SAFETY DATA SHEET

SDS00936
METHYLENE CHLORIDE

Preparation Date: 12/Aug/2017
Version: 1

1. IDENTIFICATION

Product identifier

Product Name METHYLENE CHLORIDE

Other means of identification

Product Code(s) SDS00936

Synonyms Dichloromethane.

Recommended use of the chemical and restrictions on use

Recommended Use Solvent Paint stripper

Restricted Uses No information available

Initial Supplier Identifier
Univar Canada Ltd.
9800 Van Horne Way
Richmond, BC V6X 1W5
Telephone: 1-866-686-4827

Emergency telephone number

24 Hour Emergency Phone Number (CANUTEC): 1-888-226-8832 (1-888-CAN-UTE)

2. HAZARD IDENTIFICATION

Hazardous Classification of the substance or mixture

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity - Oral</td>
<td>Category 4</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 2A</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Category 1B</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure)</td>
<td>Category 3</td>
</tr>
<tr>
<td>Specific target organ toxicity (repeated exposure)</td>
<td>Category 2</td>
</tr>
</tbody>
</table>

Label elements
Hazard pictograms

Signal Word: Danger

Hazard statements
Harmful if swallowed
May cause cancer
Causes skin irritation
Causes serious eye irritation
May cause respiratory irritation
May cause drowsiness or dizziness
May cause damage to organs through prolonged or repeated exposure

Precautionary Statements

Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Wear protective gloves/protective clothing/eye protection/face protection
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Do not breathe dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area

Response
IF exposed or concerned: Get medical advice/attention
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

Storage
Store locked up

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

Other Information
Unknown acute toxicity No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Substance</th>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
<th>Synonyms</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dichloromethane</td>
<td>75-09-2</td>
<td>90 - 100%</td>
<td>Dichloromethane</td>
</tr>
</tbody>
</table>
4. FIRST AID

Description of first aid measures

General advice
Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.

Inhalation
Remove to fresh air.

Eye contact
Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin contact
Wash skin with soap and water.

Ingestion
Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician.

Most important symptoms and effects, both acute and delayed:
Aspiration into the lungs may occur during ingestion or vomiting, resulting in lung injury. May cause slight corneal injury. Prolonged or repeated exposure may cause skin irritation, even a burn. May cause pain disproportionate to the level of irritation to eye tissue. Single dose oral toxicity is low. Small amounts swallowed incidental to normal handling operations are not likely to cause injury. Prolonged skin contact is unlikely to result in absorption of harmful amounts. Swallowing larger amounts may cause injury. In confined or poorly ventilated areas, vapors can readily accumulate and can cause unconsciousness and death. Excessive exposure may cause irritation to upper respiratory tract (nose and throat). May cause carboxyhemoglobinemia, thereby impairing the blood's ability to transport oxygen. Minimal anesthetic or narcotic effects may be seen in the range of 500-1000 ppm methylene chloride. Progressively higher levels over 1000 ppm can cause dizziness, drunkenness, and as low as 10,000 ppm, unconsciousness and death. These high levels may also cause cardiac arrhythmias (irregular heartbeats). Extensive skin contact with methylene chloride, such as immersion, may cause an intense burning sensation, followed by a cold, numb feeling which will subside after contact. May cause moderate eye irritation which may be slow to heal. Vapor may cause eye irritation experienced as mild discomfort and redness. May cause drying and flaking of the skin.

Indication of any immediate medical attention and special treatment needed:

Note to physicians
Treatment based on sound judgment of physician and individual reactions of patient. If burn is present, treat as any thermal burn, after decontamination. Carboxyhemoglobinemia may aggravate any preexisting condition sensitive to a decrease in available oxygen, such as chronic lung disease, coronary artery disease or anemias. Exposure may increase "myocardial irritability". Do not administer sympathomimetic drugs such as epinephrine unless absolutely necessary. Maintain adequate ventilation and oxygenation of the patient. Because rapid absorption may occur through lungs if aspirated and cause systemic effects, the decision of whether to induce vomiting or not should be made by a physician. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Specific hazards arising from the substance or mixture
Use water spray to cool fire-exposed containers and structures. Vapors are heavier than air and may accumulate in low areas. Vapors may travel along the ground to be ignited at distant locations. Stay upwind. Isolate and restrict area access. Move containers from fire area if you can do it without risk. Withdraw immediately in case of rising sound from
venting safety devices or discoloration of tank. Containers exposed to intense heat from fires should be cooled with water to prevent vapor pressure build-up which could result in container rupture. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Although this product does not have a flash point it can burn at room temperature. Water fog, applied gently may be used as a blanket for fire extinguishments.

**Hazardous combustion products**
Hydrogen chloride. Chlorine. Phosgene. Decomposition products can include and are not limited to:

**Special protective equipment for fire-fighters**
Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

**Environmental precautions**
See Section 12 for additional Ecological Information.

**Methods and materials for containment and cleaning up**
Prevent further leakage or spillage if safe to do so.

### 7. HANDLING AND STORAGE

**Precautions for safe handling**
Wear all protective equipment. Do not cut, drill, grind, weld or perform similar operations on or near containers. Containers, even those that have been emptied, will retain product residue and vapor and should be handled as if they were full until they have been cleaned. Manual operations (such as cold cleaning or paint stripping) using methylene chloride should be engineered to provide for confining solvent vapors, adequate ventilation and/or respiratory protection to reduce the potential for overexposure to vapors. To avoid uncontrolled emissions vent vapor from container to storage tank. Do not enter these areas where vapors of this product are suspected unless special breathing apparatus is used and an observer is present for assistance. Vapors are heavier than air and will collect in low areas.

**Conditions for safe storage, including any incompatibilities**
Keep containers tightly closed. Product has a shelf life of 24 months. Store in a cool, dry, well ventilated area. Significant vapor pressure (greater than 5 psi) can be generated above 55 °F. This may result in venting or rupture. Do not store in aluminum, zinc, aluminum alloys and plastics. Product should not be packaged in aluminum aerosol cans or with finely divided aluminum or its alloys in an aerosol can. Product is denser than water.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters**

**Exposure Limits**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Alberta OEL</th>
<th>British Columbia OEL</th>
<th>Ontario</th>
<th>Quebec OEL</th>
<th>Exposure Limit - ACGIH</th>
<th>Immediately Dangerous to Life or Health - IDLH</th>
</tr>
</thead>
</table>

SDS00936 - METHYLENE CHLORIDE Preparation Date: 12/Aug/2017
Appropriate engineering controls

Engineering controls
Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines. Lethal concentrations may exist in areas with poor ventilation.

Individual protection measures, such as personal protective equipment

Eye/face protection
Chemical goggles; also wear a face shield if splashing hazard exists.

Hand protection
Butyl rubber gloves. Polyvinyl alcohol gloves. Viton gloves. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials as well as the instructions/specifications provided by the glove supplier. Use gloves chemically resistant to this material, examples of preferred glove barrier materials include:. Examples of acceptable glove barrier materials include:.

Skin and body protection
Skin contact should be prevented through the use of suitable protective clothing, gloves and footwear, selected for conditions of use and exposure potential. Consideration must be given both to durability as well as permeation resistance. Impervious clothing.

Respiratory protection
Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required, use an approved air-purifying or positive-pressure supplied-air respirator depending on the potential airborne concentration. For emergency and other conditions where the exposure guideline may be exceeded, use an approved positive-pressure self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. In confined or poorly ventilated areas, use an approved self-contained breathing apparatus or positive pressure airline with auxiliary self-contained air supply.

General hygiene considerations
Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Values</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
<td>none known</td>
</tr>
<tr>
<td>Color</td>
<td>Colorless</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Characteristic</td>
<td></td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No information available</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PROPERTIES</th>
<th>Values</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Melting point / freezing point</td>
<td>-97 °C / -143 °F</td>
<td></td>
</tr>
<tr>
<td>Initial boiling point/boiling range</td>
<td>39.8 °C / 104 °F</td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
<td>Tag Closed Cup</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
<td>none known</td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td>none known</td>
<td></td>
</tr>
<tr>
<td>Upper flammability limit:</td>
<td>22</td>
<td></td>
</tr>
</tbody>
</table>
Lower flammability limit:  14
Vapor pressure            355 mmHg @ 20°C
Relative vapor density    2.93
Specific Gravity          1.320
Water solubility          2.0 g/100 g @ 25°C
Solubility in other solvents No data available
Partition coefficient     No data available
Autoignition temperature  556 °C / 1033 °F
Decomposition temperature No data available
Kinematic viscosity       0.41 mPa.s Dynamic
Dynamic viscosity         No data available
Explosive properties      No information available.
Oxidizing properties      No information available.

Molecular weight          84.94 g/mol
VOC Percentage Volatility No information available
Liquid Density           No information available
Bulk density             No information available

### 10. STABILITY AND REACTIVITY

**Reactivity/Chemical Stability**
Stable under normal conditions

**Possibility of hazardous reactions**
Water contamination may cause corrosion of metals due to formation of hydrochloric acid.

**Hazardous polymerization**
Will not occur.

**Conditions to avoid**
Avoid excessive heat, open flames and all ignition sources. Direct sunlight.

**Incompatible materials**

**Hazardous decomposition products**
Decomposition products can include and are not limited to:. Hydrogen chloride. Chlorine. Phosgene.

### 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure**

**Inhalation**
In confined or poorly ventilated areas, vapors can readily accumulate and can cause unconsciousness and death. Excessive exposure may cause irritation to upper respiratory tract (nose and throat). May cause carboxyhemoglobinemia, thereby impairing the blood's ability to transport oxygen. Minimal anesthetic or narcotic effects may be seen in the range of 500-1000 ppm methylene chloride. Progressively higher levels over 1000 ppm can cause dizziness, drunkenness, and as low as 10,000 ppm, unconsciousness and death. These high levels may also cause cardiac arrhythmias (irregular heartbeats).

**Eye contact**
May cause slight corneal injury. May cause pain disproportionate to the level of irritation to eye tissue. May cause moderate eye irritation which may be slow to heal. Vapor may cause eye irritation experienced as mild discomfort and redness.

**Skin contact**
Prolonged or repeated exposure may cause skin irritation, even a burn. Prolonged skin contact is unlikely to result in absorption of harmful amounts. Extensive skin contact with methylene chloride, such as immersion, may cause an intense burning sensation, followed by a cold, numb feeling which will subside after contact. May cause drying and flaking of the skin.

**Ingestion**
Aspiration into the lungs may occur during ingestion or vomiting, resulting in lung injury. Single dose oral toxicity is low. Small amounts swallowed incidental to normal handling operations are not likely to cause injury. Swallowing larger amounts may cause injury.

**Information on toxicological effects**

**Symptoms**
Observations in animals include irritation to the upper respiratory tract, liver or kidney effects. Exposure to this material may decrease the oxygen-carrying capacity of the blood.

**Numerical measures of toxicity**

**Acute toxicity**

The following values are calculated based on chapter 3.1 of the GHS document.

- **ATEmix (oral)**: 1,602.00 mg/kg
- **Unknown acute toxicity**: No information available

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dichloromethane</td>
<td>1600 mg/kg</td>
<td>Not available</td>
<td>= 53 mg/L (Rat) 6 h</td>
</tr>
<tr>
<td>75-09-2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Skin corrosion/irritation**
Prolonged or repeated exposure may cause skin irritation, even a burn. Prolonged skin contact is unlikely to result in absorption of harmful amounts. Extensive skin contact with methylene chloride, such as immersion, may cause an intense burning sensation, followed by a cold, numb feeling which will subside after contact. May cause drying and flaking of the skin.

**Serious eye damage/eye irritation**
May cause slight corneal injury. May cause pain disproportionate to the level of irritation to eye tissue. May cause moderate eye irritation which may be slow to heal. Vapor may cause eye irritation experienced as mild discomfort and redness.

**Respiratory or skin sensitization**
No information available.

**Germ cell mutagenicity**
No information available.

**Carcinogenicity**
No additional information available.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dichloromethane</td>
<td>A3</td>
<td>Group 2A</td>
<td>Reasonably Anticipated</td>
<td>X</td>
</tr>
<tr>
<td>75-09-2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Legend**

- **ACGIH (American Conference of Governmental Industrial Hygienists)**
  - A3 - Animal Carcinogen
- **IARC (International Agency for Research on Cancer)**
  - Group 2A - Probably Carcinogenic to Humans
- **NTP (National Toxicology Program)**
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Reproductive toxicity
Methylene chloride can pass through the placenta and can be excreted in maternal milk. Did not cause birth defects in animals; other effects were seen in the fetus only at doses with caused toxic effects to the mother.

Specific target organ systemic toxicity - single exposure
May cause respiratory irritation. May cause drowsiness or dizziness.

Specific target organ systemic toxicity - repeated exposure
Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard
No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Ecotoxicity - Freshwater Algae Data</th>
<th>Ecotoxicity - Fish Species Data</th>
<th>Toxicity to microorganisms</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dichloromethane 75-09-2</td>
<td>500 mg/L EC50 Pseudokirchneriella subcapitata 72 h 500 mg/L EC50 Pseudokirchneriella subcapitata 96 h</td>
<td>140.8 - 277.7 mg/L LC50 (Pimephales promelas) 96 h flow-through 262 - 855 mg/L LC50 (Pimephales promelas) 96 h static 193 mg/L LC50 (Lepomis macrochirus) 96 h flow-through 193 mg/L LC50 (Lepomis macrochirus) 96 h static</td>
<td>Not available</td>
<td>EC50: 1532 - 1847mg/L (48h, Daphnia magna) EC50: =190mg/L (48h, Daphnia magna)</td>
</tr>
</tbody>
</table>

Persistence and degradability
No information available.

Bioaccumulation
No information available.

Component Information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Partition coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dichloromethane 75-09-2</td>
<td>1.25</td>
</tr>
</tbody>
</table>

Other adverse effects
No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods
Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Do not reuse empty containers.

14. TRANSPORT INFORMATION
TDG (Canada):
- UN Number: UN1593
- Shipping name: DICHLOROMETHANE
- Class: 6.1
- Packing Group: III
- Marine pollutant: Not available.

DOT (U.S.):
- UN Number: UN1593
- Shipping name: DICHLOROMETHANE
- Class: 6.1
- Packing Group: III
- Marine pollutant: Not available

15. REGULATORY INFORMATION
Safety, health and environmental regulations/legislation specific for the substance or mixture

U.S. Regulatory Rules

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CERCLA/SARA - Section 302:</th>
<th>SARA (311, 312) Hazard Class:</th>
<th>CERCLA/SARA - Section 313:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dichloromethane - 75-09-2</td>
<td>Not Listed</td>
<td>Listed</td>
<td>Listed</td>
</tr>
</tbody>
</table>

International Inventories
- TSCA: Complies
- DSL/NDSL: Complies

Legend:
- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA: Health hazards 1  Flammability 1  Instability 0  Physical and chemical properties

HMIS Health Rating: Health hazards * 2  Flammability 1  Physical hazards 0

Legend
- Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION
- TWA: TWA (time-weighted average)  STEL
- Ceiling: Maximum limit value  Skin designation

Prepared By: The Environment, Health and Safety Department of Univar Canada Ltd.

Preparation Date: 12/Aug/2017
Revision Date: 12/Aug/2017

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End of Safety Data Sheet