

Product code	Description

PSM-102	GB/T 23211 - Pesticides in Milk RM Kit

Components:

TFP-01-A	GB/T 23211 Standard no. 1 (1X1 mL)
TFP-02-1	GB/T 23211 Standard no. 2 (1X1 mL)
TFP-03-1	GB/T 23211 Standard no. 3 (1X1 mL)
TFP-04-1	GB/T 23211 Standard no. 4 (1X1 mL)
TFP-05-1	GB/T 23211 Standard no. 5 (1X1 mL)
TFP-06-1	GB/T 23211 Standard no. 6 (1X1 mL)
TFP-07-1	GB/T 23211 Standard no. 7 (1X1 mL)
TFP-08-1	GB/T 23211 Standard no. 8 (1X1 mL)
TFP-09-1	GB/T 23211 Standard no. 9 (1X1 mL)
TFP-10	GB/T 23211 Standard no. 10 (1X1ML)
TFP-11	GB/T 23211 Standard no. 11 (1X1ML)
TFP-12	GB/T 23211 Standard no. 12 (1X1ML)
TFP-13	GB/T 23211 Standard no. 13 (1X1ML)
TFP-14-1	GB/T 23211 Standard no. 14 (1X1 mL)
TFP-15-1	GB/T 23211 Standard no. 15 (1X1 mL)
TFP-16-1	GB/T 23211 Standard no. 16 (1X1 mL)
TFP-17-1	GB/T 23211 Standard no. 17 (1X1 mL)
TFP-18-1	GB/T 23211 Standard no. 18 (1X1 mL)
TFP-19-1	GB/T 23211 Standard no. 19 (1X1 mL)
TFP-20	GB/T 23211 Standard no. 20 (1X1ML)
TFP-21	GB/T 23211 Standard no. 21 (1X1ML)
TFP-22	GB/T 23211 Standard no. 22 (1X1ML)
TFP-23	GB/T 23211 Standard no. 23 (1X1ML)
TFP-24-1	GB/T 23211 Standard no. 24 (1X1 mL)
TFP-25-1	GB/T 23211 Standard no. 25 (1X1 mL)
TFP-26-1	GB/T 23211 Standard no. 26 (1X1 mL)
TFP-27-1	GB/T 23211 Standard no. 27 (1X1 mL)
TFP-28-1	GB/T 23211 Standard no. 28 (1X1 mL)
TFP-29-1	GB/T 23211 Standard no. 29 (1X1 mL)
TFP-30	GB/T 23211 Standard no. 30 (1X1ML)
TFP-31-1	GB/T 23211 Standard no. 31 (1X1 mL)
TFP-32-1	GB/T 23211 Standard no. 32 (1X1 mL)
TFP-33-1	GB/T 23211 Standard no. 33 (1X1 mL)
TFP-34-1	GB/T 23211 Standard no. 34 (1X1 mL)
TFP-35-1	GB/T 23211 Standard no. 35 (1X1 mL)
TFP-36-1	GB/T 23211 Standard no. 36 (1X1 mL)
TFP-37-1	GB/T 23211 Standard no. 37 (1X1 mL)
TFP-38-1	GB/T 23211 Standard no. 38 (1X1 mL)
PST-1925	Clethodim

PST-2380	Heptenophos

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 28.03.2019

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** GB/T 23211 Standard no. 1 (1X1 mL)
- **Part number:** TFP-01-A
- **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str.8
76337 Waldbronn
Germany
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS09 environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 2 H319 Causes serious eye irritation.

- **Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms**



GHS02



GHS07



GHS09

- **Signal word** Danger

- **Hazard-determining components of labelling:**
acetonitrile

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 28.03.2019

Trade name: GB/T 23211 Standard no. 1 (1X1 mL)

(Contd. of page 1)

· Hazard statements

- H225 Highly flammable liquid and vapour.
- H302 Harmful if swallowed.
- H319 Causes serious eye irritation.
- H411 Toxic to aquatic life with long lasting effects.

· Precautionary statements

- P101 If medical advice is needed, have product container or label at hand.
- P102 Keep out of reach of children.
- P103 Read label before use.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- P330 Rinse mouth.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
- P391 Collect spillage.
- P403+P235 Store in a well-ventilated place. Keep cool.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Other hazards
· Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

· Chemical characterisation: Mixtures
· Description: Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 75-05-8 EINECS: 200-835-2	acetonitrile ⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	99.848%
CAS: 121-75-5 EINECS: 204-497-7	malathion (ISO) ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302; Skin Sens. 1, H317	0.0127%

· Additional information: For the wording of the listed hazard phrases refer to section 16.

GB

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 28.03.2019

Trade name: GB/T 23211 Standard no. 1 (1X1 mL)

(Contd. of page 2)

4 First aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 28.03.2019

Trade name: GB/T 23211 Standard no. 1 (1X1 mL)

(Contd. of page 3)

- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

Ingredients with limit values that require monitoring at the workplace:	
75-05-8 acetonitrile	
WEL	Short-term value: 102 mg/m ³ , 60 ppm Long-term value: 68 mg/m ³ , 40 ppm

- **Additional information:** The lists valid during the making were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

- **Respiratory protection:**

When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.

Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

- **Protection of hands:**

Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

- **Material of gloves**

For normal use: nitrile rubber, 11-13 mil thickness

For direct contact with the chemical: butyl rubber, 12-15 mil thickness

- **Penetration time of glove material**

For normal use: nitrile rubber: 1 hour

For direct contact with the chemical: butyl rubber: > 4 hours

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 28.03.2019

Trade name: GB/T 23211 Standard no. 1 (1X1 mL)

(Contd. of page 4)

· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Fluid
Colour:	Colourless
· Odour:	Aromatic
· Odour threshold:	Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/freezing point:	-46 °C
Initial boiling point and boiling range:	81 °C

· Flash point: 2 °C

· Flammability (solid, gas): Not applicable.

· Ignition temperature: 525 °C

· Decomposition temperature: Not determined.

· Auto-ignition temperature: Product is not selfigniting.

· Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Explosion limits:

Lower:	4.4 Vol %
Upper:	16 Vol %

· Vapour pressure at 20 °C: 0 hPa

· Density at 20 °C: 0.786 g/cm³

· Relative density: Not determined.

· Vapour density: Not determined.

· Evaporation rate: Not determined.

· Solubility in / Miscibility with water:

Not miscible or difficult to mix.

· Partition coefficient: n-octanol/water: Not determined.

· Viscosity:

Dynamic at 20 °C:	0.39 mPas
Kinematic:	Not determined.

· Solvent content:

Organic solvents: 0.0 %

(Contd. on page 6)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 28.03.2019

Trade name: GB/T 23211 Standard no. 1 (1X1 mL)

(Contd. of page 5)

VOC (EC)	0.01 %
Solids content:	0.0 %
Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**
Harmful if swallowed.

· **LD/LC50 values relevant for classification:**

ATE (Acute Toxicity Estimates)

Oral	LD50	1,322 mg/kg (rat)

75-05-8 acetonitrile

Oral	LD50	1,320 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	3,587 mg/L (mouse)

121-75-5 malathion (ISO)

Oral	LD50	1,000 mg/kg (rat)
Dermal	LD50	8,790 mg/kg (rabbit)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

GB

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 28.03.2019

Trade name: GB/T 23211 Standard no. 1 (1X1 mL)

(Contd. of page 6)

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxical effects:**
- **Remark:** Toxic for fish
- **Additional ecological information:**
- **General notes:**
 Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
 Do not allow product to reach ground water, water course or sewage system.
 Danger to drinking water if even small quantities leak into the ground.
 Also poisonous for fish and plankton in water bodies.
 Toxic for aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
 Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· European waste catalogue

HP 3	Flammable
HP 4	Irritant - skin irritation and eye damage
HP 6	Acute Toxicity
HP 14	Ecotoxic

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· Not Regulated, De minimus Quantities	-
· UN-Number	
· ADR, IMDG, IATA	UN1648
· UN proper shipping name	
· ADR	1648 ACETONITRILE, ENVIRONMENTALLY HAZARDOUS
· IMDG	ACETONITRILE, MARINE POLLUTANT

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 28.03.2019

Trade name: GB/T 23211 Standard no. 1 (1X1 mL)

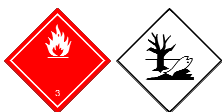
(Contd. of page 7)

· IATA

ACETONITRILE

· Transport hazard class(es)

· ADR, IMDG



· Class

3 Flammable liquids.

· Label

3

· IATA



· Class

3 Flammable liquids.

· Label

3

· Packing group

· ADR, IMDG, IATA

II

· Environmental hazards:

Product contains environmentally hazardous substances:
malathion (ISO)

· Marine pollutant:

Symbol (fish and tree)

· Special marking (ADR):

Symbol (fish and tree)

· Special precautions for user

Warning: Flammable liquids.

· Danger code (Kemler):

33

· EMS Number:

F-E,S-D

· Stowage Category

B

· Stowage Code

SW2 Clear of living quarters.

· Transport in bulk according to Annex II of Marpol
and the IBC Code

Not applicable.

· Transport/Additional information:

· ADR

· Limited quantities (LQ)

1L

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· Transport category

2

· Tunnel restriction code

D/E

· IMDG

· Limited quantities (LQ)

1L

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 28.03.2019

Trade name: GB/T 23211 Standard no. 1 (1X1 mL)

(Contd. of page 8)

· UN "Model Regulation":	UN 1648 ACETONITRILE, 3, II, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category**
E2 Hazardous to the Aquatic Environment
P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 200 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

· Regulation (EU) No 649/2012	

121-75-5	malathion (ISO)	Annex I Part 1

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- **Relevant phrases**
H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
- **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 4: Acute toxicity – Category 4
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Skin Sens. 1: Skin sensitisation – Category 1
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** GB/T 23211 Standard no. 2 (1X1 mL)
- **Part number:** TFP-02-1
- **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str.8
76337 Waldbronn
Germany
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 2 H319 Causes serious eye irritation.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

- **Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms**



GHS02



GHS07

- **Signal word** Danger

- **Hazard-determining components of labelling:**

acetonitrile

- **Hazard statements**

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 2 (1X1 mL)

(Contd. of page 1)

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

- P101 If medical advice is needed, have product container or label at hand.
- P102 Keep out of reach of children.
- P103 Read label before use.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- P330 Rinse mouth.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
- P403+P235 Store in a well-ventilated place. Keep cool.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards
Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

Chemical characterisation: Mixtures
Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:

CAS: 75-05-8	acetonitrile	99.822%
EINECS: 200-835-2	⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	
CAS: 22781-23-3	bendiocarb (ISO)	0.0127%
EINECS: 245-216-8	⚠ Acute Tox. 2, H300; Acute Tox. 3, H311; Acute Tox. 3, H331; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	

Additional information: For the wording of the listed hazard phrases refer to section 16.

GB

(Contd. on page 3)

Safety data sheet

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Trade name: GB/T 23211 Standard no. 2 (1X1 mL)

(Contd. of page 2)

4 First aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 2 (1X1 mL)

(Contd. of page 3)

- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

Ingredients with limit values that require monitoring at the workplace:	
75-05-8 acetonitrile	
WEL	Short-term value: 102 mg/m ³ , 60 ppm Long-term value: 68 mg/m ³ , 40 ppm

- **Additional information:** The lists valid during the making were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

- **Respiratory protection:**

When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.

Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

- **Protection of hands:**

Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

- **Material of gloves**

For normal use: nitrile rubber, 11-13 mil thickness

For direct contact with the chemical: butyl rubber, 12-15 mil thickness

- **Penetration time of glove material**

For normal use: nitrile rubber: 1 hour

For direct contact with the chemical: butyl rubber: > 4 hours

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 2 (1X1 mL)

(Contd. of page 4)

· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Fluid
Colour:	Colourless
· Odour:	Aromatic
· Odour threshold:	Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/freezing point:	-46 °C
Initial boiling point and boiling range:	81 °C

· Flash point: 2 °C

· Flammability (solid, gas): Not applicable.

· Ignition temperature: 525 °C

· Decomposition temperature: Not determined.

· Auto-ignition temperature: Product is not selfigniting.

· Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Explosion limits:

Lower:	4.4 Vol %
Upper:	16 Vol %

· Vapour pressure at 20 °C: 0 hPa

· Density at 20 °C: 0.786 g/cm³

· Relative density: Not determined.

· Vapour density: Not determined.

· Evaporation rate: Not determined.

· Solubility in / Miscibility with water:

Not miscible or difficult to mix.

· Partition coefficient: n-octanol/water: Not determined.

· Viscosity:

Dynamic at 20 °C:	0.39 mPas
Kinematic:	Not determined.

· Solvent content:

VOC (EC) 0.00 %

(Contd. on page 6)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 2 (1X1 mL)

(Contd. of page 5)

Solids content:	0.0 %
Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**
Harmful if swallowed.

· **LD/LC50 values relevant for classification:**

ATE (Acute Toxicity Estimates)

Oral	LD50	1,322 mg/kg (rat)

75-05-8 acetonitrile

Oral	LD50	1,320 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	3,587 mg/L (mouse)

22781-23-3 bendiocarb (ISO)

Oral	LD50	40 mg/kg (rat)
Dermal	LD50	566 mg/kg (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 2 (1X1 mL)

(Contd. of page 6)

- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxical effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**
 Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
 Do not allow product to reach ground water, water course or sewage system.
 Danger to drinking water if even small quantities leak into the ground.
 Harmful to aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
 Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **European waste catalogue**

HP 3	Flammable
HP 4	Irritant - skin irritation and eye damage
HP 6	Acute Toxicity
HP 14	Ecotoxic

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

*

14 Transport information

- **Not Regulated, De minimus Quantities**

-

· **UN-Number**

· **ADR, IMDG, IATA**

UN1648

· **UN proper shipping name**

· **ADR**

· **IMDG, IATA**

1648 ACETONITRILE

ACETONITRILE

(Contd. on page 8)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 2 (1X1 mL)

(Contd. of page 7)

· **Transport hazard class(es)**

· **ADR, IMDG, IATA**

· **Class**

3 Flammable liquids.

· **Label**

3

· **Packing group**

· **ADR, IMDG, IATA**

II

· **Environmental hazards:**

Not applicable.

· **Special precautions for user**

Warning: Flammable liquids.

· **Danger code (Kemler):**

33

· **EMS Number:**

F-E,S-D

· **Stowage Category**

B

· **Stowage Code**

SW2 Clear of living quarters.

· **Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

· **Transport/Additional information:**

· **ADR**

· **Limited quantities (LQ)**

1L

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **Transport category**

2

· **Tunnel restriction code**

D/E

· **IMDG**

· **Limited quantities (LQ)**

1L

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **UN "Model Regulation":**

UN 1648 ACETONITRILE, 3, II

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Directive 2012/18/EU**

· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **Seveso category P5c** FLAMMABLE LIQUIDS

· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t

· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t

· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 2 (1X1 mL)

(Contd. of page 8)

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

· **Relevant phrases**

H225 Highly flammable liquid and vapour.
H300 Fatal if swallowed.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H312 Harmful in contact with skin.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H332 Harmful if inhaled.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

· **Department issuing SDS:** Document Control / Regulatory· **Contact:** regulatory@ultrasci.com· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 2: Acute toxicity – Category 2
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 3: Acute toxicity – Category 3
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

· *** Data compared to the previous version altered.**

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** GB/T 23211 Standard no. 3 (1X1 mL)
- **Part number:** TFP-03-1
- **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str.8
76337 Waldbronn
Germany
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 2 H319 Causes serious eye irritation.

- **Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms**



GHS02 GHS07

- **Signal word** Danger

- **Hazard-determining components of labelling:**
acetonitrile

- **Hazard statements**

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 3 (1X1 mL)

(Contd. of page 1)

· Precautionary statements

- P101 If medical advice is needed, have product container or label at hand.
- P102 Keep out of reach of children.
- P103 Read label before use.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- P330 Rinse mouth.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
- P403+P235 Store in a well-ventilated place. Keep cool.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Other hazards

· Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

*

3 Composition/information on ingredients

· Chemical characterisation: Mixtures

- **Description:** Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 75-05-8	acetonitrile	99.81%
EINECS: 200-835-2	⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

· Description of first aid measures

· General information:

Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.

- **After skin contact:** Immediately rinse with water.

· After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 3 (1X1 mL)

(Contd. of page 2)

- **After swallowing:** Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

GB

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 3 (1X1 mL)

(Contd. of page 3)

8 Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

75-05-8 acetonitrile

WEL	Short-term value: 102 mg/m ³ , 60 ppm Long-term value: 68 mg/m ³ , 40 ppm

· **Additional information:** The lists valid during the making were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

· **Respiratory protection:**

When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.

Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

· **Protection of hands:**

Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

· **Material of gloves**

For normal use: nitrile rubber, 11-13 mil thickness

For direct contact with the chemical: butyl rubber, 12-15 mil thickness

· **Penetration time of glove material**

For normal use: nitrile rubber: 1 hour

For direct contact with the chemical: butyl rubber: > 4 hours

· **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Fluid

Colour: Colourless

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 3 (1X1 mL)

(Contd. of page 4)

· Odour:	Aromatic
· Odour threshold:	Not determined.
· pH-value:	Not determined.
· Change in condition	
Melting point/freezing point:	-46 °C
Initial boiling point and boiling range:	81 °C
· Flash point:	2 °C
· Flammability (solid, gas):	Not applicable.
· Ignition temperature:	525 °C
· Decomposition temperature:	Not determined.
· Auto-ignition temperature:	Product is not selfigniting.
· Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· Explosion limits:	
Lower:	4.4 Vol %
Upper:	16 Vol %
· Vapour pressure at 20 °C:	0 hPa
· Density at 20 °C:	0.786 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Not miscible or difficult to mix.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic at 20 °C:	0.39 mPas
Kinematic:	Not determined.
· Solvent content:	
VOC (EC)	0.00 %
Solids content:	0.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 3 (1X1 mL)

(Contd. of page 5)

· **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

· **Information on toxicological effects**

· **Acute toxicity**

Harmful if swallowed.

· **LD/LC50 values relevant for classification:**
ATE (Acute Toxicity Estimates)

Oral	LD50	1,323 mg/kg (rat)

75-05-8 acetonitrile

Oral	LD50	1,320 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	3,587 mg/L (mouse)

· **Primary irritant effect:**

· **Skin corrosion/irritation** Based on available data, the classification criteria are not met.

· **Serious eye damage/irritation**

Causes serious eye irritation.

· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

· **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.

· **Carcinogenicity** Based on available data, the classification criteria are not met.

· **Reproductive toxicity** Based on available data, the classification criteria are not met.

· **STOT-single exposure** Based on available data, the classification criteria are not met.

· **STOT-repeated exposure** Based on available data, the classification criteria are not met.

· **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

· **Toxicity**

· **Aquatic toxicity:** No further relevant information available.

· **Persistence and degradability** No further relevant information available.

· **Behaviour in environmental systems:**

· **Bioaccumulative potential** No further relevant information available.

· **Mobility in soil** No further relevant information available.

· **Additional ecological information:**

· **General notes:**

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No further relevant information available.

GB

(Contd. on page 7)



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 3 (1X1 mL)

(Contd. of page 6)

13 Disposal considerations

· Waste treatment methods**· Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· European waste catalogue

HP 3	Flammable
HP 4	Irritant - skin irritation and eye damage
HP 6	Acute Toxicity

· Uncleaned packaging:

· Recommendation: Disposal must be made according to official regulations.

14 Transport information

· Not Regulated, De minimus Quantities

-

· UN-Number**· ADR, IMDG, IATA**

UN1648

· UN proper shipping name**· ADR**

1648 ACETONITRILE

· IMDG, IATA

ACETONITRILE

· Transport hazard class(es)**· ADR, IMDG, IATA****· Class**

3 Flammable liquids.

· Label

3

· Packing group**· ADR, IMDG, IATA**

II

· Environmental hazards:

Not applicable.

· Special precautions for user

Warning: Flammable liquids.

· Danger code (Kemler):

33

· EMS Number:

F-E,S-D

· Stowage Category

B

· Stowage Code

SW2 Clear of living quarters.

· Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

(Contd. on page 8)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 3 (1X1 mL)

(Contd. of page 7)

· Transport/Additional information:
· ADR
· Limited quantities (LQ)

1L

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· Transport category

2

· Tunnel restriction code

D/E

· IMDG
· Limited quantities (LQ)

1L

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· UN "Model Regulation":

UN 1648 ACETONITRILE, 3, II

15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture
· Directive 2012/18/EU
· Named dangerous substances - ANNEX I None of the ingredients is listed.

· Seveso category P5c FLAMMABLE LIQUIDS

· Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t

· Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t

· REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

· Relevant phrases

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

· Department issuing SDS: Document Control / Regulatory

· Contact: regulatory@ultrasci.com

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

(Contd. on page 9)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 3 (1X1 mL)

(Contd. of page 8)

LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 4: Acute toxicity – Category 4
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
· *** Data compared to the previous version altered.**

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** GB/T 23211 Standard no. 4 (1X1 mL)
- **Part number:** TFP-04-1
- **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str.8
76337 Waldbronn
Germany
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 2 H319 Causes serious eye irritation.

- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS02 GHS07

- **Signal word** Danger
- **Hazard-determining components of labelling:**
acetonitrile
- **Hazard statements**
H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.
H319 Causes serious eye irritation.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 4 (1X1 mL)

(Contd. of page 1)

· Precautionary statements

- P101 If medical advice is needed, have product container or label at hand.
- P102 Keep out of reach of children.
- P103 Read label before use.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- P330 Rinse mouth.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
- P403+P235 Store in a well-ventilated place. Keep cool.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Other hazards

· Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

· Chemical characterisation: Mixtures

- **Description:** Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 75-05-8 EINECS: 200-835-2	acetonitrile ⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	99.81%
CAS: 24934-91-6 EINECS: 246-538-1	chlormephos (ISO) ⚠ Acute Tox. 1, H300; Acute Tox. 2, H310; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	0.0127%

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

· Description of first aid measures

· General information:

Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 4 (1X1 mL)

(Contd. of page 2)

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 4 (1X1 mL)

· **Specific end use(s)** No further relevant information available.

(Contd. of page 3)

8 Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**
75-05-8 acetonitrile

WEL	Short-term value: 102 mg/m ³ , 60 ppm
	Long-term value: 68 mg/m ³ , 40 ppm

· **Additional information:** The lists valid during the making were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

· **Respiratory protection:**

When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.

Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

· **Protection of hands:**

Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

· **Material of gloves**

For normal use: nitrile rubber, 11-13 mil thickness

For direct contact with the chemical: butyl rubber, 12-15 mil thickness

· **Penetration time of glove material**

For normal use: nitrile rubber: 1 hour

For direct contact with the chemical: butyl rubber: > 4 hours

· **Eye protection:**


Tightly sealed goggles

GB

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 4 (1X1 mL)

(Contd. of page 4)

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Fluid
Colour:	Colourless
Odour:	Aromatic
Odour threshold:	Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/freezing point:	-46 °C
Initial boiling point and boiling range:	81 °C

· Flash point: 2 °C

· Flammability (solid, gas): Not applicable.

· Ignition temperature: 525 °C

· Decomposition temperature: Not determined.

· Auto-ignition temperature: Product is not selfigniting.

· Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Explosion limits:

Lower:	4.4 Vol %
Upper:	16 Vol %

· Vapour pressure at 20 °C: 0 hPa

· Density at 20 °C: 0.786 g/cm³

· Relative density: Not determined.

· Vapour density: Not determined.

· Evaporation rate: Not determined.

· Solubility in / Miscibility with water:

Not miscible or difficult to mix.

· Partition coefficient: n-octanol/water: Not determined.

· Viscosity:

Dynamic at 20 °C:	0.39 mPas
Kinematic:	Not determined.

· Solvent content:

Organic solvents:	0.0 %
VOC (EC)	0.03 %

Solids content: 0.0 %

· Other information: No further relevant information available.

10 Stability and reactivity

· Reactivity: No further relevant information available.

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 4 (1X1 mL)

(Contd. of page 5)

- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**
Harmful if swallowed.

· **LD/LC50 values relevant for classification:**

ATE (Acute Toxicity Estimates)

Oral	LD50	1,323 mg/kg (rat)

75-05-8 acetonitrile

Oral	LD50	1,320 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	3,587 mg/L (mouse)

24934-91-6 chlormephos (ISO)

Dermal	LD50	>1,600 mg/kg (rabbit)
Inhalative	LC50/4 h	88 mg/L (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 4 (1X1 mL)

(Contd. of page 6)

- Danger to drinking water if even small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- **European waste catalogue**

HP 3	Flammable
HP 4	Irritant - skin irritation and eye damage
HP 6	Acute Toxicity

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **Not Regulated, De minimus Quantities**
-
- **UN-Number**
· **ADR, IMDG, IATA**
UN1648
- **UN proper shipping name**
· **ADR**
· **IMDG, IATA**
1648 ACETONITRILE
ACETONITRILE
- **Transport hazard class(es)**
· **ADR, IMDG, IATA**

· **Class**
· **Label**
3 Flammable liquids.
3
- **Packing group**
· **ADR, IMDG, IATA**
II
- **Environmental hazards:**
Not applicable.
- **Special precautions for user**
· **Danger code (Kemler):**
· **EMS Number:**
· **Stowage Category**
Warning: Flammable liquids.
33
F-E,S-D
B

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 4 (1X1 mL)

(Contd. of page 7)

· Stowage Code	SW2 Clear of living quarters.
· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category	2
· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1648 ACETONITRILE, 3, II

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category** P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

· Regulation (EU) No 649/2012		
24934-91-6	chlormephos (ISO)	Annex I Part 1

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- **Relevant phrases**
H225 Highly flammable liquid and vapour.
H300 Fatal if swallowed.
H302 Harmful if swallowed.
H310 Fatal in contact with skin.
H312 Harmful in contact with skin.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 4 (1X1 mL)

(Contd. of page 8)

- **Department issuing SDS:** Document Control / Regulatory

- **Contact:** regulatory@ultrasci.com

- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids – Category 2

Acute Tox. 1: Acute toxicity – Category 1

Acute Tox. 4: Acute toxicity – Category 4

Acute Tox. 2: Acute toxicity – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

- *** Data compared to the previous version altered.**

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** GB/T 23211 Standard no. 5 (1X1 mL)
- **Part number:** TFP-05-1
- **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str.8
76337 Waldbronn
Germany
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS08 health hazard

STOT SE 1 H370 Causes damage to organs.



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 2 H319 Causes serious eye irritation.

- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.

(Contd. on page 2)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 5 (1X1 mL)

(Contd. of page 1)

· Hazard pictograms

· Signal word Danger
· Hazard-determining components of labelling:

acetonitrile
methanol

· Hazard statements

H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.
H319 Causes serious eye irritation.
H370 Causes damage to organs.
H410 Very toxic to aquatic life with long lasting effects.

· Precautionary statements

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P311 IF exposed or concerned: Call a POISON CENTER/doctor.
P321 Specific treatment (see on this label).
P330 Rinse mouth.
P337+P313 If eye irritation persists: Get medical advice/attention.
P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
P391 Collect spillage.
P403+P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Other hazards
· Results of PBT and vPvB assessment
· PBT: Not applicable.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 5 (1X1 mL)

(Contd. of page 2)

· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterisation: Mixtures**

· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 75-05-8 EINECS: 200-835-2	acetonitrile ⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	89.783%
CAS: 67-56-1 EINECS: 200-659-6	methanol ⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; ⚠ STOT SE 1, H370	10.039%
CAS: 34256-82-1 EINECS: 251-899-3	2-chloro-N-(ethoxymethyl)-N-(2-ethyl-6-methylphenyl)acetamide ⚠ Carc. 2, H351; Repr. 2, H361f; STOT RE 2, H373; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332; Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	0.0127%
CAS: 1582-09-8 EINECS: 216-428-8	trifluralin (ISO) (containing < 0,5 ppm NPDA) ⚠ Carc. 2, H351; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302; Skin Sens. 1, H317	0.0127%
CAS: 14816-18-3 EINECS: 238-887-3	phoxim (ISO) ⚠ Acute Tox. 3, H311; ⚠ Repr. 2, H361f; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302; Skin Sens. 1, H317	0.0127%
CAS: 563-12-2 EINECS: 209-242-3	ethion (ISO) ⚠ Acute Tox. 3, H301; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H312	0.0127%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

· **Description of first aid measures**

· **General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:** Immediately rinse with water.

· **After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:** Call for a doctor immediately.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

· **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

GB

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 5 (1X1 mL)

(Contd. of page 3)

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

GB

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 5 (1X1 mL)

(Contd. of page 4)

8 Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

75-05-8 acetonitrile

WEL	Short-term value: 102 mg/m ³ , 60 ppm
	Long-term value: 68 mg/m ³ , 40 ppm

67-56-1 methanol

WEL	Short-term value: 333 mg/m ³ , 250 ppm
	Long-term value: 266 mg/m ³ , 200 ppm
Sk	

· **Additional information:** The lists valid during the making were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

· **Respiratory protection:**

When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.

Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

· **Protection of hands:**

Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

· **Material of gloves**

For normal use: nitrile rubber, 11-13 mil thickness

For direct contact with the chemical: butyl rubber, 12-15 mil thickness

· **Penetration time of glove material**

For normal use: nitrile rubber: 1 hour

For direct contact with the chemical: butyl rubber: > 4 hours

· **Eye protection:**



Tightly sealed goggles

GB

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 5 (1X1 mL)

(Contd. of page 5)

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form: Fluid
Colour: According to product specification

· Odour: Characteristic

· Odour threshold: Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/freezing point: Undetermined.

Initial boiling point and boiling range: 64 °C

· Flash point: 2 °C

· Flammability (solid, gas): Not applicable.

· Ignition temperature: 455 °C

· Decomposition temperature: Not determined.

· Auto-ignition temperature: Product is not selfigniting.

· Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Explosion limits:

Lower: 4.4 Vol %

Upper: 44 Vol %

· Vapour pressure at 20 °C: 100 hPa

· Density: Not determined.

· Relative density: Not determined.

· Vapour density: Not determined.

· Evaporation rate: Not determined.

· Solubility in / Miscibility with water:

Not miscible or difficult to mix.

· Partition coefficient: n-octanol/water: Not determined.

· Viscosity:

Dynamic: Not determined.

Kinematic: Not determined.

· Solvent content:

Organic solvents: 10.1 %

VOC (EC) 10.06 %

Solids content: 0.1 %

· Other information: No further relevant information available.

10 Stability and reactivity

· Reactivity: No further relevant information available.

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 5 (1X1 mL)

(Contd. of page 6)

- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

· Information on toxicological effects

· Acute toxicity

Harmful if swallowed.

· LD/LC50 values relevant for classification:

ATE (Acute Toxicity Estimates)

Oral	LD50	1,470 mg/kg (rat)
Inhalative	LC50/4 h	29.9 mg/L

75-05-8 acetonitrile

Oral	LD50	1,320 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	3,587 mg/L (mouse)

67-56-1 methanol

Oral	LD50	5,628 mg/kg (rat)
Dermal	LD50	15,800 mg/kg (rabbit)

34256-82-1 2-chloro-N-(ethoxymethyl)-N-(2-ethyl-6-methylphenyl)acetamide

Oral	LD50	763 mg/kg (rat)
Dermal	LD50	4,166 mg/kg (rabbit)

1582-09-8 trifluralin (ISO) (containing < 0,5 ppm NPDA)

Oral	LD50	1,930 mg/kg (rat)
Dermal	LD50	>5,000 mg/kg (rat)

14816-18-3 phoxim (ISO)

Oral	LD50	300 mg/kg (rat)
Dermal	LD50	1,000 mg/kg (rat)

563-12-2 ethion (ISO)

Oral	LD50	13 mg/kg (rat)
Dermal	LD50	62 mg/kg (rat)
Inhalative	LC50/4 h	864 mg/L (rat)

· Primary irritant effect:

· **Skin corrosion/irritation** Based on available data, the classification criteria are not met.

· Serious eye damage/irritation

Causes serious eye irritation.

· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

· CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.

· **Carcinogenicity** Based on available data, the classification criteria are not met.

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 5 (1X1 mL)

(Contd. of page 7)

- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure**
Causes damage to organs.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Very toxic for fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Very toxic for aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· European waste catalogue

HP 3	Flammable
HP 4	Irritant - skin irritation and eye damage
HP 5	Specific Target Organ Toxicity (STOT)/Aspiration Toxicity
HP 6	Acute Toxicity
HP 14	Ecotoxic

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **Not Regulated, De minimus Quantities**

(Contd. on page 9)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 5 (1X1 mL)

(Contd. of page 8)

· UN-Number · ADR, IMDG, IATA	UN1992
· UN proper shipping name · ADR · IMDG · IATA	1992 FLAMMABLE LIQUID, TOXIC, N.O.S. (ACETONITRILE, METHANOL), ENVIRONMENTALLY HAZARDOUS FLAMMABLE LIQUID, TOXIC, N.O.S. (ACETONITRILE, METHANOL), MARINE POLLUTANT FLAMMABLE LIQUID, TOXIC, N.O.S. (ACETONITRILE, METHANOL)

· Transport hazard class(es) · ADR	
	
· Class · Label	3 Flammable liquids. 3+6.1

· IMDG	
	
· Class · Label	3 Flammable liquids. 3/6.1

· IATA	
	
· Class · Label	3 Flammable liquids. 3 (6.1)

· Packing group · ADR, IMDG, IATA	II

· Environmental hazards: · Marine pollutant: · Special marking (ADR):	Product contains environmentally hazardous substances: ethion (ISO), phoxim (ISO) Symbol (fish and tree) Symbol (fish and tree)

· Special precautions for user · Danger code (Kemler): · EMS Number: · Stowage Category · Stowage Code	Warning: Flammable liquids. 336 F-E,S-D B SW2 Clear of living quarters.

(Contd. on page 10)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 5 (1X1 mL)

(Contd. of page 9)

· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category	2
· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1992 FLAMMABLE LIQUID, TOXIC, N.O.S. (ACETONITRILE, METHANOL), 3 (6.1), II, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category**
H3 STOT SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE
E1 Hazardous to the Aquatic Environment
P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 50 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 69

· Regulation (EU) No 649/2012

34256-82-1	2-chloro-N-(ethoxymethyl)-N-(2-ethyl-6-methylphenyl)acetamide	Annex I Part 1 Annex I Part 2
1582-09-8	trifluralin (ISO) (containing < 0,5 ppm NPDA)	Annex I Part 1 Annex I Part 2
563-12-2	ethion (ISO)	Annex I Part 1

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

· **Relevant phrases**

H225 Highly flammable liquid and vapour.

(Contd. on page 11)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 5 (1X1 mL)

(Contd. of page 10)

H301 Toxic if swallowed.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H361f Suspected of damaging fertility.
H370 Causes damage to organs.
H373 May cause damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

· **Department issuing SDS:** Document Control / Regulatory

· **Contact:** regulatory@ultrasci.com

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids – Category 2

Acute Tox. 3: Acute toxicity – Category 3

Acute Tox. 4: Acute toxicity – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Skin Sens. 1: Skin sensitisation – Category 1

Carc. 2: Carcinogenicity – Category 2

Repr. 2: Reproductive toxicity – Category 2

STOT SE 1: Specific target organ toxicity (single exposure) – Category 1

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

· *** Data compared to the previous version altered.**

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** GB/T 23211 Standard no. 6 (1X1 mL)
- **Part number:** TFP-06-1
- **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str.8
76337 Waldbronn
Germany
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 2 H319 Causes serious eye irritation.

- **Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms**



GHS02 GHS07

- **Signal word** Danger

- **Hazard-determining components of labelling:**

acetonitrile

- **Hazard statements**

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

(Contd. on page 2)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 6 (1X1 mL)

(Contd. of page 1)

· Precautionary statements

- P101 If medical advice is needed, have product container or label at hand.
- P102 Keep out of reach of children.
- P103 Read label before use.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- P330 Rinse mouth.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
- P403+P235 Store in a well-ventilated place. Keep cool.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Other hazards

· Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

· Chemical characterisation: Mixtures

- **Description:** Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 75-05-8 EINECS: 200-835-2	acetonitrile ⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	99.81%
CAS: 15972-60-8 EINECS: 240-110-8	alachlor (ISO) ⚠ Carc. 2, H351; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302; Skin Sens. 1, H317	0.0127%

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

· Description of first aid measures

· General information:

Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 6 (1X1 mL)

(Contd. of page 2)

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 6 (1X1 mL)

· **Specific end use(s)** No further relevant information available.

(Contd. of page 3)

8 Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**
75-05-8 acetonitrile

WEL	Short-term value: 102 mg/m ³ , 60 ppm
	Long-term value: 68 mg/m ³ , 40 ppm

· **Additional information:** The lists valid during the making were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

· **Respiratory protection:**

When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.

Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

· **Protection of hands:**

Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

· **Material of gloves**

For normal use: nitrile rubber, 11-13 mil thickness

For direct contact with the chemical: butyl rubber, 12-15 mil thickness

· **Penetration time of glove material**

For normal use: nitrile rubber: 1 hour

For direct contact with the chemical: butyl rubber: > 4 hours

· **Eye protection:**


Tightly sealed goggles

GB

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 6 (1X1 mL)

(Contd. of page 4)

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form:	Fluid
Colour:	Colourless
Odour:	Aromatic
Odour threshold:	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/freezing point:	-46 °C
Initial boiling point and boiling range:	81 °C

· **Flash point:** 2 °C

· **Flammability (solid, gas):** Not applicable.

· **Ignition temperature:** 525 °C

· **Decomposition temperature:** Not determined.

· **Auto-ignition temperature:** Product is not selfigniting.

· **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· **Explosion limits:**

Lower:	4.4 Vol %
Upper:	16 Vol %

· **Vapour pressure at 20 °C:** 0 hPa

· **Density at 20 °C:** 0.786 g/cm³

· **Relative density** Not determined.

· **Vapour density** Not determined.

· **Evaporation rate** Not determined.

· **Solubility in / Miscibility with water:**

Not miscible or difficult to mix.

· **Partition coefficient: n-octanol/water:** Not determined.

· **Viscosity:**

Dynamic at 20 °C:	0.39 mPas
Kinematic:	Not determined.

· **Solvent content:**

VOC (EC) 0.00 %

Solids content: 0.0 %

· **Other information** No further relevant information available.

10 Stability and reactivity

· **Reactivity** No further relevant information available.

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 6 (1X1 mL)

(Contd. of page 5)

- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

· Information on toxicological effects

- **Acute toxicity**
Harmful if swallowed.

· LD/LC50 values relevant for classification:

ATE (Acute Toxicity Estimates)

Oral	LD50	1,323 mg/kg (rat)

75-05-8 acetonitrile

Oral	LD50	1,320 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	3,587 mg/L (mouse)

15972-60-8 alachlor (ISO)

Oral	LD50	930 mg/kg (rat)
Dermal	LD50	3,500 mg/kg (rabbit)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 6 (1X1 mL)

(Contd. of page 6)

- Danger to drinking water if even small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- **European waste catalogue**

HP 3	Flammable
HP 4	Irritant - skin irritation and eye damage
HP 6	Acute Toxicity

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **Not Regulated, De minimus Quantities**
-
- **UN-Number**
· **ADR, IMDG, IATA**
UN1648
- **UN proper shipping name**
· **ADR**
· **IMDG, IATA**
1648 ACETONITRILE
ACETONITRILE
- **Transport hazard class(es)**
· **ADR, IMDG, IATA**

· **Class**
· **Label**
3 Flammable liquids.
3
- **Packing group**
· **ADR, IMDG, IATA**
II
- **Environmental hazards:**
Not applicable.
- **Special precautions for user**
· **Danger code (Kemler):**
· **EMS Number:**
· **Stowage Category**
Warning: Flammable liquids.
33
F-E,S-D
B

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 6 (1X1 mL)

(Contd. of page 7)

· Stowage Code	SW2 Clear of living quarters.
· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category	2
· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1648 ACETONITRILE, 3, II

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category** P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

· Regulation (EU) No 649/2012		
15972-60-8	alachlor (ISO)	Annex I Part 1 Annex I Part 3

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- **Relevant phrases**
H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H351 Suspected of causing cancer.
H400 Very toxic to aquatic life.

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 6 (1X1 mL)

(Contd. of page 8)

H410 Very toxic to aquatic life with long lasting effects.

· **Department issuing SDS:** Document Control / Regulatory· **Contact:** regulatory@ultrasci.com· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids – Category 2

Acute Tox. 4: Acute toxicity – Category 4

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Skin Sens. 1: Skin sensitisation – Category 1

Carc. 2: Carcinogenicity – Category 2

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

· *** Data compared to the previous version altered.**

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

1 Identification of the substance/mixture and of the company/undertaking

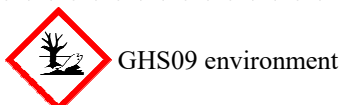
- **Product identifier**
- **Trade name:** GB/T 23211 Standard no. 7 (1X1 mL)
- **Part number:** TFP-07-1
- **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str.8
76337 Waldbronn
Germany
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



Flam. Liq. 2 H225 Highly flammable liquid and vapour.



Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



Acute Tox. 4 H302 Harmful if swallowed.
Eye Irrit. 2 H319 Causes serious eye irritation.

- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



- **Signal word** Danger
- **Hazard-determining components of labelling:**
acetonitrile

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 7 (1X1 mL)

(Contd. of page 1)

· Hazard statements

- H225 Highly flammable liquid and vapour.
- H302 Harmful if swallowed.
- H319 Causes serious eye irritation.
- H411 Toxic to aquatic life with long lasting effects.

· Precautionary statements

- P101 If medical advice is needed, have product container or label at hand.
- P102 Keep out of reach of children.
- P103 Read label before use.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- P330 Rinse mouth.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
- P391 Collect spillage.
- P403+P235 Store in a well-ventilated place. Keep cool.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Other hazards
· Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

· Chemical characterisation: Mixtures
· Description: Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 75-05-8 EINECS: 200-835-2	acetonitrile ⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	99.835%
CAS: 13593-03-8 EINECS: 237-031-6	quinalphos (ISO) ⚠ Acute Tox. 3, H301; ⚠ Eye Dam. 1, H318; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H312	0.0127%

· Additional information: For the wording of the listed hazard phrases refer to section 16.

GB

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 7 (1X1 mL)

(Contd. of page 2)

4 First aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 7 (1X1 mL)

(Contd. of page 3)

- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

Ingredients with limit values that require monitoring at the workplace:	
75-05-8 acetonitrile	
WEL	Short-term value: 102 mg/m ³ , 60 ppm Long-term value: 68 mg/m ³ , 40 ppm

- **Additional information:** The lists valid during the making were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

- **Respiratory protection:**

When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.

Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

- **Protection of hands:**

Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

- **Material of gloves**

For normal use: nitrile rubber, 11-13 mil thickness

For direct contact with the chemical: butyl rubber, 12-15 mil thickness

- **Penetration time of glove material**

For normal use: nitrile rubber: 1 hour

For direct contact with the chemical: butyl rubber: > 4 hours

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 7 (1X1 mL)

(Contd. of page 4)

· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Fluid
Colour:	Colourless
· Odour:	Aromatic
· Odour threshold:	Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/freezing point:	-46 °C
Initial boiling point and boiling range:	81 °C

· Flash point: 2 °C

· Flammability (solid, gas): Not applicable.

· Ignition temperature: 525 °C

· Decomposition temperature: Not determined.

· Auto-ignition temperature: Product is not selfigniting.

· Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Explosion limits:

Lower:	4.4 Vol %
Upper:	16 Vol %

· Vapour pressure at 20 °C: 0 hPa

· Density at 20 °C: 0.786 g/cm³

· Relative density: Not determined.

· Vapour density: Not determined.

· Evaporation rate: Not determined.

· Solubility in / Miscibility with water:

Not miscible or difficult to mix.

· Partition coefficient: n-octanol/water: Not determined.

· Viscosity:

Dynamic at 20 °C:	0.39 mPas
Kinematic:	Not determined.

· Solvent content:

VOC (EC) 0.00 %

(Contd. on page 6)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 7 (1X1 mL)

(Contd. of page 5)

Solids content:	0.0 %
Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**
Harmful if swallowed.

LD/LC50 values relevant for classification:		

ATE (Acute Toxicity Estimates)		

Oral	LD50	1,322 mg/kg (rat)

75-05-8 acetonitrile		

Oral	LD50	1,320 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	3,587 mg/L (mouse)

13593-03-8 quinalphos (ISO)		

Oral	LD50	26 mg/kg (rat)
Dermal	LD50	300 mg/kg (rat)
Inhalative	LC50/4 h	330 mg/L (mouse)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

GB

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 7 (1X1 mL)

(Contd. of page 6)

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxical effects:**
- **Remark:** Toxic for fish
- **Additional ecological information:**
- **General notes:**
 Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
 Do not allow product to reach ground water, water course or sewage system.
 Danger to drinking water if even small quantities leak into the ground.
 Also poisonous for fish and plankton in water bodies.
 Toxic for aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
 Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· European waste catalogue

HP 3	Flammable
HP 4	Irritant - skin irritation and eye damage
HP 6	Acute Toxicity
HP 14	Ecotoxic

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· Not Regulated, De minimus Quantities

-

· UN-Number

· ADR, IMDG, IATA

UN1648

· UN proper shipping name

· ADR

· IMDG

· IATA

1648 ACETONITRILE
ACETONITRILE, MARINE POLLUTANT
ACETONITRILE

(Contd. on page 8)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

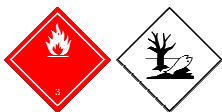
Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 7 (1X1 mL)

(Contd. of page 7)

· **Transport hazard class(es)**

· **ADR, IMDG**

· **Class**

3 Flammable liquids.

· **Label**

3

· **IATA**

· **Class**

3 Flammable liquids.

· **Label**

3

· **Packing group**

· **ADR, IMDG, IATA**

II

· **Environmental hazards:**

Product contains environmentally hazardous substances:
quinalphos (ISO)

· **Marine pollutant:**

Symbol (fish and tree)

· **Special marking (ADR):**

Symbol (fish and tree)

· **Special precautions for user**

Warning: Flammable liquids.

· **Danger code (Kemler):**

33

· **EMS Number:**

F-E,S-D

· **Stowage Category**

B

· **Stowage Code**

SW2 Clear of living quarters.

· **Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

· **Transport/Additional information:**

· **ADR**

· **Limited quantities (LQ)**

1L

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **Transport category**

2

· **Tunnel restriction code**

D/E

· **IMDG**

· **Limited quantities (LQ)**

1L

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **UN "Model Regulation":**

UN 1648 ACETONITRILE, 3, II

GB

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 7 (1X1 mL)

(Contd. of page 8)

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Directive 2012/18/EU
- Named dangerous substances - ANNEX I None of the ingredients is listed.
- Seveso category
E2 Hazardous to the Aquatic Environment
P5c FLAMMABLE LIQUIDS
- Qualifying quantity (tonnes) for the application of lower-tier requirements 200 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 500 t
- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- Relevant phrases
H225 Highly flammable liquid and vapour.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
- Department issuing SDS: Document Control / Regulatory
- Contact: regulatory@ultrasci.com
- Abbreviations and acronyms:
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
- * Data compared to the previous version altered.

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** GB/T 23211 Standard no. 8 (1X1 mL)
- **Part number:** TFP-08-1
- **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str.8
76337 Waldbronn
Germany
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS09 environment

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 2 H319 Causes serious eye irritation.

- **Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms**



GHS02



GHS07



GHS09

- **Signal word** Danger

- **Hazard-determining components of labelling:**
acetonitrile

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 8 (1X1 mL)

(Contd. of page 1)

· Hazard statements

- H225 Highly flammable liquid and vapour.
- H302 Harmful if swallowed.
- H319 Causes serious eye irritation.
- H410 Very toxic to aquatic life with long lasting effects.

· Precautionary statements

- P101 If medical advice is needed, have product container or label at hand.
- P102 Keep out of reach of children.
- P103 Read label before use.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- P330 Rinse mouth.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
- P391 Collect spillage.
- P403+P235 Store in a well-ventilated place. Keep cool.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Other hazards
· Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

· Chemical characterisation: Mixtures
· Description: Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 75-05-8 EINECS: 200-835-2	acetonitrile ⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	99.81%
CAS: 72490-01-8 EINECS: 276-696-7	ethyl[2-(4-phenoxyphenoxy)ethyl]carbamate ⚠ Carc. 2, H351; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	0.0127%
CAS: 111988-49-9	thiacloprid ⚠ Acute Tox. 3, H301; ⚠ Carc. 2, H351; Repr. 1B, H360; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H332; STOT SE 3, H336	0.0127%

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 8 (1X1 mL)

(Contd. of page 2)

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

GB

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 8 (1X1 mL)

(Contd. of page 3)

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

Ingredients with limit values that require monitoring at the workplace:	
75-05-8 acetonitrile	
WEL	Short-term value: 102 mg/m ³ , 60 ppm Long-term value: 68 mg/m ³ , 40 ppm

- **Additional information:** The lists valid during the making were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.

- **Respiratory protection:**

When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.

Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

- **Protection of hands:**

Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

- **Material of gloves**

For normal use: nitrile rubber, 11-13 mil thickness
For direct contact with the chemical: butyl rubber, 12-15 mil thickness

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 8 (1X1 mL)

(Contd. of page 4)

- **Penetration time of glove material**
For normal use: nitrile rubber: 1 hour
For direct contact with the chemical: butyl rubber: > 4 hours
- **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Fluid
Colour:	Colourless
Odour:	Aromatic
Odour threshold:	Not determined.

· **pH-value:** Not determined.

· Change in condition

Melting point/freezing point:	-46 °C
Initial boiling point and boiling range:	81 °C

· **Flash point:** 2 °C

· **Flammability (solid, gas):** Not applicable.

· **Ignition temperature:** 525 °C

· **Decomposition temperature:** Not determined.

· **Auto-ignition temperature:** Product is not selfigniting.

· **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Explosion limits:

Lower:	4.4 Vol %
Upper:	16 Vol %

· **Vapour pressure at 20 °C:** 0 hPa

· Density at 20 °C:	0.786 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.

· Solubility in / Miscibility with water:

Not miscible or difficult to mix.

· **Partition coefficient: n-octanol/water:** Not determined.

· Viscosity:

Dynamic at 20 °C:	0.39 mPas

(Contd. on page 6)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 8 (1X1 mL)

(Contd. of page 5)

Kinematic:	Not determined.
· Solvent content: VOC (EC)	0.00 %
Solids content:	0.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**
Harmful if swallowed.

· LD/LC50 values relevant for classification:

ATE (Acute Toxicity Estimates)

Oral	LD50	1,323 mg/kg (rat)

75-05-8 acetonitrile

Oral	LD50	1,320 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	3,587 mg/L (mouse)

72490-01-8 ethyl[2-(4-phenoxyphenoxy)ethyl]carbamate

Oral	LD50	16,800 mg/kg (rat)
Inhalative	LC50/4 h	>480 mg/L (rat)

111988-49-9 thiacloprid

Oral	LD50	444 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)
Inhalative	LC50/4 h	1,223 mg/L (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 8 (1X1 mL)

(Contd. of page 6)

- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **European waste catalogue**

HP 3	Flammable
HP 4	Irritant - skin irritation and eye damage
HP 6	Acute Toxicity
HP 14	Ecotoxic

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **Not Regulated, De minimus Quantities**

-

· **UN-Number**

· **ADR, IMDG, IATA**

UN1648

· **UN proper shipping name**

· **ADR**

1648 ACETONITRILE, ENVIRONMENTALLY
HAZARDOUS

(Contd. on page 8)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 8 (1X1 mL)

(Contd. of page 7)

· **IMDG**
· **IATA**

ACETONITRILE, MARINE POLLUTANT
ACETONITRILE

· **Transport hazard class(es)**

· **ADR, IMDG**

· **Class**

3 Flammable liquids.

· **Label**

3

· **IATA**

· **Class**

3 Flammable liquids.

· **Label**

3

· **Packing group**

· **ADR, IMDG, IATA**

II

· **Environmental hazards:**

Product contains environmentally hazardous substances: 4-(4-chlorophenyl)-2-phenyl-2-[(1H-1,2,4-triazol-1-yl)methyl]butanenitrile

· **Marine pollutant:**

Symbol (fish and tree)

· **Special marking (ADR):**

Symbol (fish and tree)

· **Special precautions for user**

Warning: Flammable liquids.

· **Danger code (Kemler):**

33

· **EMS Number:**

F-E,S-D

· **Stowage Category**

B

· **Stowage Code**

SW2 Clear of living quarters.

· **Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

· **Transport/Additional information:**

· **ADR**

· **Limited quantities (LQ)**

1L

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **Transport category**

2

· **Tunnel restriction code**

D/E

· **IMDG**

· **Limited quantities (LQ)**

1L

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 8 (1X1 mL)

(Contd. of page 8)

· **UN "Model Regulation":** UN 1648 ACETONITRILE, 3, II,
ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Directive 2012/18/EU
- Named dangerous substances - ANNEX I None of the ingredients is listed.
- Seveso category
E1 Hazardous to the Aquatic Environment
P5c FLAMMABLE LIQUIDS
- Qualifying quantity (tonnes) for the application of lower-tier requirements 100 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t
- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- **Relevant phrases**
H225 Highly flammable liquid and vapour.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H336 May cause drowsiness or dizziness.
H351 Suspected of causing cancer.
H360 May damage fertility or the unborn child.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
- **Department issuing SDS:** Document Control / Regulatory
- **Contact:** regulatory@ultrasci.com
- **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4

(Contd. on page 10)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 8 (1X1 mL)

(Contd. of page 9)

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Carc. 2: Carcinogenicity – Category 2

Repr. 1B: Reproductive toxicity – Category 1B

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

· *** Data compared to the previous version altered.**

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** GB/T 23211 Standard no. 9 (1X1 mL)
- **Part number:** TFP-09-1
- **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str.8
76337 Waldbronn
Germany
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 2 H319 Causes serious eye irritation.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

- **Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms**



GHS02



GHS07

- **Signal word** Danger

- **Hazard-determining components of labelling:**

acetonitrile

- **Hazard statements**

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 9 (1X1 mL)

(Contd. of page 1)

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

- P101 If medical advice is needed, have product container or label at hand.
- P102 Keep out of reach of children.
- P103 Read label before use.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- P330 Rinse mouth.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
- P403+P235 Store in a well-ventilated place. Keep cool.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards
Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

Chemical characterisation: Mixtures
Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:

CAS: 75-05-8 EINECS: 200-835-2	acetonitrile ⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	99.81%
CAS: 65907-30-4 EINECS: 265-974-3	furathiocarb ⚠ Acute Tox. 3, H301; Acute Tox. 2, H330; ⚠ STOT RE 2, H373; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	0.0127%
CAS: 120116-88-3	cyazofamid ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	0.0127%

Additional information: For the wording of the listed hazard phrases refer to section 16.

GB

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 9 (1X1 mL)

(Contd. of page 2)

4 First aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 9 (1X1 mL)

(Contd. of page 3)

- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

Ingredients with limit values that require monitoring at the workplace:	
75-05-8 acetonitrile	
WEL	Short-term value: 102 mg/m ³ , 60 ppm Long-term value: 68 mg/m ³ , 40 ppm

- **Additional information:** The lists valid during the making were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.

- **Respiratory protection:**

When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.

Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

- **Protection of hands:**

Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

- **Material of gloves**

For normal use: nitrile rubber, 11-13 mil thickness
For direct contact with the chemical: butyl rubber, 12-15 mil thickness

- **Penetration time of glove material**

For normal use: nitrile rubber: 1 hour
For direct contact with the chemical: butyl rubber: > 4 hours

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 9 (1X1 mL)

(Contd. of page 4)

· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Fluid
Colour:	Colourless
Odour:	Aromatic
Odour threshold:	Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/freezing point:	-46 °C
Initial boiling point and boiling range:	81 °C

· Flash point: 2 °C

· Flammability (solid, gas): Not applicable.

· Ignition temperature: 525 °C

· Decomposition temperature: Not determined.

· Auto-ignition temperature: Product is not selfigniting.

· Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Explosion limits:

Lower:	4.4 Vol %
Upper:	16 Vol %

· Vapour pressure at 20 °C: 0 hPa

· Density at 20 °C: 0.786 g/cm³

· Relative density: Not determined.

· Vapour density: Not determined.

· Evaporation rate: Not determined.

· Solubility in / Miscibility with water:

Not miscible or difficult to mix.

· Partition coefficient: n-octanol/water: Not determined.

· Viscosity:

Dynamic:	Not determined.
Kinematic:	Not determined.

· Solvent content:

Organic solvents: 0.0 %

(Contd. on page 6)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 9 (1X1 mL)

(Contd. of page 5)

VOC (EC)	0.01 %
Solids content:	0.1 %
Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**
Harmful if swallowed.

· **LD/LC50 values relevant for classification:**

ATE (Acute Toxicity Estimates)

Oral	LD50	1,323 mg/kg (rat)

75-05-8 acetonitrile

Oral	LD50	1,320 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	3,587 mg/L (mouse)

65907-30-4 furathiocarb

Oral	LD50	53 mg/kg (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 9 (1X1 mL)

(Contd. of page 6)

- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxical effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**
 Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
 Do not allow product to reach ground water, water course or sewage system.
 Danger to drinking water if even small quantities leak into the ground.
 Harmful to aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
 Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· European waste catalogue

HP 3	Flammable
HP 4	Irritant - skin irritation and eye damage
HP 6	Acute Toxicity
HP 14	Ecotoxic

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

*

14 Transport information

- **Not Regulated, De minimus Quantities**

-

· UN-Number

· ADR, IMDG, IATA

UN1648

· UN proper shipping name

· ADR

· IMDG, IATA

1648 ACETONITRILE

ACETONITRILE

(Contd. on page 8)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 9 (1X1 mL)

(Contd. of page 7)

· **Transport hazard class(es)**

· **ADR, IMDG, IATA**

· **Class**

3 Flammable liquids.

· **Label**

3

· **Packing group**

· **ADR, IMDG, IATA**

II

· **Environmental hazards:**

Not applicable.

· **Special precautions for user**

Warning: Flammable liquids.

· **Danger code (Kemler):**

33

· **EMS Number:**

F-E,S-D

· **Stowage Category**

B

· **Stowage Code**

SW2 Clear of living quarters.

· **Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

· **Transport/Additional information:**

· **ADR**

· **Limited quantities (LQ)**

1L

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **Transport category**

2

· **Tunnel restriction code**

D/E

· **IMDG**

· **Limited quantities (LQ)**

1L

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **UN "Model Regulation":**

UN 1648 ACETONITRILE, 3, II

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Directive 2012/18/EU**

· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **Seveso category** P5c FLAMMABLE LIQUIDS

· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t

· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t

· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 9 (1X1 mL)

(Contd. of page 8)

· **Regulation (EU) No 649/2012**

65907-30-4 furathiocarb

Annex I Part 1

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

· **Relevant phrases**

H225 Highly flammable liquid and vapour.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H330 Fatal if inhaled.
H332 Harmful if inhaled.
H373 May cause damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

· **Department issuing SDS:** Document Control / Regulatory

· **Contact:** regulatory@ultrasci.com

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 2: Acute toxicity – Category 2
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Skin Sens. 1: Skin sensitisation – Category 1
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

· *** Data compared to the previous version altered.**

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** GB/T 23211 Standard no. 10 (1X1ML)
- **Part number:** TFP-10
- **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str.8
76337 Waldbronn
Germany
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 2 H319 Causes serious eye irritation.

- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS02



GHS07



GHS09

- **Signal word** Danger

(Contd. on page 2)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 10 (1X1ML)

(Contd. of page 1)

· Hazard-determining components of labelling:

acetonitrile

· Hazard statements

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

H400 Very toxic to aquatic life.

H411 Toxic to aquatic life with long lasting effects.

· Precautionary statements

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read label before use.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P330 Rinse mouth.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313 If eye irritation persists: Get medical advice/attention.

P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.

P391 Collect spillage.

P403+P235 Store in a well-ventilated place. Keep cool.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Other hazards
· Results of PBT and vPvB assessment
· PBT: Not applicable.

· vPvB: Not applicable.

3 Composition/information on ingredients

· Chemical characterisation: Mixtures
· Description: Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 75-05-8 EINECS: 200-835-2	acetonitrile ⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	99.81%
CAS: 13071-79-9 EINECS: 235-963-8	S-tert-butylthiomethyl O,O-diethylphosphorodithioate ⚠ Acute Tox. 2, H300; Acute Tox. 1, H310; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	0.0127%

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 10 (1X1ML)

(Contd. of page 2)

CAS: 13684-56-5 EINECS: 237-198-5	desmedipham ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	0.0127%
CAS: 142459-58-3	flufenacet (ISO) ⚠ STOT RE 2, H373; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302; Skin Sens. 1, H317	0.0127%
CAS: 139528-85-1	metosulam ⚠ Carc. 2, H351; STOT RE 2, H373; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	0.0127%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 10 (1X1ML)

(Contd. of page 3)

Ensure adequate ventilation.

· **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

· **Handling:**

· **Precautions for safe handling** No special precautions are necessary if used correctly.

· **Information about fire - and explosion protection:**

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

· **Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and receptacles:** Store in a cool location.

· **Information about storage in one common storage facility:** Not required.

· **Further information about storage conditions:**

Keep container tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

· **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

75-05-8 acetonitrile

WEL Short-term value: 102 mg/m³, 60 ppm

Long-term value: 68 mg/m³, 40 ppm

· **Additional information:** The lists valid during the making were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

· **Respiratory protection:**

When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.

Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

· **Protection of hands:**

Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 10 (1X1ML)

(Contd. of page 4)

exceeding 4 hrs. Supplier recommendations should be followed.

· **Material of gloves**

For normal use: nitrile rubber, 11-13 mil thickness

For direct contact with the chemical: butyl rubber, 12-15 mil thickness

· **Penetration time of glove material**

For normal use: nitrile rubber: 1 hour

For direct contact with the chemical: butyl rubber: > 4 hours

· **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Fluid

Colour: Colourless

· **Odour:** Aromatic

· **Odour threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/freezing point: -46 °C

Initial boiling point and boiling range: 81 °C

· **Flash point:** 2 °C

· **Flammability (solid, gas):** Not applicable.

· **Ignition temperature:** 525 °C

· **Decomposition temperature:** Not determined.

· **Auto-ignition temperature:** Product is not selfigniting.

· **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· **Explosion limits:**

Lower: 4.4 Vol %

Upper: 16 Vol %

· **Vapour pressure at 20 °C:** 0 hPa

· **Density at 20 °C:** 0.786 g/cm³

· **Relative density** Not determined.

· **Vapour density** Not determined.

· **Evaporation rate** Not determined.

· **Solubility in / Miscibility with water:**

Not miscible or difficult to mix.

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 10 (1X1ML)

(Contd. of page 5)

· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic at 20 °C:	0.39 mPas
Kinematic:	Not determined.
· Solvent content:	
VOC (EC)	0.00 %
· Solids content:	0.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**
Harmful if swallowed.

· **LD/LC50 values relevant for classification:**

ATE (Acute Toxicity Estimates)

Oral	LD50	1,323 mg/kg (rat)

75-05-8 acetonitrile

Oral	LD50	1,320 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	3,587 mg/L (mouse)

13071-79-9 S-tert-butylthiomethyl O,O-diethylphosphorodithioate

Oral	LD50	4.5 mg/kg (rat)

13684-56-5 desmedipham

Oral	LD50	9,600 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)

142459-58-3 flufenacet (ISO)

Oral	LD50	589 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)
Inhalative	LC50/4 h	>3,700 mg/L (rat)

139528-85-1 metosulam

Oral	LD50	>5,000 mg/kg (rat)

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 10 (1X1ML)

(Contd. of page 6)

Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	>1,900 mg/L (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:**
Very toxic for fish
Toxic for fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Very toxic for aquatic organisms
Toxic for aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

European waste catalogue	
HP 3	Flammable
HP 4	Irritant - skin irritation and eye damage

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 10 (1X1ML)

(Contd. of page 7)

HP 6	Acute Toxicity
HP 14	Ecotoxic

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· Not Regulated, De minimus Quantities

-

· UN-Number

· ADR, IMDG, IATA

UN1648

· UN proper shipping name

· ADR

1648 ACETONITRILE, ENVIRONMENTALLY
HAZARDOUS

· IMDG

· IATA

ACETONITRILE, MARINE POLLUTANT
ACETONITRILE

· Transport hazard class(es)

· ADR, IMDG



· Class

3 Flammable liquids.

· Label

3

· IATA



· Class

3 Flammable liquids.

· Label

3

· Packing group

· ADR, IMDG, IATA

II

· Environmental hazards:

Product contains environmentally hazardous substances:
chlorotoluron, S-tert-butylthiomethyl O,O-
diethylphosphorodithioate

· Marine pollutant:

Symbol (fish and tree)

· Special marking (ADR):

Symbol (fish and tree)

· Special precautions for user

Warning: Flammable liquids.

· Danger code (Kemler):

33

· EMS Number:

F-E,S-D

· Stowage Category

B

(Contd. on page 9)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 10 (1X1ML)

(Contd. of page 8)

· Stowage Code	SW2 Clear of living quarters.
· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category	2
· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1648 ACETONITRILE, 3, II, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category**
E1 Hazardous to the Aquatic Environment
P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 100 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

· **Regulation (EU) No 649/2012**

13071-79-9 | S-tert-butylthiomethyl O,O-diethylphosphorodithioate

Annex I Part 1

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- **Relevant phrases**
H225 Highly flammable liquid and vapour.
H300 Fatal if swallowed.
H302 Harmful if swallowed.
H310 Fatal in contact with skin.
H312 Harmful in contact with skin.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.

(Contd. on page 10)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 10 (1X1ML)

(Contd. of page 9)

H332 Harmful if inhaled.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

· **Department issuing SDS:** Document Control / Regulatory

· **Contact:** regulatory@ultrasci.com

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids – Category 2

Acute Tox. 2: Acute toxicity – Category 2

Acute Tox. 4: Acute toxicity – Category 4

Acute Tox. 1: Acute toxicity – Category 1

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Skin Sens. 1: Skin sensitisation – Category 1

Carc. 2: Carcinogenicity – Category 2

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

· *** Data compared to the previous version altered.**

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** GB/T 23211 Standard no. 11 (1X1ML)
- **Part number:** TFP-11
- **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str.8
76337 Waldbronn
Germany
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS09 environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 2 H319 Causes serious eye irritation.

· Label elements

· Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

· Hazard pictograms



GHS02



GHS07



GHS09

· Signal word Danger

· Hazard-determining components of labelling:

acetonitrile

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 11 (1X1ML)

(Contd. of page 1)

· Hazard statements

- H225 Highly flammable liquid and vapour.
- H302 Harmful if swallowed.
- H319 Causes serious eye irritation.
- H411 Toxic to aquatic life with long lasting effects.

· Precautionary statements

- P101 If medical advice is needed, have product container or label at hand.
- P102 Keep out of reach of children.
- P103 Read label before use.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- P330 Rinse mouth.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
- P391 Collect spillage.
- P403+P235 Store in a well-ventilated place. Keep cool.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Other hazards
· Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

· Chemical characterisation: Mixtures

- **Description:** Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 75-05-8 EINECS: 200-835-2	acetonitrile ⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	99.822%
CAS: 10453-86-8 EINECS: 233-940-7	resmethrin (ISO) ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302	0.0127%
CAS: 121552-61-2	cyprodinil ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Skin Sens. 1, H317	0.0127%
CAS: 23103-98-2 EINECS: 245-430-1	pirimicarb ⚠ Acute Tox. 3, H301; Acute Tox. 3, H331; ⚠ Carc. 2, H351; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Skin Sens. 1, H317	0.0127%

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 11 (1X1ML)

(Contd. of page 2)

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

GB

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 11 (1X1ML)

(Contd. of page 3)

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

75-05-8 acetonitrile

WEL	Short-term value: 102 mg/m ³ , 60 ppm
	Long-term value: 68 mg/m ³ , 40 ppm

- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
- **Respiratory protection:**
When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.
Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.
- **Protection of hands:**
Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.
- **Material of gloves**
For normal use: nitrile rubber, 11-13 mil thickness
For direct contact with the chemical: butyl rubber, 12-15 mil thickness

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 11 (1X1ML)

(Contd. of page 4)

- **Penetration time of glove material**
For normal use: nitrile rubber: 1 hour
For direct contact with the chemical: butyl rubber: > 4 hours
- **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties	
· General Information	
· Appearance:	
Form:	Fluid
Colour:	Colourless
· Odour:	Aromatic
· Odour threshold:	Not determined.
· pH-value:	Not determined.
· Change in condition	
Melting point/freezing point:	-46 °C
Initial boiling point and boiling range:	81 °C
· Flash point:	2 °C
· Flammability (solid, gas):	Not applicable.
· Ignition temperature:	525 °C
· Decomposition temperature:	Not determined.
· Auto-ignition temperature:	Product is not selfigniting.
· Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· Explosion limits:	
Lower:	4.4 Vol %
Upper:	16 Vol %
· Vapour pressure at 20 °C:	0 hPa
· Density at 20 °C:	0.786 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Not miscible or difficult to mix.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic at 20 °C:	0.39 mPas

(Contd. on page 6)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 11 (1X1ML)

(Contd. of page 5)

Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	0.0 %
VOC (EC)	0.01 %
· Solids content:	0.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**
Harmful if swallowed.

· LD/LC50 values relevant for classification:

ATE (Acute Toxicity Estimates)

Oral	LD50	1,322 mg/kg (rat)

75-05-8 acetonitrile

Oral	LD50	1,320 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	3,587 mg/L (mouse)

10453-86-8 resmethrin (ISO)

Oral	LD50	1,244 mg/kg (rat)
Dermal	LD50	2,500 mg/kg (rabbit)

121552-61-2 cyprodinil

Oral	LD50	2,796 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)

23103-98-2 pirimicarb

Oral	LD50	>500 mg/kg (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 11 (1X1ML)

(Contd. of page 6)

- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Toxic for fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **European waste catalogue**

HP 3	Flammable
HP 4	Irritant - skin irritation and eye damage
HP 6	Acute Toxicity
HP 14	Ecotoxic

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **Not Regulated, De minimus Quantities**

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 11 (1X1ML)

(Contd. of page 7)

· UN-Number · ADR, IMDG, IATA	UN1648
· UN proper shipping name · ADR · IMDG · IATA	1648 ACETONITRILE, ENVIRONMENTALLY HAZARDOUS ACETONITRILE, MARINE POLLUTANT ACETONITRILE

- Transport hazard class(es)
- ADR, IMDG



· Class · Label	3 Flammable liquids. 3

- IATA



· Class · Label	3 Flammable liquids. 3

· Packing group · ADR, IMDG, IATA	II

· Environmental hazards: · Marine pollutant: · Special marking (ADR):	Product contains environmentally hazardous substances: cyprodinil, resmethrin (ISO) Symbol (fish and tree) Symbol (fish and tree)

· Special precautions for user · Danger code (Kemler): · EMS Number: · Stowage Category · Stowage Code	Warning: Flammable liquids. 33 F-E,S-D B SW2 Clear of living quarters.

· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.

- Transport/Additional information:

· ADR · Limited quantities (LQ) · Excepted quantities (EQ) · Transport category · Tunnel restriction code	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml 2 D/E

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 11 (1X1ML)

(Contd. of page 8)

· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1648 ACETONITRILE, 3, II, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category**
E2 Hazardous to the Aquatic Environment
P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 200 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- **Relevant phrases**
H225 Highly flammable liquid and vapour.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H332 Harmful if inhaled.
H351 Suspected of causing cancer.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
- **Department issuing SDS:** Document Control / Regulatory
- **Contact:** regulatory@ultrasci.com
- **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)

(Contd. on page 10)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 11 (1X1ML)

(Contd. of page 9)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids – Category 2

Acute Tox. 3: Acute toxicity – Category 3

Acute Tox. 4: Acute toxicity – Category 4

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Skin Sens. 1: Skin sensitisation – Category 1

Carc. 2: Carcinogenicity – Category 2

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

· *** Data compared to the previous version altered.**

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 3

Revision: 31.03.2019

1 Identification of the substance/mixture and of the company/undertaking

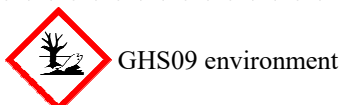
- **Product identifier**
- **Trade name:** GB/T 23211 Standard no. 12 (1X1ML)
- **Part number:** TFP-12
- **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str.8
76337 Waldbronn
Germany
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



Flam. Liq. 2 H225 Highly flammable liquid and vapour.



Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



Acute Tox. 4 H302 Harmful if swallowed.
Eye Irrit. 2 H319 Causes serious eye irritation.

- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



- **Signal word** Danger
- **Hazard-determining components of labelling:**
acetonitrile

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 3

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 12 (1X1ML)

(Contd. of page 1)

· Hazard statements

H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.
H319 Causes serious eye irritation.
H411 Toxic to aquatic life with long lasting effects.

· Precautionary statements

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P330 Rinse mouth.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical advice/attention.
P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
P391 Collect spillage.
P403+P235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Other hazards
· Results of PBT and vPvB assessment
· PBT: Not applicable.

· vPvB: Not applicable.

3 Composition/information on ingredients

· Chemical characterisation: Mixtures
· Description: Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 75-05-8 EINECS: 200-835-2	acetonitrile ⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	99.81%
CAS: 2642-71-9 EINECS: 220-147-6	azinphos-ethyl (ISO) ⚠ Acute Tox. 2, H300; Acute Tox. 3, H311; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	0.0127%
CAS: 3689-24-5 EINECS: 222-995-2	sulfotep (ISO) ⚠ Acute Tox. 2, H300; Acute Tox. 1, H310; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	0.0127%

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 3

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 12 (1X1ML)

(Contd. of page 2)

· Additional information: For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

GB

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 3

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 12 (1X1ML)

(Contd. of page 3)

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

Ingredients with limit values that require monitoring at the workplace:

75-05-8 acetonitrile

WEL	Short-term value: 102 mg/m ³ , 60 ppm
	Long-term value: 68 mg/m ³ , 40 ppm

3689-24-5 sulfotep (ISO)

WEL	Long-term value: 0.1 mg/m ³
Sk	

- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
- **Respiratory protection:**
When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.
Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.
- **Protection of hands:**
Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 3

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 12 (1X1ML)

(Contd. of page 4)

· Material of gloves

For normal use: nitrile rubber, 11-13 mil thickness

For direct contact with the chemical: butyl rubber, 12-15 mil thickness

· Penetration time of glove material

For normal use: nitrile rubber: 1 hour

For direct contact with the chemical: butyl rubber: > 4 hours

· Eye protection:


Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties
· General Information
· Appearance:
Form: Fluid

Colour: Colourless

· Odour: Aromatic

· Odour threshold: Not determined.

· pH-value: Not determined.

· Change in condition
Melting point/freezing point: -46 °C

Initial boiling point and boiling range: 81 °C

· Flash point: 2 °C

· Flammability (solid, gas): Not applicable.

· Ignition temperature: 525 °C

· Decomposition temperature: Not determined.

· Auto-ignition temperature: Product is not selfigniting.

· Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Explosion limits:
Lower: 4.4 Vol %

Upper: 16 Vol %

· Vapour pressure at 20 °C: 0 hPa

· Density at 20 °C: 0.786 g/cm³
· Relative density Not determined.

· Vapour density Not determined.

· Evaporation rate Not determined.

· Solubility in / Miscibility with water:

Not miscible or difficult to mix.

· Partition coefficient: n-octanol/water: Not determined.

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 3

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 12 (1X1ML)

(Contd. of page 5)

· Viscosity:	
Dynamic at 20 °C:	0.39 mPas
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	0.0 %
VOC (EC)	0.03 %
· Solids content:	
Other information	0.1 %
	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**
Harmful if swallowed.

· **LD/LC50 values relevant for classification:**

ATE (Acute Toxicity Estimates)

Oral	LD50	1,323 mg/kg (rat)

75-05-8 acetonitrile

Oral	LD50	1,320 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	3,587 mg/L (mouse)

2642-71-9 azinphos-ethyl (ISO)

Dermal	LD50	250 mg/kg (rat)
Inhalative	LC50/4 h	390 mg/L (rat)

3689-24-5 sulfotep (ISO)

Oral	LD50	5 mg/kg (rat)
Dermal	LD50	20 mg/kg (rat)
Inhalative	LC50/4 h	38 mg/L (rat)

93-65-2 2-(4-chloro-2-methylphenoxy)propionic acid

Oral	LD50	650 mg/kg (rat)
Dermal	LD50	900 mg/kg (rabbit)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 3

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 12 (1X1ML)

(Contd. of page 6)

- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxical effects:**
- **Remark:** Toxic for fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **European waste catalogue**

HP 3	Flammable
HP 4	Irritant - skin irritation and eye damage
HP 6	Acute Toxicity
HP 14	Ecotoxic

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

GB

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 3

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 12 (1X1ML)

(Contd. of page 7)

14 Transport information

· Not Regulated, De minimus Quantities

-

· UN-Number

· ADR, IMDG, IATA

UN1648

· UN proper shipping name

· ADR

1648 ACETONITRILE, ENVIRONMENTALLY
HAZARDOUS

· IMDG

· IATA

ACETONITRILE, MARINE POLLUTANT
ACETONITRILE

· Transport hazard class(es)

· ADR, IMDG



· Class

3 Flammable liquids.

· Label

3

· IATA



· Class

3 Flammable liquids.

· Label

3

· Packing group

· ADR, IMDG, IATA

II

· Environmental hazards:

Product contains environmentally hazardous substances:
azinphos-ethyl (ISO), sulfotep (ISO)

· Marine pollutant:

Symbol (fish and tree)

· Special marking (ADR):

Symbol (fish and tree)

· Special precautions for user

Warning: Flammable liquids.

· Danger code (Kemler):

33

· EMS Number:

F-E,S-D

· Stowage Category

B

· Stowage Code

SW2 Clear of living quarters.

· Transport in bulk according to Annex II of Marpol
and the IBC Code

Not applicable.

· Transport/Additional information:

· ADR

· Limited quantities (LQ)

1L

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 3

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 12 (1X1ML)

(Contd. of page 8)

· Transport category	2
· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1648 ACETONITRILE, 3, II, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category**
E2 Hazardous to the Aquatic Environment
P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 200 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

· **Regulation (EU) No 649/2012**

2642-71-9 azinphos-ethyl (ISO)

Annex I Part I

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- **Relevant phrases**
H225 Highly flammable liquid and vapour.
H300 Fatal if swallowed.
H302 Harmful if swallowed.
H310 Fatal in contact with skin.
H311 Toxic in contact with skin.
H312 Harmful in contact with skin.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

- **Department issuing SDS:** Document Control / Regulatory

- **Contact:** regulatory@ultrasci.com

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

(Contd. on page 10)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 3

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 12 (1X1ML)

(Contd. of page 9)

EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 2: Acute toxicity – Category 2
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 1: Acute toxicity – Category 1
Acute Tox. 3: Acute toxicity – Category 3
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

· * **Data compared to the previous version altered.**

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** GB/T 23211 Standard no. 13 (1X1ML)
- **Part number:** TFP-13
- **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str.8
76337 Waldbronn
Germany
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 2 H319 Causes serious eye irritation.

- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS02



GHS07



GHS09

- **Signal word** Danger

(Contd. on page 2)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 13 (1X1ML)

(Contd. of page 1)

· Hazard-determining components of labelling:

acetonitrile

· Hazard statements

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

H410 Very toxic to aquatic life with long lasting effects.

· Precautionary statements

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read label before use.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P330 Rinse mouth.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313 If eye irritation persists: Get medical advice/attention.

P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.

P391 Collect spillage.

P403+P235 Store in a well-ventilated place. Keep cool.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Other hazards
· Results of PBT and vPvB assessment
· PBT: Not applicable.

· vPvB: Not applicable.

3 Composition/information on ingredients

· Chemical characterisation: Mixtures
· Description: Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 75-05-8	acetonitrile	99.81%
EINECS: 200-835-2	⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	
CAS: 28434-01-7	bioresmethrin	0.0127%
EINECS: 249-014-0	⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302	

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 13 (1X1ML)

(Contd. of page 2)

CAS: 86479-06-3	hexaflumuron	0.0127%
ELINCS: 401-400-1	⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H332	

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 13 (1X1ML)

See Section 13 for disposal information.

(Contd. of page 3)

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

Ingredients with limit values that require monitoring at the workplace:

75-05-8 acetonitrile

WEL	Short-term value: 102 mg/m ³ , 60 ppm
	Long-term value: 68 mg/m ³ , 40 ppm

- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
- **Respiratory protection:**
When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.
Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.
- **Protection of hands:**
Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 13 (1X1ML)

(Contd. of page 4)

· Material of gloves

For normal use: nitrile rubber, 11-13 mil thickness

For direct contact with the chemical: butyl rubber, 12-15 mil thickness

· Penetration time of glove material

For normal use: nitrile rubber: 1 hour

For direct contact with the chemical: butyl rubber: > 4 hours

· Eye protection:


Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties
· General Information
· Appearance:
Form: Fluid

Colour: Colourless

· Odour: Aromatic

· Odour threshold: Not determined.

· pH-value: Not determined.

· Change in condition
Melting point/freezing point: -46 °C

Initial boiling point and boiling range: 81 °C

· Flash point: 2 °C

· Flammability (solid, gas): Not applicable.

· Ignition temperature: 525 °C

· Decomposition temperature: Not determined.

· Auto-ignition temperature: Product is not selfigniting.

· Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Explosion limits:
Lower: 4.4 Vol %

Upper: 16 Vol %

· Vapour pressure at 20 °C: 0 hPa

· Density at 20 °C: 0.786 g/cm³
· Relative density Not determined.

· Vapour density Not determined.

· Evaporation rate Not determined.

· Solubility in / Miscibility with water:

Not miscible or difficult to mix.

· Partition coefficient: n-octanol/water: Not determined.

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 13 (1X1ML)

(Contd. of page 5)

· Viscosity:	
Dynamic at 20 °C:	0.39 mPas
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	0.0 %
VOC (EC)	0.01 %
· Solids content:	
Other information	0.0 %
	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**
Harmful if swallowed.

· **LD/LC50 values relevant for classification:**

ATE (Acute Toxicity Estimates)

Oral	LD50	1,323 mg/kg (rat)

75-05-8 acetonitrile

Oral	LD50	1,320 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	3,587 mg/L (mouse)

28434-01-7 bioresmethrin

Oral	LD50	1,244 mg/kg (rat)
Dermal	LD50	10,000 mg/kg (rat)
Inhalative	LC50/4 h	5,200 mg/L (rat)

86479-06-3 hexaflumuron

Oral	LD50	5,000 mg/kg (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 13 (1X1ML)

(Contd. of page 6)

- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Very toxic for fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Very toxic for aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· European waste catalogue

HP 3	Flammable
HP 4	Irritant - skin irritation and eye damage
HP 6	Acute Toxicity
HP 14	Ecotoxic

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **Not Regulated, De minimus Quantities**

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 13 (1X1ML)

(Contd. of page 7)

· UN-Number · ADR, IMDG, IATA	UN1648
· UN proper shipping name · ADR · IMDG · IATA	1648 ACETONITRILE, ENVIRONMENTALLY HAZARDOUS ACETONITRILE, MARINE POLLUTANT ACETONITRILE

- Transport hazard class(es)
- ADR, IMDG



· Class · Label	3 Flammable liquids. 3

- IATA



· Class · Label	3 Flammable liquids. 3

· Packing group · ADR, IMDG, IATA	II

· Environmental hazards: · Marine pollutant: · Special marking (ADR):	Product contains environmentally hazardous substances: bioresmethrin Symbol (fish and tree) Symbol (fish and tree)

· Special precautions for user · Danger code (Kemler): · EMS Number: · Stowage Category · Stowage Code	Warning: Flammable liquids. 33 F-E,S-D B SW2 Clear of living quarters.

· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.

- Transport/Additional information:

· ADR · Limited quantities (LQ) · Excepted quantities (EQ) · Transport category · Tunnel restriction code	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml 2 D/E

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 13 (1X1ML)

(Contd. of page 8)

· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1648 ACETONITRILE, 3, II, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category**
E1 Hazardous to the Aquatic Environment
P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 100 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- **Relevant phrases**
H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
- **Department issuing SDS:** Document Control / Regulatory
- **Contact:** regulatory@ultrasci.com
- **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2

(Contd. on page 10)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 13 (1X1ML)

(Contd. of page 9)

Acute Tox. 4: Acute toxicity – Category 4

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

· *** Data compared to the previous version altered.**

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** GB/T 23211 Standard no. 14 (1X1 mL)
- **Part number:** TFP-14-1
- **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str.8
76337 Waldbronn
Germany
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 2 H319 Causes serious eye irritation.

- **Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms**



GHS02



GHS07



GHS09

- **Signal word** Danger

(Contd. on page 2)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 14 (1X1 mL)

(Contd. of page 1)

· Hazard-determining components of labelling:

acetonitrile

· Hazard statements

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

H410 Very toxic to aquatic life with long lasting effects.

· Precautionary statements

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read label before use.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P330 Rinse mouth.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313 If eye irritation persists: Get medical advice/attention.

P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.

P391 Collect spillage.

P403+P235 Store in a well-ventilated place. Keep cool.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Other hazards
· Results of PBT and vPvB assessment
· PBT: Not applicable.

· vPvB: Not applicable.

3 Composition/information on ingredients

· Chemical characterisation: Mixtures
· Description: Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 75-05-8 EINECS: 200-835-2	acetonitrile ⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	99.797%
CAS: 1689-84-5 EINECS: 216-882-7	bromoxynil (ISO) and its salts ⚠ Acute Tox. 3, H301; Acute Tox. 2, H330; ⚠ Repr. 2, H361d; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Skin Sens. 1, H317	0.0127%

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 14 (1X1 mL)

CAS: 7786-34-7
EINECS: 232-095-1

mevinphos (ISO)

⚠ Acute Tox. 2, H300; Acute Tox. 1, H310; ⚠ Aquatic Acute 1, H400;
Aquatic Chronic 1, H410

(Contd. of page 2)

0.0127%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

· **Description of first aid measures**

· **General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:** Immediately rinse with water.

· **After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:** Call for a doctor immediately.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

· **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

5 Firefighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:**

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **For safety reasons unsuitable extinguishing agents:** Water with full jet

· **Special hazards arising from the substance or mixture** No further relevant information available.

· **Advice for firefighters**

· **Protective equipment:** No special measures required.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

· **Environmental precautions:**

Do not allow product to reach sewage system or any water course.

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

· **Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 14 (1X1 mL)

See Section 13 for disposal information.

(Contd. of page 3)

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

Ingredients with limit values that require monitoring at the workplace:	
75-05-8 acetonitrile	
WEL	Short-term value: 102 mg/m ³ , 60 ppm Long-term value: 68 mg/m ³ , 40 ppm

- **Additional information:** The lists valid during the making were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.

- **Respiratory protection:**

When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.

Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

- **Protection of hands:**

Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

(Contd. on page 5)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 14 (1X1 mL)

(Contd. of page 4)

· Material of gloves

For normal use: nitrile rubber, 11-13 mil thickness

For direct contact with the chemical: butyl rubber, 12-15 mil thickness

· Penetration time of glove material

For normal use: nitrile rubber: 1 hour

For direct contact with the chemical: butyl rubber: > 4 hours

· Eye protection:


Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties
· General Information
· Appearance:
Form: Fluid

Colour: Colourless

· Odour: Aromatic

· Odour threshold: Not determined.

· pH-value: Not determined.

· Change in condition
Melting point/freezing point: -46 °C

Initial boiling point and boiling range: 81 °C

· Flash point: 2 °C

· Flammability (solid, gas): Not applicable.

· Ignition temperature: 525 °C

· Decomposition temperature: Not determined.

· Auto-ignition temperature: Product is not selfigniting.

· Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Explosion limits:
Lower: 4.4 Vol %

Upper: 16 Vol %

· Vapour pressure at 20 °C: 0 hPa

· Density at 20 °C: 0.786 g/cm³
· Relative density Not determined.

· Vapour density Not determined.

· Evaporation rate Not determined.

· Solubility in / Miscibility with water:

Not miscible or difficult to mix.

· Partition coefficient: n-octanol/water: Not determined.

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 14 (1X1 mL)

(Contd. of page 5)

· Viscosity:	
Dynamic at 20 °C:	0.39 mPas
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	0.0 %
VOC (EC)	0.01 %
· Solids content:	
Other information	0.0 %
	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**
Harmful if swallowed.

· **LD/LC50 values relevant for classification:**

ATE (Acute Toxicity Estimates)

Oral	LD50	1,323 mg/kg (rat)

75-05-8 acetonitrile

Oral	LD50	1,320 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	3,587 mg/L (mouse)

1689-84-5 bromoxynil (ISO) and its salts

Oral	LD50	190 mg/kg (rat)

7786-34-7 mevinphos (ISO)

Oral	LD50	3 mg/kg (rat)
Dermal	LD50	4 mg/kg (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 14 (1X1 mL)

(Contd. of page 6)

- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Very toxic for fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Very toxic for aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· European waste catalogue

HP 3	Flammable
HP 4	Irritant - skin irritation and eye damage
HP 6	Acute Toxicity
HP 14	Ecotoxic

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **Not Regulated, De minimus Quantities**

(Contd. on page 8)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 14 (1X1 mL)

(Contd. of page 7)

· UN-Number · ADR, IMDG, IATA	UN1648
· UN proper shipping name · ADR · IMDG · IATA	1648 ACETONITRILE, ENVIRONMENTALLY HAZARDOUS ACETONITRILE, MARINE POLLUTANT ACETONITRILE

- Transport hazard class(es)
- ADR, IMDG



· Class · Label	3 Flammable liquids. 3

- IATA



· Class · Label	3 Flammable liquids. 3

· Packing group · ADR, IMDG, IATA	II

· Environmental hazards: · Marine pollutant: · Special marking (ADR):	Product contains environmentally hazardous substances: bromoxynil (ISO) and its salts, mevinphos (ISO) Symbol (fish and tree) Symbol (fish and tree)

· Special precautions for user · Danger code (Kemler): · EMS Number: · Stowage Category · Stowage Code	Warning: Flammable liquids. 33 F-E,S-D B SW2 Clear of living quarters.

· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.

- Transport/Additional information:

· ADR · Limited quantities (LQ) · Excepted quantities (EQ) · Transport category · Tunnel restriction code	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml 2 D/E

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 14 (1X1 mL)

(Contd. of page 8)

· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1648 ACETONITRILE, 3, II, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category**
E1 Hazardous to the Aquatic Environment
P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 100 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- **Relevant phrases**
H225 Highly flammable liquid and vapour.
H300 Fatal if swallowed.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H310 Fatal in contact with skin.
H312 Harmful in contact with skin.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H330 Fatal if inhaled.
H332 Harmful if inhaled.
H361d Suspected of damaging the unborn child.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
- **Department issuing SDS:** Document Control / Regulatory
- **Contact:** regulatory@ultrasci.com
- **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances

(Contd. on page 10)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 14 (1X1 mL)

(Contd. of page 9)

CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 1: Acute toxicity – Category 1
Acute Tox. 2: Acute toxicity – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Skin Sens. 1: Skin sensitisation – Category 1
Repr. 2: Reproductive toxicity – Category 2
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

· *** Data compared to the previous version altered.**

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** GB/T 23211 Standard no. 15 (1X1 mL)
- **Part number:** TFP-15-1
- **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str.8
76337 Waldbronn
Germany
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS09 environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 2 H319 Causes serious eye irritation.

- **Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms**



GHS02



GHS07



GHS09

- **Signal word** Danger

- **Hazard-determining components of labelling:**
acetonitrile

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 15 (1X1 mL)

(Contd. of page 1)

· Hazard statements

- H225 Highly flammable liquid and vapour.
- H302 Harmful if swallowed.
- H319 Causes serious eye irritation.
- H411 Toxic to aquatic life with long lasting effects.

· Precautionary statements

- P101 If medical advice is needed, have product container or label at hand.
- P102 Keep out of reach of children.
- P103 Read label before use.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- P330 Rinse mouth.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
- P391 Collect spillage.
- P403+P235 Store in a well-ventilated place. Keep cool.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Other hazards
· Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

· Chemical characterisation: Mixtures
· Description: Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 75-05-8 EINECS: 200-835-2	acetonitrile ⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	99.81%
CAS: 2310-17-0 EINECS: 218-996-2	phosalone ⚠ Acute Tox. 3, H301; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Sens. 1, H317	0.0127%
CAS: 500-28-7 EINECS: 207-902-5	chlorthion ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332	0.0127%

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 15 (1X1 mL)

(Contd. of page 2)

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

GB

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 15 (1X1 mL)

(Contd. of page 3)

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

75-05-8 acetonitrile

WEL	Short-term value: 102 mg/m ³ , 60 ppm
	Long-term value: 68 mg/m ³ , 40 ppm

- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
- **Respiratory protection:**
When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.
Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.
- **Protection of hands:**
Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.
- **Material of gloves**
For normal use: nitrile rubber, 11-13 mil thickness
For direct contact with the chemical: butyl rubber, 12-15 mil thickness

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 15 (1X1 mL)

(Contd. of page 4)

- **Penetration time of glove material**
For normal use: nitrile rubber: 1 hour
For direct contact with the chemical: butyl rubber: > 4 hours
- **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties	
· General Information	
· Appearance:	
Form:	Fluid
Colour:	Colourless
· Odour:	Aromatic
· Odour threshold:	Not determined.
· pH-value:	Not determined.
· Change in condition	
Melting point/freezing point:	-46 °C
Initial boiling point and boiling range:	81 °C
· Flash point:	2 °C
· Flammability (solid, gas):	Not applicable.
· Ignition temperature:	525 °C
· Decomposition temperature:	Not determined.
· Auto-ignition temperature:	Product is not selfigniting.
· Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· Explosion limits:	
Lower:	4.4 Vol %
Upper:	16 Vol %
· Vapour pressure at 20 °C:	0 hPa
· Density at 20 °C:	0.786 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Not miscible or difficult to mix.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic at 20 °C:	0.39 mPas

(Contd. on page 6)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 15 (1X1 mL)

(Contd. of page 5)

Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	0.0 %
VOC (EC)	0.03 %
· Solids content:	0.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**
Harmful if swallowed.

· LD/LC50 values relevant for classification:

ATE (Acute Toxicity Estimates)

Oral	LD50	1,323 mg/kg (rat)
75-05-8 acetonitrile		
Oral	LD50	1,320 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	3,587 mg/L (mouse)
2310-17-0 phosalone		
Oral	LD50	85 mg/kg (rat)
Dermal	LD50	1,000 mg/kg (rabbit)
500-28-7 chlorthion		
Oral	LD50	285 mg/kg (rat)
Dermal	LD50	1,500 mg/kg (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 15 (1X1 mL)

(Contd. of page 6)

- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxic effects:**
- **Remark:** Toxic for fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· European waste catalogue

HP 3	Flammable
HP 4	Irritant - skin irritation and eye damage
HP 6	Acute Toxicity
HP 14	Ecotoxic

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **Not Regulated, De minimus Quantities**

-

- **UN-Number**
- **ADR, IMDG, IATA**

UN1648

(Contd. on page 8)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 15 (1X1 mL)

(Contd. of page 7)

· UN proper shipping name · ADR · IMDG · IATA	1648 ACETONITRILE, ENVIRONMENTALLY HAZARDOUS ACETONITRILE, MARINE POLLUTANT ACETONITRILE

- Transport hazard class(es)
- ADR, IMDG



· Class · Label	3 Flammable liquids. 3

- IATA



· Class · Label	3 Flammable liquids. 3

- Packing group
- ADR, IMDG, IATA

II

- Environmental hazards:

Product contains environmentally hazardous substances:
aldicarb sulfone, phosalone

- Marine pollutant:

Symbol (fish and tree)

- Special marking (ADR):

Symbol (fish and tree)

- Special precautions for user

Warning: Flammable liquids.

- Danger code (Kemler):

33

- EMS Number:

F-E,S-D

- Stowage Category

B

- Stowage Code

SW2 Clear of living quarters.

- Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

- Transport/Additional information:

- ADR

- Limited quantities (LQ)

1L

- Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

- Transport category

2

- Tunnel restriction code

D/E

- IMDG

- Limited quantities (LQ)

1L

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 15 (1X1 mL)

(Contd. of page 8)

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· UN "Model Regulation":

UN 1648 ACETONITRILE, 3, II,
ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture
· Directive 2012/18/EU
· Named dangerous substances - ANNEX I None of the ingredients is listed.

· Seveso category

E2 Hazardous to the Aquatic Environment

P5c FLAMMABLE LIQUIDS

· Qualifying quantity (tonnes) for the application of lower-tier requirements 200 t

· Qualifying quantity (tonnes) for the application of upper-tier requirements 500 t

· REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

· Regulation (EU) No 649/2012

2310-17-0 phosalone

Annex I Part 1
Annex I Part 2

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

· Relevant phrases

H225 Highly flammable liquid and vapour.

H301 Toxic if swallowed.

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

· Department issuing SDS: Document Control / Regulatory

· Contact: regulatory@ultrasci.com

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

(Contd. on page 10)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 15 (1X1 mL)

(Contd. of page 9)

LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Skin Sens. 1: Skin sensitisation – Category 1
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

· *** Data compared to the previous version altered.**

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** GB/T 23211 Standard no. 16 (1X1 mL)
- **Part number:** TFP-16-1
- **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str.8
76337 Waldbronn
Germany
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS09 environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 2 H319 Causes serious eye irritation.

- **Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms**



GHS02



GHS07



GHS09

- **Signal word** Danger

- **Hazard-determining components of labelling:**
acetonitrile

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 16 (1X1 mL)

(Contd. of page 1)

· Hazard statements

- H225 Highly flammable liquid and vapour.
- H302 Harmful if swallowed.
- H319 Causes serious eye irritation.
- H411 Toxic to aquatic life with long lasting effects.

· Precautionary statements

- P101 If medical advice is needed, have product container or label at hand.
- P102 Keep out of reach of children.
- P103 Read label before use.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- P330 Rinse mouth.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
- P391 Collect spillage.
- P403+P235 Store in a well-ventilated place. Keep cool.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Additional information:

Contains fluazinam. May produce an allergic reaction.

· Other hazards
· Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

· Chemical characterisation: Mixtures

· **Description:** Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 75-05-8 EINECS: 200-835-2	acetonitrile ⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	99.822%
CAS: 16752-77-5 EINECS: 240-815-0	methomyl ⚠ Acute Tox. 2, H300; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	0.0127%
CAS: 52-68-6 EINECS: 200-149-3	trichlorfon (ISO) ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317	0.0127%

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 16 (1X1 mL)

CAS: 79622-59-6

fluazinam

(Contd. of page 2)

0.0127%

 Repr. 2, H361d;  Eye Dam. 1, H318;  Aquatic Acute 1, H400; Aquatic Chronic 1, H410;  Acute Tox. 4, H332; Skin Sens. 1A, H317

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

· **Description of first aid measures**

· **General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:** Immediately rinse with water.

· **After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:** Call for a doctor immediately.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

· **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

5 Firefighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:**

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **For safety reasons unsuitable extinguishing agents:** Water with full jet

· **Special hazards arising from the substance or mixture** No further relevant information available.

· **Advice for firefighters**

· **Protective equipment:** No special measures required.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

· **Environmental precautions:**

Do not allow product to reach sewage system or any water course.

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

· **Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 16 (1X1 mL)

See Section 13 for disposal information.

(Contd. of page 3)

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

Ingredients with limit values that require monitoring at the workplace:

75-05-8 acetonitrile

WEL	Short-term value: 102 mg/m ³ , 60 ppm
	Long-term value: 68 mg/m ³ , 40 ppm

- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
- **Respiratory protection:**
When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.
Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.
- **Protection of hands:**
Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 16 (1X1 mL)

(Contd. of page 4)

· Material of gloves

For normal use: nitrile rubber, 11-13 mil thickness

For direct contact with the chemical: butyl rubber, 12-15 mil thickness

· Penetration time of glove material

For normal use: nitrile rubber: 1 hour

For direct contact with the chemical: butyl rubber: > 4 hours

· Eye protection:


Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties
· General Information
· Appearance:
Form: Fluid

Colour: Colourless

· Odour: Aromatic

· Odour threshold: Not determined.

· pH-value: Not determined.

· Change in condition
Melting point/freezing point: -46 °C

Initial boiling point and boiling range: 81 °C

· Flash point: 2 °C

· Flammability (solid, gas): Not applicable.

· Ignition temperature: 525 °C

· Decomposition temperature: Not determined.

· Auto-ignition temperature: Product is not selfigniting.

· Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Explosion limits:
Lower: 4.4 Vol %

Upper: 16 Vol %

· Vapour pressure at 20 °C: 0 hPa

· Density at 20 °C: 0.786 g/cm³
· Relative density Not determined.

· Vapour density Not determined.

· Evaporation rate Not determined.

· Solubility in / Miscibility with water:

Not miscible or difficult to mix.

· Partition coefficient: n-octanol/water: Not determined.

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 16 (1X1 mL)

(Contd. of page 5)

· Viscosity:	
Dynamic at 20 °C:	0.39 mPas
Kinematic:	Not determined.
· Solvent content:	
VOC (EC)	0.00 %
· Solids content:	
Other information	0.0 %
	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**
Harmful if swallowed.

· LD/LC50 values relevant for classification:

ATE (Acute Toxicity Estimates)

Oral	LD50	1,322 mg/kg (rat)

75-05-8 acetonitrile

Oral	LD50	1,320 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	3,587 mg/L (mouse)

16752-77-5 methomyl

Oral	LD50	17 mg/kg (rat)
Dermal	LD50	5,880 mg/kg (rabbit)

52-68-6 trichlorfon (ISO)

Oral	LD50	882 mg/kg (rat)
Dermal	LD50	2,000 mg/kg (rat)

79622-59-6 fluazinam

Oral	LD50	>4,100 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)
Inhalative	LC50/4 h	>1,100 mg/L (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 16 (1X1 mL)

(Contd. of page 6)

- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxical effects:**
- **Remark:** Toxic for fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **European waste catalogue**

HP 3	Flammable
HP 4	Irritant - skin irritation and eye damage
HP 6	Acute Toxicity
HP 14	Ecotoxic

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

GB

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 16 (1X1 mL)

(Contd. of page 7)

14 Transport information

· Not Regulated, De minimus Quantities

-

· UN-Number

· ADR, IMDG, IATA

UN1648

· UN proper shipping name

· ADR

1648 ACETONITRILE, ENVIRONMENTALLY
HAZARDOUS

· IMDG

· IATA

ACETONITRILE, MARINE POLLUTANT
ACETONITRILE

· Transport hazard class(es)

· ADR, IMDG



· Class

3 Flammable liquids.

· Label

3

· IATA



· Class

3 Flammable liquids.

· Label

3

· Packing group

· ADR, IMDG, IATA

II

· Environmental hazards:

Product contains environmentally hazardous substances:
dimethylcarbamoyl chloride, trichlorfon (ISO)

· Marine pollutant:

Symbol (fish and tree)

· Special marking (ADR):

Symbol (fish and tree)

· Special precautions for user

Warning: Flammable liquids.

· Danger code (Kemler):

33

· EMS Number:

F-E,S-D

· Stowage Category

B

· Stowage Code

SW2 Clear of living quarters.

· Transport in bulk according to Annex II of Marpol
and the IBC Code

Not applicable.

· Transport/Additional information:

· ADR

· Limited quantities (LQ)

1L

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 16 (1X1 mL)

(Contd. of page 8)

· Transport category	2
· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1648 ACETONITRILE, 3, II, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category**
E2 Hazardous to the Aquatic Environment
P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 200 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

· Regulation (EU) No 649/2012		
16752-77-5	methomyl	Annex I Part 1
52-68-6	trichlorfon (ISO)	Annex I Part 1 Annex I Part 2

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- **Relevant phrases**
H225 Highly flammable liquid and vapour.
H300 Fatal if swallowed.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H361d Suspected of damaging the unborn child.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
- **Department issuing SDS:** Document Control / Regulatory
- **Contact:** regulatory@ultrasci.com

(Contd. on page 10)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 16 (1X1 mL)

(Contd. of page 9)

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 2: Acute toxicity – Category 2
Acute Tox. 4: Acute toxicity – Category 4
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Skin Sens. 1: Skin sensitisation – Category 1
Skin Sens. 1A: Skin sensitisation – Category 1A
Repr. 2: Reproductive toxicity – Category 2
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

· * Data compared to the previous version altered.

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** GB/T 23211 Standard no. 17 (1X1 mL)
- **Part number:** TFP-17-1
- **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str.8
76337 Waldbronn
Germany
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 2 H319 Causes serious eye irritation.

- **Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms**



GHS02



GHS07



GHS09

- **Signal word** Danger

(Contd. on page 2)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 17 (1X1 mL)

(Contd. of page 1)

· Hazard-determining components of labelling:

acetonitrile

· Hazard statements

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

H410 Very toxic to aquatic life with long lasting effects.

· Precautionary statements

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read label before use.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P330 Rinse mouth.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313 If eye irritation persists: Get medical advice/attention.

P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.

P391 Collect spillage.

P403+P235 Store in a well-ventilated place. Keep cool.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Other hazards
· Results of PBT and vPvB assessment
· PBT: Not applicable.

· vPvB: Not applicable.

3 Composition/information on ingredients

· Chemical characterisation: Mixtures
· Description: Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 75-05-8	acetonitrile	99.81%
EINECS: 200-835-2	 Flam. Liq. 2, H225;  Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	

(Contd. on page 3)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 17 (1X1 mL)

(Contd. of page 2)

CAS: 101463-69-8 ELINCS: 417-680-3	flufenoxuron ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H332	0.0127%
CAS: 2312-35-8 EINECS: 219-006-1	propargite (ISO) ⚠ Acute Tox. 3, H331; ⚠ Carc. 2, H351; ⚠ Eye Dam. 1, H318; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Skin Irrit. 2, H315	0.0127%
CAS: 21087-64-9 EINECS: 244-209-7	metribuzin (ISO) ⚠ Acute Tox. 3, H331; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302	0.0127%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 17 (1X1 mL)

(Contd. of page 3)

- Ensure adequate ventilation.
- **Reference to other sections**
- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:**
- Keep ignition sources away - Do not smoke.
- Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
- Keep container tightly sealed.
- Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

Ingredients with limit values that require monitoring at the workplace:

75-05-8 acetonitrile

WEL	Short-term value: 102 mg/m ³ , 60 ppm Long-term value: 68 mg/m ³ , 40 ppm

- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing
- Wash hands before breaks and at the end of work.
- Avoid contact with the eyes.
- Avoid contact with the eyes and skin.
- **Respiratory protection:**
- When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.
- Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.
- **Protection of hands:**
- Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 17 (1X1 mL)

(Contd. of page 4)

exceeding 4 hrs. Supplier recommendations should be followed.

· **Material of gloves**

For normal use: nitrile rubber, 11-13 mil thickness

For direct contact with the chemical: butyl rubber, 12-15 mil thickness

· **Penetration time of glove material**

For normal use: nitrile rubber: 1 hour

For direct contact with the chemical: butyl rubber: > 4 hours

· **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Fluid

Colour: Colourless

· **Odour:** Aromatic

· **Odour threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/freezing point: -46 °C

Initial boiling point and boiling range: 81 °C

· **Flash point:** 2 °C

· **Flammability (solid, gas):** Not applicable.

· **Ignition temperature:** 525 °C

· **Decomposition temperature:** Not determined.

· **Auto-ignition temperature:** Product is not selfigniting.

· **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· **Explosion limits:**

Lower: 4.4 Vol %

Upper: 16 Vol %

· **Vapour pressure at 20 °C:** 0 hPa

· **Density at 20 °C:** 0.786 g/cm³

· **Relative density** Not determined.

· **Vapour density** Not determined.

· **Evaporation rate** Not determined.

· **Solubility in / Miscibility with water:**

Not miscible or difficult to mix.

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 17 (1X1 mL)

(Contd. of page 5)

· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic at 20 °C:	0.39 mPas
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	0.0 %
VOC (EC)	0.01 %
· Solids content:	0.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**
Harmful if swallowed.

· LD/LC50 values relevant for classification:

ATE (Acute Toxicity Estimates)

Oral	LD50	1,323 mg/kg (rat)

75-05-8 acetonitrile

Oral	LD50	1,320 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	3,587 mg/L (mouse)

101463-69-8 flufenoxuron

Oral	LD50	>3,000 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)
Inhalative	LC50/4 h	5,000 mg/L (rat)

2312-35-8 propargite (ISO)

Oral	LD50	2,800 mg/kg (rat)
Dermal	LD50	10,300 mg/kg (rabbit)

21087-64-9 metribuzin (ISO)

Oral	LD50	1,090 mg/kg (rat)
Dermal	LD50	>20,000 mg/kg (rabbit)

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 17 (1X1 mL)

(Contd. of page 6)

Inhalative	LC50/4 h	>860 mg/L (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Very toxic for fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Very toxic for aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

European waste catalogue	
HP 3	Flammable
HP 4	Irritant - skin irritation and eye damage
HP 6	Acute Toxicity
HP 14	Ecotoxic

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 17 (1X1 mL)

(Contd. of page 7)

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **Not Regulated, De minimus Quantities**

-

· **UN-Number**

· **ADR, IMDG, IATA**

UN1648

· **UN proper shipping name**

· **ADR**

· **IMDG**

· **IATA**

1648 ACETONITRILE

ACETONITRILE, MARINE POLLUTANT

ACETONITRILE

· **Transport hazard class(es)**

· **ADR, IMDG**

· **Class**

· **Label**

3 Flammable liquids.

3

· **IATA**

· **Class**

· **Label**

3 Flammable liquids.

3

· **Packing group**

· **ADR, IMDG, IATA**

II

· **Environmental hazards:**

Product contains environmentally hazardous substances:
clofentezine, flufenoxuron

· **Marine pollutant:**

Symbol (fish and tree)

· **Special marking (ADR):**

Symbol (fish and tree)

· **Special precautions for user**

Warning: Flammable liquids.

· **Danger code (Kemler):**

33

· **EMS Number:**

F-E,S-D

· **Stowage Category**

B

· **Stowage Code**

SW2 Clear of living quarters.

· **Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 17 (1X1 mL)

(Contd. of page 8)

· Transport/Additional information:
· ADR
· Limited quantities (LQ)

1L

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· Transport category

2

· Tunnel restriction code

D/E

· IMDG
· Limited quantities (LQ)

1L

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· UN "Model Regulation":

UN 1648 ACETONITRILE, 3, II

15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture
· Directive 2012/18/EU
· Named dangerous substances - ANNEX I None of the ingredients is listed.

· Seveso category

E1 Hazardous to the Aquatic Environment

P5c FLAMMABLE LIQUIDS

· Qualifying quantity (tonnes) for the application of lower-tier requirements 100 t

· Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t

· REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

· Regulation (EU) No 649/2012

101463-69-8	flufenoxuron	Annex I Part 1 Annex I Part 2
2312-35-8	propargite (ISO)	Annex I Part 1 Annex I Part 2

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

· Relevant phrases

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H331 Toxic if inhaled.

H332 Harmful if inhaled.

(Contd. on page 10)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 17 (1X1 mL)

(Contd. of page 9)

H351 Suspected of causing cancer.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

· **Department issuing SDS:** Document Control / Regulatory· **Contact:** regulatory@ultrasci.com· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids – Category 2

Acute Tox. 4: Acute toxicity – Category 4

Acute Tox. 3: Acute toxicity – Category 3

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Carc. 2: Carcinogenicity – Category 2

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

· *** Data compared to the previous version altered.**

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** GB/T 23211 Standard no. 18 (1X1 mL)
- **Part number:** TFP-18-1
- **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str.8
76337 Waldbronn
Germany
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS08 health hazard

Repr. 1B H360D May damage the unborn child.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.
Eye Irrit. 2 H319 Causes serious eye irritation.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS02



GHS07



GHS08

- **Signal word** Danger

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 18 (1X1 mL)

(Contd. of page 1)

· Hazard-determining components of labelling:

acetonitrile
coumatetralyl

· Hazard statements

H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.
H319 Causes serious eye irritation.
H360D May damage the unborn child.
H412 Harmful to aquatic life with long lasting effects.

· Precautionary statements

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P330 Rinse mouth.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
P403+P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Other hazards
· Results of PBT and vPvB assessment

· **PBT:** Not applicable.
· **vPvB:** Not applicable.

3 Composition/information on ingredients

· Chemical characterisation: Mixtures

· **Description:** Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 75-05-8	acetonitrile	99.81%
EINECS: 200-835-2	 Flam. Liq. 2, H225;  Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 18 (1X1 mL)

(Contd. of page 2)

CAS: 63-25-2 EINECS: 200-555-0	carbaryl (ISO) ☠ Carc. 2, H351; ☠ Aquatic Acute 1, H400; ☠ Acute Tox. 4, H302; Acute Tox. 4, H332	0.0127%
CAS: 1689-83-4 EINECS: 216-881-1	ioxynil (ISO) and its salts ☠ Acute Tox. 3, H301; Acute Tox. 3, H331; ☠ Repr. 2, H361d; STOT RE 2, H373; ☠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ☠ Acute Tox. 4, H312; Eye Irrit. 2, H319	0.0127%
CAS: 25311-71-1 EINECS: 246-814-1	isofenphos (ISO) ☠ Acute Tox. 3, H301; Acute Tox. 3, H311; ☠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	0.0127%
CAS: 5836-29-3 EINECS: 227-424-0	coumatetralyl ☠ Acute Tox. 2, H300; Acute Tox. 3, H311; Acute Tox. 2, H330; ☠ Repr. 1B, H360D; STOT RE 1, H372; ☠ Aquatic Chronic 1, H410	0.0127%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

· **Description of first aid measures**

· **General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:** Immediately rinse with water.

· **After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:** Call for a doctor immediately.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

· **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

5 Firefighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:**

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **For safety reasons unsuitable extinguishing agents:** Water with full jet

· **Special hazards arising from the substance or mixture** No further relevant information available.

· **Advice for firefighters**

· **Protective equipment:** No special measures required.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

· **Environmental precautions:**

Do not allow product to reach sewage system or any water course.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 18 (1X1 mL)

(Contd. of page 3)

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

· Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

· Handling:
· Precautions for safe handling Open and handle receptacle with care.

· Information about fire - and explosion protection:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Keep respiratory protective device available.

· Conditions for safe storage, including any incompatibilities
· Storage:
· Requirements to be met by storerooms and receptacles: Store in a cool location.

· Information about storage in one common storage facility: Not required.

· Further information about storage conditions:

Keep container tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

· Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

· Additional information about design of technical facilities: No further data; see item 7.

· Control parameters
· Ingredients with limit values that require monitoring at the workplace:
75-05-8 acetonitrile

WEL Short-term value: 102 mg/m³, 60 ppm

Long-term value: 68 mg/m³, 40 ppm

· Additional information: The lists valid during the making were used as basis.

· Exposure controls
· Personal protective equipment:
· General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

· Respiratory protection:

When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 18 (1X1 mL)

(Contd. of page 4)

needed.

Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

· **Protection of hands:**

Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

· **Material of gloves**

For normal use: nitrile rubber, 11-13 mil thickness

For direct contact with the chemical: butyl rubber, 12-15 mil thickness

· **Penetration time of glove material**

For normal use: nitrile rubber: 1 hour

For direct contact with the chemical: butyl rubber: > 4 hours

· **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Fluid

Colour: Colourless

· **Odour:** Aromatic

· **Odour threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/freezing point: -46 °C

Initial boiling point and boiling range: 81 °C

· **Flash point:** 2 °C

· **Flammability (solid, gas):** Not applicable.

· **Ignition temperature:** 525 °C

· **Decomposition temperature:** Not determined.

· **Auto-ignition temperature:** Product is not selfigniting.

· **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· **Explosion limits:**

Lower: 4.4 Vol %

Upper: 16 Vol %

· **Vapour pressure at 20 °C:** 0 hPa

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 18 (1X1 mL)

(Contd. of page 5)

· Density at 20 °C:	0.786 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Not miscible or difficult to mix.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic at 20 °C:	0.39 mPas
Kinematic:	Not determined.
· Solvent content:	
VOC (EC)	0.00 %
· Solids content:	0.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**
Harmful if swallowed.

· LD/LC50 values relevant for classification:

ATE (Acute Toxicity Estimates)

Oral	LD50	1,323 mg/kg (rat)

75-05-8 acetonitrile

Oral	LD50	1,320 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	3,587 mg/L (mouse)

63-25-2 carbaryl (ISO)

Oral	LD50	230 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)

1689-83-4 ioxynil (ISO) and its salts

Oral	LD50	110 mg/kg (rat)

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 18 (1X1 mL)

(Contd. of page 6)

Dermal	LD50	809 mg/kg (rat)
25311-71-1 isofenphos (ISO)		
Oral	LD50	21.1 mg/kg (rat)
Dermal	LD50	162 mg/kg (rabbit)
Inhalative	LC50/4 h	144 mg/L (rat)
5836-29-3 coumatetralyl		
Oral	LD50	30 mg/kg (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity**
May damage the unborn child.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Harmful to aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 18 (1X1 mL)

(Contd. of page 7)

· European waste catalogue

HP 3	Flammable
HP 4	Irritant - skin irritation and eye damage
HP 6	Acute Toxicity
HP 14	Ecotoxic

· Uncleaned packaging:
· Recommendation: Disposal must be made according to official regulations.

14 Transport information

· Not Regulated, De minimus Quantities

-

· UN-Number
· ADR, IMDG, IATA

UN1648

· UN proper shipping name
· ADR

1648 ACETONITRILE

· IMDG, IATA

ACETONITRILE

· Transport hazard class(es)
· ADR, IMDG, IATA

· Class

3 Flammable liquids.

· Label

3

· Packing group
· ADR, IMDG, IATA

II

· Environmental hazards:

Not applicable.

· Special precautions for user

Warning: Flammable liquids.

· Danger code (Kemler):

33

· EMS Number:

F-E,S-D

· Stowage Category

B

· Stowage Code

SW2 Clear of living quarters.

· Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

· Transport/Additional information:
· ADR
· Limited quantities (LQ)

1L

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· Transport category

2

(Contd. on page 9)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 18 (1X1 mL)

(Contd. of page 8)

· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1648 ACETONITRILE, 3, II

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category P5c** FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 30

· **Regulation (EU) No 649/2012**

63-25-2 carbaryl (ISO)

Annex I Part 1

Annex I Part 2

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

· **Relevant phrases**

- H225 Highly flammable liquid and vapour.
- H300 Fatal if swallowed.
- H301 Toxic if swallowed.
- H302 Harmful if swallowed.
- H311 Toxic in contact with skin.
- H312 Harmful in contact with skin.
- H319 Causes serious eye irritation.
- H330 Fatal if inhaled.
- H331 Toxic if inhaled.
- H332 Harmful if inhaled.
- H351 Suspected of causing cancer.
- H360D May damage the unborn child.
- H361d Suspected of damaging the unborn child.
- H372 Causes damage to organs through prolonged or repeated exposure.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.

- **Department issuing SDS:** Document Control / Regulatory

- **Contact:** regulatory@ultrasci.com

(Contd. on page 10)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 18 (1X1 mL)

(Contd. of page 9)

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 2: Acute toxicity – Category 2
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Carc. 2: Carcinogenicity – Category 2
Repr. 1B: Reproductive toxicity – Category 1B
Repr. 2: Reproductive toxicity – Category 2
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

· * Data compared to the previous version altered.

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** GB/T 23211 Standard no. 19 (1X1 mL)
- **Part number:** TFP-19-1
- **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str.8
76337 Waldbronn
Germany
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 2 H319 Causes serious eye irritation.

- **Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms**



GHS02 GHS07

- **Signal word** Danger

- **Hazard-determining components of labelling:**

acetonitrile

- **Hazard statements**

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 19 (1X1 mL)

(Contd. of page 1)

· Precautionary statements

- P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P330 Rinse mouth.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical advice/attention.
P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
P403+P235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Other hazards

· Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

· Chemical characterisation: Mixtures

- **Description:** Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 75-05-8 EINECS: 200-835-2	acetonitrile ⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	99.81%
CAS: 94361-06-5	cyproconazole(ISO) ⚠ Acute Tox. 3, H301; ⚠ Repr. 1B, H360D; STOT RE 2, H373; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	0.0127%
CAS: 133-07-3 EINECS: 205-088-6	folpet (ISO) ⚠ Carc. 2, H351; ⚠ Aquatic Acute 1, H400; ⚠ Acute Tox. 4, H332; Eye Irrit. 2, H319; Skin Sens. 1, H317	0.0127%
CAS: 210880-92-5	clothianidin ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302	0.0127%

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

GB

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 19 (1X1 mL)

(Contd. of page 2)

4 First aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 19 (1X1 mL)

(Contd. of page 3)

- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
 - Keep container tightly sealed.
 - Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

Ingredients with limit values that require monitoring at the workplace:

75-05-8 acetonitrile

WEL	Short-term value: 102 mg/m ³ , 60 ppm Long-term value: 68 mg/m ³ , 40 ppm

- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
 - Keep away from foodstuffs, beverages and feed.
 - Immediately remove all soiled and contaminated clothing
 - Wash hands before breaks and at the end of work.
 - Avoid contact with the eyes.
 - Avoid contact with the eyes and skin.
- **Respiratory protection:**
 - When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.
 - Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.
- **Protection of hands:**
 - Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.
- **Material of gloves**
 - For normal use: nitrile rubber, 11-13 mil thickness
 - For direct contact with the chemical: butyl rubber, 12-15 mil thickness
- **Penetration time of glove material**
 - For normal use: nitrile rubber: 1 hour
 - For direct contact with the chemical: butyl rubber: > 4 hours

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 19 (1X1 mL)

(Contd. of page 4)

· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Fluid
Colour:	Colourless
· Odour:	Aromatic
· Odour threshold:	Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/freezing point:	-46 °C
Initial boiling point and boiling range:	81 °C

· Flash point: 2 °C

· Flammability (solid, gas): Not applicable.

· Ignition temperature: 525 °C

· Decomposition temperature: Not determined.

· Auto-ignition temperature: Product is not selfigniting.

· Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Explosion limits:

Lower:	4.4 Vol %
Upper:	16 Vol %

· Vapour pressure at 20 °C: 0 hPa

· Density at 20 °C: 0.786 g/cm³

· Relative density: Not determined.

· Vapour density: Not determined.

· Evaporation rate: Not determined.

· Solubility in / Miscibility with water:

Not miscible or difficult to mix.

· Partition coefficient: n-octanol/water: Not determined.

· Viscosity:

Dynamic at 20 °C:	0.39 mPas
Kinematic:	Not determined.

· Solvent content:

Organic solvents: 0.0 %

(Contd. on page 6)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 19 (1X1 mL)

(Contd. of page 5)

VOC (EC)	0.01 %
Solids content:	0.0 %
Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**
Harmful if swallowed.

· **LD/LC50 values relevant for classification:**

ATE (Acute Toxicity Estimates)

Oral	LD50	1,323 mg/kg (rat)

75-05-8 acetonitrile

Oral	LD50	1,320 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	3,587 mg/L (mouse)

94361-06-5 cyproconazole(ISO)

Oral	LD50	1,020 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)
Inhalative	LC50/4 h	>5,650 mg/L (rat)

133-07-3 folpet (ISO)

Dermal	LD50	>22,600 mg/kg (rabbit)

210880-92-5 clothianidin

Oral	LD50	>5,000 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)
Inhalative	LC50/4 h	>5,538 mg/L (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 19 (1X1 mL)

(Contd. of page 6)

- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **European waste catalogue**

HP 3	Flammable
HP 4	Irritant - skin irritation and eye damage
HP 6	Acute Toxicity

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **Not Regulated, De minimus Quantities**

-

· **UN-Number**

· **ADR, IMDG, IATA**

UN1648

· **UN proper shipping name**

· **ADR**

· **IMDG, IATA**

1648 ACETONITRILE

ACETONITRILE

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 19 (1X1 mL)

(Contd. of page 7)

· **Transport hazard class(es)**

· **ADR, IMDG, IATA**

· **Class**

3 Flammable liquids.

· **Label**

3

· **Packing group**

· **ADR, IMDG, IATA**

II

· **Environmental hazards:**

Not applicable.

· **Special precautions for user**

Warning: Flammable liquids.

· **Danger code (Kemler):**

33

· **EMS Number:**

F-E,S-D

· **Stowage Category**

B

· **Stowage Code**

SW2 Clear of living quarters.

· **Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

· **Transport/Additional information:**

· **ADR**

· **Limited quantities (LQ)**

1L

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **Transport category**

2

· **Tunnel restriction code**

D/E

· **IMDG**

· **Limited quantities (LQ)**

1L

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **UN "Model Regulation":**

UN 1648 ACETONITRILE, 3, II

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Directive 2012/18/EU**

· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **Seveso category P5c** FLAMMABLE LIQUIDS

· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t

· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t

· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 19 (1X1 mL)

(Contd. of page 8)

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

· **Relevant phrases**

- H225 Highly flammable liquid and vapour.
- H301 Toxic if swallowed.
- H302 Harmful if swallowed.
- H312 Harmful in contact with skin.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H351 Suspected of causing cancer.
- H360D May damage the unborn child.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.

· **Department issuing SDS:** Document Control / Regulatory· **Contact:** regulatory@ultrasci.com· **Abbreviations and acronyms:**

- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- VOC: Volatile Organic Compounds (USA, EU)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Flam. Liq. 2: Flammable liquids – Category 2
- Acute Tox. 3: Acute toxicity – Category 3
- Acute Tox. 4: Acute toxicity – Category 4
- Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
- Skin Sens. 1: Skin sensitisation – Category 1
- Carc. 2: Carcinogenicity – Category 2
- Repr. 1B: Reproductive toxicity – Category 1B
- STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
- Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
- Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

· *** Data compared to the previous version altered.**

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

1 Identification of the substance/mixture and of the company/undertaking

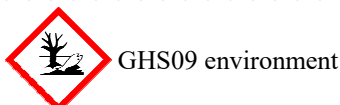
- **Product identifier**
- **Trade name:** GB/T 23211 Standard no. 20 (1X1ML)
- **Part number:** TFP-20
- **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str.8
76337 Waldbronn
Germany
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



Flam. Liq. 2 H225 Highly flammable liquid and vapour.



Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



Acute Tox. 4 H302 Harmful if swallowed.
Eye Irrit. 2 H319 Causes serious eye irritation.

- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



- **Signal word** Danger
- **Hazard-determining components of labelling:**
acetonitrile

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 20 (1X1ML)

(Contd. of page 1)

· Hazard statements

- H225 Highly flammable liquid and vapour.
- H302 Harmful if swallowed.
- H319 Causes serious eye irritation.
- H411 Toxic to aquatic life with long lasting effects.

· Precautionary statements

- P101 If medical advice is needed, have product container or label at hand.
- P102 Keep out of reach of children.
- P103 Read label before use.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- P330 Rinse mouth.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
- P391 Collect spillage.
- P403+P235 Store in a well-ventilated place. Keep cool.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Other hazards
· Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

· Chemical characterisation: Mixtures

- **Description:** Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 75-05-8 EINECS: 200-835-2	acetonitrile ⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	99.81%
CAS: 41198-08-7 EINECS: 255-255-2	O-(4-bromo-2-chlorophenyl) O-ethyl S-propyl phosphorothioate ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332	0.0127%
CAS: 834-12-8 EINECS: 212-634-7	ametryn (ISO) ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332	0.0127%

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 20 (1X1ML)

(Contd. of page 2)

CAS: 24017-47-8 EINECS: 245-986-5	triazophos (ISO) ☠ Acute Tox. 3, H301; Acute Tox. 3, H331; ☠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ☠ Acute Tox. 4, H312	0.0127%
CAS: 153719-23-4 ELINCS: 428-650-4	thiamethoxam ☠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ☠ Acute Tox. 4, H302	0.0127%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 20 (1X1ML)

See Section 13 for disposal information.

(Contd. of page 3)

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:**
 - Keep ignition sources away - Do not smoke.
 - Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
 - Keep container tightly sealed.
 - Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

Ingredients with limit values that require monitoring at the workplace:

75-05-8 acetonitrile

WEL	Short-term value: 102 mg/m ³ , 60 ppm
	Long-term value: 68 mg/m ³ , 40 ppm

- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
 - Keep away from foodstuffs, beverages and feed.
 - Immediately remove all soiled and contaminated clothing
 - Wash hands before breaks and at the end of work.
 - Avoid contact with the eyes.
 - Avoid contact with the eyes and skin.
- **Respiratory protection:**
 - When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.
 - Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.
- **Protection of hands:**
 - Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 20 (1X1ML)

(Contd. of page 4)

· Material of gloves

For normal use: nitrile rubber, 11-13 mil thickness

For direct contact with the chemical: butyl rubber, 12-15 mil thickness

· Penetration time of glove material

For normal use: nitrile rubber: 1 hour

For direct contact with the chemical: butyl rubber: > 4 hours

· Eye protection:


Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties
· General Information
· Appearance:
Form: Fluid

Colour: Colourless

· Odour: Aromatic

· Odour threshold: Not determined.

· pH-value: Not determined.

· Change in condition
Melting point/freezing point: -46 °C

Initial boiling point and boiling range: 81 °C

· Flash point: 2 °C

· Flammability (solid, gas): Not applicable.

· Ignition temperature: 525 °C

· Decomposition temperature: Not determined.

· Auto-ignition temperature: Product is not selfigniting.

· Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Explosion limits:
Lower: 4.4 Vol %

Upper: 16 Vol %

· Vapour pressure at 20 °C: 0 hPa

· Density at 20 °C: 0.786 g/cm³
· Relative density Not determined.

· Vapour density Not determined.

· Evaporation rate Not determined.

· Solubility in / Miscibility with water:

Not miscible or difficult to mix.

· Partition coefficient: n-octanol/water: Not determined.

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 20 (1X1ML)

(Contd. of page 5)

· Viscosity:	
Dynamic at 20 °C:	0.39 mPas
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	0.0 %
VOC (EC)	0.01 %
· Solids content:	
Other information	0.0 %
	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**
Harmful if swallowed.

· **LD/LC50 values relevant for classification:**

ATE (Acute Toxicity Estimates)

Oral	LD50	1,323 mg/kg (rat)

75-05-8 acetonitrile

Oral	LD50	1,320 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	3,587 mg/L (mouse)

41198-08-7 O-(4-bromo-2-chlorophenyl) O-ethyl S-propyl phosphorothioate

Oral	LD50	620.5 mg/kg (rat)
Inhalative	LC50/4 h	>2.2 mg/L (rat)

834-12-8 ametryn (ISO)

Oral	LD50	1,626 mg/kg (rat)
Dermal	LD50	8,160 mg/kg (rabbit)
Inhalative	LC50/4 h	>2.22 mg/L (rat)

24017-47-8 triazophos (ISO)

Oral	LD50	57 mg/kg (rat)
Dermal	LD50	1,100 mg/kg (rat)
Inhalative	LC50/4 h	28 mg/L (rat)

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 20 (1X1ML)

(Contd. of page 6)

153719-23-4 thiamethoxam

Oral	LD50	1,563 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)
Inhalative	LC50/4 h	>3,720 mg/L (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Toxic for fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· European waste catalogue	
HP 3	Flammable
HP 4	Irritant - skin irritation and eye damage
HP 6	Acute Toxicity

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 20 (1X1ML)

(Contd. of page 7)

HP 14 Ecotoxic

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **Not Regulated, De minimus Quantities**

-

· **UN-Number**

· **ADR, IMDG, IATA**

UN1648

· **UN proper shipping name**

· **ADR**

1648 ACETONITRILE, ENVIRONMENTALLY
HAZARDOUS

· **IMDG**

· **IATA**

ACETONITRILE, MARINE POLLUTANT
ACETONITRILE

· **Transport hazard class(es)**

· **ADR, IMDG**

· **Class**

3 Flammable liquids.

· **Label**

3

· **IATA**

· **Class**

3 Flammable liquids.

· **Label**

3

· **Packing group**

· **ADR, IMDG, IATA**

II

· **Environmental hazards:**

Product contains environmentally hazardous substances:
benalaxyl, O-(4-bromo-2-chlorophenyl) O-ethyl S-propyl
phosphorothioate

· **Marine pollutant:**

Symbol (fish and tree)

· **Special marking (ADR):**

Symbol (fish and tree)

· **Special precautions for user**

Warning: Flammable liquids.

· **Danger code (Kemler):**

33

· **EMS Number:**

F-E,S-D

· **Stowage Category**

B

· **Stowage Code**

SW2 Clear of living quarters.

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 20 (1X1ML)

(Contd. of page 8)

· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category	2
· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1648 ACETONITRILE, 3, II, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category**
E2 Hazardous to the Aquatic Environment
P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 200 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

· **Regulation (EU) No 649/2012**

834-12-8	ametryn (ISO)	Annex I Part 1
24017-47-8	triazophos (ISO)	Annex I Part 1

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- **Relevant phrases**
H225 Highly flammable liquid and vapour.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.

(Contd. on page 10)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 20 (1X1ML)

(Contd. of page 9)

H332 Harmful if inhaled.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

· **Department issuing SDS:** Document Control / Regulatory· **Contact:** regulatory@ultraschi.com· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids – Category 2

Acute Tox. 3: Acute toxicity – Category 3

Acute Tox. 4: Acute toxicity – Category 4

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

· *** Data compared to the previous version altered.**

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** GB/T 23211 Standard no. 21 (1X1ML)
- **Part number:** TFP-21
- **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str.8
76337 Waldbronn
Germany
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS08 health hazard

STOT SE 1 H370 Causes damage to organs.



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 2 H319 Causes serious eye irritation.

- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.

(Contd. on page 2)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 21 (1X1ML)

(Contd. of page 1)

· Hazard pictograms

· Signal word Danger
· Hazard-determining components of labelling:

acetonitrile
methanol

· Hazard statements

H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.
H319 Causes serious eye irritation.
H370 Causes damage to organs.
H410 Very toxic to aquatic life with long lasting effects.

· Precautionary statements

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read label before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P311	IF exposed or concerned: Call a POISON CENTER/doctor.
P321	Specific treatment (see on this label).
P330	Rinse mouth.
P337+P313	If eye irritation persists: Get medical advice/attention.
P370+P378	In case of fire: Use for extinction: CO ₂ , powder or water spray.
P391	Collect spillage.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· Other hazards
· Results of PBT and vPvB assessment
· PBT: Not applicable.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 21 (1X1ML)

· **vPvB:** Not applicable.

(Contd. of page 2)

3 Composition/information on ingredients

· **Chemical characterisation: Mixtures**

· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 75-05-8 EINECS: 200-835-2	acetonitrile Flam. Liq. 2, H225; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	89.794%
CAS: 67-56-1 EINECS: 200-659-6	methanol Flam. Liq. 2, H225; Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; STOT SE 1, H370	10.041%
CAS: 80844-07-1 ELINCS: 407-980-2	etofenprox Aquatic Acute 1, H400; Aquatic Chronic 1, H410	0.0127%
CAS: 5598-13-0 EINECS: 227-011-5	chlorpyrifos-methyl Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302; Skin Sens. 1, H317	0.0127%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

· **Description of first aid measures**

· **General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:** Immediately rinse with water.

· **After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:** Call for a doctor immediately.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

· **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

5 Firefighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:**

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **For safety reasons unsuitable extinguishing agents:** Water with full jet

· **Special hazards arising from the substance or mixture**

During heating or in case of fire poisonous gases are produced.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 21 (1X1ML)

(Contd. of page 3)

- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 21 (1X1ML)

(Contd. of page 4)

· Control parameters

· Ingredients with limit values that require monitoring at the workplace:

75-05-8 acetonitrile

WEL	Short-term value: 102 mg/m ³ , 60 ppm
	Long-term value: 68 mg/m ³ , 40 ppm

67-56-1 methanol

WEL	Short-term value: 333 mg/m ³ , 250 ppm
	Long-term value: 266 mg/m ³ , 200 ppm
	Sk

· **Additional information:** The lists valid during the making were used as basis.

· Exposure controls

· Personal protective equipment:

· General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.

· Respiratory protection:

When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.

Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

· Protection of hands:

Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

· Material of gloves

For normal use: nitrile rubber, 11-13 mil thickness
For direct contact with the chemical: butyl rubber, 12-15 mil thickness

· Penetration time of glove material

For normal use: nitrile rubber: 1 hour
For direct contact with the chemical: butyl rubber: > 4 hours

· Eye protection:



Tightly sealed goggles

*

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form: Fluid

(Contd. on page 6)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 21 (1X1ML)

(Contd. of page 5)

· Colour:	According to product specification
· Odour:	Characteristic
· Odour threshold:	Not determined.
· pH-value:	Not determined.
· Change in condition	
Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	64.7 °C
· Flash point:	2 °C
· Flammability (solid, gas):	Not applicable.
· Ignition temperature:	455 °C
· Decomposition temperature:	Not determined.
· Auto-ignition temperature:	Product is not selfigniting.
· Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· Explosion limits:	
Lower:	4.4 Vol %
Upper:	44 Vol %
· Vapour pressure at 20 °C:	100 hPa
· Density:	Not determined.
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Not miscible or difficult to mix.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	10.1 %
VOC (EC)	10.05 %
· Solids content:	0.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.

(Contd. on page 7)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 21 (1X1ML)

(Contd. of page 6)

· **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

· **Information on toxicological effects**

· **Acute toxicity**

Harmful if swallowed.

· **LD/LC50 values relevant for classification:**
ATE (Acute Toxicity Estimates)

Oral	LD50	1,470 mg/kg (rat)
Inhalative	LC50/4 h	29.9 mg/L

75-05-8 acetonitrile

Oral	LD50	1,320 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	3,587 mg/L (mouse)

67-56-1 methanol

Oral	LD50	5,628 mg/kg (rat)
Dermal	LD50	15,800 mg/kg (rabbit)

80844-07-1 etofenprox

Oral	LD50	>42,800 mg/kg (rat)
Dermal	LD50	>2,140 mg/kg (rat)

5598-13-0 chlorpyrifos-methyl

Oral	LD50	1,828 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	>670 mg/L (rat)

· **Primary irritant effect:**

· **Skin corrosion/irritation** Based on available data, the classification criteria are not met.

· **Serious eye damage/irritation**

Causes serious eye irritation.

· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

· **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.

· **Carcinogenicity** Based on available data, the classification criteria are not met.

· **Reproductive toxicity** Based on available data, the classification criteria are not met.

· **STOT-single exposure**

Causes damage to organs.

· **STOT-repeated exposure** Based on available data, the classification criteria are not met.

· **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

· **Toxicity**

· **Aquatic toxicity:** No further relevant information available.

· **Persistence and degradability** No further relevant information available.

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 21 (1X1ML)

(Contd. of page 7)

- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxical effects:**
- **Remark:** Very toxic for fish
- **Additional ecological information:**
- **General notes:**
 Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
 Do not allow product to reach ground water, water course or sewage system.
 Danger to drinking water if even small quantities leak into the ground.
 Also poisonous for fish and plankton in water bodies.
 Very toxic for aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
 Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **European waste catalogue**

HP 3	Flammable
HP 4	Irritant - skin irritation and eye damage
HP 5	Specific Target Organ Toxicity (STOT)/Aspiration Toxicity
HP 6	Acute Toxicity
HP 14	Ecotoxic

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **Not Regulated, De minimus Quantities**

-

· **UN-Number**

· **ADR, IMDG, IATA**

UN1992

· **UN proper shipping name**

· **ADR**

1992 FLAMMABLE LIQUID, TOXIC, N.O.S.
 (ACETONITRILE, METHANOL),
 ENVIRONMENTALLY HAZARDOUS
 FLAMMABLE LIQUID, TOXIC, N.O.S.
 (ACETONITRILE, METHANOL), MARINE
 POLLUTANT

· **IMDG**

· **IATA**

FLAMMABLE LIQUID, TOXIC, N.O.S.
 (ACETONITRILE, METHANOL)

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 21 (1X1ML)

(Contd. of page 8)

· Transport hazard class(es)
· ADR

· Class

3 Flammable liquids.

· Label

3+6.1

· IMDG

· Class

3 Flammable liquids.

· Label

3/6.1

· IATA

· Class

3 Flammable liquids.

· Label

3 (6.1)

· Packing group
· ADR, IMDG, IATA

II

· Environmental hazards:

Product contains environmentally hazardous substances:
etofenprox, chlorpyrifos-methyl

· Marine pollutant:

Symbol (fish and tree)

· Special marking (ADR):

Symbol (fish and tree)

· Special precautions for user

Warning: Flammable liquids.

· Danger code (Kemler):

336

· EMS Number:

F-E,S-D

· Stowage Category

B

· Stowage Code

SW2 Clear of living quarters.

· Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

· Transport/Additional information:
· ADR
· Limited quantities (LQ)

1L

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· Transport category

2

· Tunnel restriction code

D/E

(Contd. on page 10)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 21 (1X1ML)

(Contd. of page 9)

· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1992 FLAMMABLE LIQUID, TOXIC, N.O.S. (ACETONITRILE, METHANOL), 3 (6.1), II, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category**
H3 STOT SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE
E1 Hazardous to the Aquatic Environment
P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 50 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 69
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- **Relevant phrases**
H225 Highly flammable liquid and vapour.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H312 Harmful in contact with skin.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H332 Harmful if inhaled.
H370 Causes damage to organs.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
- **Department issuing SDS:** Document Control / Regulatory
- **Contact:** regulatory@ultrasci.com
- **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances

(Contd. on page 11)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 21 (1X1ML)

(Contd. of page 10)

ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Skin Sens. 1: Skin sensitisation – Category 1
STOT SE 1: Specific target organ toxicity (single exposure) – Category 1
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

· * **Data compared to the previous version altered.**

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** GB/T 23211 Standard no. 22 (1X1ML)
- **Part number:** TFP-22
- **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str.8
76337 Waldbronn
Germany
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 2 H319 Causes serious eye irritation.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

- **Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms**



GHS02 GHS07

- **Signal word** Danger

- **Hazard-determining components of labelling:**

acetonitrile

- **Hazard statements**

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 22 (1X1ML)

(Contd. of page 1)

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

- P101 If medical advice is needed, have product container or label at hand.
- P102 Keep out of reach of children.
- P103 Read label before use.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- P330 Rinse mouth.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
- P403+P235 Store in a well-ventilated place. Keep cool.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards
Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

Chemical characterisation: Mixtures
Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:

CAS: 75-05-8	acetonitrile	99.835%
EINECS: 200-835-2	 Flam. Liq. 2, H225;  Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	
CAS: 31218-83-4	trans-isopropyl-3-[[[(ethylamino)-methoxyfosfinothioyl]oxy]crotonate	0.0127%
EINECS: 250-517-2	 Acute Tox. 3, H301; Acute Tox. 3, H311;  Aquatic Acute 1, H400; Aquatic Chronic 1, H410	

Additional information: For the wording of the listed hazard phrases refer to section 16.

GB

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 22 (1X1ML)

(Contd. of page 2)

4 First aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 22 (1X1ML)

(Contd. of page 3)

- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

Ingredients with limit values that require monitoring at the workplace:	
75-05-8 acetonitrile	
WEL	Short-term value: 102 mg/m ³ , 60 ppm Long-term value: 68 mg/m ³ , 40 ppm

- **Additional information:** The lists valid during the making were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.

- **Respiratory protection:**

When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.

Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

- **Protection of hands:**

Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

- **Material of gloves**

For normal use: nitrile rubber, 11-13 mil thickness
For direct contact with the chemical: butyl rubber, 12-15 mil thickness

- **Penetration time of glove material**

For normal use: nitrile rubber: 1 hour
For direct contact with the chemical: butyl rubber: > 4 hours

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 22 (1X1ML)

(Contd. of page 4)

· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Fluid
Colour:	Colourless
Odour:	Aromatic
Odour threshold:	Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/freezing point:	-46 °C
Initial boiling point and boiling range:	81 °C

· Flash point: 2 °C

· Flammability (solid, gas): Not applicable.

· Ignition temperature: 525 °C

· Decomposition temperature: Not determined.

· Auto-ignition temperature: Product is not selfigniting.

· Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Explosion limits:

Lower:	4.4 Vol %
Upper:	16 Vol %

· Vapour pressure at 20 °C: 0 hPa

· Density at 20 °C: 0.786 g/cm³

· Relative density: Not determined.

· Vapour density: Not determined.

· Evaporation rate: Not determined.

· Solubility in / Miscibility with water:

Not miscible or difficult to mix.

· Partition coefficient: n-octanol/water: Not determined.

· Viscosity:

Dynamic at 20 °C:	0.39 mPas
Kinematic:	Not determined.

· Solvent content:

Organic solvents: 0.0 %

(Contd. on page 6)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 22 (1X1ML)

(Contd. of page 5)

VOC (EC)	0.01 %
Solids content:	0.0 %
Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**
Harmful if swallowed.

· **LD/LC50 values relevant for classification:**

ATE (Acute Toxicity Estimates)

Oral	LD50	1,322 mg/kg (rat)

75-05-8 acetonitrile

Oral	LD50	1,320 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	3,587 mg/L (mouse)

31218-83-4 trans-isopropyl-3-[(ethylamino)-methoxyfosfinothioyl]oxy|crotonate

Dermal	LD50	564 mg/kg (rat)
Inhalative	LC50/4 h	690 mg/L (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

GB

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 22 (1X1ML)

(Contd. of page 6)

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**
 Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
 Do not allow product to reach ground water, water course or sewage system.
 Danger to drinking water if even small quantities leak into the ground.
 Harmful to aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
 Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **European waste catalogue**

HP 3	Flammable
HP 4	Irritant - skin irritation and eye damage
HP 6	Acute Toxicity
HP 14	Ecotoxic

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **Not Regulated, De minimus Quantities**
 -
- **UN-Number**
 · **ADR, IMDG, IATA** UN1648
- **UN proper shipping name**
 · **ADR** 1648 ACETONITRILE
 · **IMDG, IATA** ACETONITRILE

(Contd. on page 8)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 22 (1X1ML)

(Contd. of page 7)

· **Transport hazard class(es)**

· **ADR, IMDG, IATA**

· **Class**

3 Flammable liquids.

· **Label**

3

· **Packing group**

· **ADR, IMDG, IATA**

II

· **Environmental hazards:**

Not applicable.

· **Special precautions for user**

Warning: Flammable liquids.

· **Danger code (Kemler):**

33

· **EMS Number:**

F-E,S-D

· **Stowage Category**

B

· **Stowage Code**

SW2 Clear of living quarters.

· **Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

· **Transport/Additional information:**

· **ADR**

· **Limited quantities (LQ)**

1L

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **Transport category**

2

· **Tunnel restriction code**

D/E

· **IMDG**

· **Limited quantities (LQ)**

1L

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **UN "Model Regulation":**

UN 1648 ACETONITRILE, 3, II

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Directive 2012/18/EU**

· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **Seveso category P5c** FLAMMABLE LIQUIDS

· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t

· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t

· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 22 (1X1ML)

(Contd. of page 8)

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

· **Relevant phrases**

H225 Highly flammable liquid and vapour.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H312 Harmful in contact with skin.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

· **Department issuing SDS:** Document Control / Regulatory

· **Contact:** regulatory@ultrasci.com

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

· *** Data compared to the previous version altered.**

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** GB/T 23211 Standard no. 23 (1X1ML)
- **Part number:** TFP-23
- **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str.8
76337 Waldbronn
Germany
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 2 H319 Causes serious eye irritation.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

- **Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms**



GHS02 GHS07

- **Signal word** Danger

- **Hazard-determining components of labelling:**

acetonitrile

- **Hazard statements**

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 23 (1X1ML)

(Contd. of page 1)

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

- P101 If medical advice is needed, have product container or label at hand.
- P102 Keep out of reach of children.
- P103 Read label before use.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- P330 Rinse mouth.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
- P403+P235 Store in a well-ventilated place. Keep cool.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards
Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

Chemical characterisation: Mixtures
Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:

CAS: 75-05-8 EINECS: 200-835-2	acetonitrile ⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	99.835%
CAS: 38260-54-7 EINECS: 253-855-9	etrimfos ⚠ Acute Tox. 3, H311; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302	0.0127%
CAS: 34123-59-6 EINECS: 251-835-4	isoproturon ⚠ Carc. 2, H351; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	0.0127%
CAS: 639-58-7 EINECS: 211-358-4	fentin chloride ⚠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	0.0127%

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 23 (1X1ML)

(Contd. of page 2)

Additional information: For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

GB

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 23 (1X1ML)

(Contd. of page 3)

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

75-05-8 acetonitrile

WEL	Short-term value: 102 mg/m ³ , 60 ppm Long-term value: 68 mg/m ³ , 40 ppm

639-58-7 fentin chloride

WEL	Short-term value: 0.2 mg/m ³ Long-term value: 0.1 mg/m ³ as Sn; Sk

- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
- **Respiratory protection:**
When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.
Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.
- **Protection of hands:**
Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

(Contd. on page 5)

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Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 23 (1X1ML)

(Contd. of page 4)

- **Material of gloves**
For normal use: nitrile rubber, 11-13 mil thickness
For direct contact with the chemical: butyl rubber, 12-15 mil thickness
- **Penetration time of glove material**
For normal use: nitrile rubber: 1 hour
For direct contact with the chemical: butyl rubber: > 4 hours
- **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

Form:	Fluid
Colour:	Colourless
- **Odour:** Aromatic
- **Odour threshold:** Not determined.
- **pH-value:** Not determined.
- **Change in condition**

Melting point/freezing point:	-46 °C
Initial boiling point and boiling range:	81 °C
- **Flash point:** 2 °C
- **Flammability (solid, gas):** Not applicable.
- **Ignition temperature:** 525 °C
- **Decomposition temperature:** Not determined.
- **Auto-ignition temperature:** Product is not selfigniting.
- **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
- **Explosion limits:**

Lower:	4.4 Vol %
Upper:	16 Vol %
- **Vapour pressure at 20 °C:** 0 hPa
- **Density at 20 °C:** 0.786 g/cm³
- **Relative density** Not determined.
- **Vapour density** Not determined.
- **Evaporation rate** Not determined.
- **Solubility in / Miscibility with water:** Not miscible or difficult to mix.
- **Partition coefficient: n-octanol/water:** Not determined.

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 23 (1X1ML)

(Contd. of page 5)

· Viscosity:	
Dynamic at 20 °C:	0.39 mPas
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	0.0 %
VOC (EC)	0.03 %
· Solids content:	
Other information	0.0 %
	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**
Harmful if swallowed.

· **LD/LC50 values relevant for classification:**

ATE (Acute Toxicity Estimates)

Oral	LD50	1,322 mg/kg (rat)

75-05-8 acetonitrile

Oral	LD50	1,320 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	3,587 mg/L (mouse)

38260-54-7 etrimfos

Oral	LD50	1,800 mg/kg (rat)
Dermal	LD50	>500 mg/kg (rabbit)

34123-59-6 isoproturon

Oral	LD50	3,600 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)
Inhalative	LC50/4 h	>1,950 mg/L (rat)

639-58-7 fentin chloride

Oral	LD50	238 mg/kg (rat)
Dermal	LD50	>1,000 mg/kg (rabbit)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 23 (1X1ML)

(Contd. of page 6)

- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxical effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Harmful to aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **European waste catalogue**

HP 3	Flammable
HP 4	Irritant - skin irritation and eye damage
HP 6	Acute Toxicity
HP 14	Ecotoxic

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

GB

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 23 (1X1ML)

(Contd. of page 7)

14 Transport information

· Not Regulated, De minimus Quantities

-

· UN-Number

· ADR, IMDG, IATA

UN1648

· UN proper shipping name

· ADR

· IMDG, IATA

1648 ACETONITRILE

ACETONITRILE

· Transport hazard class(es)

· ADR, IMDG, IATA



· Class

3 Flammable liquids.

· Label

3

· Packing group

· ADR, IMDG, IATA

II

· Environmental hazards:

Not applicable.

· Special precautions for user

Warning: Flammable liquids.

· Danger code (Kemler):

33

· EMS Number:

F-E,S-D

· Stowage Category

B

· Stowage Code

SW2 Clear of living quarters.

· Transport in bulk according to Annex II of Marpol
and the IBC Code

Not applicable.

· Transport/Additional information:

· ADR

· Limited quantities (LQ)

1L

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· Transport category

2

· Tunnel restriction code

D/E

· IMDG

· Limited quantities (LQ)

1L

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· UN "Model Regulation":

UN 1648 ACETONITRILE, 3, II

GB

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 23 (1X1ML)

(Contd. of page 8)

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category P5c** FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 20

· **Regulation (EU) No 649/2012**

639-58-7 fentin chloride

Annex I Part 1
Annex I Part 3

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

· **Relevant phrases**

- H225 Highly flammable liquid and vapour.
- H301 Toxic if swallowed.
- H302 Harmful if swallowed.
- H311 Toxic in contact with skin.
- H312 Harmful in contact with skin.
- H319 Causes serious eye irritation.
- H331 Toxic if inhaled.
- H332 Harmful if inhaled.
- H351 Suspected of causing cancer.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.

- **Department issuing SDS:** Document Control / Regulatory

- **Contact:** regulatory@ultrasci.com

· **Abbreviations and acronyms:**

- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- VOC: Volatile Organic Compounds (USA, EU)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Flam. Liq. 2: Flammable liquids – Category 2
- Acute Tox. 4: Acute toxicity – Category 4
- Acute Tox. 3: Acute toxicity – Category 3
- Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
- Carc. 2: Carcinogenicity – Category 2
- Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
- Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

(Contd. on page 10)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 23 (1X1ML)

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

(Contd. of page 9)

· *** Data compared to the previous version altered.**

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** GB/T 23211 Standard no. 24 (1X1 mL)
- **Part number:** TFP-24-1
- **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str.8
76337 Waldbronn
Germany
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 2 H319 Causes serious eye irritation.

· Label elements

· Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

· Hazard pictograms



GHS02



GHS07



GHS09

· Signal word Danger

(Contd. on page 2)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 24 (1X1 mL)

(Contd. of page 1)

· Hazard-determining components of labelling:

acetonitrile

· Hazard statements

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

H410 Very toxic to aquatic life with long lasting effects.

· Precautionary statements

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read label before use.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P330 Rinse mouth.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313 If eye irritation persists: Get medical advice/attention.

P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.

P391 Collect spillage.

P403+P235 Store in a well-ventilated place. Keep cool.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Other hazards
· Results of PBT and vPvB assessment
· PBT: Not applicable.

· vPvB: Not applicable.

3 Composition/information on ingredients

· Chemical characterisation: Mixtures
· Description: Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 75-05-8	acetonitrile	99.822%
EINECS: 200-835-2	⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	
CAS: 298-02-2	phorate (ISO)	0.0127%
EINECS: 206-052-2	⚠ Acute Tox. 2, H300; Acute Tox. 1, H310; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 24 (1X1 mL)

(Contd. of page 2)

CAS: 107534-96-3 ELINCS: 403-640-2	1-(4-chlorophenyl)-4,4-dimethyl-3-(1,2,4-triazol-1-ylmethyl)pentan-3-ol ⚠ Repr. 2, H361d; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302	0.0127%
CAS: 2921-88-2 EINECS: 220-864-4	chlorpyrifos (ISO) ⚠ Acute Tox. 3, H301; Acute Tox. 2, H310; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	0.0127%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 24 (1X1 mL)

(Contd. of page 3)

See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**

75-05-8 acetonitrile

WEL	Short-term value: 102 mg/m ³ , 60 ppm
	Long-term value: 68 mg/m ³ , 40 ppm

298-02-2 phorate (ISO)

WEL	Short-term value: 0.2 mg/m ³
	Long-term value: 0.05 mg/m ³
	Sk

2921-88-2 chlorpyrifos (ISO)

WEL	Short-term value: 0.6 mg/m ³
	Long-term value: 0.2 mg/m ³
	Sk

- **Additional information:** The lists valid during the making were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.

- **Respiratory protection:**

When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 24 (1X1 mL)

(Contd. of page 4)

Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

· **Protection of hands:**

Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

· **Material of gloves**

For normal use: nitrile rubber, 11-13 mil thickness

For direct contact with the chemical: butyl rubber, 12-15 mil thickness

· **Penetration time of glove material**

For normal use: nitrile rubber: 1 hour

For direct contact with the chemical: butyl rubber: > 4 hours

· **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Fluid

Colour: Colourless

· **Odour:** Aromatic

· **Odour threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/freezing point: -46 °C

Initial boiling point and boiling range: 81 °C

· **Flash point:** 2 °C

· **Flammability (solid, gas):** Not applicable.

· **Ignition temperature:** 525 °C

· **Decomposition temperature:** Not determined.

· **Auto-ignition temperature:** Product is not selfigniting.

· **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· **Explosion limits:**

Lower: 4.4 Vol %

Upper: 16 Vol %

· **Vapour pressure at 20 °C:** 0 hPa

· **Density at 20 °C:** 0.786 g/cm³

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 24 (1X1 mL)

(Contd. of page 5)

· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Not miscible or difficult to mix.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic at 20 °C:	0.39 mPas
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	0.0 %
VOC (EC)	0.04 %
Solids content:	0.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**
Harmful if swallowed.

· **LD/LC50 values relevant for classification:**

ATE (Acute Toxicity Estimates)

Oral	LD50	1,322 mg/kg (rat)

75-05-8 acetonitrile

Oral	LD50	1,320 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	3,587 mg/L (mouse)

298-02-2 phorate (ISO)

Oral	LD50	1.6 mg/kg (rat)
Dermal	LD50	2.5 mg/kg (rat)

107534-96-3 1-(4-chlorophenyl)-4,4-dimethyl-3-(1,2,4-triazol-1-ylmethyl)pentan-3-ol

Oral	LD50	1,700 mg/kg (rat)
Dermal	LD50	>5,000 mg/kg (rat)

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 24 (1X1 mL)

(Contd. of page 6)

Inhalative	LC50/4 h	>800 mg/L (rat)
2921-88-2 chlorpyrifos (ISO)		
Oral	LD50	60 mg/kg (mouse) 135 mg/kg (rat)
Dermal	LD50	120 mg/kg (mouse) 202 mg/kg (rat)
Inhalative	LC50/4 h	>200 mg/L (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Very toxic for fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Very toxic for aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 24 (1X1 mL)

(Contd. of page 7)

· European waste catalogue

HP 3	Flammable
HP 4	Irritant - skin irritation and eye damage
HP 6	Acute Toxicity
HP 14	Ecotoxic

· Uncleaned packaging:
· Recommendation: Disposal must be made according to official regulations.

14 Transport information

· Not Regulated, De minimus Quantities

-

· UN-Number
· ADR, IMDG, IATA

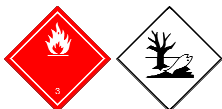
UN1648

· UN proper shipping name
· ADR

1648 ACETONITRILE, ENVIRONMENTALLY
HAZARDOUS

· IMDG
· IATA

ACETONITRILE, MARINE POLLUTANT
ACETONITRILE

· Transport hazard class(es)
· ADR, IMDG

· Class

3 Flammable liquids.

· Label

3

· IATA

· Class

3 Flammable liquids.

· Label

3

· Packing group
· ADR, IMDG, IATA

II

· Environmental hazards:

Product contains environmentally hazardous substances:
phorate (ISO), chlorpyrifos (ISO)

· Marine pollutant:

Symbol (fish and tree)

· Special marking (ADR):

Symbol (fish and tree)

· Special precautions for user

Warning: Flammable liquids.

· Danger code (Kemler):

33

· EMS Number:

F-E,S-D

(Contd. on page 9)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 24 (1X1 mL)

(Contd. of page 8)

· Stowage Category	B
· Stowage Code	SW2 Clear of living quarters.
· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category	2
· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1648 ACETONITRILE, 3, II, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category**
E1 Hazardous to the Aquatic Environment
P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 100 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- **Relevant phrases**
H225 Highly flammable liquid and vapour.
H300 Fatal if swallowed.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H310 Fatal in contact with skin.
H312 Harmful in contact with skin.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.

(Contd. on page 10)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 24 (1X1 mL)

(Contd. of page 9)

H361d Suspected of damaging the unborn child.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

· **Department issuing SDS:** Document Control / Regulatory· **Contact:** regulatory@ultrasci.com· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids – Category 2

Acute Tox. 2: Acute toxicity – Category 2

Acute Tox. 3: Acute toxicity – Category 3

Acute Tox. 4: Acute toxicity – Category 4

Acute Tox. 1: Acute toxicity – Category 1

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Repr. 2: Reproductive toxicity – Category 2

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

· *** Data compared to the previous version altered.**

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** GB/T 23211 Standard no. 25 (1X1 mL)
- **Part number:** TFP-25-1
- **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str.8
76337 Waldbronn
Germany
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



Flam. Liq. 2 H225 Highly flammable liquid and vapour.



Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 2 H319 Causes serious eye irritation.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

- **Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms**



- **Signal word** Danger

- **Hazard-determining components of labelling:**

acetonitrile

- **Hazard statements**

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 25 (1X1 mL)

(Contd. of page 1)

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

- P101 If medical advice is needed, have product container or label at hand.
- P102 Keep out of reach of children.
- P103 Read label before use.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- P330 Rinse mouth.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
- P403+P235 Store in a well-ventilated place. Keep cool.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional information:

Contains 2-chloro-6-nitro-3-phenoxyaniline. May produce an allergic reaction.

Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.

vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterisation: Mixtures
Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:

CAS: 75-05-8 EINECS: 200-835-2	acetonitrile ⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H302; ⚠ Acute Tox. 4, H312; ⚠ Acute Tox. 4, H332; ⚠ Eye Irrit. 2, H319	99.822%
CAS: 137-30-4 EINECS: 205-288-3	ziram (ISO) ⚠ Acute Tox. 2, H330; ⚠ STOT RE 2, H373; ⚠ Eye Dam. 1, H318; ⚠ Aquatic Acute 1, H400; ⚠ Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302; ⚠ Skin Sens. 1, H317; ⚠ STOT SE 3, H335	0.0127%
CAS: 74070-46-5 EINECS: 277-704-1	2-chloro-6-nitro-3-phenoxyaniline ⚠ Carc. 2, H351; ⚠ Aquatic Acute 1, H400; ⚠ Aquatic Chronic 1, H410; ⚠ Skin Sens. 1A, H317	0.0127%
CAS: 709-98-8 EINECS: 211-914-6	propanil (ISO) ⚠ Aquatic Acute 1, H400; ⚠ Acute Tox. 4, H302	0.0127%

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 25 (1X1 mL)

(Contd. of page 2)

Additional information: For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

Description of first aid measures**General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

After inhalation: Supply fresh air; consult doctor in case of complaints.**After skin contact:** Immediately rinse with water.**After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing: Call for a doctor immediately.**Information for doctor:****Most important symptoms and effects, both acute and delayed** No further relevant information available.**Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

5 Firefighting measures

Extinguishing media**Suitable extinguishing agents:**CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**For safety reasons unsuitable extinguishing agents:** Water with full jet**Special hazards arising from the substance or mixture** No further relevant information available.**Advice for firefighters****Protective equipment:** No special measures required.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Environmental precautions:

Do not allow product to reach sewage system or any water course.

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

GB

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 25 (1X1 mL)

(Contd. of page 3)

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

· Ingredients with limit values that require monitoring at the workplace:	
75-05-8 acetonitrile	
WEL	Short-term value: 102 mg/m ³ , 60 ppm Long-term value: 68 mg/m ³ , 40 ppm

- **Additional information:** The lists valid during the making were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.

- **Respiratory protection:**

When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.

Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

- **Protection of hands:**

Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

- **Material of gloves**

For normal use: nitrile rubber, 11-13 mil thickness
For direct contact with the chemical: butyl rubber, 12-15 mil thickness

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 25 (1X1 mL)

(Contd. of page 4)

- **Penetration time of glove material**
For normal use: nitrile rubber: 1 hour
For direct contact with the chemical: butyl rubber: > 4 hours
- **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Fluid
Colour:	Colourless
Odour:	Aromatic
Odour threshold:	Not determined.

· **pH-value:** Not determined.

· Change in condition

Melting point/freezing point:	-46 °C
Initial boiling point and boiling range:	81 °C

· **Flash point:** 2 °C

· **Flammability (solid, gas):** Not applicable.

· **Ignition temperature:** 525 °C

· **Decomposition temperature:** Not determined.

· **Auto-ignition temperature:** Product is not selfigniting.

· **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Explosion limits:

Lower:	4.4 Vol %
Upper:	16 Vol %

· **Vapour pressure at 20 °C:** 0 hPa

· Density at 20 °C:	0.786 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.

· Solubility in / Miscibility with water:

Not miscible or difficult to mix.

· **Partition coefficient: n-octanol/water:** Not determined.

· Viscosity:

Dynamic at 20 °C:	0.39 mPas

(Contd. on page 6)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 25 (1X1 mL)

(Contd. of page 5)

Kinematic:	Not determined.
Solvent content: VOC (EC)	0.00 %
Solids content:	0.0 %
Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**
Harmful if swallowed.

· **LD/LC50 values relevant for classification:**

ATE (Acute Toxicity Estimates)

Oral	LD50	1,322 mg/kg (rat)

75-05-8 acetonitrile

Oral	LD50	1,320 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	3,587 mg/L (mouse)

137-30-4 ziram (ISO)

Oral	LD50	1,400 mg/kg (rat)

74070-46-5 2-chloro-6-nitro-3-phenoxyaniline

Oral	LD50	>6,500 mg/kg (rat)
Dermal	LD50	>5,000 mg/kg (rat)

709-98-8 propanil (ISO)

Oral	LD50	367 mg/kg (rat)
Dermal	LD50	4,830 mg/kg (rabbit)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 25 (1X1 mL)

(Contd. of page 6)

- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Harmful to aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· European waste catalogue

HP 3	Flammable
HP 4	Irritant - skin irritation and eye damage
HP 6	Acute Toxicity
HP 14	Ecotoxic

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **Not Regulated, De minimus Quantities**

-

- **UN-Number**

- **ADR, IMDG, IATA**

UN1648

(Contd. on page 8)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 25 (1X1 mL)

(Contd. of page 7)

· UN proper shipping name	1648 ACETONITRILE
· ADR	ACETONITRILE
· IMDG, IATA	
· Transport hazard class(es)	
· ADR, IMDG, IATA	
	
· Class	3 Flammable liquids.
· Label	3
· Packing group	
· ADR, IMDG, IATA	II
· Environmental hazards:	Not applicable.
· Special precautions for user	Warning: Flammable liquids.
· Danger code (Kemler):	33
· EMS Number:	F-E,S-D
· Stowage Category	B
· Stowage Code	SW2 Clear of living quarters.
· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category	2
· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1648 ACETONITRILE, 3, II

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Directive 2012/18/EU
- Named dangerous substances - ANNEX I None of the ingredients is listed.
- Seveso category P5c FLAMMABLE LIQUIDS
- Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t

(Contd. on page 9)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 25 (1X1 mL)

(Contd. of page 8)

· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

· **Regulation (EU) No 649/2012**

709-98-8	propanil (ISO)	Annex I Part 1 Annex I Part 2

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

· **Relevant phrases**

H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H330 Fatal if inhaled.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

· **Department issuing SDS:** Document Control / Regulatory

· **Contact:** regulatory@ultrasci.com

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 2: Acute toxicity – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Skin Sens. 1: Skin sensitisation – Category 1
Skin Sens. 1A: Skin sensitisation – Category 1A
Carc. 2: Carcinogenicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

· *** Data compared to the previous version altered.**

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** GB/T 23211 Standard no. 26 (1X1 mL)
- **Part number:** TFP-26-1
- **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str.8
76337 Waldbronn
Germany
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 2 H319 Causes serious eye irritation.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

- **Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms**



GHS02 GHS07

- **Signal word** Danger

- **Hazard-determining components of labelling:**

acetonitrile

- **Hazard statements**

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 26 (1X1 mL)

(Contd. of page 1)

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

- P101 If medical advice is needed, have product container or label at hand.
- P102 Keep out of reach of children.
- P103 Read label before use.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- P330 Rinse mouth.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
- P403+P235 Store in a well-ventilated place. Keep cool.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards
Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

Chemical characterisation: Mixtures
Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:

CAS: 75-05-8 EINECS: 200-835-2	acetonitrile ⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	99.822%
CAS: 55-38-9 EINECS: 200-231-9	fenthion (ISO) ⚠ Acute Tox. 3, H331; ⚠ Muta. 2, H341; STOT RE 1, H372; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312	0.0127%

Additional information: For the wording of the listed hazard phrases refer to section 16.

GB

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 26 (1X1 mL)

(Contd. of page 2)

4 First aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.

(Contd. on page 4)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 26 (1X1 mL)

(Contd. of page 3)

- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

Ingredients with limit values that require monitoring at the workplace:	
75-05-8 acetonitrile	
WEL	Short-term value: 102 mg/m ³ , 60 ppm Long-term value: 68 mg/m ³ , 40 ppm

- **Additional information:** The lists valid during the making were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

- **Respiratory protection:**

When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.

Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

- **Protection of hands:**

Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

- **Material of gloves**

For normal use: nitrile rubber, 11-13 mil thickness

For direct contact with the chemical: butyl rubber, 12-15 mil thickness

- **Penetration time of glove material**

For normal use: nitrile rubber: 1 hour

For direct contact with the chemical: butyl rubber: > 4 hours

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 26 (1X1 mL)

(Contd. of page 4)

· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Fluid
Colour:	Colourless
Odour:	Aromatic
Odour threshold:	Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/freezing point:	-46 °C
Initial boiling point and boiling range:	81 °C

· Flash point: 2 °C

· Flammability (solid, gas): Not applicable.

· Ignition temperature: 525 °C

· Decomposition temperature: Not determined.

· Auto-ignition temperature: Product is not selfigniting.

· Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Explosion limits:

Lower:	4.4 Vol %
Upper:	16 Vol %

· Vapour pressure at 20 °C: 0 hPa

· Density at 20 °C: 0.786 g/cm³

· Relative density: Not determined.

· Vapour density: Not determined.

· Evaporation rate: Not determined.

· Solubility in / Miscibility with water:

Not miscible or difficult to mix.

· Partition coefficient: n-octanol/water: Not determined.

· Viscosity:

Dynamic at 20 °C:	0.39 mPas
Kinematic:	Not determined.

· Solvent content:

Organic solvents: 0.0 %

(Contd. on page 6)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 26 (1X1 mL)

(Contd. of page 5)

VOC (EC)	0.04 %
Solids content:	0.0 %
Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

· Information on toxicological effects

- **Acute toxicity**
Harmful if swallowed.

· LD/LC50 values relevant for classification:

ATE (Acute Toxicity Estimates)

Oral	LD50	1,322 mg/kg (rat)

75-05-8 acetonitrile

Oral	LD50	1,320 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	3,587 mg/L (mouse)

55-38-9 fenthion (ISO)

Oral	LD50	180 mg/kg (rat)
Dermal	LD50	330 mg/kg (rat)
Inhalative	LC50/4 h	800 mg/L (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

GB

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 26 (1X1 mL)

(Contd. of page 6)

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxical effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**
 Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
 Do not allow product to reach ground water, water course or sewage system.
 Danger to drinking water if even small quantities leak into the ground.
 Harmful to aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
 Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **European waste catalogue**

HP 3	Flammable
HP 4	Irritant - skin irritation and eye damage
HP 6	Acute Toxicity
HP 14	Ecotoxic

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **Not Regulated, De minimus Quantities**
 -
- **UN-Number**
 · **ADR, IMDG, IATA** UN1648
- **UN proper shipping name**
 · **ADR** 1648 ACETONITRILE
 · **IMDG, IATA** ACETONITRILE

(Contd. on page 8)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 26 (1X1 mL)

(Contd. of page 7)

· **Transport hazard class(es)**

· **ADR, IMDG, IATA**

· **Class**

3 Flammable liquids.

· **Label**

3

· **Packing group**

· **ADR, IMDG, IATA**

II

· **Environmental hazards:**

Not applicable.

· **Special precautions for user**

Warning: Flammable liquids.

· **Danger code (Kemler):**

33

· **EMS Number:**

F-E,S-D

· **Stowage Category**

B

· **Stowage Code**

SW2 Clear of living quarters.

· **Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

· **Transport/Additional information:**

· **ADR**

· **Limited quantities (LQ)**

1L

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **Transport category**

2

· **Tunnel restriction code**

D/E

· **IMDG**

· **Limited quantities (LQ)**

1L

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **UN "Model Regulation":**

UN 1648 ACETONITRILE, 3, II

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Directive 2012/18/EU**

· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **Seveso category P5c** FLAMMABLE LIQUIDS

· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t

· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t

· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 26 (1X1 mL)

(Contd. of page 8)

· Regulation (EU) No 649/2012

55-38-9 fenthion (ISO)

Annex I Part 1

Annex I Part 2

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

· Relevant phrases

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H319 Causes serious eye irritation.

H331 Toxic if inhaled.

H332 Harmful if inhaled.

H341 Suspected of causing genetic defects.

H372 Causes damage to organs through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

· Department issuing SDS: Document Control / Regulatory

· Contact: regulatory@ultrasci.com

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids – Category 2

Acute Tox. 4: Acute toxicity – Category 4

Acute Tox. 3: Acute toxicity – Category 3

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Muta. 2: Germ cell mutagenicity – Category 2

STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

· * Data compared to the previous version altered.

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** GB/T 23211 Standard no. 27 (1X1 mL)
- **Part number:** TFP-27-1
- **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str.8
76337 Waldbronn
Germany
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 2 H319 Causes serious eye irritation.

· Label elements

· Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

· Hazard pictograms



GHS02 GHS07

· Signal word Danger

· Hazard-determining components of labelling:

acetonitrile

· Hazard statements

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 27 (1X1 mL)

(Contd. of page 1)

· Precautionary statements

- P101 If medical advice is needed, have product container or label at hand.
- P102 Keep out of reach of children.
- P103 Read label before use.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- P330 Rinse mouth.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
- P403+P235 Store in a well-ventilated place. Keep cool.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Other hazards

· Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

· Chemical characterisation: Mixtures

- **Description:** Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 75-05-8	acetonitrile	99.848%
EINECS: 200-835-2	⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

· Description of first aid measures

· General information:

Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.

- **After skin contact:** Immediately rinse with water.

· After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 27 (1X1 mL)

(Contd. of page 2)

- **After swallowing:** Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

GB

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 27 (1X1 mL)

(Contd. of page 3)

8 Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

75-05-8 acetonitrile

WEL	Short-term value: 102 mg/m ³ , 60 ppm
	Long-term value: 68 mg/m ³ , 40 ppm

· **Additional information:** The lists valid during the making were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

· **Respiratory protection:**

When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.

Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

· **Protection of hands:**

Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

· **Material of gloves**

For normal use: nitrile rubber, 11-13 mil thickness

For direct contact with the chemical: butyl rubber, 12-15 mil thickness

· **Penetration time of glove material**

For normal use: nitrile rubber: 1 hour

For direct contact with the chemical: butyl rubber: > 4 hours

· **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Fluid

Colour: Colourless

(Contd. on page 5)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 27 (1X1 mL)

(Contd. of page 4)

· Odour:	Aromatic
· Odour threshold:	Not determined.
· pH-value:	Not determined.
· Change in condition	
Melting point/freezing point:	-46 °C
Initial boiling point and boiling range:	81 °C
· Flash point:	2 °C
· Flammability (solid, gas):	Not applicable.
· Ignition temperature:	525 °C
· Decomposition temperature:	Not determined.
· Auto-ignition temperature:	Product is not selfigniting.
· Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· Explosion limits:	
Lower:	4.4 Vol %
Upper:	16 Vol %
· Vapour pressure at 20 °C:	0 hPa
· Density at 20 °C:	0.786 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Not miscible or difficult to mix.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic at 20 °C:	0.39 mPas
Kinematic:	Not determined.
· Solvent content:	
VOC (EC)	0.00 %
Solids content:	0.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 27 (1X1 mL)

(Contd. of page 5)

· **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

· **Information on toxicological effects**

· **Acute toxicity**

Harmful if swallowed.

· **LD/LC50 values relevant for classification:**
ATE (Acute Toxicity Estimates)

Oral	LD50	1,322 mg/kg (rat)

75-05-8 acetonitrile

Oral	LD50	1,320 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	3,587 mg/L (mouse)

· **Primary irritant effect:**

· **Skin corrosion/irritation** Based on available data, the classification criteria are not met.

· **Serious eye damage/irritation**

Causes serious eye irritation.

· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**

· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.

· **Carcinogenicity** Based on available data, the classification criteria are not met.

· **Reproductive toxicity** Based on available data, the classification criteria are not met.

· **STOT-single exposure** Based on available data, the classification criteria are not met.

· **STOT-repeated exposure** Based on available data, the classification criteria are not met.

· **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

· **Toxicity**

· **Aquatic toxicity:** No further relevant information available.

· **Persistence and degradability** No further relevant information available.

· **Behaviour in environmental systems:**

· **Bioaccumulative potential** No further relevant information available.

· **Mobility in soil** No further relevant information available.

· **Additional ecological information:**

· **General notes:**

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No further relevant information available.

GB

(Contd. on page 7)



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 27 (1X1 mL)

(Contd. of page 6)

13 Disposal considerations

· Waste treatment methods**· Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· European waste catalogue

HP 3	Flammable
HP 4	Irritant - skin irritation and eye damage
HP 6	Acute Toxicity

· Uncleaned packaging:**· Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· Not Regulated, De minimus Quantities

-

· UN-Number**· ADR, IMDG, IATA**

UN1648

· UN proper shipping name**· ADR**

1648 ACETONITRILE

· IMDG, IATA

ACETONITRILE

· Transport hazard class(es)**· ADR, IMDG, IATA****· Class**

3 Flammable liquids.

· Label

3

· Packing group**· ADR, IMDG, IATA**

II

· Environmental hazards:

Not applicable.

· Special precautions for user

Warning: Flammable liquids.

· Danger code (Kemler):

33

· EMS Number:

F-E,S-D

· Stowage Category

B

· Stowage Code

SW2 Clear of living quarters.

· Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

(Contd. on page 8)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 27 (1X1 mL)

(Contd. of page 7)

· Transport/Additional information:
· ADR
· Limited quantities (LQ)

1L

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· Transport category

2

· Tunnel restriction code

D/E

· IMDG
· Limited quantities (LQ)

1L

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· UN "Model Regulation":

UN 1648 ACETONITRILE, 3, II

15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture
· Directive 2012/18/EU
· Named dangerous substances - ANNEX I None of the ingredients is listed.

· Seveso category P5c FLAMMABLE LIQUIDS

· Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t

· Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t

· REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

· Relevant phrases

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

· Department issuing SDS: Document Control / Regulatory

· Contact: regulatory@ultrasci.com

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

(Contd. on page 9)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 27 (1X1 mL)

(Contd. of page 8)

LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 4: Acute toxicity – Category 4
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
· *** Data compared to the previous version altered.**

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** GB/T 23211 Standard no. 28 (1X1 mL)
- **Part number:** TFP-28-1
- **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str.8
76337 Waldbronn
Germany
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



Flam. Liq. 2 H225 Highly flammable liquid and vapour.



Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 2 H319 Causes serious eye irritation.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

- **Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms**



- **Signal word** Danger

- **Hazard-determining components of labelling:**

acetonitrile

- **Hazard statements**

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 28 (1X1 mL)

(Contd. of page 1)

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

- P101 If medical advice is needed, have product container or label at hand.
- P102 Keep out of reach of children.
- P103 Read label before use.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- P330 Rinse mouth.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
- P403+P235 Store in a well-ventilated place. Keep cool.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards
Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

Chemical characterisation: Mixtures
Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:

CAS: 75-05-8	acetonitrile	99.822%
EINECS: 200-835-2	 Flam. Liq. 2, H225;  Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	
CAS: 2597-03-7	phenthoate (ISO)	0.0127%
EINECS: 219-997-0	 Aquatic Acute 1, H400; Aquatic Chronic 1, H410;  Acute Tox. 4, H302; Acute Tox. 4, H312	

Additional information: For the wording of the listed hazard phrases refer to section 16.

GB

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 28 (1X1 mL)

(Contd. of page 2)

4 First aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 28 (1X1 mL)

(Contd. of page 3)

- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

Ingredients with limit values that require monitoring at the workplace:	
75-05-8 acetonitrile	
WEL	Short-term value: 102 mg/m ³ , 60 ppm Long-term value: 68 mg/m ³ , 40 ppm

- **Additional information:** The lists valid during the making were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.

- **Respiratory protection:**

When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.

Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

- **Protection of hands:**

Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

- **Material of gloves**

For normal use: nitrile rubber, 11-13 mil thickness
For direct contact with the chemical: butyl rubber, 12-15 mil thickness

- **Penetration time of glove material**

For normal use: nitrile rubber: 1 hour
For direct contact with the chemical: butyl rubber: > 4 hours

(Contd. on page 5)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 28 (1X1 mL)

(Contd. of page 4)

· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Fluid
Colour:	Colourless
Odour:	Aromatic
Odour threshold:	Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/freezing point:	-46 °C
Initial boiling point and boiling range:	81 °C

· Flash point: 2 °C

· Flammability (solid, gas): Not applicable.

· Ignition temperature: 525 °C

· Decomposition temperature: Not determined.

· Auto-ignition temperature: Product is not selfigniting.

· Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Explosion limits:

Lower:	4.4 Vol %
Upper:	16 Vol %

· Vapour pressure at 20 °C: 0 hPa

· Density at 20 °C: 0.786 g/cm³

· Relative density: Not determined.

· Vapour density: Not determined.

· Evaporation rate: Not determined.

· Solubility in / Miscibility with water:

Not miscible or difficult to mix.

· Partition coefficient: n-octanol/water: Not determined.

· Viscosity:

Dynamic at 20 °C:	0.39 mPas
Kinematic:	Not determined.

· Solvent content:

Organic solvents: 0.0 %

(Contd. on page 6)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 28 (1X1 mL)

(Contd. of page 5)

VOC (EC)	0.03 %
Solids content:	0.0 %
Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**
Harmful if swallowed.

· **LD/LC50 values relevant for classification:**

ATE (Acute Toxicity Estimates)

Oral	LD50	1,322 mg/kg (rat)

75-05-8 acetonitrile

Oral	LD50	1,320 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	3,587 mg/L (mouse)

2597-03-7 phenthoate (ISO)

Oral	LD50	71 mg/kg (rat)
Dermal	LD50	700 mg/kg (rat)
Inhalative	LC50/4 h	59 mg/L (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

GB

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 28 (1X1 mL)

(Contd. of page 6)

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxical effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**
 Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
 Do not allow product to reach ground water, water course or sewage system.
 Danger to drinking water if even small quantities leak into the ground.
 Harmful to aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
 Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **European waste catalogue**

HP 3	Flammable
HP 4	Irritant - skin irritation and eye damage
HP 6	Acute Toxicity
HP 14	Ecotoxic

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **Not Regulated, De minimus Quantities**
 -
- **UN-Number**
 · **ADR, IMDG, IATA** UN1648
- **UN proper shipping name**
 · **ADR** 1648 ACETONITRILE
 · **IMDG, IATA** ACETONITRILE

(Contd. on page 8)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 28 (1X1 mL)

(Contd. of page 7)

· **Transport hazard class(es)**

· **ADR, IMDG, IATA**

· **Class**

3 Flammable liquids.

· **Label**

3

· **Packing group**

· **ADR, IMDG, IATA**

II

· **Environmental hazards:**

Not applicable.

· **Special precautions for user**

Warning: Flammable liquids.

· **Danger code (Kemler):**

33

· **EMS Number:**

F-E,S-D

· **Stowage Category**

B

· **Stowage Code**

SW2 Clear of living quarters.

· **Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

· **Transport/Additional information:**

· **ADR**

· **Limited quantities (LQ)**

1L

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **Transport category**

2

· **Tunnel restriction code**

D/E

· **IMDG**

· **Limited quantities (LQ)**

1L

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **UN "Model Regulation":**

UN 1648 ACETONITRILE, 3, II

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Directive 2012/18/EU**

· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **Seveso category P5c** FLAMMABLE LIQUIDS

· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t

· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t

· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 28 (1X1 mL)

(Contd. of page 8)

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

· **Relevant phrases**

H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

· **Department issuing SDS:** Document Control / Regulatory· **Contact:** regulatory@ultrasci.com· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 4: Acute toxicity – Category 4
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

· *** Data compared to the previous version altered.**

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** GB/T 23211 Standard no. 29 (1X1 mL)
- **Part number:** TFP-29-1
- **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str.8
76337 Waldbronn
Germany
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 2 H319 Causes serious eye irritation.

- **Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms**



GHS02 GHS07

- **Signal word** Danger

- **Hazard-determining components of labelling:**

acetonitrile

- **Hazard statements**

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 29 (1X1 mL)

(Contd. of page 1)

· Precautionary statements

- P101 If medical advice is needed, have product container or label at hand.
- P102 Keep out of reach of children.
- P103 Read label before use.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- P330 Rinse mouth.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
- P403+P235 Store in a well-ventilated place. Keep cool.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Other hazards

· Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

· Chemical characterisation: Mixtures

- **Description:** Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 75-05-8	acetonitrile	99.81%
EINECS: 200-835-2	⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	
CAS: 24151-93-7	piperophos (ISO)	0.0127%
	⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302	

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

· Description of first aid measures

· General information:

- Immediately remove any clothing soiled by the product.
- Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 29 (1X1 mL)

(Contd. of page 2)

- **After skin contact:** Immediately rinse with water.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 29 (1X1 mL)

· **Specific end use(s)** No further relevant information available.

(Contd. of page 3)

8 Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**
75-05-8 acetonitrile

WEL	Short-term value: 102 mg/m ³ , 60 ppm Long-term value: 68 mg/m ³ , 40 ppm

· **Additional information:** The lists valid during the making were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

· **Respiratory protection:**

When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.

Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

· **Protection of hands:**

Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

· **Material of gloves**

For normal use: nitrile rubber, 11-13 mil thickness

For direct contact with the chemical: butyl rubber, 12-15 mil thickness

· **Penetration time of glove material**

For normal use: nitrile rubber: 1 hour

For direct contact with the chemical: butyl rubber: > 4 hours

· **Eye protection:**


Tightly sealed goggles

GB

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 29 (1X1 mL)

(Contd. of page 4)

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Fluid
Colour:	Colourless
Odour:	Aromatic
Odour threshold:	Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/freezing point:	-46 °C
Initial boiling point and boiling range:	81 °C

· Flash point: 2 °C

· Flammability (solid, gas): Not applicable.

· Ignition temperature: 525 °C

· Decomposition temperature: Not determined.

· Auto-ignition temperature: Product is not selfigniting.

· Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Explosion limits:

Lower:	4.4 Vol %
Upper:	16 Vol %

· Vapour pressure at 20 °C: 0 hPa

· Density at 20 °C: 0.786 g/cm³

· Relative density: Not determined.

· Vapour density: Not determined.

· Evaporation rate: Not determined.

· Solubility in / Miscibility with water:

Not miscible or difficult to mix.

· Partition coefficient: n-octanol/water: Not determined.

· Viscosity:

Dynamic at 20 °C:	0.39 mPas
Kinematic:	Not determined.

· Solvent content:

VOC (EC) 0.00 %

Solids content: 0.0 %

· Other information: No further relevant information available.

10 Stability and reactivity

· Reactivity: No further relevant information available.

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 29 (1X1 mL)

(Contd. of page 5)

- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

· Information on toxicological effects

· Acute toxicity

Harmful if swallowed.

· LD/LC50 values relevant for classification:

ATE (Acute Toxicity Estimates)

Oral	LD50	1,323 mg/kg (rat)

75-05-8 acetonitrile

Oral	LD50	1,320 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	3,587 mg/L (mouse)

24151-93-7 piperophos (ISO)

Oral	LD50	324 mg/kg (rat)
Dermal	LD50	>2,150 mg/kg (rat)

· Primary irritant effect:

· **Skin corrosion/irritation** Based on available data, the classification criteria are not met.

· Serious eye damage/irritation

Causes serious eye irritation.

· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

· CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.

· **Carcinogenicity** Based on available data, the classification criteria are not met.

· **Reproductive toxicity** Based on available data, the classification criteria are not met.

· **STOT-single exposure** Based on available data, the classification criteria are not met.

· **STOT-repeated exposure** Based on available data, the classification criteria are not met.

· **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

· Toxicity

· **Aquatic toxicity:** No further relevant information available.

· **Persistence and degradability** No further relevant information available.

· Behaviour in environmental systems:

· **Bioaccumulative potential** No further relevant information available.

· **Mobility in soil** No further relevant information available.

· Additional ecological information:

· General notes:

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 29 (1X1 mL)

(Contd. of page 6)

Danger to drinking water if even small quantities leak into the ground.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **European waste catalogue**

HP 3	Flammable
HP 4	Irritant - skin irritation and eye damage
HP 6	Acute Toxicity

· **Uncleaned packaging:**

· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **Not Regulated, De minimus Quantities**

-

· **UN-Number**

· **ADR, IMDG, IATA**

UN1648

· **UN proper shipping name**

· **ADR**

· **IMDG, IATA**

1648 ACETONITRILE
ACETONITRILE

· **Transport hazard class(es)**

· **ADR, IMDG, IATA**



· **Class**

· **Label**

3 Flammable liquids.

3

· **Packing group**

· **ADR, IMDG, IATA**

II

· **Environmental hazards:**

Not applicable.

· **Special precautions for user**

· **Danger code (Kemler):**

· **EMS Number:**

· **Stowage Category**

Warning: Flammable liquids.

33

F-E,S-D

B

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 29 (1X1 mL)

(Contd. of page 7)

· Stowage Code	SW2 Clear of living quarters.
· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category	2
· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1648 ACETONITRILE, 3, II

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category** P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

· **Relevant phrases**

H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

· **Department issuing SDS:** Document Control / Regulatory

· **Contact:** regulatory@ultrasci.com

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods

(Contd. on page 9)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 29 (1X1 mL)

(Contd. of page 8)

IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 4: Acute toxicity – Category 4
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

· *** Data compared to the previous version altered.**

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** GB/T 23211 Standard no. 30 (1X1ML)
- **Part number:** TFP-30
- **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str.8
76337 Waldbronn
Germany
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 2 H319 Causes serious eye irritation.

- **Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms**



GHS02 GHS07

- **Signal word** Danger

- **Hazard-determining components of labelling:**
acetonitrile

- **Hazard statements**

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 30 (1X1ML)

(Contd. of page 1)

· Precautionary statements

- P101 If medical advice is needed, have product container or label at hand.
- P102 Keep out of reach of children.
- P103 Read label before use.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- P330 Rinse mouth.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
- P403+P235 Store in a well-ventilated place. Keep cool.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Other hazards

· Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

· Chemical characterisation: Mixtures

- **Description:** Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 75-05-8	acetonitrile	99.81%
EINECS: 200-835-2	⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

· Description of first aid measures

· General information:

Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.

- **After skin contact:** Immediately rinse with water.

· After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 30 (1X1ML)

(Contd. of page 2)

- **After swallowing:** Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

GB

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 30 (1X1ML)

(Contd. of page 3)

8 Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

75-05-8 acetonitrile

WEL	Short-term value: 102 mg/m ³ , 60 ppm
	Long-term value: 68 mg/m ³ , 40 ppm

· **Additional information:** The lists valid during the making were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

· **Respiratory protection:**

When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.

Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

· **Protection of hands:**

Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

· **Material of gloves**

For normal use: nitrile rubber, 11-13 mil thickness

For direct contact with the chemical: butyl rubber, 12-15 mil thickness

· **Penetration time of glove material**

For normal use: nitrile rubber: 1 hour

For direct contact with the chemical: butyl rubber: > 4 hours

· **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Fluid

Colour: Colourless

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 30 (1X1ML)

(Contd. of page 4)

· Odour:	Aromatic
· Odour threshold:	Not determined.
· pH-value:	Not determined.
· Change in condition	
Melting point/freezing point:	-46 °C
Initial boiling point and boiling range:	81 °C
· Flash point:	2 °C
· Flammability (solid, gas):	Not applicable.
· Ignition temperature:	525 °C
· Decomposition temperature:	Not determined.
· Auto-ignition temperature:	Product is not selfigniting.
· Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· Explosion limits:	
Lower:	4.4 Vol %
Upper:	16 Vol %
· Vapour pressure at 20 °C:	0 hPa
· Density at 20 °C:	0.786 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Not miscible or difficult to mix.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic at 20 °C:	0.39 mPas
Kinematic:	Not determined.
· Solvent content:	
VOC (EC)	0.00 %
Solids content:	0.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 30 (1X1ML)

(Contd. of page 5)

· **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

· **Information on toxicological effects**

· **Acute toxicity**

Harmful if swallowed.

· **LD/LC50 values relevant for classification:**
ATE (Acute Toxicity Estimates)

Oral	LD50	1,323 mg/kg (rat)

75-05-8 acetonitrile

Oral	LD50	1,320 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	3,587 mg/L (mouse)

· **Primary irritant effect:**

· **Skin corrosion/irritation** Based on available data, the classification criteria are not met.

· **Serious eye damage/irritation**

Causes serious eye irritation.

· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

· **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.

· **Carcinogenicity** Based on available data, the classification criteria are not met.

· **Reproductive toxicity** Based on available data, the classification criteria are not met.

· **STOT-single exposure** Based on available data, the classification criteria are not met.

· **STOT-repeated exposure** Based on available data, the classification criteria are not met.

· **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

· **Toxicity**

· **Aquatic toxicity:** No further relevant information available.

· **Persistence and degradability** No further relevant information available.

· **Behaviour in environmental systems:**

· **Bioaccumulative potential** No further relevant information available.

· **Mobility in soil** No further relevant information available.

· **Additional ecological information:**

· **General notes:**

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No further relevant information available.

GB

(Contd. on page 7)



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 30 (1X1ML)

(Contd. of page 6)

13 Disposal considerations

· Waste treatment methods**· Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· European waste catalogue

HP 3	Flammable
HP 4	Irritant - skin irritation and eye damage
HP 6	Acute Toxicity

· Uncleaned packaging:

· Recommendation: Disposal must be made according to official regulations.

14 Transport information

· Not Regulated, De minimus Quantities	-
· UN-Number	
· ADR, IMDG, IATA	UN1648
· UN proper shipping name	
· ADR	1648 ACETONITRILE
· IMDG, IATA	ACETONITRILE
· Transport hazard class(es)	
· ADR, IMDG, IATA	
	
· Class	3 Flammable liquids.
· Label	3
· Packing group	
· ADR, IMDG, IATA	II
· Environmental hazards:	Not applicable.
· Special precautions for user	Warning: Flammable liquids.
· Danger code (Kemler):	33
· EMS Number:	F-E,S-D
· Stowage Category	B
· Stowage Code	SW2 Clear of living quarters.
· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.

(Contd. on page 8)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 30 (1X1ML)

(Contd. of page 7)

· Transport/Additional information:
· ADR
· Limited quantities (LQ)

1L

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· Transport category

2

· Tunnel restriction code

D/E

· IMDG
· Limited quantities (LQ)

1L

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· UN "Model Regulation":

UN 1648 ACETONITRILE, 3, II

15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture
· Directive 2012/18/EU
· Named dangerous substances - ANNEX I None of the ingredients is listed.

· Seveso category P5c FLAMMABLE LIQUIDS

· Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t

· Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t

· REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

· Relevant phrases

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

· Department issuing SDS: Document Control / Regulatory

· Contact: regulatory@ultrasci.com

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

(Contd. on page 9)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 30 (1X1ML)

(Contd. of page 8)

LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 4: Acute toxicity – Category 4
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
· *** Data compared to the previous version altered.**

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** GB/T 23211 Standard no. 31 (1X1 mL)
- **Part number:** TFP-31-1
- **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str.8
76337 Waldbronn
Germany
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 2 H319 Causes serious eye irritation.

- **Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms**



GHS02



GHS07

- **Signal word** Danger

- **Hazard-determining components of labelling:**

acetonitrile

- **Hazard statements**

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 31 (1X1 mL)

(Contd. of page 1)

· Precautionary statements

- P101 If medical advice is needed, have product container or label at hand.
- P102 Keep out of reach of children.
- P103 Read label before use.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- P330 Rinse mouth.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
- P403+P235 Store in a well-ventilated place. Keep cool.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Other hazards

· Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

· Chemical characterisation: Mixtures

- **Description:** Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 75-05-8 EINECS: 200-835-2	acetonitrile ⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	99.81%
CAS: 1085-98-9 EINECS: 214-118-7	dichlofluanid (ISO) ⚠ Acute Tox. 3, H311; ⚠ Aquatic Acute 1, H400; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332; Eye Irrit. 2, H319; Skin Sens. 1, H317	0.0127%

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

· Description of first aid measures

· General information:

Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 31 (1X1 mL)

(Contd. of page 2)

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 31 (1X1 mL)

· **Specific end use(s)** No further relevant information available.

(Contd. of page 3)

8 Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**
75-05-8 acetonitrile

WEL	Short-term value: 102 mg/m ³ , 60 ppm
	Long-term value: 68 mg/m ³ , 40 ppm

· **Additional information:** The lists valid during the making were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

· **Respiratory protection:**

When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.

Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

· **Protection of hands:**

Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

· **Material of gloves**

For normal use: nitrile rubber, 11-13 mil thickness

For direct contact with the chemical: butyl rubber, 12-15 mil thickness

· **Penetration time of glove material**

For normal use: nitrile rubber: 1 hour

For direct contact with the chemical: butyl rubber: > 4 hours

· **Eye protection:**


Tightly sealed goggles

GB

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 31 (1X1 mL)

(Contd. of page 4)

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form:	Fluid
Colour:	Colourless
Odour:	Aromatic
Odour threshold:	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/freezing point:	-46 °C
Initial boiling point and boiling range:	81 °C

· **Flash point:** 2 °C

· **Flammability (solid, gas):** Not applicable.

· **Ignition temperature:** 525 °C

· **Decomposition temperature:** Not determined.

· **Auto-ignition temperature:** Product is not selfigniting.

· **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· **Explosion limits:**

Lower:	4.4 Vol %
Upper:	16 Vol %

· **Vapour pressure at 20 °C:** 0 hPa

· **Density at 20 °C:** 0.786 g/cm³

· **Relative density** Not determined.

· **Vapour density** Not determined.

· **Evaporation rate** Not determined.

· **Solubility in / Miscibility with water:**

Not miscible or difficult to mix.

· **Partition coefficient: n-octanol/water:** Not determined.

· **Viscosity:**

Dynamic at 20 °C:	0.39 mPas
Kinematic:	Not determined.

· **Solvent content:**

VOC (EC) 0.00 %

Solids content: 0.0 %

· **Other information** No further relevant information available.

10 Stability and reactivity

· **Reactivity** No further relevant information available.

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 31 (1X1 mL)

(Contd. of page 5)

- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**
Harmful if swallowed.

· **LD/LC50 values relevant for classification:**

ATE (Acute Toxicity Estimates)

Oral	LD50	1,323 mg/kg (rat)

75-05-8 acetonitrile

Oral	LD50	1,320 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	3,587 mg/L (mouse)

1085-98-9 dichlofluanid (ISO)

Oral	LD50	500 mg/kg (rat)
Dermal	LD50	1,000 mg/kg (rat)
Inhalative	LC50/4 h	300 mg/L (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 31 (1X1 mL)

(Contd. of page 6)

Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.

· Results of PBT and vPvB assessment
· PBT: Not applicable.

· vPvB: Not applicable.

· Other adverse effects No further relevant information available.

13 Disposal considerations

· Waste treatment methods
· Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· European waste catalogue

HP 3	Flammable
HP 4	Irritant - skin irritation and eye damage
HP 6	Acute Toxicity

· Uncleaned packaging:
· Recommendation: Disposal must be made according to official regulations.

14 Transport information

· Not Regulated, De minimus Quantities

-

· UN-Number
· ADR, IMDG, IATA

UN1648

· UN proper shipping name
· ADR
· IMDG, IATA

1648 ACETONITRILE

ACETONITRILE

· Transport hazard class(es)
· ADR, IMDG, IATA

· Class
· Label

3 Flammable liquids.

3

· Packing group
· ADR, IMDG, IATA

II

· Environmental hazards:

Not applicable.

· Special precautions for user
· Danger code (Kemler):
· EMS Number:
· Stowage Category

Warning: Flammable liquids.

33

F-E,S-D

B

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 31 (1X1 mL)

(Contd. of page 7)

· Stowage Code	SW2 Clear of living quarters.
· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category	2
· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1648 ACETONITRILE, 3, II

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category** P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- **Relevant phrases**
H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H312 Harmful in contact with skin.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H400 Very toxic to aquatic life.
- **Department issuing SDS:** Document Control / Regulatory
- **Contact:** regulatory@ultraschi.com

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 31 (1X1 mL)

(Contd. of page 8)

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 3: Acute toxicity – Category 3
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Skin Sens. 1: Skin sensitisation – Category 1
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

· * Data compared to the previous version altered.

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** GB/T 23211 Standard no. 32 (1X1 mL)
- **Part number:** TFP-32-1
- **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str.8
76337 Waldbronn
Germany
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 2 H319 Causes serious eye irritation.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

- **Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms**



GHS02 GHS07

- **Signal word** Danger

- **Hazard-determining components of labelling:**

acetonitrile

- **Hazard statements**

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 32 (1X1 mL)

(Contd. of page 1)

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

- P101 If medical advice is needed, have product container or label at hand.
- P102 Keep out of reach of children.
- P103 Read label before use.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- P330 Rinse mouth.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
- P403+P235 Store in a well-ventilated place. Keep cool.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional information:

Contains dodemorph (ISO). May produce an allergic reaction.

Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.

vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterisation: Mixtures
Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:

CAS: 75-05-8 EINECS: 200-835-2	acetonitrile ⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	99.822%
CAS: 1593-77-7 EINECS: 216-474-9	dodemorph (ISO) ⚠ Repr. 2, H361d; STOT RE 2, H373; ⚠ Skin Corr. 1C, H314; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Skin Sens. 1A, H317	0.0127%
CAS: 35554-44-0 EINECS: 252-615-0	imazalil (ISO) ⚠ Acute Tox. 3, H301; ⚠ Carc. 2, H351; ⚠ Eye Dam. 1, H318; ⚠ Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H332	0.0127%
CAS: 2212-67-1 EINECS: 218-661-0	molinate (ISO) ⚠ Carc. 2, H351; Repr. 2, H361f; STOT RE 2, H373; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332; Skin Sens. 1, H317	0.0127%

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 32 (1X1 mL)

(Contd. of page 2)

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

GB

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 32 (1X1 mL)

(Contd. of page 3)

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

75-05-8 acetonitrile

WEL	Short-term value: 102 mg/m ³ , 60 ppm
	Long-term value: 68 mg/m ³ , 40 ppm

- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
- **Respiratory protection:**
When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.
Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.
- **Protection of hands:**
Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.
- **Material of gloves**
For normal use: nitrile rubber, 11-13 mil thickness
For direct contact with the chemical: butyl rubber, 12-15 mil thickness

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 32 (1X1 mL)

(Contd. of page 4)

- **Penetration time of glove material**
For normal use: nitrile rubber: 1 hour
For direct contact with the chemical: butyl rubber: > 4 hours
- **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Fluid
Colour:	Colourless
Odour:	Aromatic
Odour threshold:	Not determined.

· **pH-value:** Not determined.

· Change in condition

Melting point/freezing point:	-46 °C
Initial boiling point and boiling range:	81 °C

· **Flash point:** 2 °C

· **Flammability (solid, gas):** Not applicable.

· **Ignition temperature:** 525 °C

· **Decomposition temperature:** Not determined.

· **Auto-ignition temperature:** Product is not selfigniting.

· **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Explosion limits:

Lower:	4.4 Vol %
Upper:	16 Vol %

· **Vapour pressure at 20 °C:** 0 hPa

· Density at 20 °C:	0.786 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.

· Solubility in / Miscibility with water:

Not miscible or difficult to mix.

· **Partition coefficient: n-octanol/water:** Not determined.

· Viscosity:

Dynamic at 20 °C:	0.39 mPas

(Contd. on page 6)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 32 (1X1 mL)

(Contd. of page 5)

Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	0.0 %
VOC (EC)	0.01 %
· Solids content:	0.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**
Harmful if swallowed.

· LD/LC50 values relevant for classification:

ATE (Acute Toxicity Estimates)

Oral	LD50	1,322 mg/kg (rat)
75-05-8 acetonitrile		
Oral	LD50	1,320 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	3,587 mg/L (mouse)
1593-77-7 dodemorph (ISO)		
Oral	LD50	2,645 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)
35554-44-0 imazalil (ISO)		
Oral	LD50	227 mg/kg (rat)
Dermal	LD50	4,200 mg/kg (rabbit)
2212-67-1 molinate (ISO)		
Oral	LD50	369 mg/kg (rat)
Dermal	LD50	3,536 mg/kg (rabbit)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 32 (1X1 mL)

(Contd. of page 6)

- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Harmful to aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· European waste catalogue

HP 3	Flammable
HP 4	Irritant - skin irritation and eye damage
HP 6	Acute Toxicity
HP 14	Ecotoxic

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **Not Regulated, De minimus Quantities**

(Contd. on page 8)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 32 (1X1 mL)

(Contd. of page 7)

· UN-Number	UN1648
· ADR, IMDG, IATA	
· UN proper shipping name	1648 ACETONITRILE
· ADR	ACETONITRILE
· IMDG, IATA	
· Transport hazard class(es)	
· ADR, IMDG, IATA	
	
· Class	3 Flammable liquids.
· Label	3
· Packing group	
· ADR, IMDG, IATA	II
· Environmental hazards:	Not applicable.
· Special precautions for user	Warning: Flammable liquids.
· Danger code (Kemler):	33
· EMS Number:	F-E,S-D
· Stowage Category	B
· Stowage Code	SW2 Clear of living quarters.
· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category	2
· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1648 ACETONITRILE, 3, II

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Directive 2012/18/EU
- Named dangerous substances - ANNEX I None of the ingredients is listed.

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 32 (1X1 mL)

(Contd. of page 8)

- **Seveso category** P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

· **Relevant phrases**

H225 Highly flammable liquid and vapour.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H351 Suspected of causing cancer.
H361d Suspected of damaging the unborn child.
H361f Suspected of damaging fertility.
H373 May cause damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

· **Department issuing SDS:** Document Control / Regulatory

· **Contact:** regulatory@ultrasci.com

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1C: Skin corrosion/irritation – Category 1C
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Skin Sens. 1: Skin sensitisation – Category 1
Skin Sens. 1A: Skin sensitisation – Category 1A
Carc. 2: Carcinogenicity – Category 2
Repr. 2: Reproductive toxicity – Category 2
Repr. 2: Reproductive toxicity – Category 2
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

(Contd. on page 10)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 32 (1X1 mL)

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

(Contd. of page 9)

· *** Data compared to the previous version altered.**

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** GB/T 23211 Standard no. 33 (1X1 mL)
- **Part number:** TFP-33-1
- **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str.8
76337 Waldbronn
Germany
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 2 H319 Causes serious eye irritation.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

- **Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms**



GHS02 GHS07

- **Signal word** Danger

- **Hazard-determining components of labelling:**

acetonitrile

- **Hazard statements**

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 33 (1X1 mL)

(Contd. of page 1)

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

- P101 If medical advice is needed, have product container or label at hand.
- P102 Keep out of reach of children.
- P103 Read label before use.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- P330 Rinse mouth.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
- P403+P235 Store in a well-ventilated place. Keep cool.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards
Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

Chemical characterisation: Mixtures
Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:

CAS: 75-05-8 EINECS: 200-835-2	acetonitrile ⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	99.848%
CAS: 330-54-1 EINECS: 206-354-4	diuron(ISO) ⚠ Carc. 2, H351; STOT RE 2, H373; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302	0.0127%
CAS: 67129-08-2 EINECS: 266-583-0	Metazachlor (ISO) ⚠ Carc. 2, H351; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302; Skin Sens. 1, H317	0.0127%

Additional information: For the wording of the listed hazard phrases refer to section 16.

GB

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 33 (1X1 mL)

(Contd. of page 2)

4 First aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 33 (1X1 mL)

(Contd. of page 3)

- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

Ingredients with limit values that require monitoring at the workplace:	
75-05-8 acetonitrile	
WEL	Short-term value: 102 mg/m ³ , 60 ppm Long-term value: 68 mg/m ³ , 40 ppm
330-54-1 diuron(ISO)	
WEL	Long-term value: 10 mg/m ³

- **Additional information:** The lists valid during the making were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.

- **Respiratory protection:**

When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.

Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

- **Protection of hands:**

Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

- **Material of gloves**

For normal use: nitrile rubber, 11-13 mil thickness
For direct contact with the chemical: butyl rubber, 12-15 mil thickness

- **Penetration time of glove material**

For normal use: nitrile rubber: 1 hour
For direct contact with the chemical: butyl rubber: > 4 hours

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 33 (1X1 mL)

(Contd. of page 4)

· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Fluid
Colour:	Colourless
Odour:	Aromatic
Odour threshold:	Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/freezing point:	-46 °C
Initial boiling point and boiling range:	81 °C

· Flash point: 2 °C

· Flammability (solid, gas): Not applicable.

· Ignition temperature: 525 °C

· Decomposition temperature: Not determined.

· Auto-ignition temperature: Product is not selfigniting.

· Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Explosion limits:

Lower:	4.4 Vol %
Upper:	16 Vol %

· Vapour pressure at 20 °C: 0 hPa

· Density at 20 °C: 0.786 g/cm³

· Relative density: Not determined.

· Vapour density: Not determined.

· Evaporation rate: Not determined.

· Solubility in / Miscibility with water:

Not miscible or difficult to mix.

· Partition coefficient: n-octanol/water: Not determined.

· Viscosity:

Dynamic at 20 °C:	0.39 mPas
Kinematic:	Not determined.

· Solvent content:

VOC (EC) 0.00 %

(Contd. on page 6)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 33 (1X1 mL)

(Contd. of page 5)

Solids content:	0.0 %
Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**
Harmful if swallowed.

· **LD/LC50 values relevant for classification:**

ATE (Acute Toxicity Estimates)

Oral	LD50	1,322 mg/kg (rat)

75-05-8 acetonitrile

Oral	LD50	1,320 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	3,587 mg/L (mouse)

330-54-1 diuron(ISO)

Oral	LD50	1,017 mg/kg (rat)
Dermal	LD50	>5,000 mg/kg (rat)
Inhalative	LC50/4 h	>5.05 mg/L (rat)

67129-08-2 Metazachlor (ISO)

Oral	LD50	1,000 mg/kg (rat)
Dermal	LD50	>6,810 mg/kg (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 33 (1X1 mL)

· **Aspiration hazard** Based on available data, the classification criteria are not met.

(Contd. of page 6)

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxic effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Harmful to aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· European waste catalogue

HP 3	Flammable
HP 4	Irritant - skin irritation and eye damage
HP 6	Acute Toxicity
HP 14	Ecotoxic

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· Not Regulated, De minimus Quantities

-

· UN-Number

· ADR, IMDG, IATA

UN1648

· UN proper shipping name

· ADR

· IMDG, IATA

1648 ACETONITRILE
ACETONITRILE

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 33 (1X1 mL)

(Contd. of page 7)

· **Transport hazard class(es)**

· **ADR, IMDG, IATA**

· **Class**

3 Flammable liquids.

· **Label**

3

· **Packing group**

· **ADR, IMDG, IATA**

II

· **Environmental hazards:**

Not applicable.

· **Special precautions for user**

Warning: Flammable liquids.

· **Danger code (Kemler):**

33

· **EMS Number:**

F-E,S-D

· **Stowage Category**

B

· **Stowage Code**

SW2 Clear of living quarters.

· **Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

· **Transport/Additional information:**

· **ADR**

· **Limited quantities (LQ)**

1L

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **Transport category**

2

· **Tunnel restriction code**

D/E

· **IMDG**

· **Limited quantities (LQ)**

1L

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **UN "Model Regulation":**

UN 1648 ACETONITRILE, 3, II

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Directive 2012/18/EU**

· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **Seveso category P5c** FLAMMABLE LIQUIDS

· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t

· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t

· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 33 (1X1 mL)

(Contd. of page 8)

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

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· **Relevant phrases**

H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

· **Department issuing SDS:** Document Control / Regulatory· **Contact:** regulatory@ultrasci.com· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 4: Acute toxicity – Category 4
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Skin Sens. 1: Skin sensitisation – Category 1
Carc. 2: Carcinogenicity – Category 2
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

· *** Data compared to the previous version altered.**

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 3

Revision: 31.03.2019

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** GB/T 23211 Standard no. 34 (1X1 mL)
- **Part number:** TFP-34-1
- **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str.8
76337 Waldbronn
Germany
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



Flam. Liq. 2 H225 Highly flammable liquid and vapour.



Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 2 H319 Causes serious eye irritation.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

- **Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms**



- **Signal word** Danger

- **Hazard-determining components of labelling:**

acetonitrile

- **Hazard statements**

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 3

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 34 (1X1 mL)

(Contd. of page 1)

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

- P101 If medical advice is needed, have product container or label at hand.
- P102 Keep out of reach of children.
- P103 Read label before use.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- P330 Rinse mouth.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
- P403+P235 Store in a well-ventilated place. Keep cool.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards
Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

Chemical characterisation: Mixtures
Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:

CAS: 75-05-8 EINECS: 200-835-2	acetonitrile ⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	99.924%
CAS: 5915-41-3 EINECS: 227-637-9	terbuthylazine ⚠ STOT RE 2, H373; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302	0.0127%
CAS: 64902-72-3 EINECS: 265-268-5	2-chloro-N-[[[4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]benzenesulphonamide ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	0.0127%

Additional information: For the wording of the listed hazard phrases refer to section 16.

GB

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 3

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 34 (1X1 mL)

(Contd. of page 2)

4 First aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 3

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 34 (1X1 mL)

(Contd. of page 3)

- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

Ingredients with limit values that require monitoring at the workplace:	
75-05-8 acetonitrile	
WEL	Short-term value: 102 mg/m ³ , 60 ppm Long-term value: 68 mg/m ³ , 40 ppm

- **Additional information:** The lists valid during the making were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.

- **Respiratory protection:**

When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.

Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

- **Protection of hands:**

Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

- **Material of gloves**

For normal use: nitrile rubber, 11-13 mil thickness
For direct contact with the chemical: butyl rubber, 12-15 mil thickness

- **Penetration time of glove material**

For normal use: nitrile rubber: 1 hour
For direct contact with the chemical: butyl rubber: > 4 hours

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 3

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 34 (1X1 mL)

(Contd. of page 4)

· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Fluid
Colour:	Colourless
Odour:	Aromatic
Odour threshold:	Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/freezing point:	-46 °C
Initial boiling point and boiling range:	81 °C

· Flash point: 2 °C

· Flammability (solid, gas): Not applicable.

· Ignition temperature: 525 °C

· Decomposition temperature: Not determined.

· Auto-ignition temperature: Product is not selfigniting.

· Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Explosion limits:

Lower:	4.4 Vol %
Upper:	16 Vol %

· Vapour pressure at 20 °C: 0 hPa

· Density at 20 °C: 0.786 g/cm³

· Relative density: Not determined.

· Vapour density: Not determined.

· Evaporation rate: Not determined.

· Solubility in / Miscibility with water:

Not miscible or difficult to mix.

· Partition coefficient: n-octanol/water: Not determined.

· Viscosity:

Dynamic at 20 °C:	0.39 mPas
Kinematic:	Not determined.

· Solvent content:

VOC (EC) 0.00 %

(Contd. on page 6)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 3

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 34 (1X1 mL)

(Contd. of page 5)

Solids content:	0.0 %
Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**
Harmful if swallowed.

LD/LC50 values relevant for classification:		

ATE (Acute Toxicity Estimates)		

Oral	LD50	1,321 mg/kg (rat)

75-05-8 acetonitrile		

Oral	LD50	1,320 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	3,587 mg/L (mouse)

5915-41-3 terbuthylazine		

Oral	LD50	1,845 mg/kg (rat)
Dermal	LD50	>3,000 mg/kg (rat)
Inhalative	LC50/4 h	>3,510 mg/L (rat)

64902-72-3 2-chloro-N-[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]benzenesulphonamide		

Oral	LD50	5,545 mg/kg (rat)
Dermal	LD50	3,400 mg/kg (rabbit)
Inhalative	LC50/4 h	>5,900 mg/L (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 3

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 34 (1X1 mL)

· **Aspiration hazard** Based on available data, the classification criteria are not met.

(Contd. of page 6)

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxical effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**
 Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
 Do not allow product to reach ground water, water course or sewage system.
 Danger to drinking water if even small quantities leak into the ground.
 Harmful to aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
 Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **European waste catalogue**

HP 3	Flammable
HP 4	Irritant - skin irritation and eye damage
HP 6	Acute Toxicity
HP 14	Ecotoxic

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **Not Regulated, De minimus Quantities**

-

· **UN-Number**

· **ADR, IMDG, IATA**

UN1648

· **UN proper shipping name**

· **ADR**

· **IMDG, IATA**

1648 ACETONITRILE
ACETONITRILE

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 3

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 34 (1X1 mL)

(Contd. of page 7)

· **Transport hazard class(es)**

· **ADR, IMDG, IATA**

· **Class**

3 Flammable liquids.

· **Label**

3

· **Packing group**

· **ADR, IMDG, IATA**

II

· **Environmental hazards:**

Not applicable.

· **Special precautions for user**

Warning: Flammable liquids.

· **Danger code (Kemler):**

33

· **EMS Number:**

F-E,S-D

· **Stowage Category**

B

· **Stowage Code**

SW2 Clear of living quarters.

· **Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

· **Transport/Additional information:**

· **ADR**

· **Limited quantities (LQ)**

1L

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **Transport category**

2

· **Tunnel restriction code**

D/E

· **IMDG**

· **Limited quantities (LQ)**

1L

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **UN "Model Regulation":**

UN 1648 ACETONITRILE, 3, II

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Directive 2012/18/EU**

· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **Seveso category P5c** FLAMMABLE LIQUIDS

· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t

· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t

· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 3

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 34 (1X1 mL)

(Contd. of page 8)

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

· **Relevant phrases**

H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H373 May cause damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

· **Department issuing SDS:** Document Control / Regulatory· **Contact:** regulatory@ultrasci.com· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 4: Acute toxicity – Category 4
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

· *** Data compared to the previous version altered.**

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 3

Revision: 31.03.2019

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** GB/T 23211 Standard no. 35 (1X1 mL)
- **Part number:** TFP-35-1
- **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str.8
76337 Waldbronn
Germany
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 2 H319 Causes serious eye irritation.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

- **Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms**



GHS02 GHS07

- **Signal word** Danger

- **Hazard-determining components of labelling:**

acetonitrile

- **Hazard statements**

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 3

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 35 (1X1 mL)

(Contd. of page 1)

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

- P101 If medical advice is needed, have product container or label at hand.
- P102 Keep out of reach of children.
- P103 Read label before use.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- P330 Rinse mouth.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
- P403+P235 Store in a well-ventilated place. Keep cool.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards
Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

Chemical characterisation: Mixtures
Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:

CAS: 75-05-8 EINECS: 200-835-2	acetonitrile ⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	99.924%
CAS: 834-12-8 EINECS: 212-634-7	ametryn (ISO) ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332	0.0127%
CAS: 62-73-7 EINECS: 200-547-7	dichlorvos (ISO) ⚠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 2, H330; ⚠ Aquatic Acute 1, H400; ⚠ Skin Sens. 1, H317	0.0127%

Additional information: For the wording of the listed hazard phrases refer to section 16.

GB

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 3

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 35 (1X1 mL)

(Contd. of page 2)

4 First aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 3

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 35 (1X1 mL)

(Contd. of page 3)

- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

Ingredients with limit values that require monitoring at the workplace:	
75-05-8 acetonitrile	
WEL	Short-term value: 102 mg/m ³ , 60 ppm Long-term value: 68 mg/m ³ , 40 ppm

- **Additional information:** The lists valid during the making were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.

- **Respiratory protection:**

When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.

Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

- **Protection of hands:**

Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

- **Material of gloves**

For normal use: nitrile rubber, 11-13 mil thickness
For direct contact with the chemical: butyl rubber, 12-15 mil thickness

- **Penetration time of glove material**

For normal use: nitrile rubber: 1 hour
For direct contact with the chemical: butyl rubber: > 4 hours

(Contd. on page 5)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 3

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 35 (1X1 mL)

(Contd. of page 4)

· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Fluid
Colour:	Colourless
Odour:	Aromatic
Odour threshold:	Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/freezing point:	-46 °C
Initial boiling point and boiling range:	81 °C

· Flash point: 2 °C

· Flammability (solid, gas): Not applicable.

· Ignition temperature: 525 °C

· Decomposition temperature: Not determined.

· Auto-ignition temperature: Product is not selfigniting.

· Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Explosion limits:

Lower:	4.4 Vol %
Upper:	16 Vol %

· Vapour pressure at 20 °C: 0 hPa

· Density at 20 °C: 0.786 g/cm³

· Relative density: Not determined.

· Vapour density: Not determined.

· Evaporation rate: Not determined.

· Solubility in / Miscibility with water:

Not miscible or difficult to mix.

· Partition coefficient: n-octanol/water: Not determined.

· Viscosity:

Dynamic at 20 °C:	0.39 mPas
Kinematic:	Not determined.

· Solvent content:

Organic solvents: 0.0 %

(Contd. on page 6)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 3

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 35 (1X1 mL)

(Contd. of page 5)

VOC (EC)	0.01 %
Solids content:	0.0 %
Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**
Harmful if swallowed.

· **LD/LC50 values relevant for classification:**

ATE (Acute Toxicity Estimates)

Oral	LD50	1,321 mg/kg (rat)

75-05-8 acetonitrile

Oral	LD50	1,320 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	3,587 mg/L (mouse)

834-12-8 ametryn (ISO)

Oral	LD50	1,626 mg/kg (rat)
Dermal	LD50	8,160 mg/kg (rabbit)
Inhalative	LC50/4 h	>2.22 mg/L (rat)

62-73-7 dichlorvos (ISO)

Oral	LD50	25 mg/kg (rat)
Dermal	LD50	107 mg/kg (rat)
		107 mg/kg (rabbit)
Inhalative	LC50/4 h	15 mg/L (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 3

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 35 (1X1 mL)

(Contd. of page 6)

- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Harmful to aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· European waste catalogue

HP 3	Flammable
HP 4	Irritant - skin irritation and eye damage
HP 6	Acute Toxicity
HP 14	Ecotoxic

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **Not Regulated, De minimus Quantities**

-

- **UN-Number**

- **ADR, IMDG, IATA**

UN1648

(Contd. on page 8)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 3

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 35 (1X1 mL)

(Contd. of page 7)

· UN proper shipping name	1648 ACETONITRILE
· ADR	ACETONITRILE
· IMDG, IATA	
· Transport hazard class(es)	
· ADR, IMDG, IATA	
	
· Class	3 Flammable liquids.
· Label	3
· Packing group	
· ADR, IMDG, IATA	II
· Environmental hazards:	Not applicable.
· Special precautions for user	Warning: Flammable liquids.
· Danger code (Kemler):	33
· EMS Number:	F-E,S-D
· Stowage Category	B
· Stowage Code	SW2 Clear of living quarters.
· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category	2
· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1648 ACETONITRILE, 3, II

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Directive 2012/18/EU
- Named dangerous substances - ANNEX I None of the ingredients is listed.
- Seveso category P5c FLAMMABLE LIQUIDS
- Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 3

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 35 (1X1 mL)

(Contd. of page 8)

· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

· **Regulation (EU) No 649/2012**

834-12-8	ametryn (ISO)	Annex I Part 1
62-73-7	dichlorvos (ISO)	Annex I Part 1 Annex I Part 2

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

· **Relevant phrases**

H225 Highly flammable liquid and vapour.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H312 Harmful in contact with skin.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H330 Fatal if inhaled.
H332 Harmful if inhaled.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

· **Department issuing SDS:** Document Control / Regulatory

· **Contact:** regulatory@ultrasci.com

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 2: Acute toxicity – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Skin Sens. 1: Skin sensitisation – Category 1
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

· *** Data compared to the previous version altered.**

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** GB/T 23211 Standard no. 36 (1X1 mL)
- **Part number:** TFP-36-1
- **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str.8
76337 Waldbronn
Germany
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS06 skull and crossbones

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 health hazard

STOT SE 1 H370 Causes damage to organs.

- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS02



GHS06



GHS08

- **Signal word** Danger
- **Hazard-determining components of labelling:**
methanol

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 36 (1X1 mL)

(Contd. of page 1)

· Hazard statements

H225 Highly flammable liquid and vapour.
H331 Toxic if inhaled.
H370 Causes damage to organs.

· Precautionary statements

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+P311 IF exposed or concerned: Call a POISON CENTER/doctor.
P321 Specific treatment (see on this label).
P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P403+P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Other hazards
· Results of PBT and vPvB assessment
· PBT: Not applicable.

· vPvB: Not applicable.

3 Composition/information on ingredients

· Chemical characterisation: Mixtures
· Description: Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 67-56-1	methanol	99.949%
EINECS: 200-659-6	 Flam. Liq. 2, H225;  Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331;  STOT SE 1, H370	

· Additional information: For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

· Description of first aid measures
· General information:

Immediately remove any clothing soiled by the product.
Remove breathing equipment only after contaminated clothing have been completely removed.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 36 (1X1 mL)

(Contd. of page 2)

In case of irregular breathing or respiratory arrest provide artificial respiration.

- **After inhalation:**

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

- **After swallowing:** If symptoms persist consult doctor.

- **Information for doctor:**

- **Most important symptoms and effects, both acute and delayed** No further relevant information available.

- **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

5 Firefighting measures

- **Extinguishing media**

- **Suitable extinguishing agents:**

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- **For safety reasons unsuitable extinguishing agents:** Water with full jet

- **Special hazards arising from the substance or mixture**

During heating or in case of fire poisonous gases are produced.

- **Advice for firefighters**

- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

- **Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

- **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

- **Handling:**

- **Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

- **Information about fire - and explosion protection:**

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Keep respiratory protective device available.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 36 (1X1 mL)

(Contd. of page 3)

- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
 - Keep container tightly sealed.
 - Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

· Ingredients with limit values that require monitoring at the workplace:	
67-56-1 methanol	
WEL	Short-term value: 333 mg/m ³ , 250 ppm
	Long-term value: 266 mg/m ³ , 200 ppm
Sk	

- **Additional information:** The lists valid during the making were used as basis.

- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
 - Keep away from foodstuffs, beverages and feed.
 - Immediately remove all soiled and contaminated clothing
 - Wash hands before breaks and at the end of work.
 - Store protective clothing separately.
- **Respiratory protection:**
 - When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.
 - Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.
- **Protection of hands:**
 - Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.
- **Material of gloves**
 - For normal use: nitrile rubber, 11-13 mil thickness
 - For direct contact with the chemical: butyl rubber, 12-15 mil thickness
- **Penetration time of glove material**
 - For normal use: nitrile rubber: 1 hour
 - For direct contact with the chemical: butyl rubber: > 4 hours

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 36 (1X1 mL)

(Contd. of page 4)

· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Fluid
Colour:	Colourless
Odour:	Alcohol-like
Odour threshold:	Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/freezing point:	-98 °C
Initial boiling point and boiling range:	64.7 °C

· Flash point: 9 °C

· Flammability (solid, gas): Not applicable.

· Ignition temperature: 455 °C

· Decomposition temperature: Not determined.

· Auto-ignition temperature: Product is not selfigniting.

· Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Explosion limits:

Lower:	5.5 Vol %
Upper:	44 Vol %

· Vapour pressure at 20 °C: 100 hPa

Density at 20 °C:	0.8 g/cm ³
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.

· Solubility in / Miscibility with water:

Not miscible or difficult to mix.

· Partition coefficient: n-octanol/water: Not determined.

· Viscosity:

Dynamic:	Not determined.
Kinematic:	Not determined.

· Solvent content:

Organic solvents: 99.9 %

(Contd. on page 6)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 36 (1X1 mL)

(Contd. of page 5)

VOC (EC)	99.95 %
Solids content:	0.0 %
Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**
Toxic if inhaled.

· **LD/LC50 values relevant for classification:**

ATE (Acute Toxicity Estimates)

Inhalative	LC50/4 h	3 mg/L

67-56-1 methanol

Oral	LD50	5,628 mg/kg (rat)
Dermal	LD50	15,800 mg/kg (rabbit)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure**
Causes damage to organs.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 36 (1X1 mL)

(Contd. of page 6)

- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· European waste catalogue

HP 3	Flammable
HP 5	Specific Target Organ Toxicity (STOT)/Aspiration Toxicity
HP 6	Acute Toxicity

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **Not Regulated, De minimus Quantities**

-

- **UN-Number**
- **ADR, IMDG, IATA** UN1230

- **UN proper shipping name**
- **ADR** 1230 METHANOL
- **IMDG, IATA** METHANOL

· Transport hazard class(es)

· ADR



- **Class** 3 Flammable liquids.
- **Label** 3+6.1

· IMDG



- **Class** 3 Flammable liquids.

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 36 (1X1 mL)

(Contd. of page 7)

· Label	3/6.1
· IATA	
 	
· Class	3 Flammable liquids.
· Label	3 (6.1)
· Packing group	
· ADR, IMDG, IATA	II
· Environmental hazards:	Not applicable.
· Special precautions for user	Warning: Flammable liquids.
· Danger code (Kemler):	336
· EMS Number:	F-E,S-D
· Stowage Category	B
· Stowage Code	SW2 Clear of living quarters.
· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category	2
· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1230 METHANOL, 3 (6.1), II

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Directive 2012/18/EU
- Named dangerous substances - ANNEX I None of the ingredients is listed.
- Seveso category
H2 ACUTE TOXIC
P5c FLAMMABLE LIQUIDS
- Qualifying quantity (tonnes) for the application of lower-tier requirements 50 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t
- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 69

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 36 (1X1 mL)

(Contd. of page 8)

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

· **Relevant phrases**

H225 Highly flammable liquid and vapour.

H301 Toxic if swallowed.

H311 Toxic in contact with skin.

H331 Toxic if inhaled.

H370 Causes damage to organs.

· **Department issuing SDS:** Document Control / Regulatory· **Contact:** regulatory@ultrasci.com· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids – Category 2

Acute Tox. 3: Acute toxicity – Category 3

STOT SE 1: Specific target organ toxicity (single exposure) – Category 1

· *** Data compared to the previous version altered.**

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** GB/T 23211 Standard no. 37 (1X1 mL)
- **Part number:** TFP-37-1
- **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str.8
76337 Waldbronn
Germany
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 2 H319 Causes serious eye irritation.

- **Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms**



GHS02 GHS07

- **Signal word** Danger

- **Hazard-determining components of labelling:**

acetonitrile

- **Hazard statements**

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

(Contd. on page 2)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 37 (1X1 mL)

(Contd. of page 1)

· Precautionary statements

- P101 If medical advice is needed, have product container or label at hand.
- P102 Keep out of reach of children.
- P103 Read label before use.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- P330 Rinse mouth.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
- P403+P235 Store in a well-ventilated place. Keep cool.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Other hazards

· Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

· Chemical characterisation: Mixtures

- **Description:** Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 75-05-8	acetonitrile	99.949%
EINECS: 200-835-2	⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

· Description of first aid measures

· General information:

Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.

- **After skin contact:** Immediately rinse with water.

· After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 37 (1X1 mL)

(Contd. of page 2)

- **After swallowing:** Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

GB

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 37 (1X1 mL)

(Contd. of page 3)

8 Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

75-05-8 acetonitrile

WEL	Short-term value: 102 mg/m ³ , 60 ppm
	Long-term value: 68 mg/m ³ , 40 ppm

· **Additional information:** The lists valid during the making were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

· **Respiratory protection:**

When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.

Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

· **Protection of hands:**

Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

· **Material of gloves**

For normal use: nitrile rubber, 11-13 mil thickness

For direct contact with the chemical: butyl rubber, 12-15 mil thickness

· **Penetration time of glove material**

For normal use: nitrile rubber: 1 hour

For direct contact with the chemical: butyl rubber: > 4 hours

· **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Fluid

Colour: Colourless

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 37 (1X1 mL)

(Contd. of page 4)

· Odour:	Aromatic
· Odour threshold:	Not determined.
· pH-value:	Not determined.
· Change in condition	
Melting point/freezing point:	-46 °C
Initial boiling point and boiling range:	81 °C
· Flash point:	2 °C
· Flammability (solid, gas):	Not applicable.
· Ignition temperature:	525 °C
· Decomposition temperature:	Not determined.
· Auto-ignition temperature:	Product is not selfigniting.
· Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· Explosion limits:	
Lower:	4.4 Vol %
Upper:	16 Vol %
· Vapour pressure at 20 °C:	0 hPa
· Density at 20 °C:	0.786 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Not miscible or difficult to mix.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic at 20 °C:	0.39 mPas
Kinematic:	Not determined.
· Solvent content:	
VOC (EC)	0.00 %
Solids content:	0.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 37 (1X1 mL)

(Contd. of page 5)

· **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

· **Information on toxicological effects**

· **Acute toxicity**

Harmful if swallowed.

· **LD/LC50 values relevant for classification:**
ATE (Acute Toxicity Estimates)

Oral	LD50	1,321 mg/kg (rat)

75-05-8 acetonitrile

Oral	LD50	1,320 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	3,587 mg/L (mouse)

· **Primary irritant effect:**

· **Skin corrosion/irritation** Based on available data, the classification criteria are not met.

· **Serious eye damage/irritation**

Causes serious eye irritation.

· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

· **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.

· **Carcinogenicity** Based on available data, the classification criteria are not met.

· **Reproductive toxicity** Based on available data, the classification criteria are not met.

· **STOT-single exposure** Based on available data, the classification criteria are not met.

· **STOT-repeated exposure** Based on available data, the classification criteria are not met.

· **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

· **Toxicity**

· **Aquatic toxicity:** No further relevant information available.

· **Persistence and degradability** No further relevant information available.

· **Behaviour in environmental systems:**

· **Bioaccumulative potential** No further relevant information available.

· **Mobility in soil** No further relevant information available.

· **Additional ecological information:**

· **General notes:**

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No further relevant information available.

GB

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 37 (1X1 mL)

(Contd. of page 6)

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **European waste catalogue**

HP 3	Flammable
HP 4	Irritant - skin irritation and eye damage
HP 6	Acute Toxicity

· **Uncleaned packaging:**

· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **Not Regulated, De minimus Quantities**

-

· **UN-Number**

· **ADR, IMDG, IATA**

UN1648

· **UN proper shipping name**

· **ADR**

· **IMDG, IATA**

1648 ACETONITRILE

ACETONITRILE

· **Transport hazard class(es)**

· **ADR, IMDG, IATA**



· **Class**

3 Flammable liquids.

· **Label**

3

· **Packing group**

· **ADR, IMDG, IATA**

II

· **Environmental hazards:**

Not applicable.

· **Special precautions for user**

Warning: Flammable liquids.

· **Danger code (Kemler):**

33

· **EMS Number:**

F-E,S-D

· **Stowage Category**

B

· **Stowage Code**

SW2 Clear of living quarters.

· **Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

(Contd. on page 8)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 37 (1X1 mL)

(Contd. of page 7)

· Transport/Additional information:

· ADR	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
· Transport category	
2	
· Tunnel restriction code	
D/E	
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	
UN 1648 ACETONITRILE, 3, II	

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category P5c** FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

· Relevant phrases

H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.

· Department issuing SDS: Document Control / Regulatory

· Contact: regulatory@ultrasci.com

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)

(Contd. on page 9)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 37 (1X1 mL)

(Contd. of page 8)

LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 4: Acute toxicity – Category 4
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
· *** Data compared to the previous version altered.**

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** GB/T 23211 Standard no. 38 (1X1 mL)
- **Part number:** TFP-38-1
- **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str.8
76337 Waldbronn
Germany
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 2 H319 Causes serious eye irritation.

· Label elements

· Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

· Hazard pictograms



GHS02 GHS07

· Signal word Danger

· Hazard-determining components of labelling:

acetonitrile

· Hazard statements

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 38 (1X1 mL)

(Contd. of page 1)

· Precautionary statements

- P101 If medical advice is needed, have product container or label at hand.
- P102 Keep out of reach of children.
- P103 Read label before use.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- P330 Rinse mouth.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
- P403+P235 Store in a well-ventilated place. Keep cool.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Other hazards

· Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

· Chemical characterisation: Mixtures

- **Description:** Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 75-05-8 EINECS: 200-835-2	acetonitrile ⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	99.873%
CAS: 102851-06-9	tau-fluvalinate ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315	0.127%

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

· Description of first aid measures

· General information:

Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 38 (1X1 mL)

(Contd. of page 2)

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 38 (1X1 mL)

· **Specific end use(s)** No further relevant information available.

(Contd. of page 3)

8 Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**
75-05-8 acetonitrile

WEL	Short-term value: 102 mg/m ³ , 60 ppm
	Long-term value: 68 mg/m ³ , 40 ppm

· **Additional information:** The lists valid during the making were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

· **Respiratory protection:**

When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.

Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

· **Protection of hands:**

Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

· **Material of gloves**

For normal use: nitrile rubber, 11-13 mil thickness

For direct contact with the chemical: butyl rubber, 12-15 mil thickness

· **Penetration time of glove material**

For normal use: nitrile rubber: 1 hour

For direct contact with the chemical: butyl rubber: > 4 hours

· **Eye protection:**


Tightly sealed goggles

GB

(Contd. on page 5)



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 38 (1X1 mL)

(Contd. of page 4)

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Fluid
Colour:	Colourless
Odour:	Aromatic
Odour threshold:	Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/freezing point:	-46 °C
Initial boiling point and boiling range:	81 °C

· Flash point: 2 °C

· Flammability (solid, gas): Not applicable.

· Ignition temperature: 525 °C

· Decomposition temperature: Not determined.

· Auto-ignition temperature: Product is not selfigniting.

· Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Explosion limits:

Lower:	4.4 Vol %
Upper:	16 Vol %

· Vapour pressure at 20 °C: 0 hPa

· Density at 20 °C: 0.786 g/cm³

· Relative density: Not determined.

· Vapour density: Not determined.

· Evaporation rate: Not determined.

· Solubility in / Miscibility with water:

Not miscible or difficult to mix.

· Partition coefficient: n-octanol/water: Not determined.

· Viscosity:

Dynamic at 20 °C:	0.39 mPas
Kinematic:	Not determined.

· Solvent content:

VOC (EC) 0.00 %

Solids content: 0.0 %

· Other information: No further relevant information available.

10 Stability and reactivity

· Reactivity: No further relevant information available.

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 38 (1X1 mL)

(Contd. of page 5)

- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity**
Harmful if swallowed.

- **LD/LC50 values relevant for classification:**

ATE (Acute Toxicity Estimates)

Oral	LD50	1,322 mg/kg (rat)

75-05-8 acetonitrile

Oral	LD50	1,320 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	3,587 mg/L (mouse)

102851-06-9 tau-fluvalinate

Oral	LD50	261 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	>500 mg/L (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 38 (1X1 mL)

(Contd. of page 6)

Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.

Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

Waste treatment methods
Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

European waste catalogue

HP 3	Flammable
HP 4	Irritant - skin irritation and eye damage
HP 6	Acute Toxicity

Uncleaned packaging:

- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

Not Regulated, De minimus Quantities

-

UN-Number
ADR, IMDG, IATA

UN1648

UN proper shipping name
ADR
IMDG, IATA

1648 ACETONITRILE

ACETONITRILE

Transport hazard class(es)
ADR, IMDG, IATA

Class
Label

3 Flammable liquids.

3

Packing group
ADR, IMDG, IATA

II

Environmental hazards:

Not applicable.

Special precautions for user
Danger code (Kemler):
EMS Number:
Stowage Category

Warning: Flammable liquids.

33

F-E,S-D

B

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 38 (1X1 mL)

(Contd. of page 7)

· Stowage Code	SW2 Clear of living quarters.
· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category	2
· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1648 ACETONITRILE, 3, II

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category** P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- **Relevant phrases**
H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
- **Department issuing SDS:** Document Control / Regulatory
- **Contact:** regulatory@ultrasci.com

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 2

Revision: 31.03.2019

Trade name: GB/T 23211 Standard no. 38 (1X1 mL)

(Contd. of page 8)

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

· * Data compared to the previous version altered.

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 5

Revision: 24.03.2019

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** Clethodim
- **Part number:** PST-1925, PST-1925-10MG, PST-1925-50MG, PST-1925-100MG
- **CAS Number:**
99129-21-2
- **Index number:**
606-150-00-9
- **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str.8
76337 Waldbronn
Germany
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS07

Acute Tox. 4 H302 Harmful if swallowed.
 Skin Sens. 1 H317 May cause an allergic skin reaction.
 Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS07

- **Signal word** Warning
- **Hazard-determining components of labelling:**
clethodim
- **Hazard statements**
H302 Harmful if swallowed.
H317 May cause an allergic skin reaction.
H412 Harmful to aquatic life with long lasting effects.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 5

Revision: 24.03.2019

Trade name: Clethodim

(Contd. of page 1)

· Precautionary statements

- P101 If medical advice is needed, have product container or label at hand.
- P102 Keep out of reach of children.
- P103 Read label before use.
- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P272 Contaminated work clothing should not be allowed out of the workplace.
- P273 Avoid release to the environment.
- P280 Wear protective gloves.
- P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- P330 Rinse mouth.
- P302+P352 IF ON SKIN: Wash with plenty of water.
- P362+P364 Take off contaminated clothing and wash it before reuse.
- P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
- P321 Specific treatment (see on this label).
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Additional information:

EUH066 Repeated exposure may cause skin dryness or cracking.

· Other hazards**· Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

*

3 Composition/information on ingredients

· Chemical characterisation: Substances**· CAS No. Description**

99129-21-2 clethodim

· Identification number(s)

· **Index number:** 606-150-00-9

*

4 First aid measures

· Description of first aid measures**· General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· After inhalation:

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

· **After eye contact:** Rinse opened eye for several minutes under running water.

· **After swallowing:** Call for a doctor immediately.

· Information for doctor:

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

(Contd. on page 3)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 5

Revision: 24.03.2019

Trade name: Clethodim

- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

(Contd. of page 2)

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists valid during the making were used as basis.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 5

Revision: 24.03.2019

Trade name: Clethodim

(Contd. of page 3)

- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
 Keep away from foodstuffs, beverages and feed.
 Immediately remove all soiled and contaminated clothing
 Wash hands before breaks and at the end of work.
- **Respiratory protection:**
 When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.
 Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.
- **Protection of hands:**
 Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.
- **Material of gloves**
 For normal use: nitrile rubber, 11-13 mil thickness
 For direct contact with the chemical: butyl rubber, 12-15 mil thickness
 The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **Penetration time of glove material**
 For normal use: nitrile rubber: 1 hour
 For direct contact with the chemical: butyl rubber: > 4 hours
- **Eye protection:** Goggles recommended during refilling

*

9 Physical and chemical properties

· Information on basic physical and chemical properties	
· General Information	
· Appearance:	
Form:	Fluid
Colour:	Not determined.
· Odour:	Characteristic
· Odour threshold:	Not determined.
· pH-value:	Not determined.
· Change in condition	
Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	Undetermined.
· Flash point:	Not applicable.
· Flammability (solid, gas):	Not applicable.
· Decomposition temperature:	Not determined.
· Auto-ignition temperature:	Not determined.
· Explosive properties:	Product does not present an explosion hazard.

(Contd. on page 5)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 5

Revision: 24.03.2019

Trade name: Clethodim

(Contd. of page 4)

· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapour pressure:	Not determined.
· Density:	Not determined.
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Not miscible or difficult to mix.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
VOC (EC)	0.00 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

· Information on toxicological effects

- **Acute toxicity**
Harmful if swallowed.

· LD/LC50 values relevant for classification:

ATE (Acute Toxicity Estimates)

Oral	LD50	500 mg/kg

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation**
May cause an allergic skin reaction.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 5

Revision: 24.03.2019

Trade name: Clethodim

(Contd. of page 5)

- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Harmful to aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

European waste catalogue

HP 6	Acute Toxicity
HP 13	Sensitising
HP 14	Ecotoxic

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· UN-Number · ADR, ADN, IMDG, IATA	not regulated
· UN proper shipping name · ADR, ADN, IMDG, IATA	not regulated
· Transport hazard class(es) · ADR, ADN, IMDG, IATA · Class	not regulated

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 5

Revision: 24.03.2019

Trade name: Clethodim

(Contd. of page 6)

· Packing group	
· ADR, IMDG, IATA	not regulated
· Environmental hazards:	Not applicable.
· Special precautions for user	Not applicable.
· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· UN "Model Regulation":	not regulated

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** Substance is not listed.
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

· **Department issuing SDS:** Document Control / Regulatory

· **Contact:** regulatory@ultrasci.com

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity – Category 4

Skin Sens. 1: Skin sensitisation – Category 1

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

· *** Data compared to the previous version altered.**

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 3

Revision: 31.03.2019

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** Heptenophos
- **Part number:** PST-2380, PST-2380-10MG, PST-2380-25MG
- **CAS Number:**
23560-59-0
- **EC number:**
245-737-0
- **Index number:**
015-126-00-1
- **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str.8
76337 Waldbronn
Germany
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS06 skull and crossbones

Acute Tox. 3 H301 Toxic if swallowed.



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.



GHS07

Acute Tox. 4 H312 Harmful in contact with skin.

- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the CLP regulation.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 3

Revision: 31.03.2019

Trade name: Heptenophos

(Contd. of page 1)

· Hazard pictograms


GHS06 GHS09

· Signal word Danger
· Hazard-determining components of labelling:

heptenophos (ISO)

· Hazard statements

H301 Toxic if swallowed.

H312 Harmful in contact with skin.

H410 Very toxic to aquatic life with long lasting effects.

· Precautionary statements

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read label before use.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P273 Avoid release to the environment.

P280 Wear protective gloves / protective clothing.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P321 Specific treatment (see on this label).

P330 Rinse mouth.

P302+P352 IF ON SKIN: Wash with plenty of water.

P312 Call a POISON CENTER/doctor if you feel unwell.

P362+P364 Take off contaminated clothing and wash it before reuse.

P391 Collect spillage.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Other hazards
· Results of PBT and vPvB assessment
· PBT: Not applicable.

· vPvB: Not applicable.

3 Composition/information on ingredients

· Chemical characterisation: Substances
· CAS No. Description

23560-59-0 heptenophos (ISO)

· Identification number(s)
· EC number: 245-737-0

· Index number: 015-126-00-1

GB

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 3

Revision: 31.03.2019

Trade name: Heptenophos

(Contd. of page 2)

4 First aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Do not induce vomiting; call for medical help immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.

(Contd. on page 4)



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 3

Revision: 31.03.2019

Trade name: Heptenophos

(Contd. of page 3)

- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
 - Keep away from foodstuffs, beverages and feed.
 - Immediately remove all soiled and contaminated clothing
 - Wash hands before breaks and at the end of work.
 - Avoid contact with the eyes and skin.
- **Respiratory protection:**
 - When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.
 - Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.
- **Protection of hands:**
 - Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.
- **Material of gloves**
 - For normal use: nitrile rubber, 11-13 mil thickness
 - For direct contact with the chemical: butyl rubber, 12-15 mil thickness
 - The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **Penetration time of glove material**
 - For normal use: nitrile rubber: 1 hour
 - For direct contact with the chemical: butyl rubber: > 4 hours
- **Eye protection:** Goggles recommended during refilling

9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

Form:	Fluid
Colour:	Not determined.
- **Odour:** Ester-like
- **Odour threshold:** Not determined.

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 3

Revision: 31.03.2019

Trade name: Heptenophos

(Contd. of page 4)

· pH-value:	Not determined.
· Change in condition Melting point/freezing point: Initial boiling point and boiling range:	Undetermined. 64 °C
· Flash point:	Not applicable.
· Flammability (solid, gas):	Not applicable.
· Decomposition temperature:	Not determined.
· Auto-ignition temperature:	Not determined.
· Explosive properties:	Product does not present an explosion hazard.
· Explosion limits: Lower: Upper:	Not determined. Not determined.
· Vapour pressure at 20 °C:	0 hPa
· Density at 20 °C: · Relative density · Vapour density · Evaporation rate	1.28 g/cm ³ Not determined. Not determined. Not determined.
· Solubility in / Miscibility with water at 20 °C:	2.2 g/l
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity: Dynamic: Kinematic:	Not determined. Not determined.
· Solvent content: VOC (EC) · Other information	0.00 % No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**
Toxic if swallowed.

(Contd. on page 6)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 3

Revision: 31.03.2019

Trade name: Heptenophos

(Contd. of page 5)

Harmful in contact with skin.

LD/LC50 values relevant for classification:
ATE (Acute Toxicity Estimates)

Oral	LD50	96 mg/kg (rat)
Dermal	LD50	2,000 mg/kg (rat)

23560-59-0 heptenophos (ISO)

Oral	LD50	96 mg/kg (rat)
Dermal	LD50	2,000 mg/kg (rat)
Inhalative	LC50/4 h	400 mg/L (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Very toxic for fish
- **Additional ecological information:**
- **General notes:**
 - Water hazard class 3 (German Regulation) (Assessment by list): extremely hazardous for water
 - Do not allow product to reach ground water, water course or sewage system, even in small quantities.
 - Danger to drinking water if even extremely small quantities leak into the ground.
 - Also poisonous for fish and plankton in water bodies.
 - Very toxic for aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

GB

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 3

Revision: 31.03.2019

Trade name: Heptenophos

(Contd. of page 6)

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **European waste catalogue**

HP 6	Acute Toxicity
HP 14	Ecotoxic

· **Uncleaned packaging:**

· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **UN-Number**

· **ADR, IMDG, IATA**

UN2810

· **UN proper shipping name**

· **ADR**

2810 TOXIC LIQUID, ORGANIC, N.O.S. (heptenophos (ISO)), ENVIRONMENTALLY HAZARDOUS

· **IMDG, IATA**

TOXIC LIQUID, ORGANIC, N.O.S. (heptenophos (ISO))

· **Transport hazard class(es)**

· **ADR**

· **Class**

6.1 Toxic substances.

· **Label**

6.1

· **IMDG, IATA**

· **Class**

6.1 Toxic substances.

· **Label**

6.1

· **Packing group**

· **ADR, IMDG, IATA**

III

· **Environmental hazards:**

· **Special marking (ADR):**

Symbol (fish and tree)

· **Special precautions for user**

Warning: Toxic substances.

· **Danger code (Kemler):**

60

· **EMS Number:**

F-A,S-A

· **Stowage Category**

A

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 3

Revision: 31.03.2019

Trade name: Heptenophos

(Contd. of page 7)

· Stowage Code	SW2 Clear of living quarters.
· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· Transport category	2
· Tunnel restriction code	E
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 2810 TOXIC LIQUID, ORGANIC, N.O.S. (HEPTENOPHOS (ISO)), 6.1, III, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** Substance is not listed.
- **Seveso category** E1 Hazardous to the Aquatic Environment
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 100 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- **Department issuing SDS:** Document Control / Regulatory
- **Contact:** regulatory@ultrasci.com
- **Abbreviations and acronyms:**
 ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 EINECS: European Inventory of Existing Commercial Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 VOC: Volatile Organic Compounds (USA, EU)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic

(Contd. on page 9)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 31.03.2019

Version number 3

Revision: 31.03.2019

Trade name: Heptenophos

(Contd. of page 8)

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 3: Acute toxicity – Category 3

Acute Tox. 4: Acute toxicity – Category 4

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

· *** Data compared to the previous version altered.**

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