

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 03/30/2019

Version Number 3

Reviewed on 03/30/2019

**1 Identification**

- **Product identifier**
- **Trade name:** Volatiles Standard (1X1 mL)
- **Part number:** PMX-144-1
- **Application of the substance / the mixture** Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Agilent Technologies, Inc.  
5301 Stevens Creek Blvd.  
Santa Clara, CA 95051 USA
- **Information department:**  
Telephone: 800-227-9770  
e-mail: pdl-msds\_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: 1-800-424-9300

**2 Hazard(s) identification**

- **Classification of the substance or mixture**



GHS02 Flame

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



GHS06 Skull and crossbones

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 Health hazard

Muta. 1B H340 May cause genetic defects.

Carc. 1B H350 May cause cancer.

Repr. 2 H361 Suspected of damaging fertility or the unborn child.

STOT SE 1 H370 Causes damage to organs.

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



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Acute Tox. 4 H312 Harmful in contact with skin.

Skin Sens. 1 H317 May cause an allergic skin reaction.

- **Label elements**

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

(Contd. on page 2)

## Safety Data Sheet

### acc. to OSHA HCS

Printing date 03/30/2019

Version Number 3

Reviewed on 03/30/2019

**Trade name: Volatiles Standard (1X1 mL)**

(Contd. of page 1)

**· Hazard pictograms**

**· Signal word Danger**
**· Hazard-determining components of labeling:**

methanol  
 2,2'-bioxirane  
 carbon disulphide  
 lactonitrile  
 ethyl methacrylate  
 1-chloro-2,3-epoxypropane  
 methacrylonitrile  
 methyl methacrylate

**· Hazard statements**

Highly flammable liquid and vapor.  
 Harmful if swallowed or in contact with skin.  
 Toxic if inhaled.  
 May cause an allergic skin reaction.  
 May cause genetic defects.  
 May cause cancer.  
 Suspected of damaging fertility or the unborn child.  
 Causes damage to organs.  
 May cause damage to organs through prolonged or repeated exposure.

**· Precautionary statements**

Obtain special instructions before use.  
 Do not handle until all safety precautions have been read and understood.  
 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
 Ground/bond container and receiving equipment.  
 Use explosion-proof electrical/ventilating/lighting/equipment.  
 Use only non-sparking tools.  
 Take precautionary measures against static discharge.  
 Do not breathe dust/fume/gas/mist/vapors/spray.  
 Wash thoroughly after handling.  
 Do not eat, drink or smoke when using this product.  
 Use only outdoors or in a well-ventilated area.  
 Contaminated work clothing must not be allowed out of the workplace.  
 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 (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 IF exposed or concerned: Get medical advice/attention.  
 Specific treatment (see on this label).  
 Get medical advice/attention if you feel unwell.  
 Take off contaminated clothing and wash it before reuse.  
 If skin irritation or rash occurs: Get medical advice/attention.  
 Wash contaminated clothing before reuse.  
 In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray.

(Contd. on page 3)

## Safety Data Sheet

### acc. to OSHA HCS

Printing date 03/30/2019

Version Number 3

Reviewed on 03/30/2019

#### Trade name: Volatiles Standard (1X1 mL)

(Contd. of page 2)

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

Store in a well-ventilated place. Keep cool.

Store locked up.

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

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**



· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

### 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

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

· **Dangerous components:**

67-56-1	methanol	95.702%
75-15-0	carbon disulphide	0.253%
1464-53-5	2,2'-bioxirane	0.253%
97-63-2	ethyl methacrylate	0.253%
106-89-8	1-chloro-2,3-epoxypropane	0.253%
126-98-7	methacrylonitrile	0.253%
57-57-8	3-propanolide	0.253%
96-23-1	1,3-dichloro-2-propanol	0.253%
80-62-6	methyl methacrylate	0.253%

### 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.

Remove breathing apparatus only after contaminated clothing have been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· **After inhalation:**

Supply fresh air or oxygen; call for doctor.

(Contd. on page 4)

## Safety Data Sheet

### acc. to OSHA HCS

Printing date 03/30/2019

Version Number 3

Reviewed on 03/30/2019

**Trade name: Volatiles Standard (1X1 mL)**

(Contd. of page 3)

- 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:** Immediately call a 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:**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture**  
During heating or in case of fire poisonous gases are produced.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

### 6 Accidental release measures

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

- **PAC-1:**

67-56-1	methanol	530 ppm
123-73-9	(E)-2-butenal	0.19 ppm
75-05-8	acetonitrile	13 ppm
75-15-0	carbon disulphide	13 ppm
542-76-7	3-chloropropionitrile	0.23 ppm
107-07-3	2-chloroethanol	0.11 ppm
1464-53-5	2,2'-bioxirane	0.091 ppm
97-63-2	ethyl methacrylate	5.5 ppm
106-89-8	1-chloro-2,3-epoxypropane	1.7 ppm
78-97-7	lactonitrile	0.24 mg/m <sup>3</sup>
109-77-3	malononitrile	0.07 ppm

(Contd. on page 5)

## Safety Data Sheet

acc. to OSHA HCS

Printing date 03/30/2019

Version Number 3

Reviewed on 03/30/2019

**Trade name: Volatiles Standard (1X1 mL)**

(Contd. of page 4)

126-98-7	methacrylonitrile	0.091 ppm
57-57-8	3-propanolide	1.5 ppm
107-12-0	propionitrile	0.27 ppm
96-23-1	1,3-dichloro-2-propanol	0.33 ppm
80-62-6	methyl methacrylate	17 ppm
107-18-6	allyl alcohol	0.09 ppm
107-19-7	prop-2-yn-1-ol	2.5 ppm

**· PAC-2:**

67-56-1	methanol	2,100 ppm
123-73-9	(E)-2-butenal	4.4 ppm
75-05-8	acetonitrile	50 ppm
75-15-0	carbon disulphide	160 ppm
542-76-7	3-chloropropionitrile	2.5 ppm
107-07-3	2-chloroethanol	1.2 ppm
1464-53-5	2,2'-bioxirane	1 ppm
97-63-2	ethyl methacrylate	61 ppm
106-89-8	1-chloro-2,3-epoxypropane	24 ppm
78-97-7	lactonitrile	2.6 mg/m <sup>3</sup>
109-77-3	malononitrile	0.77 ppm
126-98-7	methacrylonitrile	1.0 ppm
57-57-8	3-propanolide	5 ppm
107-12-0	propionitrile	3.0 ppm
96-23-1	1,3-dichloro-2-propanol	3.6 ppm
80-62-6	methyl methacrylate	120 ppm
107-18-6	allyl alcohol	1.7 ppm
107-19-7	prop-2-yn-1-ol	16 ppm

**· PAC-3:**

67-56-1	methanol	7200* ppm
123-73-9	(E)-2-butenal	14 ppm
75-05-8	acetonitrile	150 ppm
75-15-0	carbon disulphide	480 ppm
542-76-7	3-chloropropionitrile	5.4 ppm
107-07-3	2-chloroethanol	3.5 ppm
1464-53-5	2,2'-bioxirane	4 ppm
97-63-2	ethyl methacrylate	370 ppm
106-89-8	1-chloro-2,3-epoxypropane	72 ppm
78-97-7	lactonitrile	16 mg/m <sup>3</sup>
109-77-3	malononitrile	2.3 ppm
126-98-7	methacrylonitrile	3.1 ppm
57-57-8	3-propanolide	30 ppm
107-12-0	propionitrile	9.1 ppm

(Contd. on page 6)

## Safety Data Sheet acc. to OSHA HCS

Printing date 03/30/2019

Version Number 3

Reviewed on 03/30/2019

**Trade name: Volatiles Standard (1X1 mL)**

(Contd. of page 5)

96-23-1	1,3-dichloro-2-propanol	5.4 ppm
80-62-6	methyl methacrylate	570 ppm
107-18-6	allyl alcohol	13 ppm
107-19-7	prop-2-yn-1-ol	72 ppm

### 7 Handling and storage

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

### 8 Exposure controls/personal protection

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

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

PEL	Long-term value: 260 mg/m <sup>3</sup> , 200 ppm
REL	Short-term value: 325 mg/m <sup>3</sup> , 250 ppm Long-term value: 260 mg/m <sup>3</sup> , 200 ppm Skin
TLV	Short-term value: 328 mg/m <sup>3</sup> , 250 ppm Long-term value: 262 mg/m <sup>3</sup> , 200 ppm Skin; BEI

**75-15-0 carbon disulphide**

PEL	Long-term value: 20 ppm Ceiling limit value: 30; 100* ppm *30-min peak per 8-hr shift
REL	Short-term value: 30 mg/m <sup>3</sup> , 10 ppm Long-term value: 3 mg/m <sup>3</sup> , 1 ppm Skin

(Contd. on page 7)

## Safety Data Sheet

### acc. to OSHA HCS

Printing date 03/30/2019

Version Number 3

Reviewed on 03/30/2019

**Trade name: Volatiles Standard (1X1 mL)**

(Contd. of page 6)

TLV	Long-term value: 3.13 mg/m <sup>3</sup> , 1 ppm Skin, BEI
<b>106-89-8 1-chloro-2,3-epoxypropane</b>	
PEL	Long-term value: 19 mg/m <sup>3</sup> , 5 ppm Skin
REL	See Pocket Guide App. A
TLV	Long-term value: 1.9 mg/m <sup>3</sup> , 0.5 ppm Skin
<b>126-98-7 methacrylonitrile</b>	
REL	Long-term value: 3 mg/m <sup>3</sup> , 1 ppm Skin
TLV	Long-term value: 2.7 mg/m <sup>3</sup> , 1 ppm Skin
<b>57-57-8 3-propanolide</b>	
PEL	see 29 CFR 1910.1003
REL	See Pocket Guide App. A
TLV	Long-term value: 1.5 mg/m <sup>3</sup> , 0.5 ppm
<b>80-62-6 methyl methacrylate</b>	
PEL	Long-term value: 410 mg/m <sup>3</sup> , 100 ppm
REL	Long-term value: 410 mg/m <sup>3</sup> , 100 ppm
TLV	Short-term value: 410 mg/m <sup>3</sup> , 100 ppm Long-term value: 205 mg/m <sup>3</sup> , 50 ppm DSEN

**· Ingredients with biological limit values:**

<b>67-56-1 methanol</b>	
BEI	15 mg/L Medium: urine Time: end of shift Parameter: Methanol (background, nonspecific)
<b>75-15-0 carbon disulphide</b>	
BEI	0.5 mg/g creatinine Medium: urine Time: end of shift Parameter: 2-Thioxothiazolidine-4-carboxylic acid (background, nonspecific)

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

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

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

· **Breathing equipment:**

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

(Contd. on page 8)

## Safety Data Sheet

### acc. to OSHA HCS

Printing date 03/30/2019

Version Number 3

Reviewed on 03/30/2019

**Trade name: Volatiles Standard (1X1 mL)**

(Contd. of page 7)

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

· **Protection of hands:**

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

· **Material of gloves**

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

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

· **Penetration time of glove material**

For normal use: nitrile rubber: 1 hour

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

· **Eye protection:**



Tightly sealed goggles

## 9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

<b>Form:</b>	Fluid
<b>Color:</b>	Colorless
<b>Odor:</b>	Alcohol-like
<b>Odor threshold:</b>	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

<b>Melting point/Melting range:</b>	-98 °C (-144.4 °F)
<b>Boiling point/Boiling range:</b>	64 °C (147.2 °F)

· **Flash point:** 9 °C (48.2 °F)

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

· **Ignition temperature:** 455 °C (851 °F)

· **Decomposition temperature:** Not determined.

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

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

· **Explosion limits:**

<b>Lower:</b>	5.5 Vol %
<b>Upper:</b>	44 Vol %

· **Vapor pressure at 20 °C (68 °F):** 100 hPa (75 mm Hg)

· **Density at 20 °C (68 °F):** 0.80939 g/cm<sup>3</sup> (6.75436 lbs/gal)

(Contd. on page 9)



## Safety Data Sheet

### acc. to OSHA HCS

Printing date 03/30/2019

Version Number 3

Reviewed on 03/30/2019

**Trade name: Volatiles Standard (1X1 mL)**

(Contd. of page 8)

· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with Water:</b>	Not miscible or difficult to mix.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	96.0 %
<b>VOC content:</b>	95.96 %
	776.7 g/l / 6.48 lb/gal
· <b>Other information</b>	No further relevant information available.

### 10 Stability and reactivity

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

### 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

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

Oral	LD50	1,982 mg/kg
Dermal	LD50	1,414 mg/kg
Inhalative	LC50/4 h	2.89 mg/L

**67-56-1 methanol**

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

**123-73-9 (E)-2-butenal**

Oral	LD50	240 mg/kg (mouse)
Dermal	LD50	380 mg/kg (rabbit)
Inhalative	LC50/4 h	0.3 mg/L (rat)

**75-15-0 carbon disulphide**

Oral	LD50	1,200 mg/kg (rat)
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(Contd. on page 10)

## Safety Data Sheet

### acc. to OSHA HCS

Printing date 03/30/2019

Version Number 3

Reviewed on 03/30/2019

**Trade name: Volatiles Standard (1X1 mL)**

(Contd. of page 9)

Inhalative	LC50/4 h	10.35 mg/L (rat)
<b>107-07-3 2-chloroethanol</b>		
Oral	LD50	385 mg/kg (mouse) 71 mg/kg (rat)
Dermal	LD50	67 mg/kg (mouse)
Inhalative	LC50/4 h	0.29 mg/L (rat)
<b>1464-53-5 2,2'-bioxirane</b>		
Oral	LD50	72 mg/kg (mouse)
Dermal	LD50	80 mg/kg (rabbit)
Inhalative	LC50/4 h	90 mg/L (rat)
<b>97-63-2 ethyl methacrylate</b>		
Oral	LD50	1,223 mg/kg (rat)
Inhalative	LC50/4 h	8,300 mg/L (rat)
<b>106-89-8 1-chloro-2,3-epoxypropane</b>		
Oral	LD50	90 mg/kg (rat)
Dermal	LD50	515 mg/kg (rabbit)
Inhalative	LC50/4 h	250 mg/L (rat)
<b>109-77-3 malononitrile</b>		
Oral	LD50	19 mg/kg (mouse) 61 mg/kg (rat)
Dermal	LD50	350 mg/kg (rat)
<b>126-98-7 methacrylonitrile</b>		
Oral	LD50	250 mg/kg (rat)
Dermal	LD50	320 mg/kg (rabbit)
<b>96-23-1 1,3-dichloro-2-propanol</b>		
Oral	LD50	110 mg/kg (rat)
Dermal	LD50	800 mg/kg (rabbit)
<b>80-62-6 methyl methacrylate</b>		
Oral	LD50	7,900 mg/kg (rat)
Dermal	LD50	>5,000 mg/kg (rabbit)
Inhalative	LC50/4 h	78,000 mg/L (rat)

- **Primary irritant effect:**

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

- **on the eye:** No irritating effect.

- **Sensitization:** Sensitization possible through skin contact.

- **Additional toxicological information:**

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

Toxic

Harmful

Irritant

The product can cause inheritable damage.

(Contd. on page 11)

US

## Safety Data Sheet acc. to OSHA HCS

Printing date 03/30/2019

Version Number 3

Reviewed on 03/30/2019

**Trade name: Volatiles Standard (1X1 mL)**

(Contd. of page 10)

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

106-89-8	1-chloro-2,3-epoxypropane	2A
57-57-8	3-propanolide	2B
96-23-1	1,3-dichloro-2-propanol	2B
80-62-6	methyl methacrylate	3

**· NTP (National Toxicology Program)**

1464-53-5	2,2'-bioxirane	R
106-89-8	1-chloro-2,3-epoxypropane	R
57-57-8	3-propanolide	R

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

57-57-8	3-propanolide	
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### 12 Ecological information

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

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

**· Behavior in environmental systems:**
**· Bioaccumulative potential** No further relevant information available.

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

**· Additional ecological information:**
**· General notes:**

Water hazard class 3 (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

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

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

**· vPvB:** Not applicable.

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

### 13 Disposal considerations

**· Waste treatment methods**
**· Recommendation:**

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

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

### 14 Transport information

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

(Contd. on page 12)

## Safety Data Sheet

acc. to OSHA HCS

Printing date 03/30/2019

Version Number 3

Reviewed on 03/30/2019

**Trade name: Volatiles Standard (1X1 mL)**

(Contd. of page 11)

· **UN-Number**  
 · **DOT, IMDG, IATA** UN1230

· **UN proper shipping name**  
 · **DOT** Methanol  
 · **IMDG, IATA** METHANOL

· **Transport hazard class(es)**

· **DOT**



· **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**

· **DOT, 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 MARPOL73/78 and the IBC Code** Not applicable.

· **Transport/Additional information:**

· **DOT**

· **Quantity limitations** On passenger aircraft/rail: 1 L  
 On cargo aircraft only: 60 L

(Contd. on page 13)

## Safety Data Sheet

acc. to OSHA HCS

Printing date 03/30/2019

Version Number 3

Reviewed on 03/30/2019

**Trade name: Volatiles Standard (1X1 mL)**

(Contd. of page 12)

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>· <b>IMDG</b></li> <li>· <b>Limited quantities (LQ)</b></li> <li>· <b>Excepted quantities (EQ)</b></li> </ul> | 1L<br>Code: E2<br>Maximum net quantity per inner packaging: 30 ml<br>Maximum net quantity per outer packaging: 500 ml |
| <ul style="list-style-type: none"> <li>· <b>UN "Model Regulation":</b></li> </ul>  | UN 1230 METHANOL, 3 (6.1), II   |

### 15 Regulatory information

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

- **Section 355 (extremely hazardous substances):**

123-73-9	(E)-2-butenal
75-15-0	carbon disulphide
542-76-7	3-chloropropionitrile
107-07-3	2-chloroethanol
1464-53-5	2,2'-bioxirane
106-89-8	1-chloro-2,3-epoxypropane
78-97-7	lactonitrile
109-77-3	malonitrile
126-98-7	methacrylonitrile
57-57-8	3-propanolide
107-12-0	propionitrile
107-18-6	allyl alcohol

- **Section 313 (Specific toxic chemical listings):**

67-56-1	methanol
75-05-8	acetonitrile
75-15-0	carbon disulphide
542-76-7	3-chloropropionitrile
1464-53-5	2,2'-bioxirane
106-89-8	1-chloro-2,3-epoxypropane
109-77-3	malonitrile
126-98-7	methacrylonitrile
57-57-8	3-propanolide
80-62-6	methyl methacrylate
107-18-6	allyl alcohol
107-19-7	prop-2-yn-1-ol

- **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

- **TSCA new (21st Century Act): (Substances not listed)**

1464-53-5	2,2'-bioxirane
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(Contd. on page 14)

## Safety Data Sheet

acc. to OSHA HCS

Printing date 03/30/2019

Version Number 3

Reviewed on 03/30/2019

**Trade name: Volatiles Standard (1X1 mL)**

(Contd. of page 13)

126-98-7	methacrylonitrile
57-57-8	3-propanolide

**· Proposition 65**
**· Chemicals known to cause cancer:**

1464-53-5	2,2'-bioxirane
106-89-8	1-chloro-2,3-epoxypropane
57-57-8	3-propanolide
96-23-1	1,3-dichloro-2-propanol

**· Chemicals known to cause reproductive toxicity for females:**

75-15-0	carbon disulphide
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**· Chemicals known to cause reproductive toxicity for males:**

75-15-0	carbon disulphide
106-89-8	1-chloro-2,3-epoxypropane

**· Chemicals known to cause developmental toxicity:**

67-56-1	methanol
75-15-0	carbon disulphide

**· Carcinogenic categories**
**· EPA (Environmental Protection Agency)**

123-73-9	(E)-2-butenal	C
75-05-8	acetonitrile	CBD, D
106-89-8	1-chloro-2,3-epoxypropane	B2
80-62-6	methyl methacrylate	E, NL

**· TLV (Threshold Limit Value established by ACGIH)**

75-05-8	acetonitrile	A4
75-15-0	carbon disulphide	A4
107-07-3	2-chloroethanol	A4
106-89-8	1-chloro-2,3-epoxypropane	A3
57-57-8	3-propanolide	A3
80-62-6	methyl methacrylate	A4
107-18-6	allyl alcohol	A4

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

106-89-8	1-chloro-2,3-epoxypropane
57-57-8	3-propanolide

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

Carcinogenic hazardous material group III (dangerous).

**· Information about limitation of use:**

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

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

US

(Contd. on page 15)

**Safety Data Sheet**  
**acc. to OSHA HCS**

Printing date 03/30/2019

Version Number 3

Reviewed on 03/30/2019

**Trade name: Volatiles Standard (1X1 mL)**

(Contd. of page 14)

**16 Other information**

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

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

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

· **Date of preparation / last revision** 03/30/2019 / 2

· **Abbreviations and acronyms:**

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

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Flam. Liq. 2: Flammable liquids – Category 2

Acute Tox. 4: Acute toxicity – Category 4

Acute Tox. 3: Acute toxicity – Category 3

Skin Sens. 1: Skin sensitisation – Category 1

Muta. 1B: Germ cell mutagenicity – Category 1B

Carc. 1B: Carcinogenicity – Category 1B

Repr. 2: Reproductive toxicity – Category 2

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

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

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