








EMERGENCY NUMBERS:

 (USA) CHEMTREC : 1(800) 424-9300 (24hrs)
 (CAN) CANUTEC : 1(613) 996-6666 (24hrs)
 (USA) Anachemia : 1(518) 297-4444
 (CAN) Anachemia : 1(514) 489-5711

WHMIS	Protective Clothing	TDG Road/Rail
WHMIS CLASS: D-1B D-2A D-2B		TDG CLASS: 6.1 PIN: UN1593 PG: III
 	   	

Section I. Product Identification and Uses

Product name	DICHLOROMETHANE	CI#	Not available.
Chemical formula	CH ₂ Cl ₂	CAS#	75-09-2
Synonyms	Methylene chloride, Methylene dichloride, AC-3172, AC-3172PG, AC-3172SC, AC-3172T, GD-3170, GD-3171, GD-3172, M-11126, 32667, 32679, 32652, 32648, 32655,	Code	AC-3172
Supplier	Anachemia Canada. 255 Norman. Lachine (Montreal), Que H8R 1A3	Formula weight	84.93
		Supersedes	
Material uses	For laboratory use only.		

Section II. Ingredients

Name	CAS #	%	TLV
1) DICHLOROMETHANE	75-09-2	60-100	Exposure limits: ACGIH TWA 50 ppm (174 mg/m ³) OSHA PEL-TWA 25 ppm OSHA PEL-Ceiling 125 ppm

Toxicity values of the hazardous ingredients
DICHLOROMETHANE:
 ORAL (LD50): Acute: 1600 mg/kg (Rat). 873 mg/kg (Mouse).
 VAPOR (LC50): Acute: 52000 mg/m³ (Rat). 14400 mg/m³ (Mouse) (7 hour(s)).

Section III. Physical Data

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Physical state and appearance / Odor	Clear, colorless liquid with characteristic odor.
pH (1% soln/water)	Not available.
Odor threshold	150-300 ppm
Percent volatile	100% (V/V)
Freezing point	-96.7°C
Boiling point	39.8 to 41°C
Specific gravity	1.329 (Water = 1)
Vapor density	2.93 (Air = 1)
Vapor pressure	349 (420) mm Hg @ 20°C (25°C)
Water/oil dist. coeff.	0.0
Evaporation rate	27.5 (n-Butyl acetate = 1).
Solubility	2% (in H ₂ O)

Section IV. Fire and Explosion Data

Flash point	No flash point in conventional closed tester. Vapors can burn in air above 100°C.
Flammable limits	LOWER: 12% UPPER: 25%
Auto-ignition temperature	556°C
Fire degradation products	Oxides of carbon (CO, CO ₂), chlorine, hydrogen chloride, phosgene.
Fire extinguishing procedures	Use extinguishing media suitable for surrounding materials. Wear adequate personal protection to prevent contact with material or its combustion products. Self contained breathing apparatus with a full facepiece operated in a pressure demand or other positive pressure mode. Disperse vapors with water spray if they have not ignited. Cool containing vessels with flooding quantities of water until well after fire is out.
Fire and Explosion Hazards	Dichloromethane vapors concentrated in a poorly ventilated area can be ignited upon contact with a high intensity source of heat. Vapor forms explosive mixture with air. The sensitivity to static discharge is not available. The sensitivity to impact is not available. Emits toxic fumes under fire conditions.

Section V. Toxicological Properties

Routes of entry	Inhalation and ingestion. Eye contact. Skin contact. Skin absorption.
Effects of Acute Exposure	Harmful by ingestion, inhalation or skin absorption. Irritant. Dichloromethane is metabolized to carbon monoxide which reduces the blood's ability to carry oxygen (carboxyhemoglobinemia). May be fatal. Target organs: skin, cardiovascular system, eyes, central nervous system, (in animals: lung, liver, salivary gland and mammary gland tumors). 2300 ppm (DICHLOROMETHANE) is immediately dangerous to life or health.
Eye	Irritation, corneal burns, conjunctivitis and possible corneal damage.
Skin	Causes irritation, defatting, drying, and craking of the skin. Possibility of skin burns if not removed rapidly. May cause dermatitis. May be absorbed through the skin.
Inhalation	Vapors are irritating to the nose, throat and respiratory tract. In confined or poorly ventilated areas, vapors can readily accumulate and can cause unconsciousness and death. Minimal anaesthetic or narcotic effects may be seen in the range of 500-1000 ppm dichloromethane. May cause cyanosis, central nervous system depression, cardiac arrhythmia, systemic poisoning, and asphyxiation. Excessive exposure may cause carboxyhemoglobinemia, thereby impairing the blood's ability to transport oxygen. See ingestion.
Ingestion	May cause irritation and burning of the mouth, throat and respiratory tract. May cause cyanosis, abdominal pain, central nervous system depression (headache, nausea, vomiting, drowsiness, weakness, dyspnea, incoordination, etc.), cardiac arrhythmia, liver and kidney damage, and systemic poisoning and death possible. Guard against aspiration into lungs (may cause chemical pneumonitis which can be fatal).

Section V. Toxicological Properties

Effects of Chronic Overexposure May cause carboxyhemoglobinemia, encephalopathy, central nervous system depression, liver, kidney, lung, blood, skin, eye and pancreas damage. Animal: causes cancer of the lungs, liver, salivary and mammary glands. Potential carcinogen. IARC: 2B Possibly carcinogenic to humans. ACGIH: A3 Confirmed animal carcinogen with unknown relevance to humans. Possible mutagen. Human: passes through the placenta, excreted in maternal milk. In vitro studies in mammal cells have shown mutagenic action. Dichloromethane can cause adverse effects on the blood. These effects include blood in the urine, anemia, and carboxyhemoglobinemia caused by metabolism of dichloromethane to carbon dioxide in the blood. Initial manifestation of carboxyhemoglobinemia is cyanosis, characterized by cherry-red lips, tongue and mucous membranes and jaundice. Teratogenic effects: Not available. Toxicity of the product to the reproductive system: Not available. To the best of our knowledge the chronic toxicity of this substance has not been fully investigated.

Section VI. First Aid Measures

Eye contact Immediately flush eyes with large amounts of water for at least 20 minutes holding lids apart to ensure flushing of the entire surface. Obtain immediate medical attention.

Skin contact Immediately flush skin with plenty of water and soap for at least 20 minutes while removing contaminated clothing and shoes. Call a physician. Wash contaminated clothing before reusing.

Inhalation Remove patient to fresh air. Administer approved oxygen supply if breathing is difficult. Administer artificial respiration or CPR if breathing has ceased. Seek immediate medical attention. Do not give vasopressor drugs (epinephrine, adrenaline, ephedrine, etc...) as there may be danger of cardiac arrhythmia.

Ingestion DO NOT induce vomiting. If conscious, wash out mouth with water. Immediately transport victim to an emergency facility. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomitus. Emergency Medical Care: 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. Exposure may increase "myocardial irritability". Do not administer sympathomimetic drugs unless absolutely necessary. If burn is present, treat as any thermal burn, after decontamination. There is no specific antidote. Supportive care. Treatment based on judgement of the physician in response to reactions of the patient. Carboxyhemoglobinemia may aggravate any preexisting condition sensitive to a decrease in available oxygen, such as chronic lung disease, coronary artery disease or anemias.

Section VII. Reactivity Data

Stability Stable. Conditions to avoid: High temperatures, sparks, open flames and all other sources of ignition, contamination.

Hazardous decomp. products Hydrogen chloride, chlorine, phosgene.

Incompatibility Oxidizing agents, bases, alkali metals such as potassium and sodium, metals such as zinc, aluminum, and magnesium, powdered metals, reducing agents, nitric acid, amines, aluminum trichloride, nitrogen trioxide, ethylene, acids may cause fires and explosions. May attack some forms of plastics, rubbers and coatings.

Reaction Products May react violently with metals such as sodium, potassium and barium, particularly if they are finely divided. Hydrolysis producing small amounts of hydrochloric acid is possible with gross water contamination. Hazardous polymerization will not occur.

Section VIII. Preventive Measures

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Protective Clothing in case of spill and leak	Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves. Full suit.
Spill and leak	Evacuate the area. Eliminate all sources of ignition. Absorb on sand or vermiculite and place in a closed container for disposal. Ventilate area and wash spill site after material pick up is complete. DO NOT empty into drains. DO NOT touch damaged container or spilled material. Stay upwind: Keep out of low areas. Prevent entry into sewers, basements or confined areas; dike if needed.
Waste disposal	Dispose of waste material at an approved (hazardous) waste treatment/ disposal facility in accordance with applicable local, provincial and federal regulations. This material and its container must be disposed of in a safe way. Harmful to aquatic life at low concentrations. Can be dangerous if allowed to enter drinking water intakes. Do not contaminate domestic or irrigation water supplies, lakes, streams, ponds, or rivers.
Storage and Handling	Keep at temperature not exceeding 25°C. Store in a cool place away from heated areas, sparks, and flame. Store in a well ventilated area. Store away from incompatible materials. Do not add any other material to the container. Do not wash down the drain. Do not breathe gas/fumes/vapor/spray. In case of insufficient ventilation, wear suitable respiratory equipment. Keep away from direct sunlight or strong incandescent light. Keep container tightly closed and dry. Manipulate under an adequate fume hood. Empty containers may contain a hazardous residue. Handle and open container with care. Take off immediately all contaminated clothing. This product must be manipulated by qualified personnel. Do not get in eyes, on skin, or on clothing. Wash well after use. In accordance with good storage and handling practices. Do not allow smoking and food consumption while handling. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Wear suitable protective clothing. Do not use pressure to dispense. Do not use handling equipment or containers composed of magnesium, aluminum or their alloys. Protect from moisture. Watch for accumulation in low confined areas. In case of accident or if you feel unwell, seek medical advice immediately (show the label when possible.).

Section IX. Protective Measures

Protective clothing	Splash goggles. Impervious vitron gloves, apron, coveralls, and/or other resistant protective clothing. Sufficient to protect skin. Prior to use, user should confirm impermeability. A NIOSH/MSHA-approved air-purifying respirator equipped with organic vapor cartridges for concentrations up to 50 ppm. An air-supplied respirator if concentrations are higher or unknown. Have available and use as appropriate: face shields, rubber suits, aprons, and boots. Do not wear contact lenses. Make eye bath and emergency shower available. Ensure that eyewash station and safety shower is proximal to the work-station location.
Engineering controls	Use only in a chemical fume hood to keep airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment. Do not use in unventilated spaces. Vapors are heavier than air and may travel along the ground or pool in low areas. Because vapor is heavy, ventilation must be provided at floor level as well as at higher levels.

Section X. Other Information

Special Precautions or comments	<p>Toxic! Carcinogen! Mutagen! Neurotoxic! Severe irritant! Possible risks of irreversible effects. Do not breathe vapor. Avoid all contact with the product. Avoid prolonged or repeated exposure. Use only in a chemical fume hood. Keep away from heat, sparks and flame. Do not use handling equipment or containers composed of magnesium, aluminum, zinc or their alloys. Handle and open container with care. Container should be opened only by a technically qualified person.</p> <p>Synergistic materials: Exposure to a combination of carbon monoxide and methylene chloride must be limited.; Alcohols may interact synergistically with chlorinated solvents (example: carbon tetrachloride, chloroform, bromotrichloromethane), dithiocarbamates (example: disulfiram), dimethylnitrosamine and thioacetamide. Exposure to and/or consumption of alcohol may increase toxic effects.</p> <p>RTECS NO: PA8050000 (Dichloromethane).</p>
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NFPA

Prepared by MSDS Department/Département de F.S..

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Telephone# (514) 489-5711

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