

SAFETY DATA SHEET

Creation Date 27-January-2010

Revision Date 24-December-2021

Revision Number 9

1. Identification

Product Name Methylene chloride

Cat No. : D35-1; D35-4; D149RS-19; D149RS-50; D149RS-200; D154-4;
D154-4LC; D158-4

CAS-No 75-09-2
Synonyms Dichloromethane; DCM (Stabilized Amylene/Pentene or Cyclohexene)

Recommended Use Laboratory chemicals.
Uses advised against .

Details of the supplier of the safety data sheet

Company

Importer/Distributor
Fisher Scientific
112 Colonnade Road,
Ottawa, ON K2E 7L6,
Canada
Tel: 1-800-234-7437

Manufacturer

Fisher Scientific Company
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Emergency Telephone Number CHEMTREC®, Inside the USA: 800-424-9300
CHEMTREC®, Outside the USA: 001-703-527-3887

2. Hazard(s) identification

Classification

WHMIS 2015 Classification Classified as hazardous under the Hazardous Products Regulations (SOR/2015-17)

Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Carcinogenicity	Category 1B
Specific target organ toxicity (single exposure)	Category 3
Target Organs - Central nervous system (CNS).	
Specific target organ toxicity - (repeated exposure)	Category 2
Target Organs - Liver, Kidney, Blood.	

Label Elements

Signal Word
Danger

Hazard Statements

Causes skin irritation
 Causes serious eye irritation
 May cause drowsiness and dizziness
 May cause cancer
 May cause damage to organs through prolonged or repeated exposure

**Precautionary Statements****Prevention**

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Wear protective gloves/protective clothing/eye protection/face protection
 Do not breathe dust/fumes/gas/mist/vapours/spray
 Wash face, hands and any exposed skin thoroughly after handling
 Use only outdoors or in a well-ventilated area

Response

IF exposed or concerned: Get medical advice/attention
 IF ON SKIN: Wash with plenty of soap and water
 IF INHALED: Remove person to fresh air and keep comfortable for breathing
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 If skin irritation occurs: Get medical advice/attention
 Take off contaminated clothing

Storage

Store locked up
 Store in a well-ventilated place. Keep container tightly closed

Disposal

Dispose of contents/container to an approved waste disposal plant

Other Hazards

Contains a known or suspected endocrine disruptor

3. Composition/Information on Ingredients

Component	CAS-No	Weight %
Dichloromethane	75-09-2	>99.5

4. First-aid measures

General Advice	If symptoms persist, call a physician.
Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.
Inhalation	Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.

Ingestion	Clean mouth with water and drink afterwards plenty of water.
Most important symptoms/effects	. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting: Causes central nervous system depression: Continued or high exposures by inhalation will cause anaesthetic effects. This may result in a loss of consciousness and could prove fatal: Causes formation of carbon monoxide in the blood. Carbon monoxide may cause adverse effects on the cardiovascular system and the central nervous system
Notes to Physician	Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media	Water spray, carbon dioxide (CO ₂), dry chemical, alcohol-resistant foam.
Unsuitable Extinguishing Media	No information available
Flash Point	No information available
Method -	No information available
Autoignition Temperature	556 °C / 1032.8 °F
Explosion Limits	
Upper	23 vol %
Lower	13 vol %
Sensitivity to Mechanical Impact	No information available
Sensitivity to Static Discharge	No information available

Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

Hazardous Combustion Products

Carbon monoxide (CO). Carbon dioxide (CO₂). Phosgene. Hydrogen chloride gas.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

Health 2	Flammability 1	Instability 0	Physical hazards N/A
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6. Accidental release measures

Personal Precautions	Use personal protective equipment as required. Ensure adequate ventilation.
Environmental Precautions	Should not be released into the environment.
Methods for Containment and Clean Up	Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

7. Handling and storage

Handling	Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Vapors are heavier than air and may spread along floors. Handle product only in closed system or provide appropriate exhaust ventilation. Reacts with aluminum and its alloys.
Storage.	Keep containers tightly closed in a dry, cool and well-ventilated place. Do not store in aluminum containers. Incompatible Materials. Strong oxidizing agents. Strong acids. Amines.

8. Exposure controls / personal protection

Exposure Guidelines

Component	Alberta	British Columbia	Ontario TWAEV	Quebec	ACGIH TLV	OSHA PEL	NIOSH IDLH
Dichloromethane	TWA: 50 ppm TWA: 174 mg/m ³	TWA: 25 ppm	TWA: 50 ppm	TWA: 50 ppm TWA: 174 mg/m ³	TWA: 50 ppm	(Vacated) TWA: 500 ppm (Vacated) STEL: 2000 ppm (Vacated) Ceiling: 1000 ppm TWA: 25 ppm STEL: 125 ppm	IDLH: 2300 ppm

Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH IDLH: NIOSH - National Institute for Occupational Safety and Health

Engineering Measures

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment

Eye Protection

Goggles

Hand Protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Glove material	Breakthrough time	Glove thickness	Glove comments
Viton (R)	See manufacturers recommendations	-	Splash protection only

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

Respiratory Protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

Recommended Filter type: low boiling organic solvent Type AX Brown conforming to EN371

When RPE is used a face piece Fit Test should be conducted

Environmental exposure controls

No information available.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Physical State	Liquid
Appearance	Colorless
Odor	sweet
Odor Threshold	No information available

pH	No information available
Melting Point/Range	-97 °C / -142.6 °F
Boiling Point/Range	39 °C / 102.2 °F
Flash Point	No information available
Evaporation Rate	No information available
Flammability (solid,gas)	Not applicable
Flammability or explosive limits	
Upper	23 vol %
Lower	13 vol %
Vapor Pressure	350 mbar @ 20°C
Vapor Density	2.93 (Air = 1.0)
Specific Gravity	1.33
Solubility	No information available
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	556 °C / 1032.8 °F
Decomposition Temperature	No information available
Viscosity	0.42 mPas @ 25°C
Molecular Formula	C H2 Cl2
Molecular Weight	84.93

10. Stability and reactivity

Reactive Hazard	None known, based on information available
Stability	Stable under normal conditions. Decomposes on exposure to light.
Conditions to Avoid	Excess heat. Protect from direct sunlight.
Incompatible Materials	Strong oxidizing agents, Strong acids, Amines
Hazardous Decomposition Products	Carbon monoxide (CO), Carbon dioxide (CO ₂), Phosgene, Hydrogen chloride gas
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	Forms a detonable mixture with nitric acid.

11. Toxicological information

Acute Toxicity

Product Information

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Dichloromethane	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rat)	53 mg/L (Rat) 6 h 76000 mg/m ³ (Rat) 4 h

Toxicologically Synergistic Products No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation	Irritating to eyes and skin
Sensitization	No information available
Carcinogenicity	The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Dichloromethane	75-09-2	Group 2A	Reasonably Anticipated	A3	X	A3

IARC (International Agency for Research on Cancer)

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

NTP: (National Toxicity Program)	Group 2B - Possibly Carcinogenic to Humans NTP: (National Toxicity Program) Known - Known Carcinogen Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
ACGIH: (American Conference of Governmental Industrial Hygienists)	A1 - Known Human Carcinogen A2 - Suspected Human Carcinogen A3 - Animal Carcinogen ACGIH: (American Conference of Governmental Industrial Hygienists)
Mexico - Occupational Exposure Limits - Carcinogens	Mexico - Occupational Exposure Limits - Carcinogens A1 - Confirmed Human Carcinogen A2 - Suspected Human Carcinogen A3 - Confirmed Animal Carcinogen A4 - Not Classifiable as a Human Carcinogen A5 - Not Suspected as a Human Carcinogen

Mutagenic Effects	Mutagenic effects have occurred in microorganisms.
Reproductive Effects	No information available.
Developmental Effects	No information available.
Teratogenicity	No information available.
STOT - single exposure	Central nervous system (CNS)
STOT - repeated exposure	Liver Kidney Blood
Aspiration hazard	No information available
Symptoms / effects, both acute and delayed	Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting; Causes central nervous system depression: Continued or high exposures by inhalation will cause anaesthetic effects. This may result in a loss of consciousness and could prove fatal: Causes formation of carbon monoxide in the blood. Carbon monoxide may cause adverse effects on the cardiovascular system and the central nervous system
Endocrine Disruptor Information	No information available
Other Adverse Effects	Tumorigenic effects have been reported in experimental animals.

12. Ecological information

Ecotoxicity

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Dichloromethane	EC50:>660 mg/L/96h	Pimephales promelas: LC50:193 mg/L/96h	EC50: 1 mg/L/24 h EC50: 2.88 mg/L/15 min	EC50: 140 mg/L/48h

Persistence and Degradability Persistence is unlikely based on information available.

Bioaccumulation/ Accumulation No information available.

Mobility Will likely be mobile in the environment due to its volatility.

Component	log Pow
Dichloromethane	1.25

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

Component	RCRA - U Series Wastes	RCRA - P Series Wastes

Dichloromethane - 75-09-2	U080	-
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14. Transport information

DOT

UN-No	UN1593
Proper Shipping Name	DICHLOROMETHANE
Hazard Class	6.1
Packing Group	III

TDG

UN-No	UN1593
Proper Shipping Name	DICHLOROMETHANE
Hazard Class	6.1
Packing Group	III

IATA

UN-No	UN1593
Proper Shipping Name	Dichloromethane
Hazard Class	6.1
Packing Group	III

IMDG/IMO

UN-No	UN1593
Proper Shipping Name	Dichloromethane
Hazard Class	6.1
Packing Group	III

15. Regulatory information

International Inventories

Component	CAS-No	DSL	NDSL	TSCA	TSCA Inventory notification - Active-Inactive	EINECS	ELINCS	NLP
Dichloromethane	75-09-2	X	-	X	ACTIVE	200-838-9	-	-

Component	CAS-No	IECSC	KECL	ENCS	ISHL	TCSI	AICS	NZIoC	PICCS
Dichloromethane	75-09-2	X	KE-23893	X	X	X	X	X	X

Legend:

X - Listed '-' - Not Listed

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances**IECSC** - Chinese Inventory of Existing Chemical Substances**KECL** - Korean Existing and Evaluated Chemical Substances**ENCS** - Japanese Existing and New Chemical Substances**AICS** - Australian Inventory of Chemical Substances**PICCS** - Philippines Inventory of Chemicals and Chemical Substances**Canada**

SDS in compliance with provisions of information as set out in Canadian Standard - Part 4, Schedule 1 and 2 of the Hazardous Products Regulations (HPR) and meets the requirements of the HPR (Paragraph 13(1)(a) of the Hazardous Products Act (HPA)).

Component	Canada - National Pollutant Release Inventory (NPRI)	Canadian Environmental Protection Agency (CEPA) - List of Toxic Substances	Canada's Chemicals Management Plan (CEPA)
Dichloromethane	Part 1, Group A Substance Part 4 Substance	Schedule I	

Other International Regulations**Authorisation/Restrictions according to EU REACH**

Component	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Dichloromethane	-	Use restricted. See item 59. (see link for restriction details) Use restricted. See item 75. (see link for restriction details)	-

<https://echa.europa.eu/substances-restricted-under-reach>

Safety, health and environmental regulations/legislation specific for the substance or mixture

Component	CAS-No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential	Restriction of Hazardous Substances (RoHS)
Dichloromethane	75-09-2	Listed	Not applicable	Not applicable	Not applicable

Component	CAS-No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
Dichloromethane	75-09-2	Not applicable	Not applicable	Not applicable	Annex I - Y45

16. Other information

Prepared By

Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

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Revision Summary

This document has been updated to comply with the requirements of WHMIS 2015 to align with the Globally Harmonised System (GHS) for the Classification and Labelling of Chemicals.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS