31.03.2019 **Kit components**

Product code	Description
US-109K	**High Concentration GC/MS Kit**

Components:

US-100N-1	Base/Neutrals Standard (1X1 mL)
US-101N-1	Base/Neutrals Standard (1X1 mL)
US-102BN-1	Organochloride Pesticide Standard (1X1 mL)
US-103N-1	Toxic Substances Standard (1X1 mL)
US-104N-1	Toxic Substances Standard (1X1 mL)
US-105N-1	Benzidines Standard (1X1 mL)
US-106N-1	PAH Standard (1X1 mL)
US-107N-1	Phenols Standard (1X1 mL)
US-108N-1	Semi-Volatiles Internal Standard (1X1 mL)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

*
1 Identification

· **Product identifier**

· **Trade name: Base/Neutrals Standard (1X1 mL)**

· **Part number:** US-100N-1
· **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Agilent Technologies Australia Pty Ltd
679 Springvale Road
Mulgrave
Victoria 3170, Australia

· **Further information obtainable from:**
Telephone: 1800 802 402
e-mail: pdl-msds_author@agilent.com
· **Emergency telephone number:** CHEMTREC®: +(61) - 290372994

*
2 Hazard(s) Identification

· **Classification of the substance or mixture**


health hazard

Carc. 1B	H350	May cause cancer.
STOT RE 2	H373	May cause damage to organs through prolonged or repeated exposure.

Acute Tox. 4	H302	Harmful if swallowed.
Acute Tox. 4	H312	Harmful in contact with skin.
Skin Irrit. 2	H315	Causes skin irritation.
Eye Irrit. 2A	H319	Causes serious eye irritation.
STOT SE 3	H335	May cause respiratory irritation.

· **Label elements**
· **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).
· **Hazard pictograms**


GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labelling:**
dichloromethane
bis(2-chloroethyl) ether
dimethylnitrosoamine

(Contd. on page 2)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Base/Neutrals Standard (1X1 mL)

(Contd. of page 1)

nitrosodipropylamine

· **Hazard statements**
Harmful if swallowed.
Harmful in contact with skin.
Causes skin irritation.
Causes serious eye irritation.
May cause cancer.
May cause respiratory irritation.
May cause damage to organs through prolonged or repeated exposure.

· **Precautionary statements**
If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust/fume/gas/mist/vapours/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.
Use personal protective equipment as required.
IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
Rinse mouth.
IF ON SKIN: Wash with plenty of water.
IF INHALED: Remove victim to fresh air and keep at rest in a position 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.
Get medical advice/attention if you feel unwell.
Specific measures (see on this label).
If skin irritation occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Take off contaminated clothing and wash before reuse.
Wash contaminated clothing before reuse.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

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

*
3 Composition and Information on Ingredients

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

(Contd. on page 3)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Base/Neutrals Standard (1X1 mL)

(Contd. of page 2)

· **Dangerous components:**

75-09-2	dichloromethane STOT RE 2, H373; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	97.889%
111-44-4	bis(2-chloroethyl) ether Flam. Liq. 3, H226; Acute Tox. 2, H300; Acute Tox. 1, H310; Acute Tox. 2, H330; Carc. 2, H351	0.151%
101-55-3	4-bromophenyl phenyl ether Acute Tox. 4, H302; Eye Irrit. 2A, H319; Skin Sens. 1, H317	0.151%
7005-72-3	4-chlorophenyl phenyl ether Acute Tox. 4, H302; Eye Irrit. 2A, H319; Skin Sens. 1, H317	0.151%
117-84-0	dioctyl phthalate Repr. 2, H361	0.151%
621-64-7	nitrosodipropylamine Carc. 1B, H350; Acute Tox. 4, H302	0.151%
62-75-9	dimethylnitrosoamine Acute Tox. 3, H301; Acute Tox. 2, H330; Carc. 1B, H350; STOT RE 1, H372; Flam. Liq. 4, H227	0.151%
84-74-2	dibutyl phthalate Repr. 1B, H360; Acute Tox. 4, H332	0.151%
117-81-7	di-(2-ethylhexyl) phthalate Repr. 1B, H360	0.151%
85-68-7	BBP Acute Tox. 3, H331; Repr. 1B, H360	0.151%

· **SVHC**

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

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

4 First Aid Measures

· **Description of first aid measures**
· **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
· **After inhalation:** 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. If symptoms persist, consult a doctor.
· **After swallowing:** Call for a doctor immediately.
· **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed** No further relevant information available.
· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

(Contd. on page 4)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Base/Neutrals Standard (1X1 mL)

(Contd. of page 3)

*
5 Fire Fighting Measures

· **Extinguishing media**
· **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
· **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.
· **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

*
7 Handling and Storage

· **Handling:**
· **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
· **Information about fire - and explosion protection:** Keep respiratory protective device available.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** No special requirements.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:** Keep container tightly sealed.
· **Specific end use(s)** No further relevant information available.

8 Exposure controls and personal protection

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

· **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**	
75-09-2 dichloromethane	
NES	Long-term value: 174 mg/m³, 50 ppm Sk

(Contd. on page 5)

(Contd. of page 4)

WES	Long-term value: 174 mg/m³, 50 ppm Sk
111-44-4 bis(2-chloroethyl) ether	
NES	Short-term value: 58 mg/m³, 10 ppm Long-term value: 29 mg/m³, 5 ppm Sk
WES	Short-term value: 58 mg/m³, 10 ppm Long-term value: 29 mg/m³, 5 ppm Sk
62-75-9 dimethylnitrosoamine	
NES	Sk
WES	Sk
84-74-2 dibutyl phthalate	
NES	Long-term value: 5 mg/m³
WES	Long-term value: 5 mg/m³
117-81-7 di-(2-ethylhexyl) phthalate	
NES	Short-term value: 10 mg/m³ Long-term value: 5 mg/m³
WES	Short-term value: 10 mg/m³ Long-term value: 5 mg/m³

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

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

(Contd. on page 6)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Base/Neutrals Standard (1X1 mL)

(Contd. of page 5)

· **Eye protection:**
Safety glasses

Tightly sealed goggles

9 Physical and Chemical Properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Fluid
Colour:	Colourless
· **Odour:**	Like chlorine
· **Odour threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/freezing point:	-95.1 °C
Initial boiling point and boiling range:	40 °C
· **Flash point:**	Not applicable.
· **Flammability (solid, gas):**	Not applicable.
· **Ignition temperature:**	605 °C
· **Decomposition temperature:**	Not determined.
· **Auto-ignition temperature:**	Product is not selfigniting.
· **Explosive properties:**	Product does not present an explosion hazard.
· **Explosion limits:**	
Lower:	13 Vol %
Upper:	22 Vol %
· **Vapour pressure at 20 °C:**	360 hPa
· **Density at 20 °C:**	1.3 g/cm³
· **Relative density**	Not determined.
· **Vapour density**	Not determined.
· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with**	
water at 20 °C:	20 g/l
· **Partition coefficient: n-octanol/water:**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Solvent content:**	
Organic solvents:	97.9 %

(Contd. on page 7)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Base/Neutrals Standard (1X1 mL)

(Contd. of page 6)

VOC (EC)	97.89 %
Solids content:	0.5 %
· **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 relevant for classification:**		
ATE (Acute Toxicity Estimates)		
Oral	LD50	1,407 mg/kg
Dermal	LD50	>1,976 mg/kg
Inhalative	LC50/4 h	>87.9 mg/L (rat)

75-09-2 dichloromethane		
Oral	LD50	1,600 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)
Inhalative	LC50/4 h	88 mg/L (rat)
111-44-4 bis(2-chloroethyl) ether		
Oral	LD50	75 mg/kg (rat)
Dermal	LD50	90 mg/kg (rabbit)
Inhalative	LC50/4 h	330 mg/L (rat)
117-84-0 dioctyl phthalate		
Oral	LD50	47,000 mg/kg (rat)
621-64-7 nitrosodipropylamine		
Oral	LD50	480 mg/kg (rat)
62-75-9 dimethylnitrosoamine		
Oral	LD50	37 mg/kg (rat)
Inhalative	LC50/4 h	78 mg/L (rat)
84-74-2 dibutyl phthalate		
Oral	LD50	6,300 mg/kg (rat)
Dermal	LD50	>4,000 mg/kg (rabbit)
Inhalative	LC50/4 h	15.68 mg/L (rat)

(Contd. on page 8)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Base/Neutrals Standard (1X1 mL)

(Contd. of page 7)

117-81-7 di-(2-ethylhexyl) phthalate		
Oral	LD50	>20,000 mg/kg (rat)
Dermal	LD50	4,000 mg/kg (rat)
		25,000 mg/kg (rabbit)
85-68-7 BBP		
Oral	LD50	2,330 mg/kg (rat)
Dermal	LD50	6,700 mg/kg (rabbit)
Inhalative	LC50/4 h	>6.7 mg/L (rat)

· **Primary irritant effect:**
· **Skin corrosion/irritation** Irritant to skin and mucous membranes.
· **Serious eye damage/irritation** Irritating effect.
· **Respiratory or skin sensitisation** No sensitising effects known.
· **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Harmful
Irritant
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
Carc. 1B

12 Ecological Information

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

13 Disposal considerations

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

(Contd. on page 9)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Base/Neutrals Standard (1X1 mL)

(Contd. of page 8)

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

*
14 Transport information

· **Not Regulated, De minimus Quantities**	-
· **UN-Number**	
· **ADG, IMDG, IATA**	UN1593
· **UN proper shipping name**	
· **ADG**	1593 DICHLOROMETHANE
· **IMDG, IATA**	DICHLOROMETHANE
· **Transport hazard class(es)**	
· **ADG, IMDG, IATA**	
· **Class**	6.1 Toxic substances.
· **Label**	6.1
· **Packing group**	
· **ADG, IMDG, IATA**	III
· **Environmental hazards:**	Not applicable.
· **Special precautions for user**	Warning: Toxic substances.
· **Danger code (Kemler):**	60
· **EMS Number:**	F-A,S-A
· **Segregation groups**	Liquid halogenated hydrocarbons
· **Stowage Category**	A
· **Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **ADG**	
· **Limited quantities (LQ)**	5L
· **Excepted quantities (EQ)**	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· **Transport category**	2
· **Tunnel restriction code**	E
· **IMDG**	
· **Limited quantities (LQ)**	5L
· **Excepted quantities (EQ)**	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml

(Contd. on page 10)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Base/Neutrals Standard (1X1 mL)

(Contd. of page 9)

· **UN "Model Regulation":** UN 1593 DICHLOROMETHANE, 6.1, III

15 Regulatory information

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

· **Australian Inventory of Chemical Substances**	
75-09-2	dichloromethane
111-44-4	bis(2-chloroethyl) ether
101-55-3	4-bromophenyl phenyl ether
7005-72-3	4-chlorophenyl phenyl ether
131-11-3	dimethyl phthalate
117-84-0	dioctyl phthalate
62-75-9	dimethylnitrosoamine
86-30-6	nitrosodiphenylamine
84-74-2	dibutyl phthalate
117-81-7	di-(2-ethylhexyl) phthalate
85-68-7	BBP
84-66-2	diethyl phthalate

· **Standard for the Uniform Scheduling of Medicines and Poisons**		
75-09-2	dichloromethane	S5
131-11-3	dimethyl phthalate	S10
84-74-2	dibutyl phthalate	S10
85-68-7	BBP	S10
84-66-2	diethyl phthalate	S10

· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **National regulations:**
· **Additional classification according to Decree on Hazardous Materials, Annex II:**
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.

· **Other regulations, limitations and prohibitive regulations**

· **Substances of very high concern (SVHC) according to REACH, Article 57**	
84-74-2	dibutyl phthalate
117-81-7	di-(2-ethylhexyl) phthalate
85-68-7	BBP

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

(Contd. on page 11)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Base/Neutrals Standard (1X1 mL)

(Contd. of page 10)

16 Other information

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

· **Relevant phrases**
H226 Flammable liquid and vapour.
H227 Combustible liquid.
H300 Fatal if swallowed.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H310 Fatal in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H330 Fatal if inhaled.
H331 Toxic if inhaled.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H350 May cause cancer.
H351 Suspected of causing cancer.
H360 May damage fertility or the unborn child.
H361 Suspected of damaging fertility or the unborn child.
H372 Causes damage to organs through prolonged or repeated exposure.
H373 May cause damage to organs through prolonged or repeated exposure.

· **Department issuing SDS:** Document Control / Regulatory
· **Contact:** regulatory@ultrasci.com
· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 3: Flammable liquids – Category 3
Flam. Liq. 4: Flammable liquids – Category 4
Acute Tox. 2: Acute toxicity – Category 2
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 1: Acute toxicity – Category 1
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
Skin Sens. 1: Skin sensitisation – Category 1
Carc. 1B: Carcinogenicity – Category 1B
Carc. 2: Carcinogenicity – Category 2
Repr. 1B: Reproductive toxicity – Category 1B
Repr. 2: Reproductive toxicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
· *** Data compared to the previous version altered.**

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 2 Revision: 31.03.2019

1 Identification

· **Product identifier**

· **Trade name: Base/Neutrals Standard (1X1 mL)**

· **Part number:** US-101N-1
· **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Agilent Technologies Australia Pty Ltd
679 Springvale Road
Mulgrave
Victoria 3170, Australia

· **Further information obtainable from:**
Telephone: 1800 802 402
e-mail: pdl-msds_author@agilent.com
· **Emergency telephone number:** CHEMTREC®: +(61) - 290372994

2 Hazard(s) Identification

· **Classification of the substance or mixture**


health hazard

Carc. 1B	H350	May cause cancer.
STOT RE 2	H373	May cause damage to organs through prolonged or repeated exposure.

Acute Tox. 4	H302	Harmful if swallowed.
Acute Tox. 4	H312	Harmful in contact with skin.
Skin Irrit. 2	H315	Causes skin irritation.
Eye Irrit. 2A	H319	Causes serious eye irritation.
STOT SE 3	H335	May cause respiratory irritation.

· **Label elements**
· **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).
· **Hazard pictograms**


GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labelling:**
dichloromethane
hexachlorobuta-1,3-diene
2,4-dinitrotoluene

(Contd. on page 2)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 2 Revision: 31.03.2019

Trade name: Base/Neutrals Standard (1X1 mL)

(Contd. of page 1)

2,6-dinitrotoluene

· **Hazard statements**
Harmful if swallowed.
Harmful in contact with skin.
Causes skin irritation.
Causes serious eye irritation.
May cause cancer.
May cause respiratory irritation.
May cause damage to organs through prolonged or repeated exposure.

· **Precautionary statements**
If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust/fume/gas/mist/vapours/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.
Use personal protective equipment as required.
IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
Rinse mouth.
IF ON SKIN: Wash with plenty of water.
IF INHALED: Remove victim to fresh air and keep at rest in a position 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.
Get medical advice/attention if you feel unwell.
Specific measures (see on this label).
If skin irritation occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Take off contaminated clothing and wash before reuse.
Wash contaminated clothing before reuse.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:**	
87-68-3	hexachlorobuta-1,3-diene
120-82-1	1,2,4-trichlorobenzene

· **vPvB:**	
87-68-3	hexachlorobuta-1,3-diene

3 Composition and Information on Ingredients

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

(Contd. on page 3)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 2 Revision: 31.03.2019

Trade name: Base/Neutrals Standard (1X1 mL)

(Contd. of page 2)

· **Dangerous components:**

75-09-2	dichloromethane STOT RE 2, H373; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	97.889%
106-46-7	1,4-dichlorobenzene Carc. 2, H351; Eye Irrit. 2A, H319	0.151%
121-14-2	2,4-dinitrotoluene Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; Muta. 2, H341; Carc. 1B, H350; Repr. 2, H361; STOT RE 2, H373	0.151%
606-20-2	2,6-dinitrotoluene Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; Muta. 2, H341; Carc. 1B, H350; Repr. 2, H361; STOT RE 2, H373	0.151%
118-74-1	hexachlorobenzene Carc. 1B, H350; STOT RE 1, H372	0.151%
87-68-3	hexachlorobuta-1,3-diene PBT; vPvB Acute Tox. 3, H301; Acute Tox. 2, H310; Carc. 2, H351; Skin Irrit. 2, H315; Flam. Liq. 4, H227	0.151%
98-95-3	nitrobenzene Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; Carc. 2, H351; Repr. 1B, H360; STOT RE 1, H372; Flam. Liq. 4, H227	0.151%
120-82-1	1,2,4-trichlorobenzene PBT Acute Tox. 4, H302; Skin Irrit. 2, H315	0.151%
103-33-3	azobenzene Muta. 2, H341; Carc. 1B, H350; STOT RE 2, H373; Acute Tox. 4, H302; Acute Tox. 4, H332	0.151%
78-59-1	3,5,5-trimethylcyclohex-2-enone Carc. 2, H351; Acute Tox. 4, H302; Acute Tox. 4, H312; Eye Irrit. 2, H319; STOT SE 3, H335	0.151%

· **SVHC**

121-14-2	2,4-dinitrotoluene
98-95-3	nitrobenzene

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

4 First Aid Measures

· **Description of first aid measures**
· **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
· **After inhalation:** 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. If symptoms persist, consult a doctor.
· **After swallowing:** Call for a doctor immediately.

(Contd. on page 4)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 2 Revision: 31.03.2019

Trade name: Base/Neutrals Standard (1X1 mL)

(Contd. of page 3)

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

7 Handling and Storage

· **Handling:**
· **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
· **Information about fire - and explosion protection:** Keep respiratory protective device available.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** No special requirements.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:** Keep container tightly sealed.
· **Specific end use(s)** No further relevant information available.

(Contd. on page 5)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 2 Revision: 31.03.2019

Trade name: Base/Neutrals Standard (1X1 mL)

(Contd. of page 4)

8 Exposure controls and personal protection

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

· **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**	
75-09-2 dichloromethane	
NES	Long-term value: 174 mg/m³, 50 ppm Sk
WES	Long-term value: 174 mg/m³, 50 ppm Sk
106-46-7 1,4-dichlorobenzene	
NES	Short-term value: 300 mg/m³, 50 ppm Long-term value: 150 mg/m³, 25 ppm
WES	Short-term value: 300 mg/m³, 50 ppm Long-term value: 150 mg/m³, 25 ppm
87-68-3 hexachlorobuta-1,3-diene	
NES	Long-term value: 0.21 mg/m³, 0.02 ppm Sk
WES	Long-term value: 0.21 mg/m³, 0.02 ppm Sk
98-95-3 nitrobenzene	
NES	Long-term value: 5 mg/m³, 1 ppm Sk
WES	Long-term value: 5 mg/m³, 1 ppm Sk
120-82-1 1,2,4-trichlorobenzene	
NES	Peak limitation: 37 mg/m³, 5 ppm
WES	Peak limitation: 37 mg/m³, 5 ppm
78-59-1 3,5,5-trimethylcyclohex-2-enone	
NES	Peak limitation: 28 mg/m³, 5 ppm
WES	Peak limitation: 28 mg/m³, 5 ppm

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

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the eyes and skin.
· **Respiratory protection:**
When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.
Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

(Contd. on page 6)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 2 Revision: 31.03.2019

Trade name: Base/Neutrals Standard (1X1 mL)

(Contd. of page 5)

· **Protection of hands:**
Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.
· **Material of gloves**
For normal use: nitrile rubber, 11-13 mil thickness
For direct contact with the chemical: butyl rubber, 12-15 mil thickness
· **Penetration time of glove material**
For normal use: nitrile rubber: 1 hour
For direct contact with the chemical: butyl rubber: > 4 hours
· **Eye protection:**
Safety glasses

Tightly sealed goggles

9 Physical and Chemical Properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Fluid
Colour:	Colourless
· **Odour:**	Like chlorine
· **Odour threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/freezing point:	-95.1 °C
Initial boiling point and boiling range:	40 °C
· **Flash point:**	Not applicable.
· **Flammability (solid, gas):**	Not applicable.
· **Ignition temperature:**	605 °C
· **Decomposition temperature:**	Not determined.
· **Auto-ignition temperature:**	Product is not selfigniting.
· **Explosive properties:**	Product does not present an explosion hazard.
· **Explosion limits:**	
Lower:	13 Vol %
Upper:	22 Vol %
· **Vapour pressure at 20 °C:**	360 hPa
· **Density at 20 °C:**	1.3 g/cm³
· **Relative density**	Not determined.
· **Vapour density**	Not determined.

(Contd. on page 7)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 2 Revision: 31.03.2019

Trade name: Base/Neutrals Standard (1X1 mL)

(Contd. of page 6)

· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with water at 20 °C:**	20 g/l
· **Partition coefficient: n-octanol/water:**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Solvent content:**	
Organic solvents:	98.5 %
VOC (EC)	98.49 %
Solids content:	1.1 %
· **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 relevant for classification:**

ATE (Acute Toxicity Estimates)		
Oral	LD50	1,543 mg/kg (rat)
Dermal	LD50	>1,928 mg/kg
Inhalative	LC50/4 h	77.6 mg/L

75-09-2 dichloromethane		
Oral	LD50	1,600 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)
Inhalative	LC50/4 h	88 mg/L (rat)
95-50-1 1,2-dichlorobenzene		
Oral	LD50	500 mg/kg (rat)
Dermal	LD50	>10,000 mg/kg (rabbit)
106-46-7 1,4-dichlorobenzene		
Oral	LD50	>2,000 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)

(Contd. on page 8)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 2 Revision: 31.03.2019

Trade name: Base/Neutrals Standard (1X1 mL)

(Contd. of page 7)

Inhalative	LC50/4 h	>5.07 mg/L (rat)
121-14-2 2,4-dinitrotoluene		
Oral	LD50	268 mg/kg (rat)
606-20-2 2,6-dinitrotoluene		
Oral	LD50	177 mg/kg (rat)
118-74-1 hexachlorobenzene		
Oral	LD50	10,000 mg/kg (rat)
Inhalative	LC50/4 h	3,600 mg/L (rat)
87-68-3 hexachlorobuta-1,3-diene		
Oral	LD50	82 mg/kg (rat)
Dermal	LD50	100 mg/kg (rabbit)
Inhalative	LC50/4 h	370 mg/L (mouse)
77-47-4 hexachlorocyclopentadiene		
Oral	LD50	315 mg/kg (rat)
Dermal	LD50	430 mg/kg (rabbit)
Inhalative	LC50/4 h	2 mg/L (rat)
98-95-3 nitrobenzene		
Oral	LD50	390 mg/kg (rat)
Dermal	LD50	2,100 mg/kg (rat)
Inhalative	LC50/4 h	556 mg/L (rat)
120-82-1 1,2,4-trichlorobenzene		
Oral	LD50	756 mg/kg (rat)
Dermal	LD50	6,139 mg/kg (rat)
103-33-3 azobenzene		
Oral	LD50	1,000 mg/kg (rat)
78-59-1 3,5,5-trimethylcyclohex-2-enone		
Oral	LD50	1,870 mg/kg (rat)
Dermal	LD50	1,200 mg/kg (rabbit)
Inhalative	LC50/4 h	7,000 mg/L (rat)

· **Primary irritant effect:**
· **Skin corrosion/irritation** Irritant to skin and mucous membranes.
· **Serious eye damage/irritation** Irritating effect.
· **Respiratory or skin sensitisation** No sensitising effects known.
· **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Harmful
Irritant
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
Carc. 1B

(Contd. on page 9)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 2 Revision: 31.03.2019

Trade name: Base/Neutrals Standard (1X1 mL)

(Contd. of page 8)

12 Ecological Information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability** No further relevant information available.
· **Behaviour in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Water hazard class 3 (German Regulation) (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:**	
87-68-3	hexachlorobuta-1,3-diene
120-82-1	1,2,4-trichlorobenzene

· **vPvB:**	
87-68-3	hexachlorobuta-1,3-diene

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

13 Disposal considerations

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

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

14 Transport information

· **Not Regulated, De minimus Quantities**	-
· **UN-Number**	
· **ADG, IMDG, IATA**	UN1593
· **UN proper shipping name**	
· **ADG**	1593 DICHLOROMETHANE
· **IMDG, IATA**	DICHLOROMETHANE

(Contd. on page 10)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 2 Revision: 31.03.2019

Trade name: Base/Neutrals Standard (1X1 mL)

(Contd. of page 9)

· **Transport hazard class(es)**

· **ADG, IMDG, IATA**

· **Class**	6.1 Toxic substances.
· **Label**	6.1
· **Packing group**	
· **ADG, IMDG, IATA**	III
· **Environmental hazards:**	Not applicable.
· **Special precautions for user**	Warning: Toxic substances.
· **Danger code (Kemler):**	60
· **EMS Number:**	F-A,S-A
· **Segregation groups**	Liquid halogenated hydrocarbons
· **Stowage Category**	A
· **Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **ADG**	
· **Limited quantities (LQ)**	5L
· **Excepted quantities (EQ)**	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· **Transport category**	2
· **Tunnel restriction code**	E
· **IMDG**	
· **Limited quantities (LQ)**	5L
· **Excepted quantities (EQ)**	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· **UN "Model Regulation":**	UN 1593 DICHLOROMETHANE, 6.1, III

15 Regulatory information

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

· **Australian Inventory of Chemical Substances**	
75-09-2	dichloromethane
95-50-1	1,2-dichlorobenzene
541-73-1	1,3-dichlorobenzene
106-46-7	1,4-dichlorobenzene
121-14-2	2,4-dinitrotoluene

(Contd. on page 11)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 2 Revision: 31.03.2019

Trade name: Base/Neutrals Standard (1X1 mL)

(Contd. of page 10)

606-20-2	2,6-dinitrotoluene
118-74-1	hexachlorobenzene
87-68-3	hexachlorobuta-1,3-diene
77-47-4	hexachlorocyclopentadiene
67-72-1	hexachloroethane
98-95-3	nitrobenzene
120-82-1	1,2,4-trichlorobenzene
103-33-3	azobenzene
78-59-1	3,5,5-trimethylcyclohex-2-enone

· **Standard for the Uniform Scheduling of Medicines and Poisons**		
75-09-2	dichloromethane	S5
95-50-1	1,2-dichlorobenzene	S6
106-46-7	1,4-dichlorobenzene	S5
118-74-1	hexachlorobenzene	S7
98-95-3	nitrobenzene	S6
103-33-3	azobenzene	S6
78-59-1	3,5,5-trimethylcyclohex-2-enone	S5

· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **National regulations:**

· **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.

· **Other regulations, limitations and prohibitive regulations**

· **Substances of very high concern (SVHC) according to REACH, Article 57**	
121-14-2	2,4-dinitrotoluene
98-95-3	nitrobenzene

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

16 Other information

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

· **Relevant phrases**
H227 Combustible liquid.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H310 Fatal in contact with skin.
H311 Toxic in contact with skin.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H332 Harmful if inhaled.

(Contd. on page 12)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 2 Revision: 31.03.2019

Trade name: Base/Neutrals Standard (1X1 mL)

(Contd. of page 11)

H335 May cause respiratory irritation.
H341 Suspected of causing genetic defects.
H350 May cause cancer.
H351 Suspected of causing cancer.
H360 May damage fertility or the unborn child.
H361 Suspected of damaging fertility or the unborn child.
H372 Causes damage to organs through prolonged or repeated exposure.
H373 May cause damage to organs through prolonged or repeated exposure.

· **Department issuing SDS:** Document Control / Regulatory
· **Contact:** regulatory@ultrasci.com
· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 4: Flammable liquids – Category 4
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 2: Acute toxicity – Category 2
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
Muta. 2: Germ cell mutagenicity – Category 2
Carc. 1B: Carcinogenicity – Category 1B
Carc. 2: Carcinogenicity – Category 2
Repr. 1B: Reproductive toxicity – Category 1B
Repr. 2: Reproductive toxicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

*

1 Identification

· **Product identifier**

· **Trade name: Organochloride Pesticide Standard (1X1 mL)**

· **Part number:** US-102BN-1
· **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Agilent Technologies Australia Pty Ltd
679 Springvale Road
Mulgrave
Victoria 3170, Australia

· **Further information obtainable from:**
Telephone: 1800 802 402
e-mail: pdl-msds_author@agilent.com
· **Emergency telephone number:** CHEMTREC®: +(61) - 290372994

2 Hazard(s) Identification

· **Classification of the substance or mixture**


flame

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


health hazard

Repr. 2 H361 Suspected of damaging fertility or the unborn child.
STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.
Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.

Acute Tox. 4 H302 Harmful if swallowed.
Acute Tox. 4 H312 Harmful in contact with skin.
Skin Irrit. 2 H315 Causes skin irritation.
STOT SE 3 H336 May cause drowsiness or dizziness.

· **Label elements**
· **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).
· **Hazard pictograms**


GHS02 GHS07 GHS08

(Contd. on page 2)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Organochloride Pesticide Standard (1X1 mL)

(Contd. of page 1)

· **Signal word** Danger

· **Hazard-determining components of labelling:**
toluene
n-hexane
endosulfan sulfate
dieldrin (ISO)

· **Hazard statements**
Highly flammable liquid and vapour.
Harmful if swallowed.
Harmful in contact with skin.
Causes skin irritation.
Suspected of damaging fertility or the unborn child.
May cause drowsiness or dizziness.
May cause damage to organs through prolonged or repeated exposure.
May be fatal if swallowed and enters airways.

· **Precautionary statements**
If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
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/vapours/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.
Use personal protective equipment as required.
IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
Do NOT induce vomiting.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
IF exposed or concerned: Get medical advice/attention.
Get medical advice/attention if you feel unwell.
Rinse mouth.
Specific measures (see on this label).
If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing and wash before reuse.
Wash contaminated clothing before reuse.
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.

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

(Contd. on page 3)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Organochloride Pesticide Standard (1X1 mL)

(Contd. of page 2)

· **vPvB:** Not applicable.

*
3 Composition and Information on Ingredients

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

· **Dangerous components:**

108-88-3	toluene Flam. Liq. 2, H225; Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304; Skin Irrit. 2, H315; STOT SE 3, H336	47.903%
110-54-3	n-hexane Flam. Liq. 2, H225; Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304; Skin Irrit. 2, H315; STOT SE 3, H336	47.903%
50-29-3	DDT (common name not adopted by ISO) Acute Tox. 3, H301; Acute Tox. 3, H311; Carc. 2, H351; STOT RE 1, H372	0.262%
72-55-9	2,2-bis(p-chlorophenyl)-1,1-dichloroethylene Carc. 2, H351; Acute Tox. 4, H302	0.262%
60-57-1	dieldrin (ISO) Acute Tox. 3, H301; Acute Tox. 1, H310; Carc. 2, H351; STOT RE 1, H372	0.262%
76-44-8	heptachlor (ISO) Acute Tox. 3, H301; Acute Tox. 3, H311; Carc. 2, H351; STOT RE 2, H373	0.262%
1024-57-3	heptachlor epoxide - isomer B Acute Tox. 3, H301; Carc. 2, H351; STOT RE 2, H373	0.262%
319-85-7	(1alpha,2ß,3alpha,4ß,5alpha,6ß)-1,2,3,4,5,6-hexachlorocyclohexane Carc. 2, H351; Acute Tox. 4, H312	0.262%
58-89-9	γ -HCH or γ -BHC Acute Tox. 3, H301; Acute Tox. 3, H311; STOT RE 2, H373; Lact., H362	0.262%
309-00-2	aldrin (ISO) Acute Tox. 3, H301; Acute Tox. 3, H311; Carc. 2, H351; STOT RE 1, H372	0.262%
72-54-8	TDE Acute Tox. 3, H301; Carc. 2, H351; Acute Tox. 4, H312	0.262%

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

4 First Aid Measures

· **Description of first aid measures**
· **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
· **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
· **After eye contact:** Rinse opened eye for several minutes under running water.
· **After swallowing:** Call for a doctor immediately.
· **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

(Contd. on page 4)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Organochloride Pesticide Standard (1X1 mL)

(Contd. of page 3)

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

6 Accidental Release Measures

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

7 Handling and Storage

· **Handling:**
· **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
· **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Keep respiratory protective device available.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** Store in a cool location.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:**
Keep container tightly sealed.

(Contd. on page 5)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Organochloride Pesticide Standard (1X1 mL)

(Contd. of page 4)

Store in cool, dry conditions in well sealed receptacles.
· **Specific end use(s)** No further relevant information available.

8 Exposure controls and personal protection

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

· **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**	
108-88-3 toluene	
NES	Short-term value: 574 mg/m³, 150 ppm Long-term value: 191 mg/m³, 50 ppm Sk
WES	Short-term value: 574 mg/m³, 150 ppm Long-term value: 191 mg/m³, 50 ppm Sk
110-54-3 n-hexane	
NES	Long-term value: 72 mg/m³, 20 ppm
WES	Long-term value: 72 mg/m³, 20 ppm

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

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

(Contd. on page 6)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Organochloride Pesticide Standard (1X1 mL)

(Contd. of page 5)

· **Eye protection:**

Tightly sealed goggles

9 Physical and Chemical Properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Fluid
Colour:	According to product specification
· **Odour:**	Characteristic
· **Odour threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	69 °C
· **Flash point:**	-22 °C
· **Flammability (solid, gas):**	Not applicable.
· **Ignition temperature:**	240 °C
· **Decomposition temperature:**	Not determined.
· **Auto-ignition temperature:**	Product is not selfigniting.
· **Explosive properties:**	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· **Explosion limits:**	
Lower:	1.2 Vol %
Upper:	7.4 Vol %
· **Vapour pressure at 20 °C:**	110 hPa
· **Density:**	Not determined.
· **Relative density**	Not determined.
· **Vapour density**	Not determined.
· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with water:**	Not miscible or difficult to mix.
· **Partition coefficient: n-octanol/water:**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Solvent content:**	
Organic solvents:	96.1 %

(Contd. on page 7)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Organochloride Pesticide Standard (1X1 mL)

(Contd. of page 6)

VOC (EC)	96.07 %
Solids content:	4.2 %
· **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 relevant for classification:**		
ATE (Acute Toxicity Estimates)		
Oral	LD50	610 mg/kg
Dermal	LD50	1,345 mg/kg
Inhalative	LC50/4 h	40.1 mg/L

108-88-3 toluene		
Oral	LD50	5,580 mg/kg (rat)
Dermal	LD50	12,124 mg/kg (rabbit)
Inhalative	LC50/4 h	5,320 mg/L (mouse)
		28.1 mg/L (rat)
110-54-3 n-hexane		
Oral	LD50	5,000 mg/kg (rat)
Dermal	LD50	3,000 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)
72-55-9 2,2-bis(p-chlorophenyl)-1,1-dichloroethylene		
Oral	LD50	880 mg/kg (rat)
60-57-1 dieldrin (ISO)		
Oral	LD50	38 mg/kg (mouse)
		38 mg/kg (rat)
Dermal	LD50	10 mg/kg (rat)
		250 mg/kg (rabbit)

(Contd. on page 8)

(Contd. of page 7)

72-20-8 endrin (ISO)		
Oral	LD50	3 mg/kg (rat)
Dermal	LD50	60 mg/kg (rat)
		60 mg/kg (rabbit)
959-98-8 endosulfan I		
Oral	LD50	76 mg/kg (rat)
33213-65-9 endosulfan II		
Oral	LD50	240 mg/kg (rat)
1031-07-8 endosulfan sulfate		
Oral	LD50	18 mg/kg (rat)
76-44-8 heptachlor (ISO)		
Oral	LD50	40 mg/kg (rat)
Dermal	LD50	119 mg/kg (rat)
1024-57-3 heptachlor epoxide - isomer B		
Oral	LD50	15 mg/kg (rat)
319-85-7 (1alpha,2ß,3alpha,4ß,5alpha,6ß)-1,2,3,4,5,6-hexachlorocyclohexane		
Oral	LD50	6,000 mg/kg (rat)
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)
309-00-2 aldrin (ISO)		
Oral	LD50	39 mg/kg (rat)
Dermal	LD50	98 mg/kg (rat)
		15 mg/kg (rabbit)
72-54-8 TDE		
Dermal	LD50	1,200 mg/kg (rabbit)

· **Primary irritant effect:**
· **Skin corrosion/irritation** Irritant to skin and mucous membranes.
· **Serious eye damage/irritation** No irritating effect.
· **Respiratory or skin sensitisation** No sensitising effects known.
· **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Harmful
Irritant
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
Repr. 2

12 Ecological Information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability** No further relevant information available.

(Contd. on page 9)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Organochloride Pesticide Standard (1X1 mL)

(Contd. of page 8)

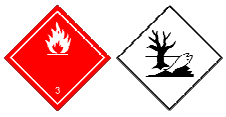
· **Behaviour in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment):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

13 Disposal considerations

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

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

*
14 Transport information

· **Not Regulated, De minimus Quantities**	-
· **UN-Number**	
· **ADG, IMDG, IATA**	UN1993
· **UN proper shipping name**	
· **ADG**	1993 FLAMMABLE LIQUID, N.O.S. (HEXANES, TOLUENE), ENVIRONMENTALLY HAZARDOUS
· **IMDG**	FLAMMABLE LIQUID, N.O.S. (HEXANES, TOLUENE), MARINE POLLUTANT
· **IATA**	FLAMMABLE LIQUID, N.O.S. (HEXANES, TOLUENE)
· **Transport hazard class(es)**	
· **ADG, IMDG**	
· **Class**	3 Flammable liquids.

(Contd. on page 10)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Organochloride Pesticide Standard (1X1 mL)

(Contd. of page 9)

· **Label**	3
· **IATA**	
	
· **Class**	3 Flammable liquids.
· **Label**	3
· **Packing group**	
· **ADG, IMDG, IATA**	II
· **Environmental hazards:**	Product contains environmentally hazardous substances: dieldrin (ISO), n-hexane
· **Marine pollutant:**	Symbol (fish and tree)
· **Special marking (ADG):**	Symbol (fish and tree)
· **Special precautions for user**	Warning: Flammable liquids.
· **Danger code (Kemler):**	33
· **EMS Number:**	F-E,S-E
· **Stowage Category**	B
· **Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **ADG**	
· **Limited quantities (LQ)**	1L
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· **Transport category**	2
· **Tunnel restriction code**	D/E
· **IMDG**	
· **Limited quantities (LQ)**	1L
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· **UN "Model Regulation":**	UN 1993 FLAMMABLE LIQUID, N.O.S. (HEXANES, TOLUENE), 3, II, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

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

· **Australian Inventory of Chemical Substances**	
108-88-3	toluene
110-54-3	n-hexane
50-29-3	DDT (common name not adopted by ISO)

(Contd. on page 11)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Organochloride Pesticide Standard (1X1 mL)

(Contd. of page 10)

72-55-9	2,2-bis(p-chlorophenyl)-1,1-dichloroethylene
60-57-1	dieldrin (ISO)
72-20-8	endrin (ISO)
959-98-8	endosulfan I
33213-65-9	endosulfan II
1031-07-8	endosulfan sulfate
76-44-8	heptachlor (ISO)
319-84-6	alpha-BHC (alpha-HCH)
1024-57-3	heptachlor epoxide - isomer B
319-85-7	(1alpha,2ß,3alpha,4ß,5alpha,6ß)-1,2,3,4,5,6-hexachlorocyclohexane
319-86-8	delta-BHC (delta-HCH)
58-89-9	γ -HCH or γ -BHC
309-00-2	aldrin (ISO)
72-54-8	TDE

· **Standard for the Uniform Scheduling of Medicines and Poisons**

108-88-3	toluene	S6
50-29-3	DDT (common name not adopted by ISO)	S10
60-57-1	dieldrin (ISO)	S6
72-20-8	endrin (ISO)	S7
76-44-8	heptachlor (ISO)	S6
58-89-9	γ -HCH or γ -BHC	S2, S4, S5, S6
309-00-2	aldrin (ISO)	S6
72-54-8	TDE	S5, S6

· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** None of the ingredients is listed.
· **Seveso category**
E2 Hazardous to the Aquatic Environment
P5c FLAMMABLE LIQUIDS
· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 200 t
· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t
· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

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

· **Relevant phrases**
H225 Highly flammable liquid and vapour.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H310 Fatal in contact with skin.
H311 Toxic in contact with skin.
H312 Harmful in contact with skin.
H315 Causes skin irritation.

(Contd. on page 12)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Organochloride Pesticide Standard (1X1 mL)

(Contd. of page 11)

H336 May cause drowsiness or dizziness.
H351 Suspected of causing cancer.
H361 Suspected of damaging fertility or the unborn child.
H362 May cause harm to breast-fed children.
H372 Causes damage to organs through prolonged or repeated exposure.
H373 May cause damage to organs through prolonged or repeated exposure.

· **Department issuing SDS:** Document Control / Regulatory
· **Contact:** regulatory@ultrasci.com
· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 1: Acute toxicity – Category 1
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Carc. 2: Carcinogenicity – Category 2
Lact.: Reproductive toxicity – effects on or via lactation
Repr. 2: Reproductive toxicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Asp. Tox. 1: Aspiration hazard – Category 1
· *** Data compared to the previous version altered.**

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 2 Revision: 31.03.2019

1 Identification

· **Product identifier**

· **Trade name: Toxic Substances Standard (1X1 mL)**

· **Part number:** US-103N-1
· **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Agilent Technologies Australia Pty Ltd
679 Springvale Road
Mulgrave
Victoria 3170, Australia

· **Further information obtainable from:**
Telephone: 1800 802 402
e-mail: pdl-msds_author@agilent.com
· **Emergency telephone number:** CHEMTREC®: +(61) - 290372994

2 Hazard(s) Identification

· **Classification of the substance or mixture**


health hazard

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

Acute Tox. 4 H302 Harmful if swallowed.
Acute Tox. 4 H312 Harmful in contact with skin.
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2A H319 Causes serious eye irritation.
STOT SE 3 H335 May cause respiratory irritation.

· **Label elements**
· **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).
· **Hazard pictograms**


GHS07 GHS08

· **Signal word** Warning

· **Hazard-determining components of labelling:**
dichloromethane
o-cresol
p-cresol
· **Hazard statements**
Harmful if swallowed.

(Contd. on page 2)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 2 Revision: 31.03.2019

Trade name: Toxic Substances Standard (1X1 mL)

(Contd. of page 1)

Harmful in contact with skin.
Causes skin irritation.
Causes serious eye irritation.
May cause respiratory irritation.
May cause damage to organs through prolonged or repeated exposure.

· **Precautionary statements**
If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
Do not breathe dust/fume/gas/mist/vapours/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 SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
Rinse mouth.
IF ON SKIN: Wash with plenty of water.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
Get medical advice/attention if you feel unwell.
Specific measures (see on this label).
If skin irritation occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Take off contaminated clothing and wash before reuse.
Wash contaminated clothing before reuse.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

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

3 Composition and Information on Ingredients

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

· **Dangerous components:**

75-09-2	dichloromethane STOT RE 2, H373; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	99.397%

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

4 First Aid Measures

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

(Contd. on page 3)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 2 Revision: 31.03.2019

Trade name: Toxic Substances Standard (1X1 mL)

(Contd. of page 2)

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
· **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
· **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· **After swallowing:** Call for a doctor immediately.
· **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed** No further relevant information available.
· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire Fighting Measures

· **Extinguishing media**
· **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
· **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.
· **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and Storage

· **Handling:**
· **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
· **Information about fire - and explosion protection:** Keep respiratory protective device available.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** No special requirements.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:** Keep container tightly sealed.

(Contd. on page 4)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 2 Revision: 31.03.2019

Trade name: Toxic Substances Standard (1X1 mL)

(Contd. of page 3)

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

8 Exposure controls and personal protection

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

· **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**	
75-09-2 dichloromethane	
NES	Long-term value: 174 mg/m³, 50 ppm Sk
WES	Long-term value: 174 mg/m³, 50 ppm Sk

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

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

Tightly sealed goggles

(Contd. on page 5)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 2 Revision: 31.03.2019

Trade name: Toxic Substances Standard (1X1 mL)

(Contd. of page 4)

9 Physical and Chemical Properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Fluid
Colour:	Colourless
· **Odour:**	Like chlorine
· **Odour threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/freezing point:	-95.1 °C
Initial boiling point and boiling range:	40 °C
· **Flash point:**	Not applicable.
· **Flammability (solid, gas):**	Not applicable.
· **Ignition temperature:**	605 °C
· **Decomposition temperature:**	Not determined.
· **Auto-ignition temperature:**	Product is not selfigniting.
· **Explosive properties:**	Product does not present an explosion hazard.
· **Explosion limits:**	
Lower:	13 Vol %
Upper:	22 Vol %
· **Vapour pressure at 20 °C:**	360 hPa
· **Density at 20 °C:**	1.29954 g/cm³
· **Relative density**	Not determined.
· **Vapour density**	Not determined.
· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with**	
water at 20 °C:	20 g/l
· **Partition coefficient: n-octanol/water:**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Solvent content:**	
Organic solvents:	99.5 %
VOC (EC)	99.55 %
Solids content:	0.6 %
· **Other information**	No further relevant information available.

10 Stability and Reactivity

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

(Contd. on page 6)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 2 Revision: 31.03.2019

Trade name: Toxic Substances Standard (1X1 mL)

(Contd. of page 5)

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

11 Toxicological Information

· **Information on toxicological effects**
· **Acute toxicity**

· **LD/LC50 values relevant for classification:**		
ATE (Acute Toxicity Estimates)		
Oral	LD50	1,560 mg/kg (rat)
Dermal	LD50	>1,985 mg/kg
Inhalative	LC50/4 h	88.5 mg/L (rat)

75-09-2 dichloromethane		
Oral	LD50	1,600 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)
Inhalative	LC50/4 h	88 mg/L (rat)
95-95-4 2,4,5-trichlorophenol		
Oral	LD50	820 mg/kg (rat)

· **Primary irritant effect:**
· **Skin corrosion/irritation** Irritant to skin and mucous membranes.
· **Serious eye damage/irritation** Irritating effect.
· **Respiratory or skin sensitisation** No sensitising effects known.
· **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Harmful
Irritant

12 Ecological Information

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

(Contd. on page 7)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 2 Revision: 31.03.2019

Trade name: Toxic Substances Standard (1X1 mL)

(Contd. of page 6)

· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

13 Disposal considerations

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

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

14 Transport information

· **Not Regulated, De minimus Quantities**	-
· **UN-Number** · **ADG, IMDG, IATA**	UN1593
· **UN proper shipping name** · **ADG** · **IMDG, IATA**	1593 DICHLOROMETHANE DICHLOROMETHANE
· **Transport hazard class(es)**	
· **ADG, IMDG, IATA**	
· **Class** · **Label**	6.1 Toxic substances. 6.1
· **Packing group** · **ADG, IMDG, IATA**	III
· **Environmental hazards:**	Not applicable.
· **Special precautions for user** · **Danger code (Kemler):** · **EMS Number:** · **Segregation groups** · **Stowage Category**	Warning: Toxic substances. 60 F-A,S-A Liquid halogenated hydrocarbons A
· **Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **ADG** · **Limited quantities (LQ)**	5L

(Contd. on page 8)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 2 Revision: 31.03.2019

Trade name: Toxic Substances Standard (1X1 mL)

(Contd. of page 7)

· **Excepted quantities (EQ)**	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· **Transport category**	2
· **Tunnel restriction code**	E
· **IMDG**	
· **Limited quantities (LQ)**	5L
· **Excepted quantities (EQ)**	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· **UN "Model Regulation":**	UN 1593 DICHLOROMETHANE, 6.1, III

15 Regulatory information

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

· **Australian Inventory of Chemical Substances**

All ingredients are listed.

· **Standard for the Uniform Scheduling of Medicines and Poisons**

75-09-2	dichloromethane	S5
95-95-4	2,4,5-trichlorophenol	S6

· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** 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.

· **Relevant phrases**
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.

· **Department issuing SDS:** Document Control / Regulatory
· **Contact:** regulatory@ultrasci.com
· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative

(Contd. on page 9)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 2 Revision: 31.03.2019

Trade name: Toxic Substances Standard (1X1 mL)

(Contd. of page 8)

Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

1 Identification

· **Product identifier**

· **Trade name: Toxic Substances Standard (1X1 mL)**

· **Part number:** US-104N-1
· **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Agilent Technologies Australia Pty Ltd
679 Springvale Road
Mulgrave
Victoria 3170, Australia

· **Further information obtainable from:**
Telephone: 1800 802 402
e-mail: pdl-msds_author@agilent.com
· **Emergency telephone number:** CHEMTREC®: +(61) - 290372994

2 Hazard(s) Identification

· **Classification of the substance or mixture**


health hazard

Carc. 1B	H350	May cause cancer.
STOT RE 2	H373	May cause damage to organs through prolonged or repeated exposure.

Acute Tox. 4	H302	Harmful if swallowed.
Acute Tox. 4	H312	Harmful in contact with skin.
Skin Irrit. 2	H315	Causes skin irritation.
Eye Irrit. 2A	H319	Causes serious eye irritation.
STOT SE 3	H335	May cause respiratory irritation.

· **Label elements**
· **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).
· **Hazard pictograms**


GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labelling:**
dichloromethane
4-chloroaniline
o-nitroaniline

(Contd. on page 2)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Toxic Substances Standard (1X1 mL)

(Contd. of page 1)

m-nitroaniline

· **Hazard statements**
Harmful if swallowed.
Harmful in contact with skin.
Causes skin irritation.
Causes serious eye irritation.
May cause cancer.
May cause respiratory irritation.
May cause damage to organs through prolonged or repeated exposure.

· **Precautionary statements**
If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust/fume/gas/mist/vapours/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.
Use personal protective equipment as required.
IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
Rinse mouth.
IF ON SKIN: Wash with plenty of water.
IF INHALED: Remove victim to fresh air and keep at rest in a position 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.
Get medical advice/attention if you feel unwell.
Specific measures (see on this label).
If skin irritation occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Take off contaminated clothing and wash before reuse.
Wash contaminated clothing before reuse.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

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

3 Composition and Information on Ingredients

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

(Contd. on page 3)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Toxic Substances Standard (1X1 mL)

(Contd. of page 2)

· **Dangerous components:**		
75-09-2	dichloromethane STOT RE 2, H373; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	98.794%
106-47-8	4-chloroaniline Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; Carc. 1B, H350; Skin Sens. 1, H317	0.151%
62-53-3	aniline Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; Muta. 2, H341; Carc. 2, H351; STOT RE 1, H372; Eye Dam. 1, H318; Skin Sens. 1, H317; Flam. Liq. 4, H227	0.151%

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

4 First Aid Measures

· **Description of first aid measures**
· **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
· **After inhalation:** 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. If symptoms persist, consult a doctor.
· **After swallowing:** Call for a doctor immediately.
· **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed** No further relevant information available.
· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire Fighting Measures

· **Extinguishing media**
· **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
· **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.
· **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.

(Contd. on page 4)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Toxic Substances Standard (1X1 mL)

(Contd. of page 3)

See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and Storage

· **Handling:**
· **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
· **Information about fire - and explosion protection:** Keep respiratory protective device available.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** No special requirements.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:** Keep container tightly sealed.
· **Specific end use(s)** No further relevant information available.

8 Exposure controls and personal protection

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

· **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**	
75-09-2 dichloromethane	
NES	Long-term value: 174 mg/m³, 50 ppm Sk
WES	Long-term value: 174 mg/m³, 50 ppm Sk
62-53-3 aniline	
NES	Long-term value: 7.6 mg/m³, 2 ppm Sk, Sen
WES	Long-term value: 7.6 mg/m³, 2 ppm Sk, Sen

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

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the eyes and skin.
· **Respiratory protection:**
When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.
Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

(Contd. on page 5)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Toxic Substances Standard (1X1 mL)

(Contd. of page 4)

· **Protection of hands:**
Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.
· **Material of gloves**
For normal use: nitrile rubber, 11-13 mil thickness
For direct contact with the chemical: butyl rubber, 12-15 mil thickness
· **Penetration time of glove material**
For normal use: nitrile rubber: 1 hour
For direct contact with the chemical: butyl rubber: > 4 hours
· **Eye protection:**
Safety glasses

Tightly sealed goggles

9 Physical and Chemical Properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Fluid
Colour:	Colourless
· **Odour:**	Like chlorine
· **Odour threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/freezing point:	-95.1 °C
Initial boiling point and boiling range:	40 °C
· **Flash point:**	Not applicable.
· **Flammability (solid, gas):**	Not applicable.
· **Ignition temperature:**	605 °C
· **Decomposition temperature:**	Not determined.
· **Auto-ignition temperature:**	Product is not selfigniting.
· **Explosive properties:**	Product does not present an explosion hazard.
· **Explosion limits:**	
Lower:	13 Vol %
Upper:	22 Vol %
· **Vapour pressure at 20 °C:**	360 hPa
· **Density at 20 °C:**	1.29731 g/cm³
· **Relative density**	Not determined.
· **Vapour density**	Not determined.

(Contd. on page 6)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Toxic Substances Standard (1X1 mL)

(Contd. of page 5)

· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with water at 20 °C:**	20 g/l
· **Partition coefficient: n-octanol/water:**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Solvent content:**	
Organic solvents:	98.9 %
VOC (EC)	98.94 %
Solids content:	0.8 %
· **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 relevant for classification:**

ATE (Acute Toxicity Estimates)		
Oral	LD50	1,584 mg/kg (rat)
Dermal	LD50	>1,956 mg/kg
Inhalative	LC50/4 h	>71.1 mg/L

75-09-2 dichloromethane		
Oral	LD50	1,600 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)
Inhalative	LC50/4 h	88 mg/L (rat)
106-47-8 4-chloroaniline		
Oral	LD50	310 mg/kg (rat)
Dermal	LD50	3,200 mg/kg (rat)
62-53-3 aniline		
Oral	LD50	442 mg/kg (rat)
Dermal	LD50	820 mg/kg (rabbit)

(Contd. on page 7)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Toxic Substances Standard (1X1 mL)

(Contd. of page 6)

Inhalative	LC50/4 h	175 mg/L (mouse) 3.27 mg/L (rat)

· **Primary irritant effect:**
· **Skin corrosion/irritation** Irritant to skin and mucous membranes.
· **Serious eye damage/irritation** Irritating effect.
· **Respiratory or skin sensitisation** No sensitising effects known.
· **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Harmful
Irritant
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
Carc. 1B

12 Ecological Information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability** No further relevant information available.
· **Behaviour in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Water hazard class 3 (German Regulation) (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 together with household garbage. Do not allow product to reach sewage system.

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

14 Transport information

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

· **UN-Number**
· **ADG, IMDG, IATA** UN1593

(Contd. on page 8)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Toxic Substances Standard (1X1 mL)

(Contd. of page 7)

· **UN proper shipping name**	
· **ADG**	1593 DICHLOROMETHANE
· **IMDG, IATA**	DICHLOROMETHANE
· **Transport hazard class(es)**	
· **ADG, IMDG, IATA**	
	
· **Class**	6.1 Toxic substances.
· **Label**	6.1
· **Packing group**	
· **ADG, IMDG, IATA**	III
· **Environmental hazards:**	Not applicable.
· **Special precautions for user**	Warning: Toxic substances.
· **Danger code (Kemler):**	60
· **EMS Number:**	F-A,S-A
· **Segregation groups**	Liquid halogenated hydrocarbons
· **Stowage Category**	A
· **Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **ADG**	
· **Limited quantities (LQ)**	5L
· **Excepted quantities (EQ)**	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· **Transport category**	2
· **Tunnel restriction code**	E
· **IMDG**	
· **Limited quantities (LQ)**	5L
· **Excepted quantities (EQ)**	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· **UN "Model Regulation":**	UN 1593 DICHLOROMETHANE, 6.1, III

15 Regulatory information

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

· **Australian Inventory of Chemical Substances**

All ingredients are listed.

· **Standard for the Uniform Scheduling of Medicines and Poisons**

75-09-2	dichloromethane	S5

(Contd. on page 9)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Toxic Substances Standard (1X1 mL)

(Contd. of page 8)

106-47-8	4-chloroaniline	S7
62-53-3	aniline	S6

· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **National regulations:**

· **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.

· **Relevant phrases**
H227 Combustible liquid.
H301 Toxic if swallowed.
H311 Toxic in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H335 May cause respiratory irritation.
H341 Suspected of causing genetic defects.
H350 May cause cancer.
H351 Suspected of causing cancer.
H372 Causes damage to organs through prolonged or repeated exposure.
H373 May cause damage to organs through prolonged or repeated exposure.

· **Department issuing SDS:** Document Control / Regulatory
· **Contact:** regulatory@ultrasci.com
· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 4: Flammable liquids – Category 4
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
Skin Sens. 1: Skin sensitisation – Category 1
Muta. 2: Germ cell mutagenicity – Category 2
Carc. 1B: Carcinogenicity – Category 1B

(Contd. on page 10)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Toxic Substances Standard (1X1 mL)

(Contd. of page 9)

Carc. 2: Carcinogenicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

*

1 Identification

· **Product identifier**

· **Trade name: Benzidines Standard (1X1 mL)**

· **Part number:** US-105N-1
· **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Agilent Technologies Australia Pty Ltd
679 Springvale Road
Mulgrave
Victoria 3170, Australia

· **Further information obtainable from:**
Telephone: 1800 802 402
e-mail: pdl-msds_author@agilent.com
· **Emergency telephone number:** CHEMTREC®: +(61) - 290372994

2 Hazard(s) Identification

· **Classification of the substance or mixture**


flame

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


skull and crossbones

Acute Tox. 3 H331 Toxic if inhaled.


health hazard

Carc. 1A H350 May cause cancer.
STOT SE 1 H370 Causes damage to organs.

· **Label elements**
· **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).
· **Hazard pictograms**


GHS02 GHS06 GHS08

· **Signal word** Danger

· **Hazard-determining components of labelling:**
methanol
3,3'-dichlorobenzidine
benzidine

(Contd. on page 2)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Benzidines Standard (1X1 mL)

(Contd. of page 1)

· **Hazard statements**
Highly flammable liquid and vapour.
Toxic if inhaled.
May cause cancer.
Causes damage to organs.
· **Precautionary statements**
If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
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/vapours/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.
Use personal protective equipment as required.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove victim to fresh air and keep at rest in a position 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.
· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

3 Composition and Information on Ingredients

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

· **Dangerous components:**

67-56-1	methanol Flam. Liq. 2, H225; Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; STOT SE 1, H370	99.494%
91-94-1	3,3'-dichlorobenzidine Carc. 1B, H350; Acute Tox. 4, H312; Skin Sens. 1, H317	0.253%
92-87-5	benzidine Carc. 1A, H350; Acute Tox. 4, H302	0.253%

(Contd. on page 3)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Benzidines Standard (1X1 mL)

(Contd. of page 2)

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

4 First Aid Measures

· **Description of first aid measures**
· **General information:**
Immediately remove any clothing soiled by the product.
Remove breathing equipment 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, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **For safety reasons unsuitable extinguishing agents:** Water with full jet
· **Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
· **Advice for firefighters**
· **Protective equipment:** Mouth respiratory protective device.

6 Accidental Release Measures

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

(Contd. on page 4)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Benzidines Standard (1X1 mL)

(Contd. of page 3)

See Section 13 for disposal information.

7 Handling and Storage

· **Handling:**
· **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
· **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Keep respiratory protective device available.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** Store in a cool location.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
· **Specific end use(s)** No further relevant information available.

8 Exposure controls and personal protection

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

· **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**	
67-56-1 methanol	
NES	Short-term value: 328 mg/m³, 250 ppm Long-term value: 262 mg/m³, 200 ppm Sk
WES	Short-term value: 328 mg/m³, 250 ppm Long-term value: 262 mg/m³, 200 ppm Sk
91-94-1 3,3'-dichlorobenzidine	
NES	Sk
WES	Sk
92-87-5 benzidine	
NES	Long-term value: -(P) ppm Sk
WES	Long-term value: -(P) ppm Sk

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

(Contd. on page 5)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Benzidines Standard (1X1 mL)

(Contd. of page 4)

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

Tightly sealed goggles

9 Physical and Chemical Properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Fluid
Colour:	Colourless
· **Odour:**	Alcohol-like
· **Odour threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/freezing point:	-98 °C
Initial boiling point and boiling range:	64 °C
· **Flash point:**	9 °C
· **Flammability (solid, gas):**	Not applicable.
· **Ignition temperature:**	455 °C

(Contd. on page 6)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Benzidines Standard (1X1 mL)

(Contd. of page 5)

· **Decomposition temperature:**	Not determined.
· **Auto-ignition temperature:**	Product is not selfigniting.
· **Explosive properties:**	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· **Explosion limits:**	
Lower:	5.5 Vol %
Upper:	44 Vol %
· **Vapour pressure at 20 °C:**	100 hPa
· **Density at 20 °C:**	0.8 g/cm³
· **Relative density**	Not determined.
· **Vapour density**	Not determined.
· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with water:**	Not miscible or difficult to mix.
· **Partition coefficient: n-octanol/water:**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Solvent content:**	
Organic solvents:	99.5 %
VOC (EC)	99.49 %
Solids content:	0.5 %
· **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 relevant for classification:**		
ATE (Acute Toxicity Estimates)		
Inhalative	LC50/4 h	3.02 mg/L

(Contd. on page 7)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Benzidines Standard (1X1 mL)

(Contd. of page 6)

67-56-1 methanol		
Oral	LD50	5,628 mg/kg (rat)
Dermal	LD50	15,800 mg/kg (rabbit)
91-94-1 3,3'-dichlorobenzidine		
Oral	LD50	4,740 mg/kg (rat)
92-87-5 benzidine		
Oral	LD50	309 mg/kg (rat)

· **Primary irritant effect:**
· **Skin corrosion/irritation** No irritant effect.
· **Serious eye damage/irritation** No irritating effect.
· **Respiratory or skin sensitisation** No sensitising effects known.
· **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Toxic
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
Carc. 1A

12 Ecological Information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability** No further relevant information available.
· **Behaviour in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Water hazard class 3 (German Regulation) (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 together with household garbage. Do not allow product to reach sewage system.

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

(Contd. on page 8)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Benzidines Standard (1X1 mL)

(Contd. of page 7)

*
14 Transport information

· **Not Regulated, De minimus Quantities**	-
· **UN-Number**	
· **ADG, IMDG, IATA**	UN1230
· **UN proper shipping name**	
· **ADG**	1230 METHANOL
· **IMDG, IATA**	METHANOL
· **Transport hazard class(es)**	
· **ADG**	
· **Class**	3 Flammable liquids.
· **Label**	3+6.1
· **IMDG**	
· **Class**	3 Flammable liquids.
· **Label**	3/6.1
· **IATA**	
· **Class**	3 Flammable liquids.
· **Label**	3 (6.1)
· **Packing group**	
· **ADG, IMDG, IATA**	II
· **Environmental hazards:**	Not applicable.
· **Special precautions for user**	Warning: Flammable liquids.
· **Danger code (Kemler):**	336
· **EMS Number:**	F-E,S-D
· **Stowage Category**	B
· **Stowage Code**	SW2 Clear of living quarters.
· **Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable.

(Contd. on page 9)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Benzidines Standard (1X1 mL)

(Contd. of page 8)

· **Transport/Additional information:**

· **ADG**	
· **Limited quantities (LQ)**	1L
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· **Transport category**	2
· **Tunnel restriction code**	D/E
· **IMDG**	
· **Limited quantities (LQ)**	1L
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· **UN "Model Regulation":**	UN 1230 METHANOL, 3 (6.1), II

15 Regulatory information

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

· **Australian Inventory of Chemical Substances**

All ingredients are listed.

· **Standard for the Uniform Scheduling of Medicines and Poisons**

67-56-1	methanol	S5, S6

· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** None of the ingredients is listed.
· **Seveso category**
H2 ACUTE TOXIC
P5c FLAMMABLE LIQUIDS
· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 50 t
· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t

· **National regulations:**
· **Additional classification according to Decree on Hazardous Materials, Annex II:**
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.

· **Relevant phrases**
H225 Highly flammable liquid and vapour.
H301 Toxic if swallowed.
H302 Harmful if swallowed.

(Contd. on page 10)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Benzidines Standard (1X1 mL)

(Contd. of page 9)

H311 Toxic in contact with skin.
H312 Harmful in contact with skin.
H317 May cause an allergic skin reaction.
H331 Toxic if inhaled.
H350 May cause cancer.
H370 Causes damage to organs.

· **Department issuing SDS:** Document Control / Regulatory
· **Contact:** regulatory@ultrasci.com
· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Sens. 1: Skin sensitisation – Category 1
Carc. 1A: Carcinogenicity – Category 1A
Carc. 1B: Carcinogenicity – Category 1B
STOT SE 1: Specific target organ toxicity (single exposure) – Category 1
· *** Data compared to the previous version altered.**

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

*
1 Identification

· **Product identifier**

· **Trade name: PAH Standard (1X1 mL)**

· **Part number:** US-106N-1
· **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Agilent Technologies Australia Pty Ltd
679 Springvale Road
Mulgrave
Victoria 3170, Australia

· **Further information obtainable from:**
Telephone: 1800 802 402
e-mail: pdl-msds_author@agilent.com
· **Emergency telephone number:** CHEMTREC®: +(61) - 290372994

*
2 Hazard(s) Identification

· **Classification of the substance or mixture**


flame

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


skull and crossbones

Acute Tox. 2 H310 Fatal in contact with skin.


health hazard

Muta. 1B H340 May cause genetic defects.
Carc. 1A H350 May cause cancer.
STOT RE 1 H372 Causes damage to organs through prolonged or repeated exposure.
Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.

Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2A H319 Causes serious eye irritation.
STOT SE 3 H335 May cause respiratory irritation.

· **Label elements**
· **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).

(Contd. on page 2)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: PAH Standard (1X1 mL)

(Contd. of page 1)

· **Hazard pictograms**

GHS02 GHS06 GHS08

· **Signal word** Danger

· **Hazard-determining components of labelling:**
benzene
dichloromethane
benzo[a]pyrene
dibenz[a,h]anthracene

· **Hazard statements**
Highly flammable liquid and vapour.
Fatal in contact with skin.
Causes skin irritation.
Causes serious eye irritation.
May cause genetic defects.
May cause cancer.
May cause respiratory irritation.
Causes damage to organs through prolonged or repeated exposure.
May be fatal if swallowed and enters airways.

· **Precautionary statements**
If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
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/vapours/spray.
Do not get in eyes, on skin, or on clothing.
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.
Use personal protective equipment as required.
IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
Do NOT induce vomiting.
IF ON SKIN: Gently wash with plenty of soap and water.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove victim to fresh air and keep at rest in a position 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.
Get medical advice/attention if you feel unwell.
Specific measures (see on this label).

(Contd. on page 3)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: PAH Standard (1X1 mL)

(Contd. of page 2)

If skin irritation occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Take off contaminated clothing and wash before reuse.
Wash contaminated clothing before reuse.
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.

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:**	
120-12-7	anthracene

· **vPvB:** Not applicable.

3 Composition and Information on Ingredients

· **Chemical characterisation: Mixtures**

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

· **Dangerous components:**		
75-09-2	dichloromethane STOT RE 2, H373; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	58.52%
71-43-2	benzene Flam. Liq. 2, H225; Acute Tox. 1, H310; Muta. 1B, H340; Carc. 1A, H350; STOT RE 1, H372; Asp. Tox. 1, H304; Skin Irrit. 2, H315; Eye Irrit. 2, H319	38.572%
120-12-7	anthracene PBT Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317; STOT SE 3, H335	0.182%
85-01-8	phenanthrene Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317; STOT SE 3, H335	0.182%
206-44-0	fluoranthene Acute Tox. 4, H302; Acute Tox. 4, H332	0.182%
53-70-3	dibenz[a,h]anthracene Carc. 1B, H350	0.182%
218-01-9	chrysene Muta. 2, H341; Carc. 1B, H350	0.182%
207-08-9	benzo[k]fluoranthene Carc. 1B, H350	0.182%
205-99-2	benz[e]acephenanthrylene Carc. 1B, H350	0.182%
50-32-8	benzo[a]pyrene Muta. 1B, H340; Carc. 1B, H350; Repr. 1B, H360; Skin Sens. 1, H317	0.182%
56-55-3	benz[a]anthracene Carc. 1B, H350	0.182%
191-24-2	benzo[ghi]perylene	0.182%

(Contd. on page 4)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: PAH Standard (1X1 mL)

(Contd. of page 3)

129-00-0	pyrene Muta. 2, H341; STOT RE 2, H373	0.182%
91-20-3	naphthalene Carc. 2, H351; Acute Tox. 4, H302	0.182%

· **SVHC**	
120-12-7	anthracene
85-01-8	phenanthrene
206-44-0	fluoranthene
218-01-9	chrysene
207-08-9	benzo[k]fluoranthene
50-32-8	benzo[a]pyrene
56-55-3	benz[a]anthracene
191-24-2	benzo[ghi]perylene
129-00-0	pyrene

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

4 First Aid Measures

· **Description of first aid measures**
· **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
· **After inhalation:** 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. 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, 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.

(Contd. on page 5)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: PAH Standard (1X1 mL)

(Contd. of page 4)

6 Accidental Release Measures

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

7 Handling and Storage

· **Handling:**
· **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
· **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Keep respiratory protective device available.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** Store in a cool location.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
· **Specific end use(s)** No further relevant information available.

8 Exposure controls and personal protection

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

· **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**	
75-09-2 dichloromethane	
NES	Long-term value: 174 mg/m³, 50 ppm Sk

(Contd. on page 6)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: PAH Standard (1X1 mL)

(Contd. of page 5)

WES	Long-term value: 174 mg/m³, 50 ppm Sk
71-43-2 benzene	
NES	Long-term value: 3.2 mg/m³, 1 ppm
WES	Long-term value: 3.2 mg/m³, 1 ppm
91-20-3 naphthalene	
NES	Short-term value: 79 mg/m³, 15 ppm Long-term value: 52 mg/m³, 10 ppm
WES	Short-term value: 79 mg/m³, 15 ppm Long-term value: 52 mg/m³, 10 ppm

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

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

Tightly sealed goggles

(Contd. on page 7)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: PAH Standard (1X1 mL)

(Contd. of page 6)

9 Physical and Chemical Properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Fluid
Colour:	According to product specification
· **Odour:**	Characteristic
· **Odour threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	40 °C
· **Flash point:**	-11 °C
· **Flammability (solid, gas):**	Not applicable.
· **Ignition temperature:**	555 °C
· **Decomposition temperature:**	Not determined.
· **Auto-ignition temperature:**	Product is not selfigniting.
· **Explosive properties:**	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· **Explosion limits:**	
Lower:	1.2 Vol %
Upper:	22 Vol %
· **Vapour pressure at 20 °C:**	360 hPa
· **Density:**	Not determined.
· **Relative density**	Not determined.
· **Vapour density**	Not determined.
· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with water:**	Not miscible or difficult to mix.
· **Partition coefficient: n-octanol/water:**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Solvent content:**	
Organic solvents:	97.1 %
VOC (EC)	97.09 %
Solids content:	2.9 %
· **Other information**	No further relevant information available.

10 Stability and Reactivity

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

(Contd. on page 8)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: PAH Standard (1X1 mL)

(Contd. of page 7)

· **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 relevant for classification:**		
ATE (Acute Toxicity Estimates)		
Oral	LD50	2,078 mg/kg (rat)
Dermal	LD50	>120 mg/kg
Inhalative	LC50/4 h	150 mg/L (rat)

75-09-2 dichloromethane		
Oral	LD50	1,600 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)
Inhalative	LC50/4 h	88 mg/L (rat)
71-43-2 benzene		
Oral	LD50	3,340 mg/kg (rat)
Dermal	LD50	48 mg/kg (mouse)
		>8,260 mg/kg (rabbit)
Inhalative	LC50/4 h	9,980 mg/L (mouse)
85-01-8 phenanthrene		
Oral	LD50	700 mg/kg (mouse)
206-44-0 fluoranthene		
Oral	LD50	2,000 mg/kg (rat)
Dermal	LD50	3,180 mg/kg (rabbit)
208-96-8 acenaphthylene		
Oral	LD50	1,760 mg/kg (mouse)
129-00-0 pyrene		
Oral	LD50	2,700 mg/kg (rat)
Inhalative	LC50/4 h	170 mg/L (rat)
91-20-3 naphthalene		
Oral	LD50	490 mg/kg (rat)
Dermal	LD50	5,000 mg/kg (rat)
		20,000 mg/kg (rabbit)

· **Primary irritant effect:**
· **Skin corrosion/irritation** Irritant to skin and mucous membranes.
· **Serious eye damage/irritation** Irritating effect.
· **Respiratory or skin sensitisation** No sensitising effects known.

(Contd. on page 9)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: PAH Standard (1X1 mL)

(Contd. of page 8)

· **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Irritant
The product can cause inheritable damage.
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
Muta. 1B, Carc. 1A

12 Ecological Information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability** No further relevant information available.
· **Behaviour in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Water hazard class 3 (German Regulation) (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:**	
120-12-7	anthracene

· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

13 Disposal considerations

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

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

*
14 Transport information

· **Not Regulated, De minimus Quantities**	-
· **UN-Number**	
· **ADG, IMDG, IATA**	UN1992
· **UN proper shipping name**	
· **ADG**	1992 FLAMMABLE LIQUID, TOXIC, N.O.S. (BENZENE), ENVIRONMENTALLY HAZARDOUS
· **IMDG**	FLAMMABLE LIQUID, TOXIC, N.O.S. (BENZENE, fluorene), MARINE POLLUTANT

(Contd. on page 10)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: PAH Standard (1X1 mL)

(Contd. of page 9)

· **IATA**	FLAMMABLE LIQUID, TOXIC, N.O.S. (BENZENE)
· **Transport hazard class(es)**	
· **ADG**	
	
· **Class**	3 Flammable liquids.
· **Label**	3+6.1
· **IMDG**	
	
· **Class**	3 Flammable liquids.
· **Label**	3/6.1
· **IATA**	
	
· **Class**	3 Flammable liquids.
· **Label**	3 (6.1)
· **Packing group**	
· **ADG, IMDG, IATA**	II
· **Environmental hazards:**	Product contains environmentally hazardous substances: dibenz[a,h]anthracene
· **Marine pollutant:**	Symbol (fish and tree)
· **Special marking (ADG):**	Symbol (fish and tree)
· **Special precautions for user**	Warning: Flammable liquids.
· **Danger code (Kemler):**	336
· **EMS Number:**	F-E,S-D
· **Stowage Category**	B
· **Stowage Code**	SW2 Clear of living quarters.
· **Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **ADG**	
· **Limited quantities (LQ)**	1L
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· **Transport category**	2
· **Tunnel restriction code**	D/E

(Contd. on page 11)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: PAH Standard (1X1 mL)

(Contd. of page 10)

· **IMDG**	
· **Limited quantities (LQ)**	1L
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· **UN "Model Regulation":**	UN 1992 FLAMMABLE LIQUID, TOXIC, N.O.S. (BENZENE), 3 (6.1), II, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

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

· **Australian Inventory of Chemical Substances**	
75-09-2	dichloromethane
71-43-2	benzene
86-73-7	fluorene
120-12-7	anthracene
85-01-8	phenanthrene
206-44-0	fluoranthene
83-32-9	acenaphthene
218-01-9	chrysene
129-00-0	pyrene
91-20-3	naphthalene

· **Standard for the Uniform Scheduling of Medicines and Poisons**		
75-09-2	dichloromethane	S5
71-43-2	benzene	S7
91-20-3	naphthalene	S6

· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** None of the ingredients is listed.
· **Seveso category**
H2 ACUTE TOXIC
E1 Hazardous to the Aquatic Environment
P5c FLAMMABLE LIQUIDS
· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 50 t
· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t

· **National regulations:**
· **Additional classification according to Decree on Hazardous Materials, Annex II:**
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.

(Contd. on page 12)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: PAH Standard (1X1 mL)

(Contd. of page 11)

· **Other regulations, limitations and prohibitive regulations**

· **Substances of very high concern (SVHC) according to REACH, Article 57**	
120-12-7	anthracene
85-01-8	phenanthrene
206-44-0	fluoranthene
218-01-9	chrysene
207-08-9	benzo[k]fluoranthene
50-32-8	benzo[a]pyrene
56-55-3	benz[a]anthracene
191-24-2	benzo[ghi]perylene
129-00-0	pyrene

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

16 Other information

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

· **Relevant phrases**
H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H310 Fatal in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H340 May cause genetic defects.
H341 Suspected of causing genetic defects.
H350 May cause cancer.
H351 Suspected of causing cancer.
H360 May damage fertility or the unborn child.
H372 Causes damage to organs through prolonged or repeated exposure.
H373 May cause damage to organs through prolonged or repeated exposure.

· **Department issuing SDS:** Document Control / Regulatory
· **Contact:** regulatory@ultrasci.com
· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative

(Contd. on page 13)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: PAH Standard (1X1 mL)

(Contd. of page 12)

Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 1: Acute toxicity – Category 1
Acute Tox. 2: Acute toxicity – Category 2
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
Skin Sens. 1: Skin sensitisation – Category 1
Muta. 1B: Germ cell mutagenicity – Category 1B
Muta. 2: Germ cell mutagenicity – Category 2
Carc. 1A: Carcinogenicity – Category 1A
Carc. 1B: Carcinogenicity – Category 1B
Carc. 2: Carcinogenicity – Category 2
Repr. 1B: Reproductive toxicity – Category 1B
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Asp. Tox. 1: Aspiration hazard – Category 1
· *** Data compared to the previous version altered.**

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

1 Identification

· **Product identifier**

· **Trade name: Phenols Standard (1X1 mL)**

· **Part number:** US-107N-1
· **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Agilent Technologies Australia Pty Ltd
679 Springvale Road
Mulgrave
Victoria 3170, Australia

· **Further information obtainable from:**
Telephone: 1800 802 402
e-mail: pdl-msds_author@agilent.com
· **Emergency telephone number:** CHEMTREC®: +(61) - 290372994

2 Hazard(s) Identification

· **Classification of the substance or mixture**


health hazard

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

Acute Tox. 4 H302 Harmful if swallowed.
Acute Tox. 4 H312 Harmful in contact with skin.
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2A H319 Causes serious eye irritation.
STOT SE 3 H335 May cause respiratory irritation.

· **Label elements**
· **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).
· **Hazard pictograms**


GHS07 GHS08

· **Signal word** Warning

· **Hazard-determining components of labelling:**
dichloromethane
DNOC
2,4-dichlorophenol
2,4-dinitrophenol

(Contd. on page 2)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Phenols Standard (1X1 mL)

(Contd. of page 1)

· **Hazard statements**
Harmful if swallowed.
Harmful in contact with skin.
Causes skin irritation.
Causes serious eye irritation.
May cause respiratory irritation.
May cause damage to organs through prolonged or repeated exposure.
· **Precautionary statements**
If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
Do not breathe dust/fume/gas/mist/vapours/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 SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
Rinse mouth.
IF ON SKIN: Wash with plenty of water.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
Get medical advice/attention if you feel unwell.
Specific measures (see on this label).
If skin irritation occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Take off contaminated clothing and wash before reuse.
Wash contaminated clothing before reuse.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

3 Composition and Information on Ingredients

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

· **Dangerous components:**

75-09-2	dichloromethane STOT RE 2, H373; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	98.341%
534-52-1	DNOC Acute Tox. 2, H300; Acute Tox. 1, H310; Acute Tox. 2, H330; Muta. 2, H341; Eye Dam. 1, H318; Skin Irrit. 2, H315; Skin Sens. 1, H317	0.151%
87-86-5	pentachlorophenol Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 2, H330; Carc. 2, H351; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	0.151%

(Contd. on page 3)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Phenols Standard (1X1 mL)

(Contd. of page 2)

88-06-2	2,4,6-trichlorophenol	0.151%
	Carc. 2, H351; Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319	
59-50-7	chlorocresol	0.151%
	Eye Dam. 1, H318; Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317	

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

4 First Aid Measures

· **Description of first aid measures**
· **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
· **After inhalation:** 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. If symptoms persist, consult a doctor.
· **After swallowing:** Call for a doctor immediately.
· **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed** No further relevant information available.
· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire Fighting Measures

· **Extinguishing media**
· **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
· **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.
· **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
· **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.

(Contd. on page 4)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Phenols Standard (1X1 mL)

(Contd. of page 3)

See Section 13 for disposal information.

7 Handling and Storage

· **Handling:**
· **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
· **Information about fire - and explosion protection:** Keep respiratory protective device available.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** No special requirements.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:** Keep container tightly sealed.
· **Specific end use(s)** No further relevant information available.

8 Exposure controls and personal protection

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

· **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**	
75-09-2 dichloromethane	
NES	Long-term value: 174 mg/m³, 50 ppm Sk
WES	Long-term value: 174 mg/m³, 50 ppm Sk
534-52-1 DNOC	
NES	Long-term value: 0.2 mg/m³ Sk, Sen
WES	Long-term value: 0.2 mg/m³ Sk, Sen
87-86-5 pentachlorophenol	
NES	Long-term value: 0.5 mg/m³ Sk
WES	Long-term value: 0.5 mg/m³ Sk

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

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the eyes and skin.

(Contd. on page 5)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Phenols Standard (1X1 mL)

(Contd. of page 4)

· **Respiratory protection:**
When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.
Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.
· **Protection of hands:**
Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.
· **Material of gloves**
For normal use: nitrile rubber, 11-13 mil thickness
For direct contact with the chemical: butyl rubber, 12-15 mil thickness
· **Penetration time of glove material**
For normal use: nitrile rubber: 1 hour
For direct contact with the chemical: butyl rubber: > 4 hours
· **Eye protection:**
Safety glasses


Tightly sealed goggles

9 Physical and Chemical Properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Fluid
Colour:	Colourless
· **Odour:**	Like chlorine
· **Odour threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/freezing point:	-95.1 °C
Initial boiling point and boiling range:	40 °C
· **Flash point:**	Not applicable.
· **Flammability (solid, gas):**	Not applicable.
· **Ignition temperature:**	605 °C
· **Decomposition temperature:**	Not determined.
· **Auto-ignition temperature:**	Product is not selfigniting.
· **Explosive properties:**	Product does not present an explosion hazard.
· **Explosion limits:**	
Lower:	13 Vol %

(Contd. on page 6)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Phenols Standard (1X1 mL)

(Contd. of page 5)

Upper:	22 Vol %
· **Vapour pressure at 20 °C:**	360 hPa
· **Density at 20 °C:**	1.3 g/cm³
· **Relative density**	Not determined.
· **Vapour density**	Not determined.
· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with water at 20 °C:**	20 g/l
· **Partition coefficient: n-octanol/water:**	Not determined.
· **Viscosity:**	
Dynamic at 20 °C:	0.43 mPas
Kinematic:	Not determined.
· **Solvent content:**	
Organic solvents:	98.5 %
VOC (EC)	98.49 %
Solids content:	1.5 %
· **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 relevant for classification:**

ATE (Acute Toxicity Estimates)

Oral	LD50	1,019 mg/kg (rat)
Dermal	LD50	>1,909 mg/kg
Inhalative	LC50/4 h	63.7 mg/L

75-09-2 dichloromethane

Oral	LD50	1,600 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)
Inhalative	LC50/4 h	88 mg/L (rat)

(Contd. on page 7)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Phenols Standard (1X1 mL)

(Contd. of page 6)

534-52-1 DNOC		
Oral	LD50	7 mg/kg (rat)
Dermal	LD50	200 mg/kg (rat)
		1,000 mg/kg (rabbit)
87-86-5 pentachlorophenol		
Oral	LD50	27 mg/kg (rat)
Dermal	LD50	96 mg/kg (rat)
Inhalative	LC50/4 h	355 mg/L (rat)
88-06-2 2,4,6-trichlorophenol		
Oral	LD50	820 mg/kg (rat)
59-50-7 chlorocresol		
Oral	LD50	1,830 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)

· **Primary irritant effect:**
· **Skin corrosion/irritation** Irritant to skin and mucous membranes.
· **Serious eye damage/irritation** Irritating effect.
· **Respiratory or skin sensitisation** No sensitising effects known.
· **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Harmful
Irritant

12 Ecological Information

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

13 Disposal considerations

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

(Contd. on page 8)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Phenols Standard (1X1 mL)

(Contd. of page 7)

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

14 Transport information

· **Not Regulated, De minimus Quantities**	-
· **UN-Number**	
· **ADG, IMDG, IATA**	UN1593
· **UN proper shipping name**	
· **ADG**	1593 DICHLOROMETHANE
· **IMDG, IATA**	DICHLOROMETHANE
· **Transport hazard class(es)**	
· **ADG, IMDG, IATA**	
· **Class**	6.1 Toxic substances.
· **Label**	6.1
· **Packing group**	
· **ADG, IMDG, IATA**	III
· **Environmental hazards:**	Not applicable.
· **Special precautions for user**	Warning: Toxic substances.
· **Danger code (Kemler):**	60
· **EMS Number:**	F-A,S-A
· **Segregation groups**	Liquid halogenated hydrocarbons
· **Stowage Category**	A
· **Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **ADG**	
· **Limited quantities (LQ)**	5L
· **Excepted quantities (EQ)**	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· **Transport category**	2
· **Tunnel restriction code**	E
· **IMDG**	
· **Limited quantities (LQ)**	5L
· **Excepted quantities (EQ)**	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml

(Contd. on page 9)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Phenols Standard (1X1 mL)

(Contd. of page 8)

· **UN "Model Regulation":** UN 1593 DICHLOROMETHANE, 6.1, III

15 Regulatory information

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

· **Australian Inventory of Chemical Substances**

All ingredients are listed.

· **Standard for the Uniform Scheduling of Medicines and Poisons**

75-09-2	dichloromethane	S5
51-28-5	2,4-dinitrophenol	S10
88-75-5	2-nitrophenol	S6
100-02-7	4-nitrophenol	S6
87-86-5	pentachlorophenol	S6, S7
88-06-2	2,4,6-trichlorophenol	S6
59-50-7	chlorocresol	S5
108-95-2	phenol	S2, S4, S5, S6

· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** 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.

· **Relevant phrases**
H300 Fatal if swallowed.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H310 Fatal in contact with skin.
H311 Toxic in contact with skin.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H330 Fatal if inhaled.
H335 May cause respiratory irritation.
H341 Suspected of causing genetic defects.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure.

· **Department issuing SDS:** Document Control / Regulatory
· **Contact:** regulatory@ultrasci.com
· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

(Contd. on page 10)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 3 Revision: 31.03.2019

Trade name: Phenols Standard (1X1 mL)

(Contd. of page 9)

IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Acute Tox. 2: Acute toxicity – Category 2
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 1: Acute toxicity – Category 1
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
Skin Sens. 1: Skin sensitisation – Category 1
Muta. 2: Germ cell mutagenicity – Category 2
Carc. 2: Carcinogenicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 4 Revision: 31.03.2019

*
1 Identification

· **Product identifier**

· **Trade name: Semi-Volatiles Internal Standard (1X1 mL)**

· **Part number:** US-108N-1
· **Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Agilent Technologies Australia Pty Ltd
679 Springvale Road
Mulgrave
Victoria 3170, Australia

· **Further information obtainable from:**
Telephone: 1800 802 402
e-mail: pdl-msds_author@agilent.com
· **Emergency telephone number:** CHEMTREC®: +(61) - 290372994

*
2 Hazard(s) Identification

· **Classification of the substance or mixture**


health hazard

Carc. 1B	H350	May cause cancer.
STOT RE 2	H373	May cause damage to organs through prolonged or repeated exposure.

Acute Tox. 4	H302	Harmful if swallowed.
Skin Irrit. 2	H315	Causes skin irritation.
Eye Irrit. 2A	H319	Causes serious eye irritation.
STOT SE 3	H335	May cause respiratory irritation.

· **Label elements**
· **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).
· **Hazard pictograms**


GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labelling:**
dichloromethane
chrysene-d12
· **Hazard statements**
Harmful if swallowed.
Causes skin irritation.

(Contd. on page 2)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 4 Revision: 31.03.2019

Trade name: Semi-Volatiles Internal Standard (1X1 mL)

(Contd. of page 1)

Causes serious eye irritation.
May cause cancer.
May cause respiratory irritation.
May cause damage to organs through prolonged or repeated exposure.

· **Precautionary statements**
If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust/fume/gas/mist/vapours/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 / eye protection / face protection.
Use personal protective equipment as required.
IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
Rinse mouth.
IF ON SKIN: Wash with plenty of water.
IF INHALED: Remove victim to fresh air and keep at rest in a position 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.
Specific treatment (see on this label).
Get medical advice/attention if you feel unwell.
If skin irritation occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Take off contaminated clothing and wash before reuse.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

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

3 Composition and Information on Ingredients

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

· **Dangerous components:**		
75-09-2	dichloromethane STOT RE 2, H373; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	98.19%
1719-03-5	chrysene-d12 Muta. 2, H341; Carc. 1B, H350	0.302%
3855-82-1	1,4-dichlorobenzene-d4 Carc. 2, H351; Eye Irrit. 2A, H319	0.302%

· **SVHC**	
1719-03-5	chrysene-d12

(Contd. on page 3)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 4 Revision: 31.03.2019

Trade name: Semi-Volatiles Internal Standard (1X1 mL)

(Contd. of page 2)

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

*
4 First Aid Measures

· **Description of first aid measures**
· **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
· **After inhalation:** 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. If symptoms persist, consult a doctor.
· **After swallowing:** Call for a doctor immediately.
· **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed** No further relevant information available.
· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

*
5 Fire Fighting Measures

· **Extinguishing media**
· **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
· **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.
· **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
· **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

(Contd. on page 4)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 4 Revision: 31.03.2019

Trade name: Semi-Volatiles Internal Standard (1X1 mL)

(Contd. of page 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 fire - and explosion protection:** Keep respiratory protective device available.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** No special requirements.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:** Keep container tightly sealed.
· **Specific end use(s)** No further relevant information available.

*
8 Exposure controls and personal protection

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

· **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**	
75-09-2 dichloromethane	
NES	Long-term value: 174 mg/m³, 50 ppm Sk
WES	Long-term value: 174 mg/m³, 50 ppm Sk

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

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

(Contd. on page 5)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 4 Revision: 31.03.2019

Trade name: Semi-Volatiles Internal Standard (1X1 mL)

(Contd. of page 4)

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

Tightly sealed goggles

9 Physical and Chemical Properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Fluid
Colour:	Colourless
· **Odour:**	Like chlorine
· **Odour threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/freezing point:	-95.1 °C
Initial boiling point and boiling range:	40 °C
· **Flash point:**	Not applicable.
· **Flammability (solid, gas):**	Not applicable.
· **Ignition temperature:**	605 °C
· **Decomposition temperature:**	Not determined.
· **Auto-ignition temperature:**	Product is not selfigniting.
· **Explosive properties:**	Product does not present an explosion hazard.
· **Explosion limits:**	
Lower:	13 Vol %
Upper:	22 Vol %
· **Vapour pressure at 20 °C:**	360 hPa
· **Density at 20 °C:**	1.3 g/cm³
· **Relative density**	Not determined.
· **Vapour density**	Not determined.
· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with water at 20 °C:**	20 g/l
· **Partition coefficient: n-octanol/water:**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.

(Contd. on page 6)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 4 Revision: 31.03.2019

Trade name: Semi-Volatiles Internal Standard (1X1 mL)

(Contd. of page 5)

Kinematic:	Not determined.
· **Solvent content:**	
Organic solvents:	98.2 %
VOC (EC)	98.19 %
Solids content:	1.8 %
· **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 relevant for classification:**

ATE (Acute Toxicity Estimates)		
Oral	LD50	1,629 mg/kg (rat)
Dermal	LD50	>2,037 mg/kg (rat)
Inhalative	LC50/4 h	89.6 mg/L (rat)

75-09-2 dichloromethane		
Oral	LD50	1,600 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)
Inhalative	LC50/4 h	88 mg/L (rat)

· **Primary irritant effect:**
· **Skin corrosion/irritation** Irritant to skin and mucous membranes.
· **Serious eye damage/irritation** Irritating effect.
· **Respiratory or skin sensitisation** No sensitising effects known.
· **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Harmful
Irritant
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
Carc. 1B

(Contd. on page 7)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 4 Revision: 31.03.2019

Trade name: Semi-Volatiles Internal Standard (1X1 mL)

(Contd. of page 6)

12 Ecological Information

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

13 Disposal considerations

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

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

*
14 Transport information

· **Not Regulated, De minimus Quantities**	-
· **UN-Number** · **ADG, IMDG, IATA**	UN1593
· **UN proper shipping name** · **ADG** · **IMDG, IATA**	1593 DICHLOROMETHANE DICHLOROMETHANE
· **Transport hazard class(es)** · **ADG, IMDG, IATA**	
· **Class** · **Label**	6.1 Toxic substances. 6.1
· **Packing group** · **ADG, IMDG, IATA**	III

(Contd. on page 8)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 4 Revision: 31.03.2019

Trade name: Semi-Volatiles Internal Standard (1X1 mL)

(Contd. of page 7)

· **Environmental hazards:**	Not applicable.
· **Special precautions for user**	Warning: Toxic substances.
· **Danger code (Kemler):**	60
· **EMS Number:**	F-A,S-A
· **Segregation groups**	Liquid halogenated hydrocarbons
· **Stowage Category**	A
· **Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **ADG**	
· **Limited quantities (LQ)**	5L
· **Excepted quantities (EQ)**	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· **Transport category**	2
· **Tunnel restriction code**	E
· **IMDG**	
· **Limited quantities (LQ)**	5L
· **Excepted quantities (EQ)**	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· **UN "Model Regulation":**	UN 1593 DICHLOROMETHANE, 6.1, III

15 Regulatory information

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

· **Australian Inventory of Chemical Substances**	
75-09-2	dichloromethane

· **Standard for the Uniform Scheduling of Medicines and Poisons**		
75-09-2	dichloromethane	S5

· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **National regulations:**
· **Additional classification according to Decree on Hazardous Materials, Annex II:**
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.

· **Other regulations, limitations and prohibitive regulations**

· **Substances of very high concern (SVHC) according to REACH, Article 57**	
1719-03-5	chrysene-d12

(Contd. on page 9)

Safety Data Sheet
according to WHS Regulations

Printing date 31.03.2019 Version number 4 Revision: 31.03.2019

Trade name: Semi-Volatiles Internal Standard (1X1 mL)

(Contd. of page 8)

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

16 Other information

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

· **Relevant phrases**
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H341 Suspected of causing genetic defects.
H350 May cause cancer.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure.

· **Department issuing SDS:** Document Control / Regulatory
· **Contact:** regulatory@ultrasci.com
· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
Muta. 2: Germ cell mutagenicity – Category 2
Carc. 1B: Carcinogenicity – Category 1B
Carc. 2: Carcinogenicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
· *** Data compared to the previous version altered.**