

**Dichloromethane****D65100-1L**

Version 1.1

Revision Date 08/23/2018

Print Date 05/22/2019

**SECTION 1. IDENTIFICATION**

Product name : Dichloromethane

Number : 000000020387

Product Use Description : Laboratory chemicals

Manufacturer or supplier's details : Honeywell International Inc.  
1953 South Harvey Street  
Muskegon, MI 49442

For more information call : 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**  
:  
: (24 hours/day, 7 days/week)

**SECTION 2. HAZARDS IDENTIFICATION****Emergency Overview**

Form : liquid

Color : colourless

Odor : sweet

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**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,  
Central nervous system

**GHS Label elements, including precautionary statements**

Symbol(s)



Signal word

: Warning

Hazard statements

: Causes skin irritation.  
Causes serious eye irritation.  
May cause drowsiness or 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.

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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.

**Carcinogenicity**

NTP: Dichloromethane 75-09-2  
Reasonably Anticipated to be a Human Carcinogen.

IARC: Dichloromethane 75-09-2  
Group 2A: Probably carcinogenic to humans

ACGIH: Dichloromethane 75-09-2  
A3: Confirmed animal carcinogen

**SECTION 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 %     |

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**SECTION 4. FIRST AID MEASURES**

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

**SECTION 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 |

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Carbon dioxide (CO<sub>2</sub>)  
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.  
Cool containers/tanks with water spray.  
Prevent fire extinguishing water from contaminating surface water or the ground water system.

**SECTION 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).

**SECTION 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 : Keep away from heat and sources of ignition.

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fire and explosion

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.

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Protective measures : Ensure that eyewash stations and safety showers are close to the workstation location.

Legal requirements are to be considered in regard of the selection, use and care of personal protective equipment.  
Avoid exposure - obtain special instructions before use.

Engineering measures : Use with local exhaust ventilation.

Eye protection : Safety goggles

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

Skin and body protection : Impervious clothing

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

Hygiene measures : Keep working clothes separately.  
Take off all contaminated clothing immediately.  
Avoid contact with skin, eyes and clothing.  
Wash hands before breaks and at the end of workday.

**Exposure Guidelines**

| Components | CAS-No. | Value | Control parameters | Update | Basis |
|------------|---------|-------|--------------------|--------|-------|
|------------|---------|-------|--------------------|--------|-------|

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|                 |         |                                              |                     |            |                                                                                          |
|-----------------|---------|----------------------------------------------|---------------------|------------|------------------------------------------------------------------------------------------|
| Dichloromethane | 75-09-2 | TWA :<br>Time<br>weighted<br>average         | (50 ppm)            | 2008       | ACGIH:US. ACGIH<br>Threshold Limit<br>Values                                             |
| Dichloromethane | 75-09-2 | REF :<br>Referenc<br>e:                      | 29 CFR<br>1910.1052 | 03<br>2012 | OSHASP:US.<br>OSHA Specifically<br>Regulated<br>Substances (29<br>CFR<br>1910.1001-1053) |
| Dichloromethane | 75-09-2 | TWA :<br>Time<br>weighted<br>average         | (25 ppm)            | 02<br>2006 | OSHASP:US.<br>OSHA Specifically<br>Regulated<br>Substances (29<br>CFR<br>1910.1001-1053) |
| Dichloromethane | 75-09-2 | OSHA_A<br>CT :<br>OSHA<br>Action<br>level:   | (12.5 ppm)          | 02<br>2006 | OSHASP:US.<br>OSHA Specifically<br>Regulated<br>Substances (29<br>CFR<br>1910.1001-1053) |
| Dichloromethane | 75-09-2 | STEL :<br>Short<br>term<br>exposure<br>limit | (125 ppm)           | 02<br>2006 | OSHASP:US.<br>OSHA Specifically<br>Regulated<br>Substances (29<br>CFR<br>1910.1001-1053) |

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

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|                             |                                          |
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| Physical state              | : liquid                                 |
| Color                       | : colourless                             |
| Odor                        | : sweet                                  |
| Odor threshold              | : Note: no data available                |
| pH                          | : Note: Not applicable                   |
| Melting point/range         | : -97 °C                                 |
| Boiling point/boiling range | : 39 - 41 °C at 1,013 hPa                |
| Flash point                 | : Note: Not applicable                   |
| Evaporation rate            | : Note: no data available                |
| Lower explosion limit       | : 13 %(V)                                |
| Upper explosion limit       | : 22 %(V)                                |
| Vapor pressure              | : 453 hPa<br>at 20 °C(68 °F)             |
| Vapor density               | : Note: no data available                |
| 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:<br>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                         |
| Viscosity, kinematic                      | : Note: no data available                     |
| Molecular weight                          | : 84.93 g/mol                                 |

**SECTION 10. STABILITY AND REACTIVITY**

|                                    |                                                                                                                           |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| Chemical stability                 | : Stable under recommended storage conditions.                                                                            |
| Possibility of hazardous reactions | : Hazardous polymerisation does not occur.<br>Vapours may form explosive mixture with air.                                |
| Conditions to avoid                | : Heat, flames and sparks.<br>Exposure to sunlight.                                                                       |
| Incompatible materials             | : Alkali metals<br>Amines<br>Bases<br>Alkaline earth metals<br>Powdered metals<br>Strong oxidizing agents<br>Strong acids |
| Hazardous decomposition            | : In case of fire hazardous decomposition products may be                                                                 |

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products

produced such as:  
Phosgene  
Chlorine (Cl<sub>2</sub>)  
Carbon monoxide  
Carbon dioxide (CO<sub>2</sub>)  
Gaseous hydrogen chloride (HCl).

**SECTION 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

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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.

**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity effects**

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)

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: 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

**Elimination information (persistence and degradability)**

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

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

**Further information on ecology****SECTION 13. DISPOSAL CONSIDERATIONS**

Disposal methods : Observe all Federal, State, and Local Environmental regulations.

**SECTION 14. TRANSPORT INFORMATION**

**DOT** UN/ID No. : UN 1593  
Proper shipping name : DICHLOROMETHANE

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|               |     |
|---------------|-----|
| Class         | 6.1 |
| Packing group | III |
| Hazard Labels | 6.1 |

|             |                                          |                   |
|-------------|------------------------------------------|-------------------|
| <b>IATA</b> | UN/ID No.                                | : UN 1593         |
|             | Description of the goods                 | : DICHLOROMETHANE |
|             | Class                                    | : 6.1             |
|             | Packaging group                          | : III             |
|             | Hazard Labels                            | : 6.1             |
|             | Packing instruction (cargo aircraft)     | : 663             |
|             | Packing instruction (passenger aircraft) | : 655             |
|             | Packing instruction (passenger aircraft) | : Y642            |

|             |                          |                   |
|-------------|--------------------------|-------------------|
| <b>IMDG</b> | UN/ID No.                | : UN 1593         |
|             | Description of the goods | : DICHLOROMETHANE |
|             | Class                    | : 6.1             |
|             | Packaging group          | : III             |
|             | Hazard Labels            | : 6.1             |
|             | EmS Number               | : F-A, S-A        |
|             | Marine pollutant         | : no              |

**SECTION 15. REGULATORY INFORMATION****Inventories**

US. Toxic Substances Control Act : On TSCA Inventory

Australia. Industrial Chemical (Notification and Assessment) Act : On the inventory, or in compliance with the inventory

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

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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

**National regulatory information**

US. EPA CERCLA Hazardous Substances (40 CFR 302) : The following component(s) of this product is/are subject to release reporting under 40 CFR 302 when release exceeds the Reportable Quantity (RQ):

Reportable quantity: 1000 lbs  
: Dichloromethane 75-09-2

**SARA 302 Components** : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components** : The following components are subject to reporting levels established by SARA Title III, Section 313:  
: Dichloromethane 75-09-2

**SARA 311/312 Hazards** : Acute Health Hazard  
Chronic Health Hazard

**CERCLA Reportable Quantity** : 1001 lbs

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**California Prop. 65**

:



**WARNING:** This product can expose you to chemicals, listed below, known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

Dichloromethane

75-09-2

**Massachusetts RTK**

:

Dichloromethane

75-09-2

**New Jersey RTK**

:

Dichloromethane

75-09-2

**Pennsylvania RTK**

:

Dichloromethane

75-09-2

**SECTION 16. OTHER INFORMATION**

|                 | <b>HMIS III</b> | <b>NFPA</b> |
|-----------------|-----------------|-------------|
| 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 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.

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