

SAFETY DATA SHEET

Dichloromethane, (DCM), Methylene Chloride

This MSDS is valid for all grades that start with catalog number 313

1. IDENTIFICATION OF SUBSTANCE / MIXTURE AND OF SUPPLIER

Product Identifier: High Purity Chemicals
Synonyms: DCM; Methylene chloride (MC); Methylene dichloride; Methylene bichloride; Methane dichloride
Other means of identification: CAS No. 75-09-2
EINECS No. 200-838-9

Recommended use of the chemical and restrictions on use:

Commonly used as a solvent. It is also used as a paint stripper and in the manufacturing process of decaffeinated coffees and teas.

Supplier Details:

Pharmco Products, Inc.
1101 Isaac Shelby Drive, Shelbyville,
KY 40065, USA.
Tel: 502.232.7600
Fax: 502.633.6100
CCN17213

Pharmco Products, Inc.
58 Vale Road, Brookfield,
CT 06804, USA.
Tel: 203.740.3471
Fax: 203.740.3481
CCN17213

Distributed by:



4621 Technology Drive, Golden, CO 80403
pH: (303) 762-0800 fax: (303) 762-1240

Part #'s: M1021, M1038

Emergency Contact: CHEMTREC: 1.800.424.9300 (USA) / +1.703.527.3887 (International)

2. HAZARDS IDENTIFICATION

Emergency Overview:

WARNING! HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN. AFFECTS CENTRAL NERVOUS SYSTEM, LIVER, CARDIOVASCULAR SYSTEM, AND BLOOD. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. MAY CAUSE CANCER.

OSHA Hazards:

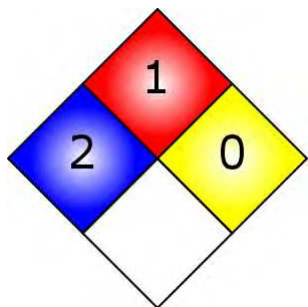
Carcinogen, Harmful by ingestion, Irritant, Target organ effect

Target Organs:

Blood, Central nervous system, Heart, Kidney, Liver, Pancreas

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NFPA



GHS label elements, including precautionary statements



Signal Word:

WARNING!

Hazard statement(s)

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.

Precautionary statement(s)

P261	Avoid breathing dust/fumes/gas/mist/vapors.
P501	Dispose of contents and container to an approved waste disposal plant.
P202	Do not handle until all safety precautions have been read and understood.
P309+P311	IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical attention.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P210	Keep away from heat, sparks, open flames, and hot surfaces. No

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P201	smoking.
P403 + P233	Obtain special instructions before use.
P271	Store in a well-ventilated place. Keep container tightly closed.
P281	Use only outdoors or in a well-ventilated area.
	Use personal protective equipment as required.

GHS Classification(s)

Carcinogenicity (Category 2)
 Eye irritation (Category 2)
 Skin irritation (Category 2)
 Specific target organ toxicity - repeated exposure (Category 2)
 Specific target organ toxicity - single exposure (Category 3)

Other hazards which do not result in classification:

Potential Health Effects:

Organ	Description
Eyes	Causes eye irritation.
Ingestion	Harmful if swallowed.
Inhalation	Can be harmful if inhaled. Causes respiratory tract irritation.
Skin	Harmful if absorbed through skin. Causes skin irritation.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Chemical identity:	Dichloromethane
Common name / Synonym:	DCM; Methylene chloride (MC); Methylene dichloride; Methylene bichloride; Methane dichloride
CAS number:	75-09-2
EINECS number:	200-838-9
ICSC number:	0058
RTECS #:	PA8050000
UN #:	1593
EC #:	602-004-00-3

% Weight	Material	CAS
100	Dichloromethane	75-09-2

4. FIRST AID MEASURES

General advice

Take proper precautions to ensure your own health and safety before attempting rescue and providing first aid. Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

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Skin

Wash skin with soap and copious amounts of water. Seek medical attention.

Inhalation

Remove person to fresh air. If signs/symptoms continue, get medical attention. Give oxygen or artificial respiration as needed.

Eyes

Thoroughly flush the eyes with large amounts of clean low-pressure water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation persists, seek medical attention.

Ingestion

DO NOT induce vomiting. If vomiting does occur, have victim lean forward to prevent aspiration. Rinse mouth with water. Seek medical attention. Never give anything by mouth to an unconscious individual.

5. FIRE FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media:

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Specific hazards arising from the chemical (e.g., nature of any hazardous combustion products):

Carbon oxides and hydrogen chloride gas expected to be the primary hazardous combustion products.

Special protective equipment and precautions for firefighters:

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Keep unopened containers cool by spraying with water.

Flammable Properties

Classification

Not flammable or combustible.

Autoignition temperature

556 °C (1,033 °F)

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Use personal protective equipment. Do not inhale vapors/mist/gas/dust. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental precautions:

Stop leak. Contain spill if possible and safe to do so. Prevent product from entering drains.

Methods and materials for containment and cleaning up:

Absorb with an inert dry material and place in an appropriate waste disposal container. Keep disposal containers

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closed when finished.

7. HANDLING AND STORAGE

Precautions for safe handling:

Do not get on skin or in eyes. Do not inhale vapor or mist. Take normal fire prevention measures.

Conditions for safe storage, including any incompatibilities:

Container must be sealed tightly and kept in a dry, well-ventilated space. Product should be stored under inert gas.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters, e.g., occupational exposure limit values or biological limit values:

Occupational Exposure Limits

Component	Source	Type	Value	Note
Dichloromethane	US (ACGIH)	TWA	50 ppm	ACGIH Threshold Limit Value

Appropriate engineering controls:

General room or local exhaust ventilation is usually required to meet exposure limit(s). Electrical equipment should be grounded and conform to applicable electrical code.

Individual protection measures, such as personal protective equipment:

Respiratory protection:

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection:

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection:

Use chemical safety goggles and/or a full face shield where splashing is possible. Use equipment approved by appropriate government standards, such as NIOSH (US) or EN166 (EU) Maintain eye wash fountain and quick-drench facilities in work area.

Skin and body protection:

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

Hygiene measures:

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Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	Liquid. Colorless, clear.
Odor	Specific data not available
Odor threshold	Specific data not available
pH	Specific data not available
Freezing point	-97 °C (-142 °F)
Initial boiling point and boiling range	40 °C (104 °F)
Flash point	Specific data not available
Evaporation rate	Specific data not available
Flammability (solid, gas)	Not flammable or combustible
Upper / Lower flammability or explosive limits	19 %(V) / 13% (V)
Vapor pressure	470.9 hPa (353.2 mmHg) at 20.0 °C (68.0 °F)
Vapor Density	2.9
Relative Density	1.325 g/mL at 25 °C (77 °F)
Solubility(ies)	slightly soluble
Partition coefficient n-octanol/water(ies)	log Pow: 1.25
Auto-ignition temperature	556 °C (1033 °F)
Decomposition temperature	Specific data not available
Formula (DICHLOROMETHANE)	CH ₂ Cl ₂
Molecular Weight (DICHLOROMETHANE)	84.93 g/mol

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	No data available
Conditions to avoid (e.g., static discharge, shock or vibration)	Heat, flames, and sparks. Extreme temperatures and direct sunlight.
Incompatible materials	Alkali metals, Aluminum, Strong oxidizing agents, Bases, Amines, Magnesium, Strong acids and strong bases, Vinyl compounds
Hazardous decomposition products	Carbon oxides and Hydrogen chloride gas are expected to be, under fire conditions, the primary hazardous decomposition products.

11. TOXICOLOGICAL INFORMATION

• Dichloromethane 75-09-2

Product Summary:

Laboratory tests have shown mutagenic effects. No data available for the teratogenic or reproductive effects of the

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product. No data available to designate product as an aspiration hazard.

Acute Toxicity:

LC50 (Inhalation)	Rat	52,000 mg/m3	
LD50 (Oral)	Rat	1,600 mg/kg	

Irritation:

Eyes

Rabbit - mild eye irritation - 24 hours

Respiratory or Skin Sensitization

No data available

Skin

Rabbit- severe skin irritation- 24 hours

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

May cause damage to Central Nervous System through prolonged or repeat exposure. Route: Inhalation

Specific target organ toxicity - single exposure (Globally Harmonized System)

Inhalation - May cause drowsiness or dizziness. - Central Nervous System

Germ Cell mutagenicity

Genotoxicity in vitro. Rat. Route: Oral. Effect: DNA Damage

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

May cause damage to organs through prolonged or repeated exposure. Route: Oral. Organs: Liver, Blood

Carcinogenicity

IARC: Group 2B: Possibly carcinogenic to humans

ACGIH: No data is available.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: OSHA regulated carcinogenic chemical.

Carcinogenicity - Rat - Inhalation. Tumorigenic:Neoplastic by RTECS criteria. Endocrine:Tumors.

Other Hazards

Organ	Description
Eyes	Irritating to the eyes.
Ingestion	Harmful if ingested.
Inhalation	Can be harmful if inhaled. Irritating to the respiratory tract.
Skin	Harmful if absorbed through skin. Irritating to skin.

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12. ECOLOGICAL INFORMATION

• Dichloromethane 75-09-2

Ecotoxicity (aquatic and terrestrial, where available):

Acute Fish Toxicity (DICHLOROMETHANE)

LC50 / 96 hours Fathead Minnow - 193 mg/L

Toxicity to Daphnia (DICHLOROMETHANE)

EC50 / 48 hours Water flea - 1,682 mg/L

Persistence and degradability:

No data available

Bioaccumulative potential:

No data available

Other adverse effects:

No data available

13. DISPOSAL CONSIDERATIONS

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging:

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

14. TRANSPORT INFORMATION

Description of waste residues and information on their safe handling and methods of disposal:

UN number	1593
UN proper shipping name	Dichloromethane
Transport hazard class(es)	6.1
Packing group (if applicable)	III

Reportable Quantity

1,000 lbs

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IMDG

UN-Number: 1593 Class: 6.1 Packing Group: III
EMS-No: F-A, S-A
Proper shipping name: DICHLOROMETHANE
Marine pollutant: No

IATA

UN-Number: 1593 Class: 6.1 Packing Group: III
Proper shipping name: Dichloromethane

15. REGULATORY INFORMATION

Safety, health and environmental regulations specific for the product in question:

OSHA Hazards

Carcinogen, Harmful by ingestion, Irritant, Target organ effect

All ingredients are on the following inventories or are exempted from listing

Country	Notification
Australia	AICS
Canada	DSL
China	IECS
European Union	EINECS
Japan	ENCS/ISHL
Korea	ECL
New Zealand	NZIoC
Philippines	PICCS
United States of America	TSCA

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Acute Health Hazard
Chronic Health Hazard

CERCLA

Dichloromethane CAS-No. 75-09-2, RQ: 1,000 lbs

Massachusetts Right To Know Components

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Dichloromethane CAS-No. 75-09-2 Revision Date 2007-07-01

Pennsylvania Right To Know Components

Dichloromethane CAS-No. 75-09-2 Revision Date 2007-07-01

New Jersey Right To Know Components

Dichloromethane CAS-No. 75-09-2 Revision Date 2007-07-01

California Prop 65 Components

WARNING! This product contains a chemical known to the State of California to cause cancer. METHYLENE CHLORIDE CAS-No. 75-09-2 Revision Date 2007-09-28

16. OTHER INFORMATION: INCLUDING INFORMATION ON PREPARATION AND REVISION OF THE SDS

Disclaimer

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