1 Identification

· Product identifier
  · Trade name: MRH/HRH Internal Standard (Kansas) (1X5 mL)
  · Part number: SKS-130
· 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.
  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
· Hazard statements
  Harmful if swallowed.
  Causes skin irritation.
  Causes serious eye irritation.
  May cause respiratory irritation.
### 3 Composition and Information on Ingredients

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

#### Dangerous components:

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Chemical Name</th>
<th>Percentage</th>
<th>Pictograms</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>75-09-2</td>
<td>Dichloromethane</td>
<td>99.623%</td>
<td>☢️ STOT RE 2, H373, ☠️ Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335</td>
<td></td>
</tr>
</tbody>
</table>

- **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 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.
    - 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:

<table>
<thead>
<tr>
<th>75-09-2 dichloromethane</th>
</tr>
</thead>
<tbody>
<tr>
<td>NES Long-term value: 174 mg/m³, 50 ppm</td>
</tr>
<tr>
<td>Sk</td>
</tr>
<tr>
<td>WES Long-term value: 174 mg/m³, 50 ppm</td>
</tr>
<tr>
<td>Sk</td>
</tr>
</tbody>
</table>

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

9 Physical and Chemical Properties

Information on basic physical and chemical properties

General Information

Appearance:
Form: Fluid
Colour: Colourless
### 48.1.26

- **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.
- **Explosion 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**
- **Vapour density**
- **Evaporation rate**
- **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:** 99.6 %
  - **VOC (EC):** 99.62 %
- **Solids content:** 0.4 %
- **Other information:** No further relevant information available.

### 10 Stability and Reactivity

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

- Information on toxicological effects
- Acute toxicity

| LD/LC50 values relevant for classification: ATE (Acute Toxicity Estimates) |
|---------------------------------|--------------------------------------------------|
| Oral LD50 | 1,606 mg/kg (rat) |
| Dermal LD50 | >2,008 mg/kg (rat) |
| Inhalative LC50/4 h | 88.3 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

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

<table>
<thead>
<tr>
<th><strong>UN-Number</strong></th>
<th>UN1593</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UN proper shipping name</strong></td>
<td>1593 DICHLOROMETHANE</td>
</tr>
<tr>
<td><strong>UN proper shipping name (ADG)</strong></td>
<td>DICHLOROMETHANE</td>
</tr>
<tr>
<td><strong>UN proper shipping name (IMDG, IATA)</strong></td>
<td>DICHLOROMETHANE</td>
</tr>
<tr>
<td><strong>Transport hazard class(es)</strong></td>
<td>6.1 Toxic substances.</td>
</tr>
<tr>
<td><strong>Class</strong></td>
<td>6.1</td>
</tr>
<tr>
<td><strong>Label</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Packing group</strong></td>
<td>III</td>
</tr>
<tr>
<td><strong>Special precautions for user</strong></td>
<td>Warning: Toxic substances.</td>
</tr>
<tr>
<td><strong>Danger code (Kemler)</strong></td>
<td>60</td>
</tr>
<tr>
<td><strong>EMS Number</strong></td>
<td>F-A,S-A</td>
</tr>
<tr>
<td><strong>Segregation groups</strong></td>
<td>Liquid halogenated hydrocarbons</td>
</tr>
<tr>
<td><strong>Stowage Category</strong></td>
<td>A</td>
</tr>
<tr>
<td><strong>Transport in bulk according to Annex II of Marpol and the IBC Code</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Transport category</strong></td>
<td>2</td>
</tr>
<tr>
<td><strong>Tunnel restriction code</strong></td>
<td>E</td>
</tr>
</tbody>
</table>
Trade name: MRH/HRH Internal Standard (Kansas) (1X5 mL)

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