Dichloromethane

SECTION 1. IDENTIFICATION

Product Identifier: Dichloromethane
Other Means of Identification: Methylene Chloride, Methane Dichloride, Methylene Dichloride, DCM
Product Code(s): DI3010, DI3010P, DI3020
Product Family: Organic
Recommended Use: Laboratory, Paint stripper, Solvent.
Restrictions on Use: None known.
Supplier Identifier: Alphachem Limited, 2485 Milltower Court, Mississauga, Ontario, L5N 5Z6, (905) 821-2995
Emergency Phone No.: CANUTEC CANADA, 613-996-6666, 24 Hours
SDS No.: 0031

SECTION 2. HAZARD IDENTIFICATION

Classified according to Canada's Hazardous Products Regulations (WHMIS 2015) and the US Hazard Communication Standard (HCS 2012).

Classification:
Acute toxicity (Oral) - Category 5; Acute toxicity (Dermal) - Category 5; Skin irritation - Category 2; Eye irritation - Category 2A; Specific target organ toxicity (single exposure) - Category 3; Specific target organ toxicity (repeated exposure) - Category 2

Label Elements:

⚠️

Signal Word:
Warning

Hazard Statement(s):
May be harmful if swallowed.
May be harmful in contact with skin.
Causes skin irritation.
Causes serious eye irritation.
May cause respiratory irritation.
May cause drowsiness or dizziness.
Suspected of causing cancer.
May cause damage to organs through prolonged or repeated exposure.

Precautionary Statement(s):
Wear protective gloves/protective clothing/eye protection/face protection.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
Do not breathe dust/fume/gas/mist/vapours/spray.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Other Hazards
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No.</th>
<th>%</th>
<th>Other Identifiers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylene chloride</td>
<td>75-09-2</td>
<td>99</td>
<td>Dichloromethane, Methane Dichloride, Methylene Bichloride</td>
</tr>
</tbody>
</table>

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation
Remove source of exposure or move to fresh air. Keep at rest in a position comfortable for breathing. Call a Poison Centre or doctor.

Skin Contact
Avoid direct contact. Wear chemical protective clothing if necessary. Immediately rinse with lukewarm, gently flowing water for 15-20 minutes. Immediately call a Poison Centre or doctor.

Eye Contact
Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open.

Ingestion
Never give anything by mouth if person is rapidly losing consciousness, or is unconscious or convulsing. Do not induce vomiting. Rinse mouth with water. Immediately call a Poison Centre or doctor. Specific treatment is required.

First-aid Comments
Some of the first-aid procedures recommended here require advanced first-aid training. If exposed or concerned, get medical advice or attention.

Most Important Symptoms and Effects, Acute and Delayed
If inhaled: at high concentrations can cause severe lung injury. Can cause severe irritation of the nose and throat. Symptoms may include headache, nausea, dizziness, drowsiness and confusion. In severe cases, death can result.
If swallowed: can cause severe irritation of the nose and throat. Aspiration hazard. May be drawn into the lungs if swallowed or vomited, causing severe lung damage. Death can result.

Immediate Medical Attention and Special Treatment

Special Instructions
General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media
Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog.

Unsuitable Extinguishing Media
None known.

Specific Hazards Arising from the Product
See Section 9 (Physical and Chemical Properties) for flash point and explosive limits. Heating increases the release of...
toxic vapour. Closed containers may rupture violently when heated releasing contents.

Very toxic carbon monoxide, carbon dioxide.

Special Protective Equipment and Precautions for Fire-fighters

Evacuate area. Fight fire from a safe distance or a protected location. Approach fire from upwind to avoid hazardous vapours or gases. For a massive fire, immediately evacuate the area and use unmanned hose holder or monitor nozzles.

Fire-fighters should enter area wearing specialized protective equipment. (Bunker Gear will not provide adequate protection.) chemical protective clothing (e.g. chemical splash suit) and positive pressure SCBA may be necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Eliminate all ignition sources. Use grounded, explosion-proof equipment. Remove or isolate incompatible materials as well as other hazardous materials. Increase ventilation to area or move leaking container to a well-ventilated and secure area.

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 to prevent the gas from accumulating, especially in confined spaces. Stop or reduce leak if safe to do so. Contain and soak up spill with absorbent that does not react with spilled product. Place used absorbent into suitable, covered, labelled containers for disposal. Large spills or leaks: contact emergency services and manufacturer/supplier for advice.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Wear personal protective equipment to avoid direct contact with this chemical. Avoid breathing in this product. Only use where there is adequate ventilation. Avoid release to the environment. Prevent uncontrolled release of product. Immediately report leaks, spills or failures of the safety equipment (e.g. ventilation system). Prevent accidental contact with incompatible chemicals.

Conditions for Safe Storage

Store in an area that is: cool, dry, well-ventilated, out of direct sunlight and away from heat and ignition sources, separate from incompatible materials (see Section 10: Stability and Reactivity). Restrict access to authorized personnel only. Regularly inspect for physical changes or signs of crystallization, damage or leaks.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV®</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TWA</td>
<td>STEL</td>
<td>Ceiling</td>
</tr>
<tr>
<td>Methylene chloride</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>25 ppm</td>
</tr>
</tbody>
</table>

Appropriate Engineering Controls

Use local exhaust ventilation and enclosure, if necessary, to control amount in the air. Use stringent control measures such as process enclosure to prevent product release into the workplace. Provide eyewash and safety shower if contact or splash hazard exists.

Individual Protection Measures

Eye/Face Protection

Wear chemical safety goggles and face shield when contact is possible.

Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.

Suitable materials are: polyvinyl alcohol, Silver Shield/4H® (PE/EVAL/PE), Trellchem® HPS, Trellchem® VPS, Tychem® Responder, Tychem® TK.

The following materials should NOT be used: butyl rubber, natural rubber, neoprene rubber, nitrile rubber, polyethylene, polyvinyl chloride, Viton®/butyl rubber, Barmer® (PE/PA/PE), Tychem® SL (Saranex™).

Product Identifier: Dichloromethane

Date of Preparation: July 15, 2015
Respiratory Protection
Wear a NIOSH approved air-purifying respirator with an organic vapour cartridge, wear a NIOSH approved air-purifying respirator with an appropriate cartridge.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties
Appearance  Colourless liquid.
Odour  Aromatic
Odour Threshold  ~ 160 ppm (detection)
P  Not available
Melting Point/Freezing Point  -97.2 °C (-143.0 °F) (melting)
Initial Boiling Point/Range  39.8 °C (103.6 °F)
Flash Point  Not available
Evaporation Rate  14.5 (n-butyl acetate = 1)
Flammability (solid, gas)  Not available
Upper/Lower Flammability or Explosive Limit  19% (upper); 12% (lower)
Vapour Pressure  46.5 kPa (348.8 mm Hg) at 20 °C
Vapour Density (air = 1)  2.93 (calculated)
Relative Density (water = 1)  1.33 at 20 °C
Solubility  Moderately soluble in water; Soluble in all proportions in alcohols (e.g. ethanol).
Partition Coefficient, n-Octanol/Water (Log Kow)  1.25 (estimated)
Auto-ignition Temperature  556 °C (1033 °F)
Decomposition Temperature  120 °C (248 °F)
Viscosity  0.32 mm²/s at 20 °C (kinematic); 0.43 mPa.s at 20 °C (dynamic)
Other Information
Physical State  Liquid

SECTION 10. STABILITY AND REACTIVITY

Reactivity
Not reactive under normal conditions of use.
Chemical Stability
Normally stable.
Possibility of Hazardous Reactions
None expected under normal conditions of storage and use.
Conditions to Avoid
High temperatures. Open flames, sparks, static discharge, heat and other ignition sources. Hot surfaces. Temperatures above 100 °C
Incompatible Materials
Strong oxidizing agents (e.g. perchloric acid), alcohols (e.g. ethanol), strong acids (e.g. hydrochloric acid), amines (e.g. triethylenamine).
Hazardous Decomposition Products
Very toxic carbon monoxide, carbon dioxide; corrosive hydrogen chloride; corrosive phosgene.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Product Identifier:  Dichloromethane
Date of Preparation:  July 15, 2015
Inhalation; skin contact; eye contact; ingestion.

**Acute Toxicity**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LC50</th>
<th>LD50 (oral)</th>
<th>LD50 (dermal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylene chloride</td>
<td>22170 ppm (rat) (4-hour exposure)</td>
<td>2280 mg/kg (male rat)</td>
<td></td>
</tr>
</tbody>
</table>

**Skin Corrosion/Irritation**
Animal tests show moderate or severe irritation.

**Serious Eye Damage/Irritation**
Animal tests show mild irritation.

**STOT (Specific Target Organ Toxicity) - Single Exposure**

- **Inhalation**
  Causes depression of the central nervous system.

- **Skin Absorption**
  No information was located.

- **Ingestion**
  Causes severe irritation or burns to the mouth, throat and stomach, harmful effects on the liver, harmful effects on the kidneys.

**Aspiration Hazard**
No information was located.

**STOT (Specific Target Organ Toxicity) - Repeated Exposure**
May cause harmful effects on the kidneys, harmful effects on the liver. Blood tests may show abnormal results. Decreased ability of blood to carry oxygen, harmful effects on the heart. In severe cases death can result.

**Respiratory and/or Skin Sensitization**
No information was located.

**Carcinogenicity**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>IARC</th>
<th>ACGIH®</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylene chloride</td>
<td>2A</td>
<td>A3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Key to Abbreviations
IARC = International Agency for Research on Cancer. Group 2B = Possibly carcinogenic to humans.
ACGIH® = American Conference of Governmental Industrial Hygienists. A3 = Animal carcinogen.

**Reproductive Toxicity**

- **Development of Offspring**
  Not known to harm the unborn child.

- **Sexual Function and Fertility**
  Not known to cause effects on sexual function or fertility.

- **Effects on or via Lactation**
  No information was located.

**Germ Cell Mutagenicity**
Conclusions cannot be drawn from the limited studies available.

**Interactive Effects**
No information was located.

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**SECTION 12. ECOLOGICAL INFORMATION**

This section is not required by WHMIS. This section is not required by OSHA HCS 2012.

**Ecotoxicity**

- **Acute Aquatic Toxicity**

**Product Identifier:** Dichloromethane

**Date of Preparation:** July 15, 2015
<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LC50 Fish</th>
<th>EC50 Crustacea</th>
<th>ErC50 Aquatic Plants</th>
<th>ErC50 Algae</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylene chloride</td>
<td>193 mg/L (Pimephales promelas (fathead minnow); 96-hour)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Chronic Aquatic Toxicity**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>NOEC Fish</th>
<th>EC50 Fish</th>
<th>NOEC Crustacea</th>
<th>EC50 Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylene chloride</td>
<td>130 mg/L (Cyprinodon variegatus (sheepshead minnow); 96 hr)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Persistence and Degradability**

Expected to be removed rapidly from aquatic environments by evaporation.

**Bioaccumulative Potential**

This product or its degradation products have the potential to bioaccumulate based on quantitative structure-activity relationships.

**Mobility in Soil**

If released into the environment, this product is expected to move rapidly through the soil, based on physical and chemical properties.

**Other Adverse Effects**

This product contains volatile organic compounds. This product may contribute to smog formation.

**SECTION 13. DISPOSAL CONSIDERATIONS**

**Disposal Methods**

Contact local environmental authorities for approved disposal or recycling methods in your jurisdiction. This product and its container must be disposed of as hazardous waste. Do NOT dump into any sewers, on the ground or into any body of water.

**SECTION 14. TRANSPORT INFORMATION**

<table>
<thead>
<tr>
<th>Regulation</th>
<th>UN No.</th>
<th>Proper Shipping Name</th>
<th>Transport Hazard Class(es)</th>
<th>Packing Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canadian TDG</td>
<td>UN1593</td>
<td>Dichloromethane</td>
<td>6.1</td>
<td>III</td>
</tr>
</tbody>
</table>

**Environmental Hazards**

Not applicable

**Special Precautions**

Not applicable

**Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable

**SECTION 15. REGULATORY INFORMATION**

**Safety, Health and Environmental Regulations**

**Canada**

**WHMIS 1988 Classification**

D1B - Toxic; D2A - Very Toxic (Carcinogenicity); D2B - Toxic

**SECTION 16. OTHER INFORMATION**

Product Identifier: Dichloromethane

Date of Preparation: July 15, 2015
Disclaimer
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