

**Dichloromethane****32222-2.5L**

Version 1.3

Issuing date 12/21/2016

Revision Date 02/21/2018

Print Date 06/28/2019

**1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****Product information**

Trade name : Dichloromethane

Number : 000000020387

Recommended use of the chemical and restrictions on use : Laboratory chemicals

Manufacturer or supplier's details : Honeywell Specialty Chemicals Seelze GmbH  
Wunstorfer Straße 40  
Seelze, 30926

For further information, please contact: : 1-800-368-0050  
+1-231-726-3171  
(Monday-Friday, 9:00am-5:00pm)

**In case of emergency call** : **Medical: 1-800-498-5701 or +1-303-389-1414**  
: **Transportation (CHEMTREC): 1-800-424-9300 or +1-703-527-3887**  
: **In Japan: +(81)-345209637**  
: (24 hours/day, 7 days/week)

**2. HAZARDS IDENTIFICATION****Classification of the substance or mixture**

Classification of the substance or mixture : Skin irritation, Category 2  
Eye irritation, Category 2A  
Carcinogenicity, Category 2  
Specific target organ toxicity - single exposure, Category 3

**GHS Label elements, including precautionary statements**

Symbol(s) : 

Signal word : Warning

Hazard statements : Causes skin irritation.  
Causes serious eye irritation.

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May cause drowsiness and dizziness.  
 Suspected of causing cancer.

Precautionary statements : **Prevention:**  
 Obtain special instructions before use.  
 Do not handle until all safety precautions have been read and understood.  
 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
 Wash skin thoroughly after handling.  
 Use only outdoors or in a well-ventilated area.  
 Wear protective gloves/protective clothing/eye protection/face protection.

**Response:**  
 IF ON SKIN: Wash with plenty of soap and 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.  
 If skin irritation occurs: Get medical advice/ attention.  
 If eye irritation persists: Get medical advice/ attention.  
 Take off contaminated clothing and wash before reuse.

**Storage:**  
 Store in a well-ventilated place. Keep container tightly closed. Store locked up.

**Disposal:**  
 Dispose of contents/ container to an approved waste disposal plant.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : CH<sub>2</sub>Cl<sub>2</sub>

Chemical nature : Substance

| Chemical name   | CAS-No. | Concentration |
|-----------------|---------|---------------|
| Dichloromethane | 75-09-2 | >=99.00 %     |
| Dichloromethane |         |               |

### 4. FIRST AID MEASURES

General advice : First aider needs to protect himself.

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|              |  |
|--------------|--|
|              | <p>Move out of dangerous area.<br/>         If unconscious, place in recovery position and seek medical advice.<br/>         Take off all contaminated clothing immediately.</p> |
| Inhalation   | : If breathed in, move person into fresh air.<br>If symptoms persist, call a physician.  |
| Skin contact | : After contact with skin, wash immediately with plenty of water.<br>Consult a physician.  |
| Eye contact  | : Rinse thoroughly with plenty of water, also under the eyelids.<br>Protect unharmed eye.<br>Consult a physician.  |
| Ingestion    | : When swallowed, allow water to be drunk.<br>Call a physician immediately.  |

## 5. FIREFIGHTING MEASURES

|   |  |
|---|--|
| Suitable extinguishing media                  | : Foam<br>Carbon dioxide (CO <sub>2</sub> )<br>Water spray<br>Dry powder   |
| Unsuitable extinguishing media                | : Do not use a solid water stream as it may scatter and spread fire.   |
| Specific hazards during firefighting          | : This product is not flammable at ambient temperatures and atmospheric pressure.<br>Exposure to decomposition products may be a hazard to health.<br>In case of fire hazardous decomposition products may be produced such as:<br>Phosgene<br>Chlorine (Cl <sub>2</sub> )<br>Carbon monoxide<br>Carbon dioxide (CO <sub>2</sub> )<br>Gaseous hydrogen chloride (HCl). |
| Special protective equipment for firefighters | : Wear self-contained breathing apparatus and protective suit.   |
| Further information                           | : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.<br>Cool containers/tanks with water spray.<br>Prevent fire extinguishing water from contaminating surface water or the ground water system.  |

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#### 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Ensure adequate ventilation.  
Evacuate personnel to safe areas.  
Wear personal protective equipment. Unprotected persons must be kept away.  
Do not breathe vapours or spray mist.
- Environmental precautions : Prevent further leakage or spillage if safe to do so.  
Do not let product enter drains.
- Methods and materials for containment and cleaning up : Ventilate the area.  
Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

#### 7. HANDLING AND STORAGE

##### Handling

- Precautions for safe handling : Wear personal protective equipment.  
Use only with adequate ventilation.  
Do not breathe vapours or spray mist.
- Advice on protection against fire and explosion : Keep away from heat and sources of ignition.  
Normal measures for preventive fire protection.

##### Storage

- Conditions for safe storage, including any incompatibilities : Store in original container.  
Keep containers tightly closed in a dry, cool and well-ventilated place.

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

##### Components with workplace control parameters

| Components                         | CAS-No. | Value                 | Control parameters | Update  | Basis                                     |
|------------------------------------|---------|-----------------------|--------------------|---------|---|
| Dichloromethane<br>Dichloromethane | 75-09-2 | TL : Threshold limits | (50 ppm)           | 04 2009 | ISHL:Industrial Safety and Health Law OEL |

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|  |  |                              |                                    |         |  |
|--|--|------------------------------|------------------------------------|---------|--|
|  |  | TWA : Time weighted average  | 170 mg/m <sup>3</sup><br>(50 ppm)  | 04 2007 | Japan Society for Occupational Health:Japan Society for Occupational Health allowable concentration recommendation value |
|  |  | TLV-C : Ceiling Limit Value  | 340 mg/m <sup>3</sup><br>(100 ppm) | 04 2007 | Japan Society for Occupational Health:Japan Society for Occupational Health allowable concentration recommendation value |
|  |  | SKIN_DES : Skin designation: | Can be absorbed through the skin.  | 04 2007 | Japan Society for Occupational Health:Japan Society for Occupational Health allowable concentration recommendation value |

**Appropriate engineering controls**

Use with local exhaust ventilation.

**Individual protection measures, such as personal protective equipment**

Respiratory protection : In case of insufficient ventilation wear suitable respiratory equipment.

 Hand protection : Impervious gloves  
 Gloves must be inspected prior to use.  
 Replace when worn.

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|                          |  |
|--------------------------|--|
| Eye protection           | : Safety goggles   |
| Skin and body protection | : Impervious clothing  |
| Hygiene measures         | : Keep working clothes separately.<br>Take off all contaminated clothing immediately.<br>Avoid contact with skin, eyes and clothing.<br>Wash hands before breaks and at the end of workday.  |
| Protective measures      | : Ensure that eyewash stations and safety showers are close to the workstation location.<br>Legal requirements are to be considered in regard of the selection, use and care of personal protective equipment.<br>Avoid exposure - obtain special instructions before use. |

**9. PHYSICAL AND CHEMICAL PROPERTIES**

|                             |  |
|-----------------------------|--|
| Physical state              | : liquid                                 |
| Colour                      | : colourless                             |
| Odour                       | : sweet                                  |
| Melting point/range         | : -97 °C                                 |
| Boiling point/boiling range | : 39 - 41 °C at 1,013 hPa                |
| Flash point                 | : Note: Not applicable                   |
| Lower explosion limit       | : 13 %(V)                                |
| Upper explosion limit       | : 22 %(V)                                |
| Vapour pressure             | : 453 hPa<br>at 20 °C(68 °F)             |
| Density                     | : 1.32 - 1.33 g/cm <sup>3</sup> at 20 °C |
| Water solubility            | : 20.0 g/l at 20 °C                      |

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|  |   |
|--|---|
| Solubility in other solvents           | : Note: soluble                               |
| Partition coefficient: n-octanol/water | : log Pow: 1.25                               |
| Ignition temperature                   | : 605 °C                                      |
| Decomposition temperature              | : > 120 °C<br>Note: Decomposition temperature |
| Viscosity, dynamic                     | : 0.44 mPa.s at 20 °C                         |
| Molecular weight                       | : 84.93 g/mol                                 |

**10. STABILITY AND REACTIVITY**

|                                    |  |
|------------------------------------|--|
| Chemical stability                 | : Stable under recommended storage conditions.   |
| Possibility of hazardous reactions | : Hazardous polymerization does not occur.<br>Vapours may form explosive mixture with air.   |
| Conditions to avoid                | : Heat, flames and sparks.<br>Exposure to sunlight.  |
| Incompatible materials to avoid    | : Alkali metals<br>Amines<br>Bases<br>Alkaline earth metals<br>Powdered metals<br>Strong oxidizing agents<br>Strong acids  |
| Hazardous decomposition products   | : In case of fire hazardous decomposition products may be produced such as:<br>Phosgene<br>Chlorine (Cl <sub>2</sub> )<br>Carbon monoxide<br>Carbon dioxide (CO <sub>2</sub> )<br>Gaseous hydrogen chloride (HCl). |

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**11. TOXICOLOGICAL INFORMATION**

- Acute oral toxicity : LD50: > 2,000 mg/kg  
Species: Rat  
Method: OECD Test Guideline 401  
Note: No deaths
- Acute inhalation toxicity : LC50: 86 mg/l  
Species: Mouse
- Acute dermal toxicity : LD50: > 2,000 mg/kg  
Species: Rat  
Method: OECD Test Guideline 402
- Skin irritation : Species: Rabbit  
Result: Irritating to skin.  
Method: OECD Test Guideline 404
- Eye irritation : Species: rabbit eye  
Result: Irritating to eyes.
- Sensitisation : Species: Mouse  
Result: non-sensitizing  
Method: OECD 429
- Dichloromethane : Test Method: Ames test  
Result: positive
- : Test Method: In vitro gene mutation study in mammalian cells  
Cell type: Chinese Hamster Ovary Cells  
Result: positive
- : Test Method: Unscheduled DNA synthesis  
Result: positive  
Note: Liver cells Mouse
- Further information : Note: Confirmed animal carcinogen with unknown relevance to humans.

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**12. ECOLOGICAL INFORMATION****Toxicity**

Toxicity to fish : LC50: 193 mg/l  
Exposure time: 96 h  
Species: Pimephales promelas (fathead minnow)

: LC50: 97 mg/l  
Exposure time: 48 h  
Species: Fish

: NOEC: 142 mg/l  
Exposure time: 28 d  
Species: Pimephales promelas (fathead minnow)  
Note: mortality

Toxicity to daphnia and other aquatic invertebrates : LC50: 220 mg/l  
Exposure time: 48 h  
Species: Daphnia (water flea)

: LC50: 27 mg/l  
Exposure time: 48 h  
Species: Daphnia magna (Water flea)

Toxicity to algae : Note: no data available

Toxicity to bacteria : LC0: 500 mg/l  
Species: Pseudomonas putida

: EC50: 2,590 mg/l  
Exposure time: 40 min  
Species: activated sludge  
Method: OECD 209

**Persistence and degradability**

Biodegradability : Result: Readily biodegradable  
Value: 68 %  
Method: OECD 301 D

**Bioaccumulative potential**

Bioaccumulation : Note: No bioaccumulation is to be expected (log Pow <= 4).

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**13. DISPOSAL CONSIDERATIONS**

Disposal methods : In accordance with local and national regulations.

**14. TRANSPORT INFORMATION****ADR**

UN/ID No. : UN 1593  
Description of the goods : DICHLOROMETHANE  
Class : 6.1  
Packing group : III  
Classification Code : T1  
Hazard Identification Number : 60  
Labels : 6.1

**IATA**

UN/ID No. : UN 1593  
Description of the goods : Dichloromethane  
Class : 6.1  
Packing group : III  
Labels : 6.1  
Packing instruction (cargo aircraft) : 663  
Packing instruction (passenger aircraft) : 655  
Packing instruction (passenger aircraft) : Y642

**IMDG**

UN/ID No. : UN 1593  
Description of the goods : DICHLOROMETHANE  
Class : 6.1  
Packing group : III  
Labels : 6.1  
EmS Number 1 : F-A  
EmS Number 2 : S-A

Marine pollutant : no

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**15. REGULATORY INFORMATION**
**National regulatory information**

|   |   |  |
|---|---|--|
| Chemical Substance  | : | Listed   |
| Control Law   | : | Type II Monitoring Chemical Substance.   |
| DES (JP)  | : | Reference: (2)-36  |
| Chemical Substance  | : | Listed   |
| Control Law   | : | Type III Monitoring Chemical Substance.  |
| JP MON3   | : | Reference: (2)-36  |
| Substances Subject to be Notified Names   | : | Threshold Concentration: 0.1 % wt 257  |
| JP MSDSD  | : |  |
| Substances Subject to be Indicated Names  | : | Article 18   |
| JPISHL LR   | : | Threshold limits: 1 % wt 14.7  |
| Vessel Safety Law   | : | Toxic and infectious substances (Article 2 and 3 of rules on shipping and storage of dangerous goods and its Attached Table 1) |
| JP VSL  | : |  |
| Aviation Law  | : | Toxic and infectious substances (Article 194 of The Enforcement Rules of Aviation Law and its Attached Table 1)                |
| JP AVL  | : |  |
| Fire Service Law  | : | Not relevant   |
| Poisonous and Deleterious Substances Control Law  | : | Not relevant   |
| Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof | : | Class I Designated Chemical Substances 186<br>Dichloromethane 75-09-2  |

**Other international regulations**
**Notification status**

|                                  |   |   |
|----------------------------------|---|---|
| US. Toxic Substances Control Act | : | On TSCA Inventory                                     |
| Australia. Industrial Chemical   | : | On the inventory, or in compliance with the inventory |

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(Notification and  
Assessment) Act

Canada. Canadian  
Environmental Protection Act  
(CEPA). Domestic  
Substances List (DSL) : All components of this product are on the Canadian DSL

Japan. Kashin-Hou Law List : On the inventory, or in compliance with the inventory

Korea. Existing Chemicals  
Inventory (KECI) : On the inventory, or in compliance with the inventory

Philippines. The Toxic  
Substances and Hazardous  
and Nuclear Waste Control  
Act : On the inventory, or in compliance with the inventory

China. Inventory of Existing  
Chemical Substances : On the inventory, or in compliance with the inventory

New Zealand. Inventory of  
Chemicals (NZIoC), as  
published by ERMA New  
Zealand : On the inventory, or in compliance with the inventory

## 16. OTHER INFORMATION

|                 | HMIS III | NFPA |
|-----------------|----------|------|
| Health hazard   | : 2*     | 2    |
| Flammability    | : 1      | 1    |
| Physical Hazard | : 0      |      |
| Instability     | :        | 0    |

\* - Chronic health hazard

Hazard rating and rating systems (e.g. HMIS® III, NFPA): This information is intended solely for the use of individuals trained in the particular system.

### Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific

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material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user. This information should not constitute a guarantee for any specific product properties.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

Previous Issue Date: 10/17/2017

Prepared by Honeywell Performance Materials and Technologies Product Stewardship Group