

MALLINCKRODT

Material Safety Data Sheet

Mallinckrodt, Inc. Science Products Division, P.O. Box M Paris, KY 40361

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Emergency Telephone Number: 314-982-5000

DICHLOROMETHANE

PRODUCT IDENTIFICATION:

Synonyms: Methylene chloride; methylene dichloride

Formula CAS No.: 75-09-2

Molecular Weight: 84.93

Chemical Formula: CH₂Cl₂

Hazardous Ingredients: Methylene chloride

PRECAUTIONARY MEASURES

WARNING! HARMFUL IF SWALLOWED OR INHALED. A CENTRAL NERVOUS SYSTEM DEPRESSANT. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT.

POSSIBLE CANCER HAZARD BASED ON TESTS WITH LABORATORY ANIMALS. EXPOSURE MAY CREATE A CANCER RISK.

Avoid breathing vapor.
Keep container closed.
Use with adequate ventilation.
Wash thoroughly after handling.
Do not get in eyes, on skin, or on clothing.

EMERGENCY/FIRST AID

If swallowed get immediate medical attention. Induce vomiting immediately by giving two glasses of water and sticking finger down throat. Never give anything by mouth to an unconscious person. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes.
SEE SECTION 5.

DOT Hazard Class: ORM-A

SECTION 1 Physical Data

Appearance: Clear, colorless liquid.
Odor: Chloroform-like.
Solubility: 1.32 gm/100 gm water @ 20°C (68°F).
Boiling Point: 39.8°C (104°F).
Melting Point: -97°C (-142°F).
Specific Gravity: 1.3
Vapor Density (Air=1): 2.9
Vapor Pressure (mm Hg): 350 @ 20°C (68°F).
Evaporation Rate: (BuAc=1): 27.5

SECTION 2 Fire and Explosion Information

Fire:
Flashpoint: None.
Autoignition temperature: > 556°C (1033°F).
Flammable limits in air, % by volume:
lcl: 12, ucl: 19 (in oxygen).
Forms flammable vapor-air mixtures above 100°C (212°F).

Explosion:
No explosion hazard under ordinary conditions, but will form explosive mixtures in atmospheres having high oxygen content, in liquid oxygen, potassium, sodium sodium, potassium alloy, nitrogen dioxide.

Fire Extinguishing Media:
Dry chemical, foam or carbon dioxide. Water spray may be used to keep fire exposed containers cool.

Special Information:
In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Vapors can flow along surfaces to distant ignition source and flash back.

SECTION 3 Reactivity Data

Stability:
Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products:
Emits highly toxic fumes of phosgene when heated to decomposition. Decomposes in a flame or hot surface to form toxic gas phosgene and corrosive mists of hydrochloric acid.

Hazardous Polymerization:
This substance does not polymerize.

Incompatibilities:
Contact with strong oxidizers, strong caustics, and chemically active metals, such as aluminum and magnesium powder, sodium, potassium, and lithium. Avoid contact with open flames and electrical arcs.

SECTION 4 Leak/Spill Disposal Information

Ventilate area of leak or spill. Remove all sources of ignition. Clean-up personnel require protective clothing and respiratory protection from vapors. Contain and recover liquid when possible. Collect as hazardous waste and atomize in a suitable RCRA approved combustion chamber, or absorb with vermiculite, dry sand, earth or similar material for disposal as hazardous waste in a RCRA approved facility. Do not flush to sewer!

Ensure compliance with local, state and federal regulations.

NFPA Ratings: Health: 2 Flammability: 1 Reactivity: 0

Effective Date: 04-06-89 Supersedes 10-21-85

DICHLOROMETHANE

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SECTION 5 Health Hazard Information

A. EXPOSURE / HEALTH EFFECTS

Inhalation:

May cause irritation of respiratory tract. May cause liver injury and blood disorders. Has a strong narcotic effect. May cause mental confusion, light-headedness, nausea, vomiting and headache. Continued exposure may result in unconsciousness and death. A mild central nervous system depressant.

Ingestion:

May cause irritation of the gastrointestinal tract with vomiting. If vomiting results in aspiration, chemical pneumonia could follow. Absorption through gastrointestinal tract may produce symptoms of central nervous system depression ranging from light headedness to unconsciousness.

Skin Contact:

May cause redness, irritation or burns. Liquid degrades the skin. May be absorbed through skin, but not expected to produce toxicity through this route.

Eye Contact:

Vapors may cause eye irritation. Contact may produce pain and inflammation.

Chronic Exposure:

Can cause headache, mental confusion, depression, loss of appetite, nausea, cough, lack of balance, and visual disturbances. Can cause dermatitis upon prolonged skin contact.

Aggravation of Pre-existing Conditions:

Persons with pre-existing skin disorders, eye problems, impaired liver, kidney, respiratory or cardiovascular function may be more susceptible to the effects of this substance.

B. FIRST AID

Inhalation:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion:

If swallowed get immediate medical attention. Induce vomiting immediately by giving two glasses of water and sticking finger down throat. Never give anything by mouth to an unconscious person.

Skin Exposure:

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Call a physician immediately.

Eye Exposure:

Wash eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

C. TOXICITY DATA (RTECS, 1986)

Oral rat LD50: 2524 mg/kg. Mutation referenced cited. Reproductive effects data cited. Dermal rabbit LDLO: 2700mg/Kg (vapor) Inhalation rat LCS0: 24445 ppm (vapor) Carcinogenicity: NTP Inhalation Studies - some evidence of Carcinogenicity in male rats; clear evidence of Carcinogenicity in female rats; clear evidence of Carcinogenicity in male and female mice. (NTP Report 306, 1985).

SECTION 6 Occupational Control Measures

Airborne Exposure Limits:

-OSHA Permissible Exposure Limit (PEL): 500 ppm (TWA) 1000 ppm (ceiling) 2000 ppm/5m/2H (peak), (in process of 6b rulemaking)
-ACGIH Threshold Limit Value (TLV): 50 ppm (TWA) Listed as A2, suspected human carcinogen
NIOSH recommended standard-air: TWA 75 ppm peak 500 ppm for 15 min.

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details.

Personal Respirators: (NIOSH Approved)

If the TLV is exceeded, a half mask chemical cartridge respirator may be worn up to ten times the TLV or the maximum use concentration specified by the respirator supplier, whichever is less.

Skin Protection:

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls to prevent skin contact.

Eye Protection:

Use chemical safety goggles. Contact lenses should not be worn when working with this material. Maintain eye wash fountain and quick-drench facilities in work area.

SECTION 7 Storage and Special Information

Under normal conditions can be stored in galvanized iron, black iron or steel. Aluminum is not generally recommended. Keep in a tightly closed container. Protect container from physical damage. Outside or detached storage is recommended. Isolate from any source of heat or ignition. Wear special protective equipment (Sec. 6) for maintenance break-in or where exposures may exceed established exposure levels. Wash hands, face, forearms and neck when exiting restricted areas. Shower, dispose of outer clothing, change to clean garments at the end of the day. Avoid cross-contamination of street clothes. Wash hands before eating and do not eat, drink, or smoke in workplace.

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Addendum to Material Safety Data Sheet

REGULATORY STATUS

This Addendum Must Not Be

Detached from the MSDS

Identifies SARA 313 substance(s)

Any copying or redistribution of the MSDS

must include a copy of this addendum

(Chem.Key: DICME)

Product or Components
of Product:

DICHLOROMETHANE (75-09-2)

Hazard Categories for SARA

Section 311/312 Reporting

Acute Chronic Fire Pressure Reactive

X

X

SARA EHS Sect. 302
RQ (lbs.) TPQ (lbs.)

No

No

SARA Section 313 Chemicals
Name List Chemical Category

Yes

No

CERCLA Sec.103
RQ (lbs.)

1000

RCRA
Sec. 261.33

U080

SARA Section 302 EHS RQ: Reportable Quantity of Extremely Hazardous Substance, listed at 40 CFR 355.

SARA Section 302 EHS TPQ: Threshold Planning Quantity of Extremely Hazardous Substance. An asterisk (*) following a Threshold Planning Quantity signifies that if the material is a solid and has a particle size equal to or larger than 100 micrometers, the Threshold Planning Quantity = 10,000 LBS.

SARA Section 313 Chemicals: Toxic Substances subject to annual release reporting requirements listed at 40 CFR 372.65.

CERCLA Sec. 103: Comprehensive Environmental Response, Compensation and Liability Act (Superfund). Releases to air, land or water of these hazardous substances which exceed the Reportable Quantity (RQ) must be reported to the National Response Center, (800-424-8802); Listed at 40 CFR 302.4

RCRA: Resource Conservation and Reclamation Act. Commercial chemical product wastes designated as acute hazards and toxic under 40 CFR 261.33

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