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Hefei TNJ Chemical Industry Co.,Ltd.

B910-911 Xincheng Business Center,

Qianshan Rd. Hefei 230022 China

Tel : (0086) 551 65418678

Fax: (0086) 551 65418697

Email: info@tnjchem.com

Site: www.tnjchem.com

## Material Safety Data Sheet

### Methylene chloride

#### Section 1: Chemical Product and Company Identification

**Molecular formula:** CH<sub>2</sub>Cl<sub>2</sub>

**CAS Nr:**75-09-2

**EINECS:** 200-838-9

**Molecular weight:**84.93

**Synonyms:** Methylene chloride

**Contact Information for Emergency:** (0086) 551 65418678

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Qianshan Road, Hefei

230004Anhui

China

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#### Section 2: Composition and Information on Ingredients

**Composition:**

Name	CAS #	% By Weight
Methylene chloride	75-09-2	100%

#### Section 3: Hazards Identification

**Potential Acute Health Effects:** Very hazardous in case of eye contact (irritant), of ingestion, of inhalation. Hazardous in case

of skin contact (irritant, permeator). Inflammation of the eye is characterized by redness, watering, and itching.

**Potential Chronic Health Effects:** CARCINOGENIC EFFECTS: Classified + (Proven.) by OSHA. Classified 2B (Possible

for human.) by IARC. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL

**TOXICITY:** Not available. The substance is toxic to lungs, the nervous system, liver, mucous membranes, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage.

#### Section 4: First Aid Measures

**Eye Contact:** Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

**Skin Contact:** In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient.

Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes

before reuse. Get medical attention.

**Serious Skin Contact:** Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream.

Seek

immediate medical attention.

**Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get

medical attention if symptoms appear.

**Serious Inhalation:** Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or

waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek

medical attention.

**Ingestion:** Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an

unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

**Serious Ingestion:** Not available.

#### Section 5: Fire and Explosion Data

**Flammability of the Product:** May be combustible at high temperature.

**Auto-Ignition Temperature:** 556°C (1032.8°F)

**Flash Points:** Not available.

**Flammable Limits:** LOWER: 12% UPPER: 19%

**Products of Combustion:** These products are carbon oxides (CO, CO<sub>2</sub>), halogenated compounds.

**Fire Hazards in Presence of Various Substances:** Not available.

**Explosion Hazards in Presence of Various Substances:** Risks of explosion of the product in presence of mechanical

impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

**Fire Fighting Media and Instructions:** SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or

foam. Do not use water jet.

**Special Remarks on Fire Hazards:** Not available.  
**Special Remarks on Explosion Hazards:** Not available.

### Section 6: Accidental Release Measures

**Small Spill:** Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.  
**Large Spill:** Absorb with an inert material and put the spilled material in an appropriate waste disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

### Section 7: Handling and Storage

**Precautions:** Keep locked up.. Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe gas/ fumes/ vapor/spray. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes.  
**Storage:** Keep container tightly closed. Keep container in a cool, well-ventilated area.

### Section 8: Exposure Controls/Personal Protection

**Engineering Controls:** Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the workstation location.  
**Personal Protection:** Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.  
**Personal Protection in Case of a Large Spill:** Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.  
**Exposure Limits:** TWA: 50 from ACGIH (TLV) [United States] TWA: 174 from ACGIH (TLV) [United States] Consult local authorities for acceptable exposure limits.

### Section 9: Physical and Chemical Properties

**Physical state and appearance:** Liquid.

**Odor:** Not available.

**Taste:** Not available.

**Molecular Weight:** 84.93g/mole

**Color:** Not available.

**pH (1% soln/water):** Not available.

**Boiling Point:** 39.75°C (103.5°F)

**Melting Point:** -96.7°C (-142.1°F)

**Critical Temperature:** Not available.

**Specific Gravity:** 1.3266 (Water = 1)

**Vapor Pressure:** 46.5 kPa (@ 20°C)

**Vapor Density:** 2.93 (Air = 1)

**Volatility:** Not available.

**Odor Threshold:** 214 ppm

**Water/Oil Dist. Coeff.:** The product is equally soluble in oil and water; log(oil/water) = 0.1

**Ionicity (in Water):** Not available.

**Dispersion Properties:** See solubility in water, methanol, diethyl ether, n-octanol, acetone.

**Solubility:** Easily soluble in methanol, diethyl ether, n-octanol, acetone. Partially soluble in cold water.

## Section 10: Stability and Reactivity Data

**Stability:** The product is stable.

**Instability Temperature:** Not available.

**Conditions of Instability:** Not available.

**Incompatibility with various substances:** Not available.

**Corrosivity:** Non-corrosive in presence of glass.

p. 4

**Special Remarks on Reactivity:** Not available.

**Special Remarks on Corrosivity:** Not available.

**Polymerization:** Will not occur.

## Section 11: Toxicological Information

**Routes of Entry:** Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.

**Toxicity to Animals:** WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR

EXPOSURE. Acute oral toxicity (LD50): 1600 mg/kg [Rat]. Acute toxicity of the vapor (LC50): 52000 1 hours [Rat].

**Chronic Effects on Humans:** CARCINOGENIC EFFECTS: Classified + (Proven.) by OSHA. Classified 2B (Possible for human.) by IARC. Causes damage to the following organs: lungs, the nervous system, liver, mucous membranes, central nervous system (CNS).

**Other Toxic Effects on Humans:** Very hazardous in case of ingestion, of inhalation. Hazardous in case of skin contact (irritant, permeator).

**Special Remarks on Toxicity to Animals:** Not available.

**Special Remarks on Chronic Effects on Humans:** Human: passes through the placenta, excreted in maternal milk.

**Special Remarks on other Toxic Effects on Humans:** Not available.

## Section 12: Ecological Information

**Ecotoxicity:** Not available.

**BOD5 and COD:** Not available.

**Products of Biodegradation:** Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation:** The products of degradation are more toxic.

**Special Remarks on the Products of Biodegradation:** Not available.

## Section 13: Disposal Considerations

**Waste Disposal:**

## Section 14: Transport Information

**DOT Classification:** CLASS 6.1: Poisonous material.

**Identification:** : Dichloromethane UNNA: 1593 PG: III

**Special Provisions for Transport:** Not available.

## Section 15: Other Regulatory Information

**Federal and State Regulations:** California prop. 65: This product contains the following ingredients for which the State

of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Methylene chloride California prop. 65: This product contains the following ingredients for which the State of

California has found to cause cancer which would require a warning under the statute: Methylene chloride Pennsylvania

p. 5

RTK: Methylene chloride Massachusetts RTK: Methylene chloride TSCA 8(b) inventory: Methylene chloride SARA 313 toxic

chemical notification and release reporting: Methylene chloride CERCLA: Hazardous substances.: Methylene chloride

**Other Regulations:** OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

**Other Classifications:**

**WHMIS (Canada):** CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC). CLASS D-2A: Material

causing other toxic effects (VERY TOXIC).

**DSCL (EEC):** R22- Harmful if swallowed. R38- Irritating to skin. R41- Risk of serious damage to eyes. R45- May cause cancer.

**HMIS (U.S.A.):**

**Health Hazard:** 2

**Fire Hazard:** 1

**Reactivity:** 0

**Personal Protection:** h

**National Fire Protection Association (U.S.A.):**

**Health:** 2

**Flammability:** 1

**Reactivity:** 0

**Specific hazard:**

**Protective Equipment:** Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent.

Wear appropriate respirator when ventilation is inadequate. Splash goggles.

## Section 16: Other Information

**References:** Not available.

**Other Special Considerations:** Not available.

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