

Product code	Description
DWK-5253	EPA Method 525.2 Kit with Chlordane

Components:

SVM-525-1	Semi-Volatile Standard (1X1 mL)
PPM-525E-1	Organochlorine Pesticide Standard (1X1 mL)
NPM-525C-1	Nitrogen/Phosphorous Pesticide Standard (1X1 mL)
NPM-525B-1	Nitrogen/Phosphorous Pesticide Standard (1X1 mL)
PPS-240-1	Toxaphene Standard (1X1 mL)
NPM-108B-1	DEF Standard (1X1 mL)
ISM-510-1	Internal and Surrogate Standard (1X1 mL)
GCM-160A-1	GC/MS Performance Check Standard (1X1 mL)
EPA-1086-1	Chlordane Standard (1X1 mL)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/29/2019

Version Number 5

Reviewed on 04/30/2019

1 Identification

- **Product identifier**
- **Trade name:** Semi-Volatile Standard (1X1 mL)
- **Part number:** SVM-525-1
- **Application of the substance / the mixture** Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies, Inc.
5301 Stevens Creek Blvd.
Santa Clara, CA 95051 USA
- **Information department:**
Telephone: 800-227-9770
e-mail: pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: 1-800-424-9300

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

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



GHS08 Health hazard

Carc. 1B H350 May cause cancer.



GHS07

Eye Irrit. 2A H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

- **Label elements**

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS02



GHS07



GHS08

- **Signal word** Danger

- **Hazard-determining components of labeling:**

acetone

dibenz[a,h]anthracene

benzo[a]pyrene

- **Hazard statements**

Highly flammable liquid and vapor.

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Causes serious eye irritation.

May cause cancer.

May cause drowsiness or dizziness.

Precautionary statements

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Ground/bond container and receiving equipment.

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

Use only non-sparking tools.

Take precautionary measures against static discharge.

Avoid breathing dust/fume/gas/mist/vapors/spray

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

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

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

IF exposed or concerned: Get medical advice/attention.

Call a poison center/doctor if you feel unwell.

If eye irritation persists: Get medical advice/attention.

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

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Store locked up.

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

Classification system:
NFPA ratings (scale 0 - 4)


Health = 2

Fire = 3

Reactivity = 0

HMIS-ratings (scale 0 - 4)


Health = *2

Fire = 3

Reactivity = 0

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

vPvB: Not applicable.

3 Composition/information on ingredients

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

Dangerous components:

67-64-1 acetone

99.546%

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53-70-3	dibenz[a,h]anthracene	0.0126%
50-32-8	benzo[a]pyrene	0.0126%

4 First-aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **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:** 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 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing 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.
- **Protective Action Criteria for Chemicals**

PAC-1:

67-64-1	acetone	200 ppm
78-59-1	3,5,5-trimethylcyclohex-2-enone	12 ppm
131-11-3	dimethyl phthalate	15 mg/m ³
121-14-2	2,4-dinitrotoluene	0.6 mg/m ³
606-20-2	2,6-dinitrotoluene	0.6 mg/m ³

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118-74-1	hexachlorobenzene	0.006 mg/m ³
77-47-4	hexachlorocyclopentadiene	0.03 ppm
87-86-5	pentachlorophenol	1 mg/m ³
129-00-0	pyrene	0.15 mg/m ³
86-73-7	fluorene	6.6 mg/m ³
120-12-7	anthracene	48 mg/m ³
85-01-8	phenanthrene	5.4 mg/m ³
208-96-8	acenaphthylene	10 mg/m ³
53-70-3	dibenz[a,h]anthracene	0.093 mg/m ³
193-39-5	indeno[1,2,3-cd]pyrene	1.2 mg/m ³
218-01-9	chrysene	0.6 mg/m ³
205-99-2	benz[e]acephenanthrylene	0.12 mg/m ³
50-32-8	benzo[a]pyrene	0.6 mg/m ³
56-55-3	benz[a]anthracene	0.6 mg/m ³
191-24-2	benzo[ghi]perylene	30 mg/m ³
84-74-2	dibutyl phthalate	15 mg/m ³
117-81-7	di-(2-ethylhexyl) phthalate	10 mg/m ³
85-68-7	BBP	15 mg/m ³
103-23-1	Di-(2-ethylhexyl) adipate	17 mg/m ³
84-66-2	diethyl phthalate	15 mg/m ³

PAC-2:

67-64-1	acetone	3200* ppm
78-59-1	3,5,5-trimethylcyclohex-2-enone	33 ppm
131-11-3	dimethyl phthalate	1,600 mg/m ³
121-14-2	2,4-dinitrotoluene	12 mg/m ³
606-20-2	2,6-dinitrotoluene	47 mg/m ³
118-74-1	hexachlorobenzene	14 mg/m ³
77-47-4	hexachlorocyclopentadiene	0.55 ppm
87-86-5	pentachlorophenol	15 mg/m ³
129-00-0	pyrene	1.7 mg/m ³
86-73-7	fluorene	72 mg/m ³
120-12-7	anthracene	530 mg/m ³
85-01-8	phenanthrene	59 mg/m ³
208-96-8	acenaphthylene	110 mg/m ³
53-70-3	dibenz[a,h]anthracene	1 mg/m ³
193-39-5	indeno[1,2,3-cd]pyrene	13 mg/m ³
218-01-9	chrysene	12 mg/m ³
205-99-2	benz[e]acephenanthrylene	1.3 mg/m ³
50-32-8	benzo[a]pyrene	120 mg/m ³
56-55-3	benz[a]anthracene	120 mg/m ³
191-24-2	benzo[ghi]perylene	330 mg/m ³

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84-74-2	dibutyl phthalate	1,600 mg/m ³
117-81-7	di-(2-ethylhexyl) phthalate	1,000 mg/m ³
85-68-7	BBP	77 mg/m ³
103-23-1	Di-(2-ethylhexyl) adipate	180 mg/m ³
84-66-2	diethyl phthalate	300 mg/m ³

PAC-3:

67-64-1	acetone	5700* ppm
78-59-1	3,5,5-trimethylcyclohex-2-enone	200 ppm
131-11-3	dimethyl phthalate	9300* mg/m ³
121-14-2	2,4-dinitrotoluene	200 mg/m ³
606-20-2	2,6-dinitrotoluene	200 mg/m ³
118-74-1	hexachlorobenzene	91 mg/m ³
77-47-4	hexachlorocyclopentadiene	1 ppm
87-86-5	pentachlorophenol	150 mg/m ³
129-00-0	pyrene	110 mg/m ³
86-73-7	fluorene	430 mg/m ³
120-12-7	anthracene	3,200 mg/m ³
85-01-8	phenanthrene	360 mg/m ³
208-96-8	acenaphthylene	660 mg/m ³
53-70-3	dibenz[a,h]anthracene	2.9 mg/m ³
193-39-5	indeno[1,2,3-cd]pyrene	79 mg/m ³
218-01-9	chrysene	69 mg/m ³
205-99-2	benz[e]acephenanthrylene	7.9 mg/m ³
50-32-8	benzo[a]pyrene	700 mg/m ³
56-55-3	benz[a]anthracene	700 mg/m ³
191-24-2	benzo[ghi]perylene	2,000 mg/m ³
84-74-2	dibutyl phthalate	9300* mg/m ³
117-81-7	di-(2-ethylhexyl) phthalate	6,100 mg/m ³
85-68-7	BBP	460 mg/m ³
103-23-1	Di-(2-ethylhexyl) adipate	1,100 mg/m ³
84-66-2	diethyl phthalate	1,800 mg/m ³

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 protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Keep respiratory protective device available.

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- **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 receptacle 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 systems:** No further data; see item 7.
- **Control parameters**

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

67-64-1 acetone

PEL	Long-term value: 2400 mg/m ³ , 1000 ppm
REL	Long-term value: 590 mg/m ³ , 250 ppm
TLV	Short-term value: 1187 mg/m ³ , 500 ppm
	Long-term value: 594 mg/m ³ , 250 ppm
	BEI

50-32-8 benzo[a]pyrene

PEL	Long-term value: 0.2 mg/m ³ see Coal tar pitch volatiles
REL	Long-term value: 0.1 mg/m ³ Coal tar pitch volatile; Pocket Guide Apps. A+C
TLV	L; BEIp

· **Ingredients with biological limit values:**

67-64-1 acetone

BEI	50 mg/L Medium: urine Time: end of shift Parameter: Acetone (nonspecific)
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50-32-8 benzo[a]pyrene

BEI	- Medium: urine Time: end of shift at end of workweek Parameter: 1-Hydroxypyrene with hydrolysis (nonquantitative)
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- **Additional information:** The lists that were valid during the creation 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.

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Avoid contact with the eyes and skin.

· **Breathing equipment:**

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 11-13 mil thickness are recommended for normal use. The breakthrough time is 1 hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15 mil 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

Color: Colorless

· **Odor:** Characteristic

· **Odor threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/Melting range: -94.7 °C (-138.5 °F)

Boiling point/Boiling range: 55.8-56.6 °C (132.4-133.9 °F)

· **Flash point:** -17 °C (1.4 °F)

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

· **Ignition temperature:** 465 °C (869 °F)

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

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· Explosion limits:	
Lower:	2.6 Vol %
Upper:	13 Vol %
· Vapor pressure at 20 °C (68 °F):	245.3 hPa (184 mm Hg)
· Density at 20 °C (68 °F):	0.791 g/cm ³ (6.6009 lbs/gal)
· Relative density	Not determined.
· Vapor 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 (68 °F):	32 mPas
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	99.6 %
VOC content:	0.05 %
	0.5 g/l / 0.00 lb/gal
Solids content:	0.3 %
· 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:**

· **LD/LC50 values that are relevant for classification:**
67-64-1 acetone

Oral	LD50	5,800 mg/kg (rat)
Dermal	LD50	20,000 mg/kg (rabbit)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.

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· Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

Irritant

· Carcinogenic categories
· IARC (International Agency for Research on Cancer)

121-14-2	2,4-dinitrotoluene	2B
606-20-2	2,6-dinitrotoluene	2B
118-74-1	hexachlorobenzene	2B
87-86-5	pentachlorophenol	2B
129-00-0	pyrene	3
86-73-7	fluorene	3
120-12-7	anthracene	3
85-01-8	phenanthrene	3
53-70-3	dibenz[a,h]anthracene	2A
193-39-5	indeno[1,2,3-cd]pyrene	2B
218-01-9	chrysene	2B
207-08-9	benzo[k]fluoranthene	2B
205-99-2	benz[e]acephenanthrylene	2B
50-32-8	benzo[a]pyrene	1
56-55-3	benz[a]anthracene	2B
191-24-2	benzo[ghi]perylene	3
117-81-7	di-(2-ethylhexyl) phthalate	2B
85-68-7	BBP	3
103-23-1	Di-(2-ethylhexyl) adipate	3

· NTP (National Toxicology Program)

118-74-1	hexachlorobenzene	R
87-86-5	pentachlorophenol	R
129-00-0	pyrene	R
86-73-7	fluorene	R
120-12-7	anthracene	R
85-01-8	phenanthrene	R
53-70-3	dibenz[a,h]anthracene	R
193-39-5	indeno[1,2,3-cd]pyrene	R
218-01-9	chrysene	R
207-08-9	benzo[k]fluoranthene	R
205-99-2	benz[e]acephenanthrylene	R
50-32-8	benzo[a]pyrene	R
56-55-3	benz[a]anthracene	R
117-81-7	di-(2-ethylhexyl) phthalate	R

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· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

· **Toxicity**

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

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

· **Behavior 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 3 (Self-assessment): 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.

· **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 of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**

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

14 Transport information

· **Not Regulated, De minimus Quantities** -

· **UN-Number**

· **DOT, IMDG, IATA** UN1090

· **UN proper shipping name**

· **DOT** Acetone solution

· **IMDG** ACETONE solution, MARINE POLLUTANT

· **IATA** ACETONE solution

· **Transport hazard class(es)**

· **DOT**

· **Class** 3 Flammable liquids

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· **Label** 3

· **IMDG**



· **Class** 3 Flammable liquids

· **Label** 3

· **IATA**



· **Class** 3 Flammable liquids

· **Label** 3

· **Packing group**

· **DOT, IMDG, IATA** II

· **Environmental hazards:** Product contains environmentally hazardous substances: 2-chlorobiphenyl

· **Marine pollutant:** Symbol (fish and tree)

· **Special precautions for user** Warning: Flammable liquids

· **Danger code (Kemler):** 33

· **EMS Number:** F-E,S-D

· **Stowage Category** B

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

· **Transport/Additional information:**

· **DOT**

· **Quantity limitations** On passenger aircraft/rail: 5 L
On cargo aircraft only: 60 L

· **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 1090 ACETONE SOLUTION, 3, II, ENVIRONMENTALLY HAZARDOUS

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15 Regulatory information

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

· Sara

· Section 355 (extremely hazardous substances):

77-47-4	hexachlorocyclopentadiene
129-00-0	pyrene

· Section 313 (Specific toxic chemical listings):

131-11-3	dimethyl phthalate
121-14-2	2,4-dinitrotoluene
606-20-2	2,6-dinitrotoluene
118-74-1	hexachlorobenzene
77-47-4	hexachlorocyclopentadiene
87-86-5	pentachlorophenol
120-12-7	anthracene
85-01-8	phenanthrene
53-70-3	dibenz[a,h]anthracene
193-39-5	indeno[1,2,3-cd]pyrene
218-01-9	chrysene
207-08-9	benzo[k]fluoranthene
205-99-2	benz[e]acephenanthrylene
50-32-8	benzo[a]pyrene
56-55-3	benz[a]anthracene
191-24-2	benzo[ghi]perylene
84-74-2	dibutyl phthalate
117-81-7	di-(2-ethylhexyl) phthalate

· TSCA (Toxic Substances Control Act):

67-64-1	acetone	ACTIVE
78-59-1	3,5,5-trimethylcyclohex-2-enone	ACTIVE
131-11-3	dimethyl phthalate	ACTIVE
121-14-2	2,4-dinitrotoluene	ACTIVE
606-20-2	2,6-dinitrotoluene	ACTIVE
118-74-1	hexachlorobenzene	ACTIVE
77-47-4	hexachlorocyclopentadiene	ACTIVE
87-86-5	pentachlorophenol	ACTIVE
129-00-0	pyrene	ACTIVE
86-73-7	fluorene	ACTIVE
120-12-7	anthracene	ACTIVE
85-01-8	phenanthrene	ACTIVE
208-96-8	acenaphthylene	ACTIVE
53-70-3	dibenz[a,h]anthracene	ACTIVE

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193-39-5	indeno[1,2,3-cd]pyrene	ACTIVE
218-01-9	chrysene	ACTIVE
50-32-8	benzo[a]pyrene	ACTIVE
56-55-3	benz[a]anthracene	ACTIVE
84-74-2	dibutyl phthalate	ACTIVE
117-81-7	di-(2-ethylhexyl) phthalate	ACTIVE
85-68-7	BBP	ACTIVE
103-23-1	Di-(2-ethylhexyl) adipate	ACTIVE
84-66-2	diethyl phthalate	ACTIVE

Hazardous Air Pollutants

78-59-1	3,5,5-trimethylcyclohex-2-enone
131-11-3	dimethyl phthalate
121-14-2	2,4-dinitrotoluene
118-74-1	hexachlorobenzene
77-47-4	hexachlorocyclopentadiene
87-86-5	pentachlorophenol
129-00-0	pyrene
86-73-7	fluorene
120-12-7	anthracene
85-01-8	phenanthrene
53-70-3	dibenz[a,h]anthracene
193-39-5	indeno[1,2,3-cd]pyrene
218-01-9	chrysene
207-08-9	benzo[k]fluoranthene
205-99-2	benz[e]acephenanthrylene
50-32-8	benzo[a]pyrene
56-55-3	benz[a]anthracene
84-74-2	dibutyl phthalate
117-81-7	di-(2-ethylhexyl) phthalate

Proposition 65
Chemicals known to cause cancer:

121-14-2	2,4-dinitrotoluene
606-20-2	2,6-dinitrotoluene
118-74-1	hexachlorobenzene
87-86-5	pentachlorophenol
53-70-3	dibenz[a,h]anthracene
193-39-5	indeno[1,2,3-cd]pyrene
218-01-9	chrysene
207-08-9	benzo[k]fluoranthene
205-99-2	benz[e]acephenanthrylene
50-32-8	benzo[a]pyrene

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Trade name: Semi-Volatile Standard (1X1 mL)

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56-55-3	benz[a]anthracene
117-81-7	di-(2-ethylhexyl) phthalate

Chemicals known to cause reproductive toxicity for females:

84-74-2	dibutyl phthalate
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Chemicals known to cause reproductive toxicity for males:

121-14-2	2,4-dinitrotoluene
606-20-2	2,6-dinitrotoluene
84-74-2	dibutyl phthalate
117-81-7	di-(2-ethylhexyl) phthalate

Chemicals known to cause developmental toxicity:

118-74-1	hexachlorobenzene
84-74-2	dibutyl phthalate
117-81-7	di-(2-ethylhexyl) phthalate
85-68-7	BBP

Carcinogenic categories
EPA (Environmental Protection Agency)

67-64-1	acetone	I
78-59-1	3,5,5-trimethylcyclohex-2-enone	C
131-11-3	dimethyl phthalate	D
118-74-1	hexachlorobenzene	B2
77-47-4	hexachlorocyclopentadiene	E, NL
87-86-5	pentachlorophenol	L
129-00-0	pyrene	D
86-73-7	fluorene	D
120-12-7	anthracene	D
85-01-8	phenanthrene	D
208-96-8	acenaphthylene	D
53-70-3	dibenz[a,h]anthracene	B2
193-39-5	indeno[1,2,3-cd]pyrene	B2
218-01-9	chrysene	B2
207-08-9	benzo[k]fluoranthene	B2
205-99-2	benz[e]acephenanthrylene	B2
50-32-8	benzo[a]pyrene	CaH
56-55-3	benz[a]anthracene	B2
191-24-2	benzo[ghi]perylene	D
84-74-2	dibutyl phthalate	D
117-81-7	di-(2-ethylhexyl) phthalate	B2
85-68-7	BBP	C
103-23-1	Di-(2-ethylhexyl) adipate	C
84-66-2	diethyl phthalate	D

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Trade name: Semi-Volatile Standard (1X1 mL)

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· TLV (Threshold Limit Value established by ACGIH)		
67-64-1	acetone	A4
78-59-1	3,5,5-trimethylcyclohex-2-enone	A3
118-74-1	hexachlorobenzene	A3
77-47-4	hexachlorocyclopentadiene	A4
87-86-5	pentachlorophenol	A3
218-01-9	chrysene	A3
205-99-2	benz[e]acephenanthrylene	A2
50-32-8	benzo[a]pyrene	A2
56-55-3	benz[a]anthracene	A2
117-81-7	di-(2-ethylhexyl) phthalate	A3
84-66-2	diethyl phthalate	A4

· NIOSH-Ca (National Institute for Occupational Safety and Health)		
218-01-9	chrysene	
50-32-8	benzo[a]pyrene	
117-81-7	di-(2-ethylhexyl) phthalate	

· **National regulations:**

· **Additional classification according to Decree on Hazardous Materials:**

Carcinogenic hazardous material group III (dangerous).

· **Information about limitation of use:**

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation.

Exceptions can be made by the authorities in certain cases.

· **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

· **Date of preparation / last revision** 05/29/2019 / 4

· **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

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

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)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

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

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

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Trade name: Semi-Volatile Standard (1X1 mL)

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TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
BEI: Biological Exposure Limit
Flam. Liq. 2: Flammable liquids – Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
Carc. 1B: Carcinogenicity – Category 1B
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

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

US

Safety Data Sheet
acc. to OSHA HCS

Printing date 05/29/2019

Version Number 3

Reviewed on 04/28/2019

1 Identification

- **Product identifier**
- **Trade name:** Organochlorine Pesticide Standard (1X1 mL)
- **Part number:** PPM-525E-1
- **Application of the substance / the mixture** Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies, Inc.
5301 Stevens Creek Blvd.
Santa Clara, CA 95051 USA
- **Information department:**
Telephone: 800-227-9770
e-mail: pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: 1-800-424-9300

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

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



GHS07

Eye Irrit. 2A H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS02 GHS07

- **Signal word** Danger
- **Hazard-determining components of labeling:**
acetone
- **Hazard statements**
Highly flammable liquid and vapor.
Causes serious eye irritation.
May cause drowsiness or dizziness.
- **Precautionary statements**
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.

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Trade name: Organochlorine Pesticide Standard (1X1 mL)

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Take precautionary measures against static discharge.
Avoid breathing dust/fume/gas/mist/vapors/spray
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
Call a poison center/doctor if you feel unwell.
If eye irritation persists: Get medical advice/attention.
In case of fire: Use for extinction: CO₂, powder or water spray.
Store in a well-ventilated place. Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**



· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

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

· **Dangerous components:**

67-64-1	acetone	99.622%
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4 First-aid measures

· **Description of first aid measures**

· **General information:** Immediately remove any clothing soiled by the product.

· **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:** If symptoms persist consult doctor.

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Trade name: Organochlorine Pesticide Standard (1X1 mL)

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- **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 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing 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.
- **Protective Action Criteria for Chemicals**

· PAC-1:

67-64-1	acetone	200 ppm
1897-45-6	chlorothalonil (ISO)	0.13 mg/m ³
309-00-2	aldrin (ISO)	0.91 mg/m ³
72-54-8	TDE	2.4 mg/m ³
50-29-3	DDT (common name not adopted by ISO)	3 mg/m ³
72-55-9	2,2-bis(p-chlorophenyl)-1,1-dichloroethylene	6.5 mg/m ³
60-57-1	dieldrin (ISO)	0.3 mg/m ³
72-20-8	endrin (ISO)	1.8 mg/m ³
76-44-8	heptachlor (ISO)	0.15 mg/m ³
1024-57-3	heptachlor epoxide - isomer B	0.15 mg/m ³
58-89-9	γ -HCH or γ -BHC	9.1 mg/m ³
72-43-5	methoxychlor	30 mg/m ³
510-15-6	chlorobenzilate (ISO)	8.4 mg/m ³

· PAC-2:

67-64-1	acetone	3200* ppm
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1897-45-6	chlorothalonil (ISO)	1.4 mg/m ³
309-00-2	aldrin (ISO)	10 mg/m ³
72-54-8	TDE	26 mg/m ³
50-29-3	DDT (common name not adopted by ISO)	34 mg/m ³
72-55-9	2,2-bis(p-chlorophenyl)-1,1-dichloroethylene	72 mg/m ³
60-57-1	dieldrin (ISO)	6.8 mg/m ³
72-20-8	endrin (ISO)	20 mg/m ³
76-44-8	heptachlor (ISO)	14 mg/m ³
1024-57-3	heptachlor epoxide - isomer B	0.5 mg/m ³
58-89-9	γ -HCH or γ -BHC	100 mg/m ³
72-43-5	methoxychlor	150 mg/m ³
510-15-6	chlorobenzilate (ISO)	92 mg/m ³

PAC-3:

67-64-1	acetone	5700* ppm
1897-45-6	chlorothalonil (ISO)	8.6 mg/m ³
309-00-2	aldrin (ISO)	100 mg/m ³
72-54-8	TDE	160 mg/m ³
50-29-3	DDT (common name not adopted by ISO)	210 mg/m ³
72-55-9	2,2-bis(p-chlorophenyl)-1,1-dichloroethylene	170 mg/m ³
60-57-1	dieldrin (ISO)	450 mg/m ³
72-20-8	endrin (ISO)	2,000 mg/m ³
76-44-8	heptachlor (ISO)	700 mg/m ³
1024-57-3	heptachlor epoxide - isomer B	3 mg/m ³
58-89-9	γ -HCH or γ -BHC	1,000 mg/m ³
72-43-5	methoxychlor	4,500 mg/m ³
510-15-6	chlorobenzilate (ISO)	550 mg/m ³

7 Handling and storage

Handling:
Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

Information about protection against explosions and fires:

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 receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

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

8 Exposure controls/personal protection

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

· **Control parameters**

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

67-64-1 acetone

PEL	Long-term value: 2400 mg/m ³ , 1000 ppm
REL	Long-term value: 590 mg/m ³ , 250 ppm
TLV	Short-term value: 1187 mg/m ³ , 500 ppm
	Long-term value: 594 mg/m ³ , 250 ppm
BEI	

· **Ingredients with biological limit values:**

67-64-1 acetone

BEI	50 mg/L
	Medium: urine
	Time: end of shift
	Parameter: Acetone (nonspecific)

· **Additional information:** The lists that were valid during the creation 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.

· **Breathing equipment:**

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 11-13 mil thickness are recommended for normal use. The breakthrough time is 1 hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15 mil 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

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Trade name: Organochlorine Pesticide Standard (1X1 mL)

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· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Fluid
Color:	Colorless
Odor:	Characteristic
Odor threshold:	Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/Melting range:	-94.7 °C (-138.5 °F)
Boiling point/Boiling range:	55.8-56.6 °C (132.4-133.9 °F)

· Flash point: -17 °C (1.4 °F)

· Flammability (solid, gaseous): Not applicable.

· Ignition temperature: 465 °C (869 °F)

· Decomposition temperature: Not determined.

· Auto igniting: Product is not selfigniting.

· Danger of explosion: Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· Explosion limits:

Lower:	2.6 Vol %
Upper:	13 Vol %

· Vapor pressure at 20 °C (68 °F): 245.3 hPa (184 mm Hg)

· Density at 20 °C (68 °F): 0.791 g/cm³ (6.6009 lbs/gal)

· Relative density: Not determined.

· Vapor 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 (68 °F):	32 mPa
Kinematic:	Not determined.

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Trade name: Organochlorine Pesticide Standard (1X1 mL)

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· Solvent content:	
Organic solvents:	99.6 %
VOC content:	0.01 %
	0.1 g/l / 0.00 lb/gal
· Solids content:	0.4 %
· 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:**

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

67-64-1 acetone

Oral	LD50	5,800 mg/kg (rat)
Dermal	LD50	20,000 mg/kg (rabbit)

1897-45-6 chlorothalonil (ISO)

Oral	LD50	10,000 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	220 mg/L (rat)

15972-60-8 alachlor (ISO)

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

58-89-9 γ -HCH or γ -BHC

Oral	LD50	88 mg/kg (rat)
Dermal	LD50	900 mg/kg (rat)
Inhalative	LC50/4 h	1,560 mg/L (rat)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

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Trade name: Organochlorine Pesticide Standard (1X1 mL)

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· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

52645-53-1	permethrin (ISO)	3
1897-45-6	chlorothalonil (ISO)	2B
309-00-2	aldrin (ISO)	3
1912-24-9	atrazine (ISO)	3
50-29-3	DDT (common name not adopted by ISO)	2A
60-57-1	dieldrin (ISO)	3
72-20-8	endrin (ISO)	3
76-44-8	heptachlor (ISO)	2B
319-84-6	alpha-BHC (alpha-HCH)	2B
1024-57-3	heptachlor epoxide - isomer B	2B
319-85-7	(1alpha,2beta,3alpha,4beta,5alpha,6beta)-1,2,3,4,5,6-hexachlorocyclohexane	2B
58-89-9	gamma-HCH or gamma-BHC	1
72-43-5	methoxychlor	3
122-34-9	simazine (ISO)	3
510-15-6	chlorobenzilate (ISO)	3

· NTP (National Toxicology Program)

50-29-3	DDT (common name not adopted by ISO)	R
319-84-6	alpha-BHC (alpha-HCH)	R
319-85-7	(1alpha,2beta,3alpha,4beta,5alpha,6beta)-1,2,3,4,5,6-hexachlorocyclohexane	R
319-86-8	delta-BHC (delta-HCH)	R
58-89-9	gamma-HCH or gamma-BHC	R

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

· Toxicity

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

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

· Behavior 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 (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.

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

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13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **Not Regulated, De minimus Quantities** -

· **UN-Number**

· **DOT, IMDG, IATA** UN1090

· **UN proper shipping name**

· **DOT** Acetone solution
· **IMDG** ACETONE solution, MARINE POLLUTANT
· **IATA** ACETONE solution

· **Transport hazard class(es)**

· **DOT**

· **Class** 3 Flammable liquids

· **Label** 3

· **IMDG**

· **Class** 3 Flammable liquids

· **Label** 3

· **IATA**

· **Class** 3 Flammable liquids

· **Label** 3

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Trade name: Organochlorine Pesticide Standard (1X1 mL)

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· Packing group · DOT, IMDG, IATA	II
· Environmental hazards:	Product contains environmentally hazardous substances: permethrin (ISO)
· Marine pollutant:	Symbol (fish and tree)
· Special precautions for user · Danger code (Kemler): · EMS Number: · Stowage Category	Warning: Flammable liquids 33 F-E,S-D B
· Transport in bulk according to Annex II of MARPOL/73/78 and the IBC Code	Not applicable.
· Transport/Additional information: · DOT · Quantity limitations	On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L
· 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 1090 ACETONE SOLUTION, 3, II, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

· Section 355 (extremely hazardous substances):

309-00-2	aldrin (ISO)
72-20-8	endrin (ISO)
58-89-9	γ -HCH or γ -BHC

· Section 313 (Specific toxic chemical listings):

52645-53-1	permethrin (ISO)
1897-45-6	chlorothalonil (ISO)
309-00-2	aldrin (ISO)
1912-24-9	atrazine (ISO)
15972-60-8	alachlor (ISO)
76-44-8	heptachlor (ISO)
319-84-6	alpha-BHC (alpha-HCH)
58-89-9	γ -HCH or γ -BHC
72-43-5	methoxychlor
122-34-9	simazine (ISO)

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510-15-6	chlorobenzilate (ISO)	
· TSCA (Toxic Substances Control Act):		
67-64-1	acetone	ACTIVE
1897-45-6	chlorothalonil (ISO)	ACTIVE
1912-24-9	atrazine (ISO)	ACTIVE
50-29-3	DDT (common name not adopted by ISO)	ACTIVE
319-84-6	alpha-BHC (alpha-HCH)	ACTIVE
319-85-7	(1 alpha,2 beta,3 alpha,4 beta,5 alpha,6 beta)-1,2,3,4,5,6-hexachlorocyclohexane	ACTIVE
319-86-8	delta-BHC (delta-HCH)	ACTIVE
58-89-9	gamma -HCH or gamma -BHC	ACTIVE
122-34-9	simazine (ISO)	ACTIVE
510-15-6	chlorobenzilate (ISO)	ACTIVE

· Hazardous Air Pollutants

76-44-8	heptachlor (ISO)
58-89-9	gamma -HCH or gamma -BHC
72-43-5	methoxychlor
510-15-6	chlorobenzilate (ISO)

· Proposition 65
· Chemicals known to cause cancer:

1897-45-6	chlorothalonil (ISO)
2593-15-9	5-ethoxy-3-trichloromethyl-1,2,4-thiadiazole
309-00-2	aldrin (ISO)
15972-60-8	alachlor (ISO)
72-54-8	TDE
50-29-3	DDT (common name not adopted by ISO)
72-55-9	2,2-bis(p-chlorophenyl)-1,1-dichloroethylene
60-57-1	dieldrin (ISO)
76-44-8	heptachlor (ISO)
319-84-6	alpha-BHC (alpha-HCH)
1024-57-3	heptachlor epoxide - isomer B
319-85-7	(1 alpha,2 beta,3 alpha,4 beta,5 alpha,6 beta)-1,2,3,4,5,6-hexachlorocyclohexane
319-86-8	delta-BHC (delta-HCH)
58-89-9	gamma -HCH or gamma -BHC
510-15-6	chlorobenzilate (ISO)

· Chemicals known to cause reproductive toxicity for females:

1912-24-9	atrazine (ISO)
50-29-3	DDT (common name not adopted by ISO)
122-34-9	simazine (ISO)

· Chemicals known to cause reproductive toxicity for males:

50-29-3	DDT (common name not adopted by ISO)
72-55-9	2,2-bis(p-chlorophenyl)-1,1-dichloroethylene

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Chemicals known to cause developmental toxicity:

1912-24-9	atrazine (ISO)
50-29-3	DDT (common name not adopted by ISO)
72-55-9	2,2-bis(p-chlorophenyl)-1,1-dichloroethylene
72-20-8	endrin (ISO)
76-44-8	heptachlor (ISO)
122-34-9	simazine (ISO)

Carcinogenic categories
EPA (Environmental Protection Agency)

67-64-1	acetone	I
309-00-2	aldrin (ISO)	B2
72-54-8	TDE	B2
50-29-3	DDT (common name not adopted by ISO)	B2
72-55-9	2,2-bis(p-chlorophenyl)-1,1-dichloroethylene	B2
60-57-1	dieldrin (ISO)	B2
72-20-8	endrin (ISO)	D
76-44-8	heptachlor (ISO)	B2
319-84-6	alpha-BHC (alpha-HCH)	B2
1024-57-3	heptachlor epoxide - isomer B	B2
319-85-7	(1alpha,2beta,3alpha,4beta,5alpha,6beta)-1,2,3,4,5,6-hexachlorocyclohexane	C
319-86-8	delta-BHC (delta-HCH)	D
72-43-5	methoxychlor	D

TLV (Threshold Limit Value established by ACGIH)

67-64-1	acetone	A4
309-00-2	aldrin (ISO)	A3
1912-24-9	atrazine (ISO)	A4
15972-60-8	alachlor (ISO)	A3
50-29-3	DDT (common name not adopted by ISO)	A3
60-57-1	dieldrin (ISO)	(A4)
72-20-8	endrin (ISO)	A4
76-44-8	heptachlor (ISO)	A3
1024-57-3	heptachlor epoxide - isomer B	A3
58-89-9	γ-HCH or γ-BHC	A3
72-43-5	methoxychlor	A4

NIOSH-Ca (National Institute for Occupational Safety and Health)

309-00-2	aldrin (ISO)
50-29-3	DDT (common name not adopted by ISO)
60-57-1	dieldrin (ISO)
76-44-8	heptachlor (ISO)
72-43-5	methoxychlor

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· **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· **Date of preparation / last revision** 05/29/2019 / 2· **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

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

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)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

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

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Flam. Liq. 2: Flammable liquids – Category 2

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

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

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

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1 Identification

- **Product identifier**
- **Trade name:** Nitrogen/Phosphorous Pesticide Standard (1X1 mL)
- **Part number:** NPM-525C-1
- **Application of the substance / the mixture** Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies, Inc.
5301 Stevens Creek Blvd.
Santa Clara, CA 95051 USA
- **Information department:**
Telephone: 800-227-9770
e-mail: pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: 1-800-424-9300

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

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



GHS07

Eye Irrit. 2A H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS02 GHS07

- **Signal word** Danger
- **Hazard-determining components of labeling:**
acetone
- **Hazard statements**
Highly flammable liquid and vapor.
Causes serious eye irritation.
May cause drowsiness or dizziness.
- **Precautionary statements**
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.

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Take precautionary measures against static discharge.
Avoid breathing dust/fume/gas/mist/vapors/spray
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
Call a poison center/doctor if you feel unwell.
If eye irritation persists: Get medical advice/attention.
In case of fire: Use for extinction: CO₂, powder or water spray.
Store in a well-ventilated place. Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**



· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

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

· **Dangerous components:**

67-64-1	acetone	99.496%
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4 First-aid measures

· **Description of first aid measures**

· **General information:** Immediately remove any clothing soiled by the product.

· **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:** If symptoms persist consult doctor.

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- **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 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing 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.
- **Protective Action Criteria for Chemicals**

· PAC-1:

67-64-1	acetone	200 ppm
2921-88-2	chlorpyrifos (ISO)	0.6 mg/m ³
62-73-7	dichlorvos (ISO)	1.8 mg/m ³
13194-48-4	ethoprophos (ISO)	0.14 mg/m ³
7786-34-7	mevinphos (ISO)	0.3 mg/m ³
1582-09-8	trifluralin (ISO) (containing < 0,5 ppm NPDA)	1.2 mg/m ³

· PAC-2:

67-64-1	acetone	3200* ppm
2921-88-2	chlorpyrifos (ISO)	15 mg/m ³
62-73-7	dichlorvos (ISO)	20 mg/m ³
13194-48-4	ethoprophos (ISO)	1.6 mg/m ³
7786-34-7	mevinphos (ISO)	4 mg/m ³
1582-09-8	trifluralin (ISO) (containing < 0,5 ppm NPDA)	13 mg/m ³

· PAC-3:

67-64-1	acetone	5700* ppm
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2921-88-2	chlorpyrifos (ISO)	44 mg/m ³
62-73-7	dichlorvos (ISO)	200 mg/m ³
13194-48-4	ethoprophos (ISO)	9.3 mg/m ³
7786-34-7	mevinphos (ISO)	40 mg/m ³
1582-09-8	trifluralin (ISO) (containing < 0,5 ppm NPDA)	78 mg/m ³

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
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 receptacle 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 systems:** No further data; see item 7.
- **Control parameters**

Components with limit values that require monitoring at the workplace:

67-64-1 acetone

PEL	Long-term value: 2400 mg/m ³ , 1000 ppm
REL	Long-term value: 590 mg/m ³ , 250 ppm
TLV	Short-term value: 1187 mg/m ³ , 500 ppm
	Long-term value: 594 mg/m ³ , 250 ppm
BEI	

Ingredients with biological limit values:

67-64-1 acetone

BEI	50 mg/L
	Medium: urine
	Time: end of shift
	Parameter: Acetone (nonspecific)

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

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- **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.
- **Breathing equipment:**
 - 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 11-13 mil thickness are recommended for normal use. The breakthrough time is 1 hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15 mil 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
 - Color:** Colorless
 - Odor:** Characteristic
 - Odor threshold:** Not determined.
- **pH-value:** Not determined.
- **Change in condition**
 - Melting point/Melting range:** -94.7 °C (-138.5 °F)
 - Boiling point/Boiling range:** 55.8-56.6 °C (132.4-133.9 °F)
- **Flash point:** -17 °C (1.4 °F)
- **Flammability (solid, gaseous):** Not applicable.

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· Ignition temperature:	465 °C (869 °F)
· Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· Explosion limits:	
Lower:	2.6 Vol %
Upper:	13 Vol %
· Vapor pressure at 20 °C (68 °F):	245.3 hPa (184 mm Hg)
· Density at 20 °C (68 °F):	0.791 g/cm ³ (6.6009 lbs/gal)
· Relative density	Not determined.
· Vapor 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 (68 °F):	32 mPas
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	99.6 %
VOC content:	0.06 %
	0.6 g/l / 0.01 lb/gal
Solids content:	0.3 %
· 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.

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11 Toxicological information

· **Information on toxicological effects**

· **Acute toxicity:**

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

67-64-1 acetone

Oral	LD50	5,800 mg/kg (rat)
Dermal	LD50	20,000 mg/kg (rabbit)

15972-60-8 alachlor (ISO)

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

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)

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)

2212-67-1 molinate (ISO)

Oral	LD50	369 mg/kg (rat)
Dermal	LD50	3,536 mg/kg (rabbit)

7786-34-7 mevinphos (ISO)

Oral	LD50	3 mg/kg (rat)
Dermal	LD50	4 mg/kg (rat)

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

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

· **Primary irritant effect:**

· **on the skin:** No irritant effect.

· **on the eye:** Irritating effect.

· **Sensitization:** No sensitizing effects known.

· **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

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· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

1912-24-9	atrazine (ISO)	3
101-21-3	chlorpropham	3
62-73-7	dichlorvos (ISO)	2B
1582-09-8	trifluralin (ISO) (containing < 0,5 ppm NPDA)	3
22248-79-9	tetrachlorvinphos	2B

· NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

· Toxicity

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

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

· Behavior 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 1 (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 of together with household garbage. Do not allow product to reach sewage system.

· Uncleaned packagings:

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

14 Transport information

· **Not Regulated, De minimus Quantities** -

· UN-Number

· **DOT, IMDG, IATA** UN1090

· UN proper shipping name

· **DOT** Acetone solution

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· **IMDG** ACETONE solution, MARINE POLLUTANT
· **IATA** ACETONE solution

· **Transport hazard class(es)**

· **DOT**



· **Class** 3 Flammable liquids
· **Label** 3

· **IMDG**



· **Class** 3 Flammable liquids
· **Label** 3

· **IATA**



· **Class** 3 Flammable liquids
· **Label** 3

· **Packing group**

· **DOT, IMDG, IATA** II

· **Environmental hazards:** Product contains environmentally hazardous substances: ametryn (ISO), chlorpyrifos (ISO)

· **Marine pollutant:** Symbol (fish and tree)

· **Special precautions for user** Warning: Flammable liquids

· **Danger code (Kemler):** 33

· **EMS Number:** F-E,S-D

· **Stowage Category** B

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

· **Transport/Additional information:**

· **DOT**

· **Quantity limitations** On passenger aircraft/rail: 5 L
On cargo aircraft only: 60 L

· **IMDG**

· **Limited quantities (LQ)** 1L

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· 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 1090 ACETONE SOLUTION, 3, II, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture
· Sara
· Section 355 (extremely hazardous substances):

62-73-7	dichlorvos (ISO)
13194-48-4	ethoprophos (ISO)
7786-34-7	mevinphos (ISO)

· Section 313 (Specific toxic chemical listings):

1912-24-9	atrazine (ISO)
15972-60-8	alachlor (ISO)
314-40-9	bromacil
1134-23-2	cycloate
21725-46-2	cyanazine (ISO)
62-73-7	dichlorvos (ISO)
957-51-7	diphenamid (ISO)
759-94-4	EPTC (ISO)
13194-48-4	ethoprophos (ISO)
60168-88-9	fenarimol (ISO)
51235-04-2	3-cyclohexyl-6-dimethylamino-1-methyl-1,2,3,4-tetrahydro-1,3,5-triazine-2,4-dione
2212-67-1	molinate (ISO)
27314-13-2	norflurazon
1114-71-2	pebulate (ISO)
7786-34-7	mevinphos (ISO)
23950-58-5	propyzamide (ISO)
7287-19-6	prometryn
1918-16-7	propachlor (ISO)
34014-18-1	tebuthiuron (ISO)
5902-51-2	terbacil
43121-43-3	triadimefon (ISO)
1582-09-8	trifluralin (ISO) (containing < 0,5 ppm NPDA)
834-12-8	ametryn (ISO)

· TSCA (Toxic Substances Control Act):

67-64-1	acetone	ACTIVE
1912-24-9	atrazine (ISO)	ACTIVE

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2008-41-5	butylate	ACTIVE
62-73-7	dichlorvos (ISO)	ACTIVE
759-94-4	EPTC (ISO)	ACTIVE
60168-88-9	fenarimol (ISO)	ACTIVE
59756-60-4	fluridone	ACTIVE
51235-04-2	3-cyclohexyl-6-dimethylamino-1-methyl-1,2,3,4-tetrahydro-1,3,5-triazine-2,4-dione	ACTIVE
139-40-2	propazine	ACTIVE
1610-18-0	prometon	ACTIVE
41814-78-2	5-methyl-1,2,4-triazolo(3,4-b)benzo-1,3-thiazole	ACTIVE

· Hazardous Air Pollutants

62-73-7	dichlorvos (ISO)
1582-09-8	trifluralin (ISO) (containing < 0,5 ppm NPDA)

· Proposition 65
· Chemicals known to cause cancer:

15972-60-8	alachlor (ISO)
62-73-7	dichlorvos (ISO)
13194-48-4	ethoprophos (ISO)
23950-58-5	propyzamide (ISO)
1918-16-7	propachlor (ISO)
22248-79-9	tetrachlorvinphos

· Chemicals known to cause reproductive toxicity for females:

1912-24-9	atrazine (ISO)
2212-67-1	molinate (ISO)
139-40-2	propazine
43121-43-3	triadimefon (ISO)

· Chemicals known to cause reproductive toxicity for males:

2212-67-1	molinate (ISO)
43121-43-3	triadimefon (ISO)

· Chemicals known to cause developmental toxicity:

1912-24-9	atrazine (ISO)
2921-88-2	chlorpyrifos (ISO)
1134-23-2	cycloate
21725-46-2	cyazazine (ISO)
759-94-4	EPTC (ISO)
2212-67-1	molinate (ISO)
139-40-2	propazine
5902-51-2	terbacil
43121-43-3	triadimefon (ISO)

· Carcinogenic categories
· EPA (Environmental Protection Agency)

67-64-1	acetone	I
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(Contd. on page 12)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/29/2019

Version Number 5

Reviewed on 04/27/2019

Trade name: Nitrogen/Phosphorous Pesticide Standard (1X1 mL)

(Contd. of page 11)

62-73-7	dichlorvos (ISO)	B2
51218-45-2	metolachlor	C
1582-09-8	trifluralin (ISO) (containing < 0,5 ppm NPDA)	C

· TLV (Threshold Limit Value established by ACGIH)

67-64-1	acetone	A4
1912-24-9	atrazine (ISO)	A4
15972-60-8	alachlor (ISO)	A3
314-40-9	bromacil	A3
2921-88-2	chlorpyrifos (ISO)	A4
62-73-7	dichlorvos (ISO)	A4
7786-34-7	mevinphos (ISO)	A4

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

· 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

· Date of preparation / last revision 05/29/2019 / 4

· 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

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

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)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

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

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Flam. Liq. 2: Flammable liquids – Category 2

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

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

· * Data compared to the previous version altered.

Safety Data Sheet
acc. to OSHA HCS

Printing date 05/29/2019

Version Number 3

Reviewed on 04/27/2019

1 Identification

- **Product identifier**
- **Trade name:** Nitrogen/Phosphorous Pesticide Standard (1X1 mL)
- **Part number:** NPM-525B-1
- **Application of the substance / the mixture** Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies, Inc.
5301 Stevens Creek Blvd.
Santa Clara, CA 95051 USA
- **Information department:**
Telephone: 800-227-9770
e-mail: pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: 1-800-424-9300

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

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



GHS07

Eye Irrit. 2A H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS02 GHS07

- **Signal word** Danger
- **Hazard-determining components of labeling:**
acetone
- **Hazard statements**
Highly flammable liquid and vapor.
Causes serious eye irritation.
May cause drowsiness or dizziness.
- **Precautionary statements**
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.

(Contd. on page 2)

Safety Data Sheet acc. to OSHA HCS

Printing date 05/29/2019

Version Number 3

Reviewed on 04/27/2019

Trade name: Nitrogen/Phosphorous Pesticide Standard (1X1 mL)

(Contd. of page 1)

Take precautionary measures against static discharge.
Avoid breathing dust/fume/gas/mist/vapors/spray
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
Call a poison center/doctor if you feel unwell.
If eye irritation persists: Get medical advice/attention.
In case of fire: Use for extinction: CO₂, powder or water spray.
Store in a well-ventilated place. Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**



· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

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

· **Dangerous components:**

67-64-1	acetone	99.924%
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4 First-aid measures

· **Description of first aid measures**

· **General information:** Immediately remove any clothing soiled by the product.

· **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:** If symptoms persist consult doctor.

(Contd. on page 3)

Safety Data Sheet acc. to OSHA HCS

Printing date 05/29/2019

Version Number 3

Reviewed on 04/27/2019

Trade name: Nitrogen/Phosphorous Pesticide Standard (1X1 mL)

(Contd. of page 2)

- **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 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing 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.
- **Protective Action Criteria for Chemicals**

· PAC-1:

67-64-1	acetone	200 ppm
298-04-4	disulfoton	0.18 mg/m ³
22224-92-6	fenamiphos (ISO)	0.15 mg/m ³
13071-79-9	S-tert-butylthiomethyl O,O-diethylphosphorodithioate	0.091 mg/m ³

· PAC-2:

67-64-1	acetone	3200* ppm
298-04-4	disulfoton	2 mg/m ³
22224-92-6	fenamiphos (ISO)	0.9 mg/m ³
13071-79-9	S-tert-butylthiomethyl O,O-diethylphosphorodithioate	1 mg/m ³

· PAC-3:

67-64-1	acetone	5700* ppm
298-04-4	disulfoton	8.8 mg/m ³
22224-92-6	fenamiphos (ISO)	3.1 mg/m ³
13071-79-9	S-tert-butylthiomethyl O,O-diethylphosphorodithioate	2.2 mg/m ³

US

(Contd. on page 4)

Safety Data Sheet acc. to OSHA HCS

Printing date 05/29/2019

Version Number 3

Reviewed on 04/27/2019

Trade name: Nitrogen/Phosphorous Pesticide Standard (1X1 mL)

(Contd. of page 3)

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
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 receptacle 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 systems:** No further data; see item 7.
- **Control parameters**

Components with limit values that require monitoring at the workplace:

67-64-1 acetone

PEL	Long-term value: 2400 mg/m ³ , 1000 ppm
REL	Long-term value: 590 mg/m ³ , 250 ppm
TLV	Short-term value: 1187 mg/m ³ , 500 ppm
	Long-term value: 594 mg/m ³ , 250 ppm
BEI	

Ingredients with biological limit values:

67-64-1 acetone

BEI	50 mg/L
	Medium: urine
	Time: end of shift
	Parameter: Acetone (nonspecific)

- **Additional information:** The lists that were valid during the creation 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.
- **Breathing equipment:**
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

acc. to OSHA HCS

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Reviewed on 04/27/2019

Trade name: Nitrogen/Phosphorous Pesticide Standard (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 11-13 mil thickness are recommended for normal use. The breakthrough time is 1 hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15 mil 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

Color: Colorless

· **Odor:** Characteristic

· **Odor threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/Melting range: -94.7 °C (-138.5 °F)

Boiling point/Boiling range: 55.8-56.6 °C (132.4-133.9 °F)

· **Flash point:** -17 °C (1.4 °F)

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

· **Ignition temperature:** 465 °C (869 °F)

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· **Explosion limits:**

Lower: 2.6 Vol %

Upper: 13 Vol %

· **Vapor pressure at 20 °C (68 °F):** 245.3 hPa (184 mm Hg)

· **Density at 20 °C (68 °F):** 0.791 g/cm³ (6.6009 lbs/gal)

(Contd. on page 6)

Safety Data Sheet acc. to OSHA HCS

Printing date 05/29/2019

Version Number 3

Reviewed on 04/27/2019

Trade name: Nitrogen/Phosphorous Pesticide Standard (1X1 mL)

(Contd. of page 5)

· Relative density	Not determined.
· Vapor 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 (68 °F):	32 mPas
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	99.9 %
VOC content:	0.03 %
	0.3 g/l / 0.00 lb/gal
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:**

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

67-64-1 acetone

Oral	LD50	5,800 mg/kg (rat)
Dermal	LD50	20,000 mg/kg (rabbit)

22224-92-6 fenamiphos (ISO)

Oral	LD50	10 mg/kg (rat)
Dermal	LD50	80 mg/kg (rat)
Inhalative	LC50/4 h	91 mg/L (rat)

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

Oral	LD50	4.5 mg/kg (rat)
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- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.

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Safety Data Sheet

acc. to OSHA HCS

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Reviewed on 04/27/2019

Trade name: Nitrogen/Phosphorous Pesticide Standard (1X1 mL)

(Contd. of page 6)

· **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

333-41-5 diazinon (ISO)

2A

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

· **Toxicity**

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

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

· **Behavior 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 1 (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 of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**

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

14 Transport information

· **Not Regulated, De minimus Quantities**

-

· **UN-Number**

· **DOT, IMDG, IATA**

UN1090

· **UN proper shipping name**

· **DOT**

Acetone solution

· **IMDG**

ACETONE solution, MARINE POLLUTANT

(Contd. on page 8)

US

Safety Data Sheet acc. to OSHA HCS

Printing date 05/29/2019

Version Number 3

Reviewed on 04/27/2019

Trade name: Nitrogen/Phosphorous Pesticide Standard (1X1 mL)

(Contd. of page 7)

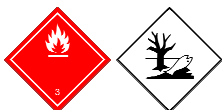
· IATA ACETONE solution

· Transport hazard class(es)

· DOT


· Class 3 Flammable liquids
· Label 3

· IMDG


· Class 3 Flammable liquids
· Label 3

· IATA


· Class 3 Flammable liquids
· Label 3

· Packing group

· DOT, IMDG, IATA II

· Environmental hazards: Product contains environmentally hazardous substances: diazinon (ISO), S-tert-butylthiomethyl O,O-diethylphosphorodithioate
· Marine pollutant: Symbol (fish and tree)

· Special precautions for user Warning: Flammable liquids
· Danger code (Kemler): 33
· EMS Number: F-E,S-D
· Stowage Category B

· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

· Transport/Additional information:

· DOT

· Quantity limitations On passenger aircraft/rail: 5 L
On cargo aircraft only: 60 L

· 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

(Contd. on page 9)

Safety Data Sheet acc. to OSHA HCS

Printing date 05/29/2019

Version Number 3

Reviewed on 04/27/2019

Trade name: Nitrogen/Phosphorous Pesticide Standard (1X1 mL)

(Contd. of page 8)

· **UN "Model Regulation":** UN 1090 ACETONE SOLUTION, 3, II, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

· Section 355 (extremely hazardous substances):

298-04-4	disulfoton
22224-92-6	fenamiphos (ISO)
13071-79-9	S-tert-butylthiomethyl O,O-diethylphosphorodithioate

· Section 313 (Specific toxic chemical listings):

333-41-5	diazinon (ISO)
150-50-5	merphos
5234-68-4	carboxin

· TSCA (Toxic Substances Control Act):

67-64-1	acetone	ACTIVE
333-41-5	diazinon (ISO)	ACTIVE
150-50-5	merphos	ACTIVE

· Hazardous Air Pollutants

None of the ingredients is listed.

· Proposition 65

· Chemicals known to cause cancer:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

· Carcinogenic categories

· EPA (Environmental Protection Agency)

67-64-1	acetone	I
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· TLV (Threshold Limit Value established by ACGIH)

67-64-1	acetone	A4
333-41-5	diazinon (ISO)	A4
298-04-4	disulfoton	A4
22224-92-6	fenamiphos (ISO)	A4

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

(Contd. on page 10)

Safety Data Sheet
acc. to OSHA HCS

Printing date 05/29/2019

Version Number 3

Reviewed on 04/27/2019

Trade name: Nitrogen/Phosphorous Pesticide Standard (1X1 mL)

(Contd. of page 9)

· **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· **Date of preparation / last revision** 05/29/2019 / 2· **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

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

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)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

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

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Flam. Liq. 2: Flammable liquids – Category 2

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

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

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

Safety Data Sheet acc. to OSHA HCS

Printing date 05/29/2019

Version Number 3

Reviewed on 04/28/2019

1 Identification

- **Product identifier**
- **Trade name:** Toxaphene Standard (1X1 mL)
- **Part number:** PPS-240-1
- **Application of the substance / the mixture** Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies, Inc.
5301 Stevens Creek Blvd.
Santa Clara, CA 95051 USA
- **Information department:**
Telephone: 800-227-9770
e-mail: pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: 1-800-424-9300

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

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



GHS08 Health hazard

Carc. 2 H351 Suspected of causing cancer.



GHS07

Eye Irrit. 2A H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS02



GHS07



GHS08

- **Signal word** Danger
- **Hazard-determining components of labeling:**
acetone
- **Hazard statements**
Highly flammable liquid and vapor.
Causes serious eye irritation.
Suspected of causing cancer.

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/29/2019

Version Number 3

Reviewed on 04/28/2019

Trade name: Toxaphene Standard (1X1 mL)

(Contd. of page 1)

May cause drowsiness or dizziness.

· **Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Ground/bond container and receiving equipment.

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

Use only non-sparking tools.

Take precautionary measures against static discharge.

Avoid breathing dust/fume/gas/mist/vapors/spray

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

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

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

IF exposed or concerned: Get medical advice/attention.

Call a poison center/doctor if you feel unwell.

If eye irritation persists: Get medical advice/attention.

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

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Store locked up.

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

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 2

Fire = 3

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 2

Fire = 3

Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

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

· **Dangerous components:**

67-64-1	acetone	99.684%
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(Contd. on page 3)

Safety Data Sheet acc. to OSHA HCS

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Trade name: Toxaphene Standard (1X1 mL)

(Contd. of page 2)

8001-35-2 Toxaphene

0.316%

4 First-aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **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:** 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 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing 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.
- **Protective Action Criteria for Chemicals**

· PAC-1:

67-64-1	acetone	200 ppm
8001-35-2	Toxaphene	1 mg/m ³

· PAC-2:

67-64-1	acetone	3200* ppm
8001-35-2	Toxaphene	20 mg/m ³

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Trade name: Toxaphene Standard (1X1 mL)

(Contd. of page 3)

· PAC-3:

67-64-1	acetone	5700* ppm
8001-35-2	Toxaphene	200 mg/m ³

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 protection against explosions and fires:

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 receptacle 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 systems: No further data; see item 7.

· Control parameters
· Components with limit values that require monitoring at the workplace:
67-64-1 acetone

PEL Long-term value: 2400 mg/m³, 1000 ppm

REL Long-term value: 590 mg/m³, 250 ppm

TLV Short-term value: 1187 mg/m³, 500 ppm

Long-term value: 594 mg/m³, 250 ppm

BEI

8001-35-2 Toxaphene

PEL Long-term value: 0.5 mg/m³

Skin

REL Skin; See Pocket Guide App. A

TLV Short-term value: 1 mg/m³

Long-term value: 0.5 mg/m³

Skin

(Contd. on page 5)

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Trade name: Toxaphene Standard (1X1 mL)

(Contd. of page 4)

· Ingredients with biological limit values:
67-64-1 acetone

BEI	50 mg/L
	Medium: urine
	Time: end of shift
	Parameter: Acetone (nonspecific)

· Additional information: The lists that were valid during the creation 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.

· Breathing equipment:

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 11-13 mil thickness are recommended for normal use. The breakthrough time is 1 hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15 mil 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
Color:	Colorless
Odor:	Characteristic
Odor threshold:	Not determined.

(Contd. on page 6)

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Trade name: Toxaphene Standard (1X1 mL)

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· pH-value:	Not determined.
· Change in condition	
Melting point/Melting range:	-94.7 °C (-138.5 °F)
Boiling point/Boiling range:	55.8-56.6 °C (132.4-133.9 °F)
· Flash point:	-17 °C (1.4 °F)
· Flammability (solid, gaseous):	Not applicable.
· Ignition temperature:	465 °C (869 °F)
· Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· Explosion limits:	
Lower:	2.6 Vol %
Upper:	13 Vol %
· Vapor pressure at 20 °C (68 °F):	245.3 hPa (184 mm Hg)
· Density at 20 °C (68 °F):	0.80269 g/cm ³ (6.69845 lbs/gal)
· Relative density	Not determined.
· Vapor 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 (68 °F):	32 mPas
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	99.7 %
VOC content:	0.00 %
	0.0 g/l / 0.00 lb/gal
Solids content:	0.3 %
· 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.

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Trade name: Toxaphene Standard (1X1 mL)

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

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11 Toxicological information

· **Information on toxicological effects**

· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**
ATE (Acute Toxicity Estimate)

Oral	LD50	15,818 mg/kg (rat)
------	------	--------------------

67-64-1 acetone

Oral	LD50	5,800 mg/kg (rat)
------	------	-------------------

Dermal	LD50	20,000 mg/kg (rabbit)
--------	------	-----------------------

8001-35-2 Toxaphene

Oral	LD50	50 mg/kg (rat)
------	------	----------------

Dermal	LD50	1,075 mg/kg (rat)
--------	------	-------------------

		1,025 mg/kg (rabbit)
--	--	----------------------

· **Primary irritant effect:**

· **on the skin:** No irritant effect.

· **on the eye:** Irritating effect.

· **Sensitization:** No sensitizing effects known.

· **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

8001-35-2	Toxaphene	2B
-----------	-----------	----

· **NTP (National Toxicology Program)**

8001-35-2	Toxaphene	R
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· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.		
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12 Ecological information

· **Toxicity**

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

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

· **Behavior 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 (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.

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Trade name: Toxaphene Standard (1X1 mL)

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- **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 of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|---|----------------------------|
| · Not Regulated, De minimus Quantities | - |
| · UN-Number | |
| · DOT, IMDG, IATA | UN1090 |
| · UN proper shipping name | |
| · DOT | Acetone solution |
| · IMDG, IATA | ACETONE solution |
| · Transport hazard class(es) | |
| · DOT | |
|  | |
| · Class | 3 Flammable liquids |
| · Label | 3 |
| | |
| · IMDG, IATA | |
|  | |
| · Class | 3 Flammable liquids |
| · Label | 3 |
| · Packing group | |
| · DOT, IMDG, IATA | II |
| · Environmental hazards: | Not applicable. |
| · Special precautions for user | Warning: Flammable liquids |
| · Danger code (Kemler): | 33 |
| · EMS Number: | F-E,S-D |

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Trade name: Toxaphene Standard (1X1 mL)

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· Stowage Category	B
· Transport in bulk according to Annex II of MARPOL/73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· DOT	
· Quantity limitations	On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L
· 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 1090 ACETONE SOLUTION, 3, II

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

· Section 355 (extremely hazardous substances):

8001-35-2 Toxaphene

· Section 313 (Specific toxic chemical listings):

8001-35-2 Toxaphene

· TSCA (Toxic Substances Control Act):

67-64-1 acetone

ACTIVE

· Hazardous Air Pollutants

8001-35-2 Toxaphene

· Proposition 65

· Chemicals known to cause cancer:

8001-35-2 Toxaphene

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

· Carcinogenic categories

· EPA (Environmental Protection Agency)

67-64-1 acetone

I

8001-35-2 Toxaphene

B2

· TLV (Threshold Limit Value established by ACGIH)

67-64-1 acetone

A4

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Trade name: Toxaphene Standard (1X1 mL)

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8001-35-2 Toxaphene

A3

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

8001-35-2 Toxaphene

· **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· **Date of preparation / last revision** 05/29/2019 / 2· **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

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

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)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

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

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Flam. Liq. 2: Flammable liquids – Category 2

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

Carc. 2: Carcinogenicity – Category 2

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

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

US

Safety Data Sheet
acc. to OSHA HCS

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Version Number 3

Reviewed on 04/27/2019

1 Identification

- **Product identifier**
- **Trade name:** DEF Standard (1X1 mL)
- **Part number:** NPM-108B-1
- **Application of the substance / the mixture** Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies, Inc.
5301 Stevens Creek Blvd.
Santa Clara, CA 95051 USA
- **Information department:**
Telephone: 800-227-9770
e-mail: pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: 1-800-424-9300

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

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



GHS07

Eye Irrit. 2A H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS02 GHS07

- **Signal word** Danger
- **Hazard-determining components of labeling:**
acetone
- **Hazard statements**
Highly flammable liquid and vapor.
Causes serious eye irritation.
May cause drowsiness or dizziness.
- **Precautionary statements**
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.

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Trade name: DEF Standard (1X1 mL)

(Contd. of page 1)

Take precautionary measures against static discharge.
Avoid breathing dust/fume/gas/mist/vapors/spray
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
Call a poison center/doctor if you feel unwell.
If eye irritation persists: Get medical advice/attention.
In case of fire: Use for extinction: CO₂, powder or water spray.
Store in a well-ventilated place. Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**



· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

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

· **Dangerous components:**

67-64-1	acetone	99.937%
---------	---------	---------

4 First-aid measures

· **Description of first aid measures**

· **General information:** Immediately remove any clothing soiled by the product.

· **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:** If symptoms persist consult doctor.

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Trade name: DEF Standard (1X1 mL)

(Contd. of page 2)

- **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 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing 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.
- **Protective Action Criteria for Chemicals**

· **PAC-1:**

67-64-1	acetone	200 ppm
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· **PAC-2:**

67-64-1	acetone	3200* ppm
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· **PAC-3:**

67-64-1	acetone	5700* ppm
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7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

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Safety Data Sheet acc. to OSHA HCS

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Reviewed on 04/27/2019

Trade name: DEF Standard (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 receptacle 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 systems:** No further data; see item 7.
- **Control parameters**

Components with limit values that require monitoring at the workplace:

67-64-1 acetone

PEL	Long-term value: 2400 mg/m ³ , 1000 ppm
REL	Long-term value: 590 mg/m ³ , 250 ppm
TLV	Short-term value: 1187 mg/m ³ , 500 ppm
	Long-term value: 594 mg/m ³ , 250 ppm
BEI	

Ingredients with biological limit values:

67-64-1 acetone

BEI	50 mg/L
	Medium: urine
	Time: end of shift
	Parameter: Acetone (nonspecific)

- **Additional information:** The lists that were valid during the creation 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.

Breathing equipment:

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 11-13 mil thickness are recommended for normal use. The breakthrough time is 1 hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15 mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

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Trade name: DEF Standard (1X1 mL)

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- **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
 - Color:** Colorless
- **Odor:** Characteristic
- **Odor threshold:** Not determined.
- **pH-value:** Not determined.
- **Change in condition**
 - Melting point/Melting range:** -94.7 °C (-138.5 °F)
 - Boiling point/Boiling range:** 55.8-56.6 °C (132.4-133.9 °F)
- **Flash point:** -17 °C (1.4 °F)
- **Flammability (solid, gaseous):** Not applicable.
- **Ignition temperature:** 465 °C (869 °F)
- **Decomposition temperature:** Not determined.
- **Auto igniting:** Product is not selfigniting.
- **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
- **Explosion limits:**
 - Lower:** 2.6 Vol %
 - Upper:** 13 Vol %
- **Vapor pressure at 20 °C (68 °F):** 245.3 hPa (184 mm Hg)
- **Density at 20 °C (68 °F):** 0.791 g/cm³ (6.6009 lbs/gal)
- **Relative density** Not determined.
- **Vapor 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.

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Trade name: DEF Standard (1X1 mL)

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· Viscosity:	
Dynamic at 20 °C (68 °F):	32 mPas
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	99.9 %
VOC content:	0.00 %
	0.0 g/l / 0.00 lb/gal
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:**

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

67-64-1 acetone

Oral	LD50	5,800 mg/kg (rat)
Dermal	LD50	20,000 mg/kg (rabbit)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

- **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

(Contd. on page 7)

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Trade name: DEF Standard (1X1 mL)

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12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior 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 1 (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 of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|---|---------------------|
| · Not Regulated, De minimus Quantities | - |
| · UN-Number | |
| · DOT, IMDG, IATA | UN1090 |
| · UN proper shipping name | |
| · DOT | Acetone solution |
| · IMDG, IATA | ACETONE solution |
| · Transport hazard class(es) | |
| · DOT | |
|  | |
| · Class | 3 Flammable liquids |
| · Label | 3 |

(Contd. on page 8)

Safety Data Sheet acc. to OSHA HCS

Printing date 05/29/2019

Version Number 3

Reviewed on 04/27/2019

Trade name: DEF Standard (1X1 mL)

(Contd. of page 7)

· IMDG, IATA



· Class	3 Flammable liquids
· Label	3

· Packing group	
· DOT, 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

· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
---	-----------------

· Transport/Additional information:

· DOT	
· Quantity limitations	On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L

· 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 1090 ACETONE SOLUTION, 3, II
--------------------------	---------------------------------

15 Regulatory information

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

· Sara

· Section 355 (extremely hazardous substances):

None of the ingredients is listed.

· Section 313 (Specific toxic chemical listings):

78-48-8	S,S,S-tributylphosphorotrithioate
---------	-----------------------------------

· TSCA (Toxic Substances Control Act):

67-64-1	acetone	ACTIVE
78-48-8	S,S,S-tributylphosphorotrithioate	ACTIVE

· Hazardous Air Pollutants

None of the ingredients is listed.

(Contd. on page 9)

Safety Data Sheet acc. to OSHA HCS

Printing date 05/29/2019

Version Number 3

Reviewed on 04/27/2019

Trade name: DEF Standard (1X1 mL)

(Contd. of page 8)

· Proposition 65
· Chemicals known to cause cancer:

78-48-8 | S,S,S-tributylphosphorotrithioate

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

· Carcinogenic categories
· EPA (Environmental Protection Agency)

67-64-1 | acetone

I

· TLV (Threshold Limit Value established by ACGIH)

67-64-1 | acetone

A4

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

· 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

· Date of preparation / last revision 05/29/2019 / 2

· 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

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

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)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

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

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Flam. Liq. 2: Flammable liquids – Category 2

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

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

· * Data compared to the previous version altered.

Safety Data Sheet
acc. to OSHA HCS

Printing date 05/29/2019

Version Number 4

Reviewed on 04/27/2019

1 Identification

- **Product identifier**
- **Trade name:** Internal and Surrogate Standard (1X1 mL)
- **Part number:** ISM-510-1
- **Application of the substance / the mixture** Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies, Inc.
5301 Stevens Creek Blvd.
Santa Clara, CA 95051 USA
- **Information department:**
Telephone: 800-227-9770
e-mail: pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: 1-800-424-9300

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

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



GHS07

Eye Irrit. 2A H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS02 GHS07

- **Signal word** Danger
- **Hazard-determining components of labeling:**
acetone
- **Hazard statements**
Highly flammable liquid and vapor.
Causes serious eye irritation.
May cause drowsiness or dizziness.
- **Precautionary statements**
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.

(Contd. on page 2)

Safety Data Sheet acc. to OSHA HCS

Printing date 05/29/2019

Version Number 4

Reviewed on 04/27/2019

Trade name: Internal and Surrogate Standard (1X1 mL)

(Contd. of page 1)

Take precautionary measures against static discharge.
Avoid breathing dust/fume/gas/mist/vapors/spray
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
Call a poison center/doctor if you feel unwell.
If eye irritation persists: Get medical advice/attention.
In case of fire: Use for extinction: CO₂, powder or water spray.
Store in a well-ventilated place. Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**



· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

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

· **Dangerous components:**

67-64-1	acetone	99.558%
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4 First-aid measures

· **Description of first aid measures**

· **General information:** Immediately remove any clothing soiled by the product.

· **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:** If symptoms persist consult doctor.

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/29/2019

Version Number 4

Reviewed on 04/27/2019

Trade name: Internal and Surrogate Standard (1X1 mL)

(Contd. of page 2)

- **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 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing 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.
- **Protective Action Criteria for Chemicals**

· PAC-1:

67-64-1	acetone	200 ppm
81-20-9	2-nitro-m-xylene	7.9 mg/m ³
115-86-6	triphenyl phosphate	9 mg/m ³

· PAC-2:

67-64-1	acetone	3200* ppm
81-20-9	2-nitro-m-xylene	86 mg/m ³
115-86-6	triphenyl phosphate	360 mg/m ³

· PAC-3:

67-64-1	acetone	5700* ppm
81-20-9	2-nitro-m-xylene	520 mg/m ³
115-86-6	triphenyl phosphate	2,100 mg/m ³

(Contd. on page 4)

Safety Data Sheet acc. to OSHA HCS

Printing date 05/29/2019

Version Number 4

Reviewed on 04/27/2019

Trade name: Internal and Surrogate Standard (1X1 mL)

(Contd. of page 3)

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
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 receptacle 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 systems:** No further data; see item 7.
- **Control parameters**

Components with limit values that require monitoring at the workplace:

67-64-1 acetone

PEL	Long-term value: 2400 mg/m ³ , 1000 ppm
REL	Long-term value: 590 mg/m ³ , 250 ppm
TLV	Short-term value: 1187 mg/m ³ , 500 ppm
	Long-term value: 594 mg/m ³ , 250 ppm
BEI	

Ingredients with biological limit values:

67-64-1 acetone

BEI	50 mg/L
	Medium: urine
	Time: end of shift
	Parameter: Acetone (nonspecific)

- **Additional information:** The lists that were valid during the creation 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.
- **Breathing equipment:**
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 acc. to OSHA HCS

Printing date 05/29/2019

Version Number 4

Reviewed on 04/27/2019

Trade name: Internal and Surrogate Standard (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 11-13 mil thickness are recommended for normal use. The breakthrough time is 1 hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15 mil 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

Color: Colorless

· **Odor:** Characteristic

· **Odor threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/Melting range: -94.7 °C (-138.5 °F)

Boiling point/Boiling range: 55.8-56.6 °C (132.4-133.9 °F)

· **Flash point:** -17 °C (1.4 °F)

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

· **Ignition temperature:** 465 °C (869 °F)

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· **Explosion limits:**

Lower: 2.6 Vol %

Upper: 13 Vol %

· **Vapor pressure at 20 °C (68 °F):** 245.3 hPa (184 mm Hg)

· **Density at 20 °C (68 °F):** 0.791 g/cm³ (6.6009 lbs/gal)

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/29/2019

Version Number 4

Reviewed on 04/27/2019

Trade name: Internal and Surrogate Standard (1X1 mL)

(Contd. of page 5)

· Relative density	Not determined.
· Vapor 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 (68 °F):	32 mPas
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	99.6 %
VOC content:	0.00 %
	0.0 g/l / 0.00 lb/gal
Solids content:	0.4 %
· 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:**

· **LD/LC50 values that are relevant for classification:**
67-64-1 acetone

Oral	LD50	5,800 mg/kg (rat)
Dermal	LD50	20,000 mg/kg (rabbit)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

- **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/29/2019

Version Number 4

Reviewed on 04/27/2019

Trade name: Internal and Surrogate Standard (1X1 mL)

(Contd. of page 6)

· NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

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

· Persistence and degradability No further relevant information available.

· Behavior 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 1 (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 of together with household garbage. Do not allow product to reach sewage system.

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

14 Transport information

· Not Regulated, De minimus Quantities

-

· UN-Number
· DOT, IMDG, IATA

UN1090

· UN proper shipping name
· DOT
· IMDG, IATA

Acetone solution

ACETONE solution

(Contd. on page 8)

US

Safety Data Sheet acc. to OSHA HCS

Printing date 05/29/2019

Version Number 4

Reviewed on 04/27/2019

Trade name: Internal and Surrogate Standard (1X1 mL)

(Contd. of page 7)

· Transport hazard class(es)

· DOT



· Class

3 Flammable liquids

· Label

3

· IMDG, IATA



· Class

3 Flammable liquids

· Label

3

· Packing group

· DOT, 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

· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

· Transport/Additional information:

· DOT

· Quantity limitations

On passenger aircraft/rail: 5 L

On cargo aircraft only: 60 L

· 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 1090 ACETONE SOLUTION, 3, II

*

15 Regulatory information

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

· Sara

· Section 355 (extremely hazardous substances):

None of the ingredients is listed.

(Contd. on page 9)

US

Safety Data Sheet acc. to OSHA HCS

Printing date 05/29/2019

Version Number 4

Reviewed on 04/27/2019

Trade name: Internal and Surrogate Standard (1X1 mL)

(Contd. of page 8)

· Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

· TSCA (Toxic Substances Control Act):

67-64-1	acetone	ACTIVE
81-20-9	2-nitro-m-xylene	ACTIVE
115-86-6	triphenyl phosphate	ACTIVE

· Hazardous Air Pollutants

None of the ingredients is listed.

· Proposition 65
· Chemicals known to cause cancer:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

· Carcinogenic categories
· EPA (Environmental Protection Agency)

67-64-1	acetone	I
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· TLV (Threshold Limit Value established by ACGIH)

67-64-1	acetone	A4
115-86-6	triphenyl phosphate	A4

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

· 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

· Date of preparation / last revision 05/29/2019 / 3

· 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

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

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)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

(Contd. on page 10)

Safety Data Sheet
acc. to OSHA HCS

Printing date 05/29/2019

Version Number 4

Reviewed on 04/27/2019

Trade name: Internal and Surrogate Standard (1X1 mL)

(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
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
BEI: Biological Exposure Limit
Flam. Liq. 2: Flammable liquids – Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

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

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/29/2019

Version Number 4

Reviewed on 04/27/2019

1 Identification

- **Product identifier**
- **Trade name:** GC/MS Performance Check Standard (1X1 mL)
- **Part number:** GCM-160A-1
- **Application of the substance / the mixture** Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies, Inc.
5301 Stevens Creek Blvd.
Santa Clara, CA 95051 USA
- **Information department:**
Telephone: 800-227-9770
e-mail: pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: 1-800-424-9300

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

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



GHS08 Health hazard

Carc. 2 H351 Suspected of causing cancer.



GHS07

Eye Irrit. 2A H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS02



GHS07



GHS08

- **Signal word** Danger
- **Hazard-determining components of labeling:**
acetone
- **Hazard statements**
Highly flammable liquid and vapor.
Causes serious eye irritation.
Suspected of causing cancer.

(Contd. on page 2)

Safety Data Sheet acc. to OSHA HCS

Printing date 05/29/2019

Version Number 4

Reviewed on 04/27/2019

Trade name: GC/MS Performance Check Standard (1X1 mL)

(Contd. of page 1)

May cause drowsiness or dizziness.

Precautionary statements

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Ground/bond container and receiving equipment.

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

Use only non-sparking tools.

Take precautionary measures against static discharge.

Avoid breathing dust/fume/gas/mist/vapors/spray

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

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

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

IF exposed or concerned: Get medical advice/attention.

Call a poison center/doctor if you feel unwell.

If eye irritation persists: Get medical advice/attention.

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

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Store locked up.

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

Classification system:
NFPA ratings (scale 0 - 4)


Health = 2

Fire = 3

Reactivity = 0

HMIS-ratings (scale 0 - 4)


Health = 2

Fire = 3

Reactivity = 0

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

vPvB: Not applicable.

3 Composition/information on ingredients

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

Dangerous components:

67-64-1	acetone	99.621%
---------	---------	---------

(Contd. on page 3)

US

Safety Data Sheet acc. to OSHA HCS

Printing date 05/29/2019

Version Number 4

Reviewed on 04/27/2019

Trade name: GC/MS Performance Check Standard (1X1 mL)

(Contd. of page 2)

50-29-3 DDT (common name not adopted by ISO)

0.126%

4 First-aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **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:** 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 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing 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.
- **Protective Action Criteria for Chemicals**

· PAC-1:

67-64-1	acetone	200 ppm
50-29-3	DDT (common name not adopted by ISO)	3 mg/m ³
72-20-8	endrin (ISO)	1.8 mg/m ³

· PAC-2:

67-64-1	acetone	3200* ppm
50-29-3	DDT (common name not adopted by ISO)	34 mg/m ³

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72-20-8	endrin (ISO)	20 mg/m ³
· PAC-3:		
67-64-1	acetone	5700* ppm
50-29-3	DDT (common name not adopted by ISO)	210 mg/m ³
72-20-8	endrin (ISO)	2,000 mg/m ³

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 protection against explosions and fires:

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 receptacle 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 systems:** No further data; see item 7.

· Control parameters

· Components with limit values that require monitoring at the workplace:

67-64-1 acetone

PEL Long-term value: 2400 mg/m³, 1000 ppm

REL Long-term value: 590 mg/m³, 250 ppm

TLV Short-term value: 1187 mg/m³, 500 ppm

Long-term value: 594 mg/m³, 250 ppm

BEI

· Ingredients with biological limit values:

67-64-1 acetone

BEI 50 mg/L

Medium: urine

Time: end of shift

Parameter: Acetone (nonspecific)

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

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- **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.
- **Breathing equipment:**
 - 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 11-13 mil thickness are recommended for normal use. The breakthrough time is 1 hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15 mil 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
Color:	Colorless
Odor:	Characteristic
Odor threshold:	Not determined.
- **pH-value:** Not determined.
- **Change in condition**

Melting point/Melting range:	-94.7 °C (-138.5 °F)
Boiling point/Boiling range:	55.8-56.6 °C (132.4-133.9 °F)
- **Flash point:** -17 °C (1.4 °F)
- **Flammability (solid, gaseous):** Not applicable.

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· Ignition temperature:	465 °C (869 °F)
· Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· Explosion limits:	
Lower:	2.6 Vol %
Upper:	13 Vol %
· Vapor pressure at 20 °C (68 °F):	245.3 hPa (184 mm Hg)
· Density at 20 °C (68 °F):	0.791 g/cm ³ (6.6009 lbs/gal)
· Relative density	Not determined.
· Vapor 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 (68 °F):	32 mPas
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	99.6 %
VOC content:	0.00 %
	0.0 g/l / 0.00 lb/gal
Solids content:	0.4 %
· 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.

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11 Toxicological information

· Information on toxicological effects

· Acute toxicity:

· LD/LC50 values that are relevant for classification:

ATE (Acute Toxicity Estimate)

Oral LD50 2,294 mg/kg (rat)

Dermal LD50 39,557 mg/kg

67-64-1 acetone

Oral LD50 5,800 mg/kg (rat)

Dermal LD50 20,000 mg/kg (rabbit)

50-29-3 DDT (common name not adopted by ISO)

Oral LD50 87 mg/kg (rat)

Dermal LD50 2,510 mg/kg (rat)

300 mg/kg (rabbit)

72-20-8 endrin (ISO)

Oral LD50 3 mg/kg (rat)

Dermal LD50 60 mg/kg (rat)

60 mg/kg (rabbit)

· Primary irritant effect:

· on the skin: No irritant effect.

· on the eye: Irritating effect.

· Sensitization: No sensitizing effects known.

· Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

Irritant

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

50-29-3 DDT (common name not adopted by ISO)

2A

72-20-8 endrin (ISO)

3

· NTP (National Toxicology Program)

50-29-3 DDT (common name not adopted by ISO)

R

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

· Toxicity

· Aquatic toxicity: No further relevant information available.

· Persistence and degradability: No further relevant information available.

· Behavior in environmental systems:

· Bioaccumulative potential: No further relevant information available.

· Mobility in soil: No further relevant information available.

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- **Additional ecological information:**
- **General notes:**
 Water hazard class 2 (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 of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|---|---------------------|
| · Not Regulated, De minimus Quantities | - |
| · UN-Number | |
| · DOT, IMDG, IATA | UN1090 |
| · UN proper shipping name | |
| · DOT | Acetone solution |
| · IMDG, IATA | ACETONE solution |
| · Transport hazard class(es) | |
| · DOT | |
|  | |
| · Class | 3 Flammable liquids |
| · Label | 3 |
| · IMDG, IATA | |
|  | |
| · Class | 3 Flammable liquids |
| · Label | 3 |
| · Packing group | |
| · DOT, IMDG, IATA | II |
| · Environmental hazards: | Not applicable. |

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· Special precautions for user	Warning: Flammable liquids
· Danger code (Kemler):	33
· EMS Number:	F-E,S-D
· Stowage Category	B
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· DOT	
· Quantity limitations	On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L
· 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 1090 ACETONE SOLUTION, 3, II

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

· Section 355 (extremely hazardous substances):

72-20-8 | endrin (ISO)

· Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

· TSCA (Toxic Substances Control Act):

67-64-1 | acetone

ACTIVE

50-29-3 | DDT (common name not adopted by ISO)

ACTIVE

· Hazardous Air Pollutants

None of the ingredients is listed.

· Proposition 65

· Chemicals known to cause cancer:

50-29-3 | DDT (common name not adopted by ISO)

· Chemicals known to cause reproductive toxicity for females:

50-29-3 | DDT (common name not adopted by ISO)

· Chemicals known to cause reproductive toxicity for males:

50-29-3 | DDT (common name not adopted by ISO)

· Chemicals known to cause developmental toxicity:

50-29-3 | DDT (common name not adopted by ISO)

72-20-8 | endrin (ISO)

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Trade name: GC/MS Performance Check Standard (1X1 mL)

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· Carcinogenic categories

· EPA (Environmental Protection Agency)

67-64-1	acetone	I
50-29-3	DDT (common name not adopted by ISO)	B2
72-20-8	endrin (ISO)	D

· TLV (Threshold Limit Value established by ACGIH)

67-64-1	acetone	A4
50-29-3	DDT (common name not adopted by ISO)	A3
72-20-8	endrin (ISO)	A4

· NIOSH-Ca (National Institute for Occupational Safety and Health)

50-29-3	DDT (common name not adopted by ISO)	
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· **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

· **Date of preparation / last revision** 05/29/2019 / 3

· 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

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

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)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

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

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Flam. Liq. 2: Flammable liquids – Category 2

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

Carc. 2: Carcinogenicity – Category 2

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

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

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1 Identification

- **Product identifier**
- **Trade name:** Chlordane Standard (1X1 mL)
- **Part number:** EPA-1086-1
- **Application of the substance / the mixture** Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies, Inc.
5301 Stevens Creek Blvd.
Santa Clara, CA 95051 USA
- **Information department:**
Telephone: 800-227-9770
e-mail: pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: 1-800-424-9300

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

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



GHS06 Skull and crossbones

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 Health hazard

Carc. 2 H351 Suspected of causing cancer.

STOT SE 1 H370 Causes damage to organs.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS02



GHS06



GHS08

- **Signal word** Danger
- **Hazard-determining components of labeling:**
methanol
chlordane (ISO)
- **Hazard statements**
Highly flammable liquid and vapor.
Toxic if inhaled.

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Trade name: Chlordane Standard (1X1 mL)

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Suspected of causing cancer.

Causes damage to organs.

· **Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Ground/bond container and receiving equipment.

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

Use only non-sparking tools.

Take precautionary measures against static discharge.

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash thoroughly after handling.

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

Use only outdoors or in a well-ventilated area.

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

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF exposed or concerned: Get medical advice/attention.

Specific treatment (see on this label).

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

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Store locked up.

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

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 1

Fire = 3

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = *1

Fire = 3

Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

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

· **Dangerous components:**

67-56-1	methanol	99.368%
57-74-9	chlordane (ISO)	0.632%

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4 First-aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Remove breathing apparatus only after contaminated clothing have been completely removed.
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 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO2, extinguishing 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.
- **Protective Action Criteria for Chemicals**

· PAC-1:

67-56-1	methanol	530 ppm
57-74-9	chlordane (ISO)	4.5 mg/m ³

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· PAC-2:

67-56-1	methanol	2,100 ppm
57-74-9	chlordane (ISO)	50 mg/m ³

· PAC-3:

67-56-1	methanol	7200* ppm
57-74-9	chlordane (ISO)	500 mg/m ³

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 protection against explosions and fires:

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 receptacle 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 systems: No further data; see item 7.

· Control parameters
· Components with limit values that require monitoring at the workplace:
67-56-1 methanol

PEL Long-term value: 260 mg/m³, 200 ppm

REL Short-term value: 325 mg/m³, 250 ppm

Long-term value: 260 mg/m³, 200 ppm

Skin

TLV Short-term value: 328 mg/m³, 250 ppm

Long-term value: 262 mg/m³, 200 ppm

Skin; BEI

· Ingredients with biological limit values:
67-56-1 methanol

BEI 15 mg/L

Medium: urine

Time: end of shift

Parameter: Methanol (background, nonspecific)

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Trade name: Chlordane Standard (1X1 mL)

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· **Additional information:** The lists that were valid during the creation 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.

· **Breathing equipment:**

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 11-13 mil thickness are recommended for normal use. The breakthrough time is 1 hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15 mil 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

Color: Colorless

· **Odor:** Alcohol-like

· **Odor threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/Melting range: -98 °C (-144.4 °F)

Boiling point/Boiling range: 64 °C (147.2 °F)

· **Flash point:** 9 °C (48.2 °F)

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

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Trade name: Chlordane Standard (1X1 mL)

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· Ignition temperature:	455 °C (851 °F)
· Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· Explosion limits:	
Lower:	5.5 Vol %
Upper:	44 Vol %
· Vapor pressure at 20 °C (68 °F):	100 hPa (75 mm Hg)
· Density at 20 °C (68 °F):	0.80499 g/cm ³ (6.71764 lbs/gal)
· Relative density	Not determined.
· Vapor 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:	99.4 %
VOC content:	99.37 %
	799.9 g/l / 6.68 lb/gal
· 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:**

· LD/LC50 values that are relevant for classification:		
ATE (Acute Toxicity Estimate)		
Oral	LD50	58,060 mg/kg (rat)

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Dermal	LD50	>253,125 mg/kg (rat)
Inhalative	LC50/4 h	2.91 mg/L

67-56-1 methanol

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

57-74-9 chlordane (ISO)

Oral	LD50	367 mg/kg (rat)
Dermal	LD50	>1,600 mg/kg (rat)

· Primary irritant effect:
· on the skin: No irritant effect.

· on the eye: No irritating effect.

· Sensitization: No sensitizing effects known.

· Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:
Toxic

· Carcinogenic categories
· IARC (International Agency for Research on Cancer)

57-74-9	chlordane (ISO)	2B
---------	-----------------	----

· NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

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

· Persistence and degradability No further relevant information available.

· Behavior 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 (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.

US

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Reviewed on 04/27/2019

Trade name: Chlordane Standard (1X1 mL)

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13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· Not Regulated, De minimus Quantities	-
· UN-Number · DOT, IMDG, IATA	UN1230
· UN proper shipping name · DOT · IMDG · IATA	Methanol solution METHANOL solution METHANOL mixture
· Transport hazard class(es) · DOT	
 	
· 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 · DOT, IMDG, IATA	II
· Environmental hazards:	Not applicable.
· Special precautions for user	Warning: Flammable liquids

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Safety Data Sheet

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Trade name: Chlordane Standard (1X1 mL)

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· 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 MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· DOT	
· Quantity limitations	On passenger aircraft/rail: 1 L On cargo aircraft only: 60 L
· 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 SOLUTION, 3 (6.1), II

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

· Section 355 (extremely hazardous substances):

57-74-9 chlordane (ISO)

· Section 313 (Specific toxic chemical listings):

All ingredients are listed.

· TSCA (Toxic Substances Control Act):

67-56-1 methanol

ACTIVE

· Hazardous Air Pollutants

All ingredients are listed.

· Proposition 65

· Chemicals known to cause cancer:

57-74-9 chlordane (ISO)

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

67-56-1 methanol

· Carcinogenic categories

· EPA (Environmental Protection Agency)

57-74-9 chlordane (ISO)

B2

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Trade name: Chlordane Standard (1X1 mL)

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· TLV (Threshold Limit Value established by ACGIH)

57-74-9 | chlordane (ISO)

A3

· NIOSH-Ca (National Institute for Occupational Safety and Health)

57-74-9 | chlordane (ISO)

· 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

· Date of preparation / last revision 05/29/2019 / 3

· 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

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

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)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

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

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Flam. Liq. 2: Flammable liquids – Category 2

Acute Tox. 3: Acute toxicity – Category 3

Carc. 2: Carcinogenicity – Category 2

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

· * Data compared to the previous version altered.

US