

MATERIAL SAFETY DATA SHEET

Dichloromethane (Methylene Chloride)

SECTION 1 . Product and Company Identification

Product Name and Synonym: Dichloromethane (Methylene Chloride)
Product Code: D4653
Material Uses:
Manufacturer: Science Stuff
1104 Newport Ave
Austin, TX 78753
(512) 837-6020
Entry Date : 3/20/2013
Print Date: 3/20/2013
24 Hour Emergency Assistance : Chemtrec 800-424-9300
Canutec 613-996-6666

Health:	3			
Flammability:	1			
Reactivity:	0			
Hazard Rating:				
Least	Slight	Moderate	High	Extreme
0	1	2	3	4
NA=Not Applicable		NE=Not Established		

SECTION 2 HAZARD IDENTIFICATION

Keep away from heat and ignition sources. May be harmful if swallowed. Avoid breathing vapor or dust. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling. Keep container closed.

Physical state: Liquid.[Colorless]

OSHA/HCS status: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Emergency overview:

WARNING!

CAUSES SEVERE EYE IRRITATION.

CANCER HAZARD – CAN CAUSE CANCER

CAUSES RESPIRATORY TRACT

AND SKIN

IRRITATION.

HAMFUL IF INHALED OR ABSORBED THROUGH THE SKIN OR SWALLOWED

CAUSES DAMAGE TO THE FOLLOWING ORGANS:

LUNGS, LIVER,

MAY CAUSE DAMAGE TO THE FOLLOWING ORGANS:

CARDIOVASCULAR SYSTEM, SKIN, EYES,

CENTRAL NERVOUS SYSTEM

WARNING: this product contains a chemical known to the State of California to cause cancer. birth defects or other reproductive harm.

Do not breath vapor or mist. Do not ingest. Do

not get in eyes or on skin or clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Routes of entry:

Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects:

Eyes: Severely irritating to eyes. Risk of serious damage to eyes.

Skin: Toxic in contact with skin. Irritating to skin.

Inhalation: Toxic by inhalation. Irritating to respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Ingestion: Toxic if swallowed.

Dichloromethane (Methylene Chloride)

Carcinogenicity: Can cause cancer. Risk of cancer depends on the duration and level of exposure.
Mutagenicity: No known significant effects or critical hazards.
Teratogenicity/ Reproductive toxicity: No known significant effects or critical hazards.
Developmental effects: No known significant effects or critical hazards.
Fertility effects: No known significant effects or critical hazards.
Target organs: Causes damage to the following organs: lungs, liver.
May cause damage to the following organs: cardiovascular system, skin, eyes, central nervous system (CNS)
Medical conditions aggravated by over-exposure:
Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product

SECTION 3 MIXTURE COMPONENTS

SARA 313	Component	CAS Number	Percent Comp.	Dimension	Exposure Limits
<input checked="" type="checkbox"/>	Dichloromethane (Methylene Chloride)	CAS# 75-09-2	100%	V/V	OSHA TWA 25 ppm, STEL (C) 25 ppm

SECTION 4 FIRST AID MEASURES

Keep away from heat and ignition sources. May be harmful if swallowed. Avoid breathing vapor or dust. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling. Keep container closed.

FIRST AID: CALL A PHYSICIAN. SKIN: Remove contaminated clothing. Wash exposed area with soap and water.

EYES: Wash eyes with plenty of water for at least 15 minutes, lifting lids occasionally. Seek Medical Aid. INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen

INGESTION: If swallowed, induce vomiting immediately after giving two glasses of water. Never give anything by mouth to an unconscious person.

SECTION 5 FIRE FIGHTING MEASURES

Fire Extinguisher Type: Water spray, Carbon dioxide, dry chemical, powder, foam.
Fire / Explosion Hazards: Vapors may form explosive mixture with air.
Fire Fighting Procedure: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and clothing.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Eliminate Ignition Sources. Neutralize with: Soda lime, soda ash. Absorb with vermiculite or other inert material. Place in container.

Personal precautions: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personal from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Environmental precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Spill: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible,

Dichloromethane (Methylene Chloride)

absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-Proof tools and explosion- proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal. Dilute with water and mop up if water- soluble or absorb with an inert dry material and place in an appropriate waste disposal container.

SECTION 7 HANDLING AND STORAGE

Store in a cool dry well ventilated area. Keep away from heat and flame. Do not get in eyes, on skin, or on clothing.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: NIOSH/MSHA-approved respirator
Ventilation
Local Exhaust
Mechanical
Protective Gloves: NIOSH Approved Gloves, impervious to Organics
Eye Protection: Splash Goggles
Other Protective Equipment: Wear appropriate clothing to prevent skin exposure

Product name - United States –

Dichloromethane

ACGIH (United States, 1996)

TWA: 174 mg/m3

OSHA (United States, 1989)

TWA: 25 ppm

STEL: 125 ppm

ACGIH TLV (United States, 1/2008)

TWA: 50 ppm 8 hour(s)

TWA: 174 mg/m3 8 hour(s)

OSHA PEL 1989 (United States, 3/1989)

STEL: 125 ppm 15 minute(s)

TWA: 25 ppm 8 hour(s)

OSHA PEL Z2 (United States, 11/2006)

STEL: 125 ppm 15 minute(s)

TWA: 25 ppm 8 hour(s)

Engineering measures: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking, and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protection

Dichloromethane (Methylene Chloride)

Eyes: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.

Recommended: splash goggles

Skin: Personal protective equipment for the body should be selected based on the task being performed and risks involved and should be approved by a specialist before handling this product.

Body recommended: lab coat

Respiratory: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Recommended:

Viton

Environmental exposure controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Melting Point:	-142°F	Percent Volatile by Volume:	>99
Boiling Point:	104°F	Evaporation Rate	Information not available
Vapor Pressure:	350 mm Hg	Evaporation Standard	
Vapor Density:	2.9	Auto Ignition Temp	1033 F (556° C)
Solubility in Water:	Soluble	Lower Flamm. Limit in Air	12% (V)
Appearance /Odors:	Colorless liquid, ether odor	Upper Flamm. Limit in Air	19% (V)
Flash Point:	N/A		
Specific Gravity:	1.33		

SECTION 10 STABILITY AND REACTIVITY INFORMATION

Stability:	Stable
Conditions to Avoid:	Avoid contact with incompatible materials.
Materials to Avoid:	oxidizers, nitrogen tetroxide, liquid oxygen, metals, urea
Hazardous Decomposition Products:	Carbon dioxide, carbon monoxide, phosgene gas,
Hazardous polymerization:	Will Not Occur
Conditions to Avoid:	None known

SECTION 11 Toxicological Information

Toxicity data- United States- Product/ ingredient name:

Dichloromethane (Methylene Chloride)

Dichloromethane			
LD50	916 mg/kg	Intraperitoneal	Rat
LD50	1600 mg/kg	Oral	Rat
LD50	985 mg/kg	Oral	Rabbit
LD50	2000 mg/kg	Oral	Guinea pig
LD50	5350 mg/kg	Unreported	Rabbit
LDLo	350 mg/kg	Intratracheal	Rat
LDLo	357 mg/kg	Oral	Rat
LDLo	1900 mg/kg	Oral	Rat
TDLo	510 mg/kg	Intraperitoneal	Rat
TDLo	237.8 mg/kg	Oral	Rat
TDLo	1000 mg/kg	Intravenous	Rat
LC50	52000 mg/m3	Inhalation Vapor	Rat
LC50	76000 mg/m3	Inhalation Vapor	Rat

Carcinogenic effects: Can cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenic effects: No known significant effects or critical hazards.

Teratogenicity/Reproductive toxicity: No known significant effects or critical hazards.

SECTION 12 Ecological Information

Aquatic toxicity

Product/ ingredient name

Dichloromethane

Acute EC50 1250 mg/L Daphnia 48 hours

Acute EC50 >500 mg/L Algae 48 hours

Acute EC50 99 mg/L Fish 48 hours

Acute EC50 1682000 to 1847000 ug/L Fresh water Daphnia – Water flea – Daphnia magna – 6 to 24 hours 48 hours

Acute EC50 99000 to 121500 ug/L Fresh water Fish – Fathead minnow – Pimephales promelas – 49 mm – 1.04 g 96 hours

Acute LC50 193 mg/L Fish 96 hours

Acute LC50 254 mg/L Fish 96 hours

Acute LC50 330 to 380 ppm Marine water Fish – Sheepshead minnow – Cyprinodon

variegates – Juvenile (Fledgling, Hatchling, Weanling) – 8 to 15 mm 96 hours

Acute LC50 220 to 250 mg/L Fresh water Fish – Bluegill – Lepomis macrochirus – Young of the year – 0.32 to 1.2 g 96 hours

Acute LC50 502000 to 855000 ug/L Fresh water Fish – Fathead minnow – Pimephales promelas – Juvenile (Fledgling, Hatchling, Weanling) 96 hours

Acute LC50 108500 to 130900 ug/L Marine water Crustaceans – Daggerblade grass shrimp – Palaemonetes pugio – Juvenile (Fledgling, Hatchling, Weanling) – 20 mm 48 hours

Acute LC50 330000 to 372000 ug/L Fresh water Fish – Fathead minnow – Pimephales promelas – 30 days – 17.6 mm – 0.066 g 96 hours

Acute LC50 310000 to 391000 ug/L Fresh water Fish – Fathead minnow – Pimephales promelas – 49 mm – 1.04 g 96 hours

Acute LC50 220000 to 250000 ug/L Fresh water Fish – Bluegill – Lepomis macrochirus 96 hours

Acute LC50 220000 to 250000 ug/L Fresh water Daphnia – Water flea – Daphnia magna – <24 hours 48 hours

Acute LC50 220 mg/L Fish 96 hours

Acute LC50 193000 to 277800 ug/L Fresh water Fish – Fathead minnow – Pimephales promelas – 49 mm – 1.04 g 96 hours

Chronic NOEC 130 ppm Marine water Fish – Sheepshead minnow – Cyprinodon variegates – Juvenile (Fledgling, Hatchling, Weanling) – 8 to 15 mm 96 hours

Environmental effects : No known significant effects or critical hazards.

Other adverse effects : No known significant effects or critical hazards.

SECTION 13 Disposal Considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

SECTION 14 Transport Information

Dichloromethane (Methylene Chloride)

DOT Classification: Dichloromethane, 6.1, UN1593, PG III

DOT Regulations may change from time to time. Please consult the most recent D.O.T. regulations.

SECTION 15 Regulatory Information

United States

HCS Classification:
Toxic material
Target organ effects
Carcinogen
Irritating material

U.S. Federal regulations:

United States inventory (TSCA 8b): listed
TSCA (Toxic Substance Control Act): This product is listed on the TSCA Inventory.
SARA 302/304/311/312 extremely hazardous substances: No products were found
SARA 302/304 emergency planning and notifications: No products were found
SARA 302/304/311/312 hazardous chemicals: Dichloromethane
SARA 311/312 MSDS distribution- Chemical inventory- hazard identification: Dichloromethane
Immediate (acute) health hazard, Delayed (chronic) health hazard
Clean Water Act (CWA) 307: Dichloromethane
Clean Water Act (CWA) 311: No products were found
Clean Air Act (CAA) 112 accidental release prevention: No products were found
Clean Air Act (CAA) 112 regulated flammable substance: No products were found.
Clean Air Act (CAA) 112 regulated toxic substance: No products were found

DEA List I Chemicals : not listed
(Precursor Chemicals)
DEA List II Chemicals : not listed
(essential Chemicals)

SARA 313
Form R – Reporting Requirements: Dichloromethane
CAS number : 75-09-2 Concentration : 100

Supplier notification : Dichloromethane
CAS number : 75-09-2 Concentration : 100

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.
Massachusetts Substance : This material is listed.
New Jersey Hazardous Substances : This material is listed.
New York Acutely Hazardous Substances : This material is listed.
Pennsylvania RTK Hazardous Substances : This material is listed.

California Prop. 65

WARNING: this product contains a chemical known to the State of California to cause cancer.

Ingredient name: Dichloromethane
Cancer: Yes Reproductive: No No significant risk level: 200 ug/day (inhalation) Maximum acceptable dosage level: No

Canada

WHMIS (Canada) :

Class D-1B: Material causing immediate and serious toxic effects (Toxic)

Class D-2A: Material causing other toxic effects (Very toxic).

Class D-2B: Material causing other toxic effects (Toxic).

Canadian lists : CEPA Toxic Substance: This material is listed.

Canadian ARET: This material is not listed.

Canadian NPRI: This material is listed.

Alberta Designated Substances: This material is not listed.

Ontario Designated Substances: This material is not listed.

Quebec Designated Substances: This material is not listed.

CEPA DSL/ CEPA NDSL : CEPA DSL:

Dichloromethane (Methylene Chloride)

This material is listed or exempted.
This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

SECTION 16 Additional Information

Flammability

Health

Reactivity

Revisions

NFPA

0.3

The information herein is believed to be accurate and is offered in good faith for the user's consideration and investigation. No warranty either expressed or implied is made for the completeness or accuracy of the information whether originating from the above mentioned company or not. Users of this material should satisfy themselves by independent investigation of current scientific and medical knowledge that the material can be used safely.