

MATERIAL SAFETY DATA SHEET

Dichloromethane

Section 1 - Chemical Product and Company Identification

MSDS Name:	Dichloromethane
Synonyms:	Methylene chloride; Methane dichloride; Methylene bichloride; Methylene dichloride; Dichloromethane; DCM.
Company Identification: (INDIA)	Veritas House, 70 Mint Road, Fort, Mumbai - 400 001. INDIA
For information in the INDIA, call:	Tel: +91 - 22 - 2275 5555 / 6184 0000, Fax: +91 - 22 - 2275 5556 / 6184 0001

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	%	EINECS#
75-09-2	Methylene chloride	>99.5	200-838-9

Hazard Symbols:	XN
	
Risk Phrases:	40

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Limited evidence of a carcinogenic effect.

Potential Health Effects

Eye:	Contact with eyes may cause severe irritation, and possible eye burns.
Skin:	May be absorbed through the skin. Causes irritation with burning pain, itching, and redness. Prolonged exposure may result in skin burns.
Ingestion:	Causes 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. May cause carboxyhemoglobinemia.
Inhalation:	Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. Causes respiratory tract irritation. May cause narcotic effects in high concentration. 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.
Chronic:	Possible cancer hazard based on tests with laboratory animals. Prolonged or repeated skin contact may cause dermatitis. May cause reproductive and fetal effects. Laboratory experiments have resulted in mutagenic effects. Chronic exposure may cause lung, liver, and pancreatic tumors. May cause conjunctivitis and/or corneal burns.

Section 4 - First Aid Measures

Eyes:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid.
Skin:	In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.
Ingestion:	If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.
Notes to Physician:	Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information:	As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Use water spray to keep fire-exposed containers cool. No flash point in conventional closed tester, but forms flammable vapor-air mixtures in larger volumes and may be an explosion hazard in a confined space.
Extinguishing Media:	Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Section 6 - Accidental Release Measures

General Information:	Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks:	Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Provide ventilation.

Section 7 - Handling and Storage

Handling:	Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Keep away from heat, sparks and flame. Use only with adequate ventilation. Avoid breathing vapor or mist.
Storage:	Store in a tightly closed container. Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances. Store below 40°C. Keep away from active metals.

Section 8 - Exposure Controls, Personal Protection

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.
Exposure Limits	CAS# 75-09-2: United Kingdom, WEL - TWA: 100 ppm TWA; 350 mg/m ³ TWA United Kingdom, WEL - STEL: 300 ppm STEL; 1060 mg/m ³ STEL United States OSHA: ; 12.5 ppm Action Level; 25 ppm TWA; 125 ppm STEL (15 min). Cancer, cardiac effects, central nervous system effects, liver effects, and skin and eye irritation - See 29 CFR 1910.1052)

	Belgium - TWA: 50 ppm TWA; 177 mg/m3 TWA
	France - VME: 50 ppm VME; 180 mg/m3 VME France - VLE: 100 ppm VLCT; 350 mg/m3 VLCT
	Japan: 50 ppm OEL; 170 mg/m3 OEL Japan: 100 ppm Ceiling; 340 mg/m3 Ceiling
	Malaysia: 50 ppm TWA
	Netherlands: 500 ppm STEL; 1750 mg/m3 STEL Netherlands: 100 ppm MAC; 350 mg/m3 MAC
	Russia: 50 mg/m3 TWA (vapor) Russia: 100 mg/m3 STEL (vapor)
	Spain: 50 ppm VLA-ED; 177 mg/m3 VLA-ED

Personal Protective Equipment

Eyes:	Wear chemical splash goggles.
Skin:	Viton gloves are recommended.
Clothing:	Wear appropriate protective clothing to prevent skin exposure.
Respirators:	A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State:	Liquid
Color:	colorless
Odor:	ethereal odor - chloroform-like
pH:	Not available
Vapor Pressure:	350 mm Hg @ 20 deg C
Viscosity:	Not available
Boiling Point:	40 deg C (104.00°F)
Freezing/Melting Point:	-97 deg C (-142.60°F)
Autoignition Temperature:	556 deg C (1,032.80 deg F)
Flash Point:	Not available
Explosion Limits: Lower:	13 vol %
Explosion Limits: Upper:	23 vol %
Decomposition Temperature:	Not available
Solubility in water:	Slightly soluble
Specific Gravity/Density:	1.33 (Water=1)
Molecular Formula:	CH ₂ Cl ₂
Molecular Weight:	84.93

Section 10 - Stability and Reactivity

Chemical Stability:	Stable at room temperature in closed containers under normal storage and handling conditions. May form explosive mixtures in atmospheres having high oxygen content.
Conditions to Avoid:	Excess heat, attacks some plastics, rubber, and coatings, confined spaces, When no water is present, dichloromethane is not corrosive to metals. At high temperatures and in the presence of water (causing slow decomposition forming HCl), corrosion of iron, some stainless steels, copper and aluminum can occur..
Incompatibilities with Other Materials	Strong oxidizing agents, strong bases, chemically active metals.

Hazardous Decomposition Products	Hydrogen chloride, phosgene, carbon monoxide, carbon dioxide.
Hazardous Polymerization	Will not occur.

Section 11 - Toxicological Information

RTECS#:	CAS# 75-09-2: PA8050000
LD50/LC50:	RTECS: CAS# 75-09-2: Draize test, rabbit, eye: 162 mg Moderate; Draize test, rabbit, eye: 10 mg Mild; Draize test, rabbit, eye: 500 mg/24H Mild; Draize test, rabbit, skin: 810 mg/24H Severe; Draize test, rabbit, skin: 100 mg/24H Moderate; Inhalation, mouse: LC50 = 14400 ppm/7H; Inhalation, mouse: LC50 = 49100 mg/m ³ /6H; Inhalation, mouse: LC50 = 54000 mg/m ³ /2H; Inhalation, mouse: LC50 = 56220 mg/m ³ /7H; Inhalation, rat: LC50 = 52 gm/m ³ ; Inhalation, rat: LC50 = 76000 mg/m ³ /4H; Inhalation, rat: LC50 = 52000 mg/m ³ /6H; Oral, mouse: LD50 = 873 mg/kg; Oral, rabbit: LD50 = 2000 mg/kg; Oral, rat: LD50 = 1600 mg/kg; Oral, rat: LD50 = 985 mg/kg;
Carcinogenicity:	Methylene chloride - ACGIH: A3 - Confirmed animal carcinogen with unknown relevance to humans California: carcinogen, initial date 4/1/88 NTP: Suspect carcinogen IARC: Group 2B carcinogen
Other:	See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Ecotoxicity:	Fish: Bluegill/Sunfish: 230mg/L; 24H; Static Fish: Fathead Minnow: 196mg/L; 96H
---------------------	--

Section 13 - Disposal Considerations

Products considered hazardous for supply are classified as Special Waste and the disposal of such chemicals is covered by regulations which may vary according to location. Contact a specialist disposal company or the local authority or advice. Empty containers must be decontaminated before returning for recycling.

Section 14 - Transport Information

	IATA	IMO	RID/ADR
Shipping Name:	DICHLOROMETHANE	DICHLOROMETHANE	DICHLOROMETHANE
Hazard Class:	6.1	6.1	6.1
UN Number:	1593	1593	1593
Packing Group:	III	III	III

USA RQ: CAS# 75-09-2: 1000 lb final RQ; 454 kg final RQ

Section 15 - Regulatory Information

European/International Regulations
European Labeling in Accordance with EC Directives

Hazard Symbols: XN

Risk Phrases:

- R 40 Limited evidence of a carcinogenic effect.

Safety Phrases:

- S 23 Do not inhale gas/fumes/vapour/spray
- S 24/25 Avoid contact with skin and eyes.
- S 36/37 Wear suitable protective clothing and gloves.

WGK (Water Danger/Protection)

- CAS# 75-09-2: 2

Canada

- CAS# 75-09-2 is listed on Canada's DSL List

US Federal

- TSCA
- CAS# 75-09-2 is listed on the TSCA Inventory.

Section 16 - Other Information

MSDS Creation Date:	July 22, 2015
Revision #0 Date	

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.