

## Safety Data Sheet

according to WHS Regulations

Printing date 27.03.2025

Revision: 27.03.2025

### 1 Identification

- **Product identifier**
- **Trade name: Acrolein Standard (1X1 mL)**
- **Part number: AM-171-1**
- **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**



Flammable liquids – Category 2

H225 Highly flammable liquid and vapour.



Acute toxicity - inhalation – Category 3

H331 Toxic if inhaled.



Specific target organ toxicity (single exposure) – Category 1

H370 Causes damage to the central nervous system and the visual organs.



Skin corrosion/irritation – Category 1B

H314 Causes severe skin burns and eye damage.

Eye damage/irritation – Category 1

H318 Causes serious eye damage.

- **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 27.03.2025

Revision: 27.03.2025

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

(Contd. of page 1)

**· Hazard pictograms**

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

methanol (>60 %)  
acrylaldehyde (<10 %)

**· Hazard statements**

H225 Highly flammable liquid and vapour.  
H331 Toxic if inhaled.  
H314 Causes severe skin burns and eye damage.  
H370 Causes damage to the central nervous system and the visual organs.

**· Precautionary statements**

P101            If medical advice is needed, have product container or label at hand.  
P102            Keep out of reach of children.  
P103            Read label before use.  
P210            Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
P260            Do not breathe vapours.  
P260            Do not breathe dusts or mists.  
P280            Wear protective gloves/protective clothing/eye protection/face protection.  
P241            Use explosion-proof electrical/ventilating/lighting equipment.  
P240            Ground/bond container and receiving equipment.  
P242            Use only non-sparking tools.  
P243            Take precautionary measures against static discharge.  
P264            Wash thoroughly after handling.  
P270            Do not eat, drink or smoke when using this product.  
P271            Use only outdoors or in a well-ventilated area.  
P308+P311    IF exposed or concerned: Call a POISON CENTER/doctor.  
P310            Immediately call a POISON CENTER/doctor.  
P321            Specific treatment (see on this label).  
P304+P340    IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P363            Wash contaminated clothing before reuse.  
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P370+P378    In case of fire: Use CO<sub>2</sub>, powder or water spray to extinguish.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P403+P233    Store in a well-ventilated place. Keep container tightly closed.  
P403+P235    Store in a well-ventilated place. Keep cool.  
P405            Store locked up.  
P501            Dispose of contents/container in accordance with local/regional/national/international regulations.

**· Other hazards**
**· Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

(Contd. on page 3)

## Safety Data Sheet

### according to WHS Regulations

Printing date 27.03.2025

Revision: 27.03.2025

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

· vPvB: Not applicable.

(Contd. of page 2)

### 3 Composition and Information on Ingredients

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

- **Dangerous components:**

67-56-1	methanol ⚠ Flammable liquids – Category 2, H225; ⚠ Acute toxicity - oral – Category 3, H301; Acute toxicity - dermal – Category 3, H311; Acute toxicity - inhalation – Category 3, H331; ⚠ Specific target organ toxicity (single exposure) – Category 1, H370	>60%
107-02-8	acrylaldehyde ⚠ Flammable liquids – Category 2, H225; ⚠ Acute toxicity - oral – Category 3, H301; Acute toxicity - dermal – Category 3, H311; Acute toxicity - inhalation – Category 1, H330; ⚠ Skin corrosion/irritation – Category 1B, H314	<10%

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

### 4 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:** Drink plenty of water and provide fresh air. 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

- **Suitable extinguishing agents:**  
 CO<sub>2</sub>, 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.
- **Protective equipment:** Mouth respiratory protective device.

### 6 Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures**  
 Mount respiratory protective device.

(Contd. on page 4)

## Safety Data Sheet

according to WHS Regulations

Printing date 27.03.2025

Revision: 27.03.2025

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

(Contd. of page 3)

- 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).  
 Use neutralising agent.  
 Dispose contaminated material as waste according to section 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.
- **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 section 7.

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

**67-56-1 methanol**

WES	Short-term value: 328 mg/m <sup>3</sup> , 250 ppm Long-term value: 262 mg/m <sup>3</sup> , 200 ppm Sk
-----	---

**107-02-8 acrylaldehyde**

WES	Short-term value: 0.69 mg/m <sup>3</sup> , 0.3 ppm Long-term value: 0.23 mg/m <sup>3</sup> , 0.1 ppm
-----	---

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

(Contd. on page 5)

## Safety Data Sheet

according to WHS Regulations

Printing date 27.03.2025

Revision: 27.03.2025

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

(Contd. of page 4)

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

- **Respiratory protection:**

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

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

- **Protection of hands:**

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

- **Material of gloves**

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

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

- **Penetration time of glove material**

For normal use: nitrile rubber: 1 hour

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

- **Eye protection:**



Tightly sealed goggles

## 9 Physical and Chemical Properties

- **General Information**

- **Appearance:**

- **Form:**

Liquid

- **Colour:**

Colourless

- **Odour:**

Alcohol-like

- **Odour threshold:**

Not determined.

- **pH-value:**

Not determined.

- **Change in condition**

- **Melting point/freezing point:**

-98 °C

- **Initial boiling point and boiling range:**

64.7 °C

- **Flash point:**

9 °C

- **Flammability (solid, gas):**

Highly flammable.

- **Auto-ignition temperature:**

455 °C

- **Decomposition temperature:**

Not determined.

- **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:**

0.80025 g/cm<sup>3</sup>

(Contd. on page 6)

AU

## Safety Data Sheet

according to WHS Regulations

Printing date 27.03.2025

Revision: 27.03.2025

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

(Contd. of page 5)

· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with</b>	
· <b>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>	100.0 %
· <b>VOC (EC)</b>	100.00 %
· <b>Solids content:</b>	0.0 %
· <b>Other information</b>	No further relevant information available.

### 10 Stability and Reactivity

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

### 11 Toxicological Information

- **Information on toxicological effects**
- **Acute toxicity** Toxic if inhaled.

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

##### ATE (Acute Toxicity Estimates)

Oral	LD50	4,113 mg/kg (rat)
Dermal	LD50	31,641 mg/kg (rabbit)
Inhalative	LC50/4 h	3.02 mg/L

##### 67-56-1 methanol

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

##### 107-02-8 acrylaldehyde

Oral	LD50	26 mg/kg (rat)
Dermal	LD50	200 mg/kg (rabbit)
Inhalative	LC50/4 h	18 mg/L (rat)

- **Skin corrosion/irritation** Causes severe skin burns and eye damage.
- **Serious eye damage/irritation** Causes serious eye damage.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.

(Contd. on page 7)

AU

## Safety Data Sheet

### according to WHS Regulations

Printing date 27.03.2025

Revision: 27.03.2025

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

(Contd. of page 6)

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

### 12 Ecological Information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **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.  
 Must not reach sewage water or drainage ditch undiluted or unneutralised.  
 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

- |   |  |
|---|--|
| <b>· Not Regulated, De minimus Quantities</b> | -  |
| <b>· UN-Number</b>                            |  |
| <b>· ADG, IMDG, IATA</b>                      | UN1230                                   |
| <b>· UN proper shipping name</b>              |  |
| <b>· ADG</b>                                  | 1230 METHANOL, ENVIRONMENTALLY HAZARDOUS |
| <b>· IMDG</b>                                 | METHANOL, MARINE POLLUTANT               |
| <b>· IATA</b>                                 | METHANOL                                 |

(Contd. on page 8)

AU

## Safety Data Sheet

according to WHS Regulations

Printing date 27.03.2025

Revision: 27.03.2025

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

(Contd. of page 7)

**· 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:  
acrylaldehyde

**· Marine pollutant:**

Symbol (fish and tree)

**· Special marking (ADG):**

Symbol (fish and tree)

**· Special precautions for user**

Warning: Flammable liquids.

**· Hazard identification number (Kemler code):**

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 9)

## Safety Data Sheet

according to WHS Regulations

Printing date 27.03.2025

Revision: 27.03.2025

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

(Contd. of page 8)

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

### 15 Regulatory information

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

- **Australian Inventory of Industrial Chemicals**

All ingredients are listed.

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

67-56-1	methanol	S5, S6, S10
107-02-8	acrylaldehyde	S7

- **Australia: Priority Existing Chemicals**

None of the ingredients is listed.

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

### 16 Other information

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

- **Relevant phrases**

H225 Highly flammable liquid and vapour.  
H301 Toxic if swallowed.  
H311 Toxic in contact with skin.  
H314 Causes severe skin burns and eye damage.  
H330 Fatal if inhaled.  
H331 Toxic if inhaled.  
H370 Causes damage to organs.

- **Contact:**

- **Abbreviations and acronyms:**

ADR: Accord relatif au transport international 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

(Contd. on page 10)

## Safety Data Sheet according to WHS Regulations

Printing date 27.03.2025

Revision: 27.03.2025

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

(Contd. of page 9)

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

Flammable liquids – Category 2: Flammable liquids – Category 2

Acute toxicity - oral – Category 3: Acute toxicity – Category 3

Acute toxicity - inhalation – Category 1: Acute toxicity – Category 1

Skin corrosion/irritation – Category 1B: Skin corrosion/irritation – Category 1B

Eye damage/irritation – Category 1: Serious eye damage/eye irritation – Category 1

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

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

-AU-