CHEMFAX™
Manufacturer of Specialty Chemicals

# Safety Data Sheet

| Section 1. Identification | | |
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| **Product Identifier** | **Methylene Chloride** | **Version: 5**<br>**Effective Date:** 25 January 2021 |
| **Other Means Of Identification** | Dichloromethane | |
| **Initial Supplier Identifier** | Chemfax Products Ltd.<br>11444 – 42 Street SE<br>Calgary, AB T2C 5C4<br>Tel: 403-287-2055 | |
| **Recommended Use and Restrictions On Use** | Industrial solvent. No restrictions. | |
| **Product Family** | Alkyl Halide | |
| **Emergency Phone** | 1-855-887-2055 Monday - Friday 8:00am - 4:30pm MST | |

| Section 2. Hazard Identification | |
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| **Hazard Classification**<br><br>**Health Hazards** |  <br>Skin Corrosion/Irritation – Category 2<br>Eye Damage/Irritation – Category 2A<br>Specific Target Organ Toxicity (Single Exposure) – Category 3<br>Gem Cell Mutagenicity – Category 2<br>Carcinogenicity – Category 2<br>Specific Target Organ Toxicity (Repeated Exposure) – Category 2<br>Aspiration Hazard – Category 1 |
| **Signal Word** | Danger |
| **Hazard Statement** | Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation, or may cause drowsiness or dizziness.<br>Suspected of causing genetic defects (ingestion, inhalation, and skin contact).<br>Suspected of causing cancer (ingestion, inhalation, and skin contact)<br>May cause damage to organs (kidney, central nervous system, and blood) through prolonged or repeated exposure (ingestion, inhalation, and skin contact).<br>May be harmful if swallowed and enters airways. |

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| **Precautionary Prevention Statement** | Wash hands thoroughly after handling. Wear protective gloves, clothing, and eye & face protection. Avoid inhaling dust, fume, gas, mist, vapours, and spray. Use only outdoors, or a well-ventilated area. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.<br>Do not inhale dust, fume, gas, mist, vapours, and spray. |
| **Precautionary Response Statement** | IF ON SKIN: Wash with plenty water and soap.<br>Specific Treatment: Do not induce vomiting unless directed by medical personnel. Treat symptomatically and supportively.<br>If skin irritation occurs: Seek medical attention.<br>Remove contaminated clothing and launder before reuse.<br>IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, seek medical attention.<br>IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a doctor if you feel unwell.<br>IF exposed or concerned, seek medical attention.<br>Seek medical attention if you feel unwell.<br>IF SWALLOWED: Immediately call a POISON CENTRE. Do NOT induce vomiting. |
| **Precautionary Storage Statements** | Store in a well-ventilated place. Keep container tightly closed. Store locked up. |
| **Precautionary Disposal Statement** | Dispose of contents/container in accordance with local regulations. |
| **Other Hazards** | None |

## Section 3. Composition / Information on Ingredients

| Chemical Name | Common Name or Synonyms | CAS NO. and Other Unique Identifiers | % by weight |
|---|---|---|---|
| Dichloromethane | Methylene chloride | 75-09-2 | 99.9 |

## Section 4. First-Aid Measures

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| **Eye Contact** | Flush eyes with water for 15 minutes. Seek medical attention. |
| **Skin Contact** | Flush area with water. If irritation persists seek medical attention. Launder clothing before reuse. |
| **Inhalation** | Remove victim to fresh air. If there is difficulty breathing, seek immediate medical attention. |
| **Ingestion** | Remove victim to fresh air. If there is difficulty breathing, seek immediate medical attention. |

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| **Most Important Symptoms and Effects Both Acute and Delayed** | If inhaled: nausea, headache, dizziness, unconsciousness and coma. Causes respiratory tract irritation. May cause narcotic effects in high concentrations. Vapors may cause dizziness or suffocation. May cause blood changes. Overexposure may cause an increase in carboxyhemoglobin levels in the blood. Can produce delayed pulmonary edema.<br>If in eyes: severe irritation, and possible eye burns.<br>If on skin: Causes irritation with burning pain, itching, and redness. Prolonged exposure may result in skin burns.<br>If ingested: gastrointestinal irritation with nausea, vomiting and diarrhea. May cause kidney damage. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure. |
| **Immediate Medical Attention and Special Treatment** | Rapid absorption through the 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. No specific antidote. Supportive care. Treatment should be based on the judgment of the physician in response to the reactions of the patient. If burn is present, treat as any thermal burn after decontamination. |

| **Section 5. Fire-Fighting Measures** | |
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| **Suitable and Unsuitable Extinguishing Media** | Dry chemicals, CO2, alcohol foam.<br>Do not use direct water jet. |
| **Hazardous Combustion Products** | Hydrogen chloride, carbon monoxide, carbon dioxide, phosgene, chlorine. |
| **Specific Hazards Arising From The Product** | Because of its high volatility, airborne concentrations of methylene chloride can accumulate in poorly ventilated areas. Odor is a poor indicator of possibly dangerous air concentrations of methylene chloride. |
| **Special Protective Equipment and Precautions For Fire-Fighters** | Fire-fighters should wear self-contained breathing apparatus and full protective clothing. Use water spray to cool containers and structures exposed to fire. |

| Section 6. Accidental Release Measures | |
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| **Personal Precautions, Protective Equipment and Emergency Procedures** | Chemical resistant footwear and coveralls. Air purifying respirator fitted with organic vapour cartridges. Safety glasses. Neoprene gloves. Evacuate unnecessary personnel. Secure area and ensure adequate ventilation. |
| **Environmental Precautions** | Do not allow material to enter, sewers and surface watercourses. Low lying areas – sumps, basements etc. may collect flammable vapours. |
| **Methods and Materials For Containment and Clean-Up** | Isolate area, restrict access, ventilate area. Soak up small spills with absorbent material and place in containers suitable for disposal. For larger spills, dike area, pump into containers for disposal. Use absorbent to remove residues, then wash with detergent and water. |

| Section 7. Handling and Storage | |
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| **Precautions For Safe Handling** | Handle with care. Toxic material. Empty containers may contain residues, do not cut, grind or weld these containers. Do NOT enter confined spaces where vapours may be trapped, especially low lying areas such as sumps, or larger tank and containment areas. |
| **Conditions For Safe Storage** | Keep containers closed when not in use. Store in a cool place away from sources of ignition. Significant vapour pressure can be generated above 12 °C., this may result in venting or rupture. Do not store in aluminum, zinc, aluminum alloys and plastics. Product has a shelf life of 24 months. |

| Section 8. Exposure Controls / Personal Protection | | | | |
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| **Control Parameters** | **TWA: 8 Hr** | **STEL: 15 min** | **Ceiling** | **IDLH *** |
| Dichloromethane | 500 ppm OSHA | 2000 ppm OSHA | 1000 ppm OSHA | 2300 ppm |
| | * Immediately Dangerous to Life and Health | | | |
| **Exposure Controls** | Local exhaust ventilation | | | |
| **Appropriate Engineering Controls** | Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. | | | |
| **Individual Protective Measures** | If exposure limits are exceeded: | | | |
| **Eye / Face Protection** | Safety glasses | | | |
| **Skin Protection** | Chemical resistant coveralls, gloves | | | |
| **Respiratory Protection** | Air purifying respirator fitted with organic vapour cartridges | | | |

| Section 9. Physical and Chemical Properties | |
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| **Appearance** | Clear, colourless liquid with irritating vapour |
| **Odour** | Ethereal odor - chloroform-like |
| **Odour Threshold** | Not available. |
| **pH** | Not applicable |
| **Flash Point** | >100 °C |
| **Boiling Point and Boiling Range** | 39.8 °C |
| **Melting Point and Freezing Point** | -96.7 °C |
| **Evaporation Rate** | 28 (ether =1) |
| **Flammability (solid, gas)** | Not applicable |
| **Upper and Lower Flammability or Explosive Limits** | 13-23 vol% |
| **Vapour Pressure** | 355 mmHg @ 20 °C |
| **Vapour Density** | 2.93 (air = 1) |
| **Relative Density** | 1.32 |
| **Solubility** | 2.0 g / 100 g water @ 25 °C |
| **Partition co-efficient, n-Octanol/Water** | log Pow: 1.25 |
| **Auto-ignition Temperature** | 556 °C |
| **Decomposition Temperature** | No data |
| **Viscosity** | No data |

| Section 10. Stability and Reactivity | |
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| **Reactivity** | May form explosive mixtures in atmospheres having high oxygen content. |
| **Chemical Stability** | Stable |
| **Possibility of Hazardous Reactions** | Will not occur |
| **Conditions to Avoid** | Avoid excessive heat, open flames and all ignition sources. Direct sunlight. |
| **Incompatible Materials** | Oxidizing agents, strong bases, amines, aluminum and magnesium powders, potassium, sodium and zinc powders, and aluminum and its alloys. |
| **Hazardous Decomposition Products** | Decomposition products can include and are not limited to: Hydrogen chloride, chlorine and phosgene. NOTE: Water contamination may cause corrosion of metals due to formation of hydrochloric acid. |

## Section 11. Toxicological Information

| Component Toxicity | LD50 Oral | LD50 Dermal | LC50 Inhalation |
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| Dichloromethane | >2.0 g/kg (Rat) | | 76 g/m$^3$ (Rat) 4h |

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| **Likely Routes of Exposure** | |
| **Skin:** | Prolonged and repeated contact will cause irritation and potentially burns. Contact leaves burning and then cold sensation. Should not be absorbed through the skin. |
| **Eyes:** | Irritation may be slow to heal. Vapour may cause eye irritation, discomfort and redness. Can cause corneal injury. |
| **Inhalation:** | May cause irritation to the upper respiratory tract. Excessive exposure may cause unconsciousness and death. May cause carboxyhemoglobinemia – impairment of the bloods ability to transport oxygen. Anesthetic effects can be observed at levels in the range of 500 – 1000 ppm. Progressively higher levels (over 1000 ppm) can cause dizziness, drunkenness, and as high as 10,000 ppm, unconsciousness and death. These high levels may also cause cardiac arrhythmias (irregular heart beat). |
| **Ingestion:** | Oral toxicity is low. Small amounts ingested incidentally during handling are not considered likely to cause injury. Larger amounts are considered harmful. Aspiration into the lungs may occur during ingestion or vomiting, resulting in lung injury. |
| **Acute Toxicity Estimates (ATE)** | LD50 Oral - Rat - > 2,000 mg/kg<br>LC50 Inhalation - Rat - 52,000 mg/m3<br>LD50 Dermal - Rat - > 2,000 mg/kg |
| **STOT (Specific Target Organ Toxicity) – Single Exposure** | May cause respiratory irritation. May cause drowsiness or dizziness. |
| **Aspiration Toxicity** | Not classified |
| **STOT (Specific Target Organ Toxicity) – Repeated Exposure** | Inhalation - May cause damage to organs through prolonged or repeated exposure. Central nervous system (oral) - may cause damage to organs through prolonged or repeated exposure (liver, blood) |
| **Skin Corrosion / Irritation** | May be harmful if absorbed through skin. Causes skin irritation. |
| **Serious Eye Damage / Irritation** | Causes eye irritation. |
| **Respiratory or Skin Sensitization** | Not classified |
| **Carcinogenicity** | Not listed. IARC - Carcinogens - Group 2B ACGIH – A3. |
| **Reproductive Toxicity** | |
| - **Sexual Function and Fertility** | Not classified |

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| - **Development of Offspring** | Not classified |
| - **Effects on or via Lactation** | Not classified |
| **Germ Cell Mutagenicity** | Genotoxicity in vivo - Rat - Oral DNA damage |
| **Interactive Effects** | None known |
| **Other Information** | None known |

| **Section 12. Ecological Information** | |
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| **Ecotoxicity** | Dichloromethane: LC50 193 mg/L (Lepomis macrochirus) 96 hr Static and flow through LC50 262 - 855 mg/L (Pimephales promelas) 96 hr static LC50: 140.8 – 277.8 mg/L (Pimephales promelas) 96 hr flow through EC50 660 mg/L ( Pseudokirchneriella subcapitata) 72 hr |
| **Persistence and Degradability** | Result: < 26 % - Not readily biodegradable. Method: OECD Test Guideline 301C |
| **Bioacumulative Potential** | No data |
| **Biodegradability** | Not readily bio-degradable |
| **Mobility in Soil** | Potential for mobility in soil is very high. |
| **Other Adverse Effects** | None known |

| **Section 13. Disposal Considerations** | |
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| **Disposal Considerations** | Dispose of contents / container in accordance with local regulations. |

| **Section 14. Transport Information** | |
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| **UN Number** | 1593 |
| **UN Proper Shipping Name** | Dichloromethane |
| **Transport Hazard Class(es)** | 6.1 |
| **Packaging Group** | III |
| **Environmental Hazards** | Not applicable |
| **Bulk Transport** | Not applicable |
| **Special Precaution** | Not applicable |
| **DOT Erg#** | 160 |

| Section 15. Regulatory Information | |
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| **Canada – DSL Inventory** | All components of this product are either on the Domestic Substances List (DSL), Non-Domestic Substances List (NDSL), or exempt |
| **TSCA** | All components of this product are either on the Toxic Substances Control Act (TSCA) Inventory List or exempt |
| **Additional Information** | None |

| Section 16. Other Information | |
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| **NFPA Rating** | Health-2/ Flammability-1/Reactivity-0/Special Hazard-Not applicable |
| **HMIS Rating** | Health-2/Flammability-1/Reactivity-0/Personal Protection-See Section 8. |
| **Prepared by:** | Chemfax Products Ltd., Technical Department |
| **Date Prepared:** | 3 August, 2012 |
| **Date of Latest Revision:** 25 January 2021 | |

**Disclaimer**

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