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

- **Product identifier**
  - **Trade name:** Custom Standard (1X1 mL)
  - **Part number:** CUS-11581

- **Relevant identified uses of the substance or mixture and uses advised against**
  - Reagents and Standards for Analytical Chemical Laboratory Use

- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:** Agilent Technologies Manufacturing GmbH & Co. KG
    - Hewlett-Packard-Str.8
    - 76337 Waldbronn
    - Germany

- **Further information obtainable from:**
  - Telephone: 0800 603 1000
  - pdl-msds_author@agilent.com
  - **Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

## 2 Hazards identification

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

  - **GHS08 health hazard**
    - Carc. 2 H351 Suspected of causing cancer.
    - STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

  - **GHS07**
    - Acute Tox. 4 H302 Harmful if swallowed.
    - Skin Irrit. 2 H315 Causes skin irritation.
    - Eye Irrit. 2 H319 Causes serious eye irritation.
    - STOT SE 3 H335 May cause respiratory irritation.

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

- **Hazard pictograms**
  - GHS07
  - GHS08

- **Signal word** Warning

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

- **Hazard statements**
  - H302 Harmful if swallowed.
Safety data sheet  
according to 1907/2006/EC, Article 31

Printing date 10.04.2019  
Revision: 10.04.2019  
Version number 2

Trade name: Custom Standard (1X1 mL)

H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H351 Suspected of causing cancer.  
H335 May cause respiratory irritation.  
H373 May cause damage to organs through prolonged or repeated exposure.

- Precautionary statements

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P302+P352 IF ON SKIN: Wash with plenty of water.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P321 Specific treatment (see on this label).
P314 Get medical advice/attention if you feel unwell.
P362+P364 Take off contaminated clothing and wash it before reuse.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- Other hazards

- Results of PBT and vPvB assessment

- PBT: Not applicable.

- vPvB: Not applicable.

3 Composition/information on ingredients

- Chemical characterisation: Mixtures

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

- Dangerous components:

| CAS: 75-09-2 | dichloromethane | 99.828% |
| EINECS: 200-838-9 | Carc. 2; H351; STOT RE 2; H373; Skin Irrit. 2; H315; Eye Irrit. 2; H319; STOT SE 3; H335 |

- 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.

5 Firefighting 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.
48.1.26

· 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/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
    WEL  Short-term value: 706 mg/m³, 200 ppm
    Long-term value: 353 mg/m³, 100 ppm
    BMGV, Sk

· Ingredients with biological limit values:
  75-09-2 dichloromethane
  BMGV  30 ppm
  Medium: end-tidal breath
  Sampling time: post shift
  Parameter: carbon monoxide

· 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
## 9 Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>· Appearance:</strong></td>
<td>Fluid</td>
</tr>
<tr>
<td>Form:</td>
<td>Colourless</td>
</tr>
<tr>
<td>Colour:</td>
<td>Like chlorine</td>
</tr>
<tr>
<td>Odour:</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Odour threshold:</td>
<td></td>
</tr>
<tr>
<td><strong>· pH-value:</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>· Change in condition:</strong></td>
<td>-95.1 °C</td>
</tr>
<tr>
<td>Melting point/freezing point:</td>
<td>40 °C</td>
</tr>
<tr>
<td>Initial boiling point and boiling range:</td>
<td></td>
</tr>
<tr>
<td><strong>· Flash point:</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>· Flammability (solid, gas):</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>· Ignition temperature:</strong></td>
<td>605 °C</td>
</tr>
<tr>
<td><strong>· Decomposition temperature:</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>· Auto-ignition temperature:</strong></td>
<td>Product is not selfigniting.</td>
</tr>
<tr>
<td><strong>· Explosive properties:</strong></td>
<td>Product does not present an explosion hazard.</td>
</tr>
<tr>
<td><strong>· Explosion limits:</strong></td>
<td>13 Vol %</td>
</tr>
<tr>
<td>Lower:</td>
<td>22 Vol %</td>
</tr>
<tr>
<td>Upper:</td>
<td></td>
</tr>
<tr>
<td><strong>· Vapour pressure at 20 °C:</strong></td>
<td>360 hPa</td>
</tr>
<tr>
<td><strong>· Density at 20 °C:</strong></td>
<td>1.3 g/cm³</td>
</tr>
<tr>
<td><strong>· Relative density</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>· Vapour density</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>· Evaporation rate</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>· Solubility in / Miscibility with water at 20 °C:</strong></td>
<td>20 g/l</td>
</tr>
<tr>
<td><strong>· Partition coefficient: n-octanol/water:</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>· Viscosity:</strong></td>
<td>0.43 mPas</td>
</tr>
<tr>
<td>Dynamic at 20 °C:</td>
<td>Kinematic:</td>
</tr>
<tr>
<td><strong>· Solvent content:</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td>Organic solvents:</td>
<td>99.9 %</td>
</tr>
</tbody>
</table>
Safety data sheet according to 1907/2006/EC, Article 31

Trade name: Custom Standard (1X1 mL)

VOC (EC)  99.85 %
Solids content:  0.0 %
Other information  No further relevant information available.

10 Stability and reactivity

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

11 Toxicological information

- Information on toxicological effects
- Acute toxicity
  Harmful if swallowed.
- LD/LC50 values relevant for classification:
  ATE (Acute Toxicity Estimates)
  Oral  LD50  1,603 mg/kg (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
    Causes skin irritation.
  - Serious eye damage/irritation
    Causes serious eye irritation.
  - Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
  - CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
  - Germ cell mutagenicity Based on available data, the classification criteria are not met.
  - Carcinogenicity
    Suspected of causing cancer.
  - Reproductive toxicity Based on available data, the classification criteria are not met.
  - STOT-single exposure
    May cause respiratory irritation.
  - STOT-repeated exposure
    May cause damage to organs through prolonged or repeated exposure.
  - Aspiration hazard Based on available data, the classification criteria are not met.
12 Ecological information

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

13 Disposal considerations

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

  European waste catalogue
  - HP 4 Irritant - skin irritation and eye damage
  - HP 5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity
  - HP 7 Carcinogenic

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

14 Transport information

- Not Regulated, De minimus Quantities

- UN-Number
  - ADR, IMDG, IATA: UN1593

- UN proper shipping name
  - ADR: 1593 DICHLOROMETHANE
  - IMDG, IATA: DICHLOROMETHANE
Trade name: Custom Standard (1X1 mL)

- Transport hazard class(es)
  - ADR, IMDG, IATA

  - Class: 6.1 Toxic substances.
  - Label: 6.1

- Packing group
  - ADR, 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:
  - ADR
    - Limited quantities (LQ): 5L
    - Excepted quantities (EQ): Code: E1
      - Maximum net quantity per inner packaging: 30 ml
      - Maximum net quantity per outer packaging: 1000 ml
  - Transport category: 2
  - Tunnel restriction code: E

- IMDG
  - Limited quantities (LQ): 5L
  - Excepted quantities (EQ): Code: E1
    - Maximum net quantity per inner packaging: 30 ml
    - Maximum net quantity per outer packaging: 1000 ml

- UN "Model Regulation": UN 1593 DICHLOROMETHANE, 6.1, III

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - Directive 2012/18/EU
  - Named dangerous substances - ANNEX I: None of the ingredients is listed.
  - REGULATION (EC) No 1907/2006 ANNEX XVII: Conditions of restriction: 3, 59
  - 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.
  H351 Suspected of causing cancer.
  H373 May cause damage to organs through prolonged or repeated exposure.

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