Dichloromethane

BDH1113

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	Dichloromethane
MSDS Number	:	000000011714
Product Use Description	:	Solvent
Manufactured for	:	VWR International LLC Radnor Corporate Center Building One Suite 200 100 Matsonford Road Radnor PA 19087
For more information call	:	(Monday-Friday,8.00am-5:00pm) 1-800-932-5000
In case of emergency call	:	(24 hours/day, 7 days/week) 1-800-424-9300(USA Only) **For Transportation Emergencies:** 1-800-424-9300 (CHEMTREC - Domestic) 1-613-996-6666 (CANUTEC - Canada)

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Form	:	liquid, clear
Color	:	colourless
Odor	:	sweet mild

Classification of the substance or mixture

Classification of the substance or mixture	:	Serious eye damage/eye irritation, Category 2B Skin irritation, Category 2 Carcinogenicity, Category 2

GHS Label elements, including precautionary statements

Symbol(s) :

Signal word : Warning

Hazard statements : Causes skin irritation.
Suspected of causing cancer.

Precautionary statements : **Prevention:**
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash skin thoroughly after handling.
Wear protective gloves.

Response:
IF ON SKIN: Wash with plenty of soap and water.
IF exposed or concerned: Get medical advice/ attention.
If skin irritation occurs: Get medical advice/ attention.
Take off contaminated clothing and wash before reuse.

Storage:
Store locked up.

Disposal:
Dispose of contents/container in accordance with local, state & federal regulations.

Carcinogenicity

NTP:	Dichloromethane	75-09-2
	Reasonably Anticipated to be a Human Carcinogen.	
IARC:	Dichloromethane	75-09-2
	Group 2B: Possibly carcinogenic to humans	
OSHA:	Dichloromethane	75-09-2
ACGIH:	Dichloromethane	75-09-2
	A3: Confirmed animal carcinogen	

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : CH_2Cl_2

Chemical nature : Substance

Chemical Name	CAS-No.	Concentration
Dichloromethane	75-09-2	100.00 %

SECTION 4. FIRST AID MEASURES

General advice : Take off all contaminated clothing immediately.

Inhalation : Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Use oxygen as required, provided a qualified operator is present. Call a physician.

Skin contact : Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Call a physician.

Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician.

Ingestion : Do not induce vomiting without medical advice. Never give

anything by mouth to an unconscious person. Call a physician.

Notes to physician

Treatment : Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Dry chemical
Carbon dioxide (CO2)
Foam
Cool closed containers exposed to fire with water spray.

Unsuitable extinguishing media : High volume water jet

Specific hazards during firefighting : This product is not flammable at ambient temperatures and atmospheric pressure.
Exposure to decomposition products may be a hazard to health.
In case of fire hazardous decomposition products may be produced such as:
Phosgene
Chlorine (Cl2)
Carbon monoxide
Carbon dioxide (CO2)
Gaseous hydrogen chloride (HCl).

Special protective equipment for firefighters : Wear self-contained breathing apparatus and protective suit.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Wear personal protective equipment.
Immediately evacuate personnel to safe areas.
Keep people away from and upwind of spill/leak.
Isolate the affected area. Confine entry into the affected area to those persons properly protected (see Section 8 of MSDS).

Ensure adequate ventilation.
Avoid accumulation of vapours in low areas.
Remove all sources of ignition.
Do not swallow.
Avoid breathing vapours, mist or gas.
Avoid contact with skin, eyes and clothing.

Environmental precautions : Prevent further leakage or spillage if safe to do so.
Do not let product enter drains.
Discharge into the environment must be avoided.
Do not flush into surface water or sanitary sewer system.
Do not allow run-off from fire fighting to enter drains or water courses.

Methods for cleaning up : Ventilate the area.
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Shovel into suitable container for disposal.
Dispose of absorbed material in accordance with the regulations.

SECTION 7. HANDLING AND STORAGE

Handling

Handling : Wear personal protective equipment.
Use only in well-ventilated areas.
Keep container tightly closed.
Do not smoke.
Do not swallow.
Avoid breathing vapours, mist or gas.
Avoid contact with skin, eyes and clothing.

Advice on protection against fire and explosion : The product is not flammable.
Normal measures for preventive fire protection.
Keep product and empty container away from heat and sources of ignition.
Fire or intense heat may cause violent rupture of packages.
Container hazardous when empty.

Storage

Requirements for storage areas and containers	:	Protect from physical damage. Keep containers tightly closed in a dry, cool and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep away from heat and sources of ignition. Keep away from direct sunlight. Store away from incompatible substances. Container hazardous when empty.
Further information on storage conditions	:	Keep containers tightly closed in a cool, well-ventilated place.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Protective measures	:	Ensure that eyewash stations and safety showers are close to the workstation location.
Engineering measures	:	Use with local exhaust ventilation. Prevent vapour buildup by providing adequate ventilation during and after use.
Eye protection	:	Do not wear contact lenses. Wear as appropriate: Safety glasses with side-shields If splashes are likely to occur, wear: Goggles or face shield, giving complete protection to eyes
Hand protection	:	Solvent-resistant gloves Gloves must be inspected prior to use. Replace when worn.
Skin and body protection	:	Wear as appropriate: Solvent-resistant apron Solvent-resistant gloves If splashes are likely to occur, wear: Protective suit

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.
Wear a positive-pressure supplied-air respirator.
For rescue and maintenance work in storage tanks use self-contained breathing apparatus.
Use NIOSH approved respiratory protection.

Hygiene measures : When using, do not eat, drink or smoke.
Wash hands before breaks and immediately after handling the product.
Keep working clothes separately.
Remove and wash contaminated clothing before re-use.
Do not swallow.
Avoid breathing vapours, mist or gas.
Avoid contact with skin, eyes and clothing.
This material has an established AIHA ERPG exposure limit.
The current list of ERPG exposure limits can be found at http://www.aiha.org/insideaiha/GuidelineDevelopment/ERPG/Documents/2011erpgweelhandbook_table-only.pdf.

Exposure Guidelines

Components	CAS-No.	Value	Control parameters	Update	Basis
Dichloromethane	75-09-2	TWA : time weighted average	(50 ppm)	2008	ACGIH:US. ACGIH Threshold Limit Values
Dichloromethane	75-09-2	REF : Reference:	29 CFR 1910.1052	03 2012	OSHASP:US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Dichloromethane	75-09-2	TWA : time weighted average	(25 ppm)	02 2006	OSHASP:US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Dichloromethane	75-09-2	OSHA_ACT : OSHA Action level:	(12.5 ppm)	02 2006	OSHASP:US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Dichloromethane	75-09-2	STEL : Short term exposure limit	(125 ppm)	02 2006	OSHASP:US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	:	liquid, clear
Color	:	colourless
Odor	:	sweet mild
pH	:	Note: Not applicable
Melting point/freezing point	:	-95 °C
Boiling point/boiling range	:	40 °C

Flash point	:	Note: does not flash
Evaporation rate	:	0.7 Method: Compared to Ether (anhydrous).
Lower explosion limit	:	12 %(V)
Upper explosion limit	:	19 %(V)
Vapor pressure	:	466.63 hPa at 20 °C(68 °F)
Vapor density	:	2.9 Note: (Air = 1.0)
Density	:	1.33 g/cm3
Water solubility	:	13.2 g/l at 25 °C
Ignition temperature	:	556 °C
Molecular weight	:	84.94 g/mol

SECTION 10. STABILITY AND REACTIVITY

Chemical stability	:	Stable under recommended storage conditions.

Possibility of hazardous reactions	:	Hazardous polymerisation does not occur.
Conditions to avoid	:	Heat, flames and sparks. Protect from extreme heat and cold. Keep away from direct sunlight.
Incompatible materials to avoid	:	Oxidizing agents Strong acids and strong bases Metals Aluminium Lithium Magnesium Sodium May attack many plastics, rubbers and coatings.
Hazardous decomposition products	:	In case of fire hazardous decomposition products may be produced such as: Phosgene Chlorine (Cl2) Carbon monoxide Carbon dioxide (CO2) Gaseous hydrogen chloride (HCl).

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	:	LD50: > 2,000 mg/kg Species: Rat Method: OECD Test Guideline 401 Note: No deaths
Acute inhalation toxicity	:	LC50: 14400 ppm Exposure time: 7 h Species: Mouse
Acute dermal toxicity	:	LD50: > 2,000 mg/kg Species: Rat

Skin irritation	:	Species: Rabbit Result: Moderate skin irritation
Eye irritation	:	Species: Rabbit Result: Moderate eye irritation
Dichloromethane	:	Test Method: Ames test Result: positive
	:	Test Method: In vitro gene mutation study in mammalian cells Cell type: Chinese Hamster Ovary Cells Result: positive
	:	Test Method: Unscheduled DNA synthesis Result: positive Note: Liver cells Mouse
Further information	:	Note: Confirmed animal carcinogen with unknown relevance to humans.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Toxicity to fish	:	static test LC50: 310 mg/l Exposure time: 96 h Species: Pimephales promelas (fathead minnow)
	:	flow-through test LC50: 193 mg/l Exposure time: 96 h Species: Pimephales promelas (fathead minnow)

: flow-through test
LC50: 10.95 mg/l
Exposure time: 96 h
Species: Oncorhynchus mykiss (rainbow trout)

: static test
LC50: 220 mg/l
Exposure time: 96 h
Species: Lepomis macrochirus (Bluegill sunfish)

Toxicity to daphnia and other aquatic invertebrates : static test
EC50: 140 mg/l
Exposure time: 48 h
Species: Daphnia magna (Water flea)

Toxicity to bacteria : EC50: 1,000 mg/l
Exposure time: 15 min
Species: Photobacterium phosphoreum

Further information on ecology

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods : Dispose of contents/ container in accordance with local, state, and federal regulations.

SECTION 14. TRANSPORT INFORMATION

DOT

UN/ID No.	: UN 1593
Proper shipping name	: DICHLOROMETHANE
Class	6.1
Packing group	III
Hazard Labels	6.1

IATA

UN/ID No.	: UN 1593

	Description of the goods	:	DICHLOROMETHANE
	Class	:	6.1
	Packaging group	:	III
	Hazard Labels	:	6.1
	Packing instruction (cargo aircraft)	:	663
	Packing instruction (passenger aircraft)	:	655
	Packing instruction (passenger aircraft)	:	Y642
IMDG	UN/ID No.	:	UN 1593
	Description of the goods	:	DICHLOROMETHANE
	Class	:	6.1
	Packaging group	:	III
	Hazard Labels	:	6.1
	EmS Number	:	F-A, S-A
	Marine pollutant	:	no

SECTION 15. REGULATORY INFORMATION

Inventories

US. Toxic Substances Control Act	:	On TSCA Inventory
Australia. Industrial Chemical (Notification and Assessment) Act	:	On the inventory, or in compliance with the inventory
Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL)	:	All components of this product are on the Canadian DSL.
Japan. Kashin-Hou Law List	:	On the inventory, or in compliance with the inventory
Korea. Toxic Chemical Control Law (TCCL) List	:	On the inventory, or in compliance with the inventory
Philippines. The Toxic	:	On the inventory, or in compliance with the inventory

Substances and Hazardous and Nuclear Waste Control Act		
China. Inventory of Existing Chemical Substances	:	On the inventory, or in compliance with the inventory
New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand	:	On the inventory, or in compliance with the inventory

National regulatory information

US. EPA CERCLA Hazardous Substances (40 CFR 302)	:	The following component(s) of this product is/are subject to release reporting under 40 CFR 302 when release exceeds the Reportable Quantity (RQ): Reportable quantity: 1000 lbs
	:	Dichloromethane 75-09-2
SARA 302 Components	:	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313 Components	:	The following components are subject to reporting levels established by SARA Title III, Section 313:
	:	Dichloromethane 75-09-2
SARA 311/312 Hazards	:	Acute Health Hazard Chronic Health Hazard
CERCLA Reportable Quantity	:	1000 lbs

California Prop. 65 : WARNING! This product contains a chemical known to the State of California to cause cancer.
Dichloromethane 75-09-2

Massachusetts RTK : Dichloromethane 75-09-2

New Jersey RTK : Dichloromethane 75-09-2

Pennsylvania RTK : Dichloromethane 75-09-2

WHMIS Classification : D1B: Toxic Material Causing Immediate and Serious Toxic Effects
D2A: Very Toxic Material Causing Other Toxic Effects
D2B: Toxic Material Causing Other Toxic Effects
This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

SECTION 16. OTHER INFORMATION

		HMIS III	NFPA
Health hazard	:	2*	2
Flammability	:	1	1
Physical Hazard	:	0	
Instability	:		0

* - Chronic health hazard

Hazard rating and rating systems (e.g. HMIS® III, NFPA): This information is intended solely for the use of individuals trained in the particular system.

Further information

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. Final determination of suitability of any material is the sole responsibility of the user. This information should not constitute a guarantee for any specific product properties.

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