

Material Safety Data Sheet

Dichloromethane-D2, 99.6+ Atom % D

ACC# 96512

Section 1 - Chemical Product and Company Identification

MSDS Name: Dichloromethane-D2, 99.6+ Atom % D

Catalog Numbers: AC176110000, AC176110050, AC176110250

Synonyms: Methylene Chloride-D; Methane Dichloride-D; Methane-D, Dichloro-; Methylene Dichloride-D.

Company Identification:

Acros Organics N.V.

One Reagent Lane

Fair Lawn, NJ 07410

For information in North America, call: 800-ACROS-01

For emergencies in the US, call CHEMTREC: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
1665-00-5	Dichloromethane-D2	>99.6	216-776-0

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: colorless liquid.

Warning! Causes eye and skin irritation and possible burns. Causes digestive and respiratory tract irritation with possible burns. May be absorbed through intact skin. May cause blood abnormalities. Potential cancer hazard. May cause central nervous system depression. May cause cancer based on animal studies. This substance has caused adverse reproductive and fetal effects in animals.

Target Organs: Blood, heart, central nervous system, liver, pancreas.

Potential Health Effects

Eye: Contact with eyes may cause severe irritation, and possible eye burns. At high concentrations may cause lacrimation (tearing) and irritation.

Skin: May be absorbed through the skin. Causes irritation with burning pain, itching, and redness. Prolonged exposure may result in skin burns.

Ingestion: Causes gastrointestinal irritation with nausea, vomiting and diarrhea. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure.

Inhalation: Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. May cause narcotic effects in high concentration. May cause dizziness, incoordination, and unconsciousness. Central nervous system effects may include confusion, ataxia (failure of muscular coordination), vertigo, tinnitus, weakness, disorientation, lethargy, drowsiness, and finally coma. May cause blood changes. Overexposure may cause an increase in carboxyhemoglobin levels in the blood. Can produce delayed pulmonary edema.

Chronic: Possible cancer hazard based on tests with laboratory animals. Prolonged or repeated skin contact may cause dermatitis. May cause reproductive and fetal effects. Laboratory experiments have resulted in mutagenic effects. Chronic exposure may cause lung, liver, and pancreatic tumors. May cause conjunctivitis and/or corneal burns.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid. Do NOT allow victim to rub eyes or keep eyes closed.

Skin: Get medical aid. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Vapors mixed with air in proper proportion will propagate a flame. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. Containers may explode when heated. Combustible material; may burn but does not ignite readily. Will form explosive mixtures in atmospheres having high oxygen contents.

Extinguishing Media: For small fires, use dry chemical, carbon dioxide, or water spray. For large fires, use dry chemical, carbon dioxide, alcohol-resistant foam, or water spray. Cool containers with flooding quantities of water until well after fire is out.

Flash Point: Not applicable.
Autoignition Temperature: 556 deg C (1,032.80 deg F)
Explosion Limits, Lower:13 vol %
Upper: 23 vol %
NFPA Rating: (estimated) Health: 2; Flammability: 1; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Loosen closure cautiously before opening. Avoid breathing dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Keep away from heat, sparks and flame. Do not ingest or inhale.
Storage: Keep away from heat, sparks, and flame. Store in a tightly closed container. Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from metals. Store below 40°C. Keep away from active metals.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Dichloromethane-D2	none listed	none listed	none listed

OSHA Vacated PELs: Dichloromethane-D2: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Appearance: colorless

Odor: ethereal odor - chloroform-like

pH: Not available.

Vapor Pressure: 350 mm Hg @ 20

Vapor Density: 2.93 (Air=1)

Evaporation Rate:Not available.

Viscosity: Not available.

Boiling Point: 40 deg C

Freezing/Melting Point:-97 deg C

Decomposition Temperature:Not available.

Solubility: Moderately soluble in water

Specific Gravity/Density:1.33 (Water=1)

Molecular Formula:CH₂Cl₂

Molecular Weight:84.92

Section 10 - Stability and Reactivity

Chemical Stability: Stable at room temperature in closed containers under normal storage and handling conditions. May form explosive mixtures in atmospheres having high oxygen content.

Conditions to Avoid: Incompatible materials, ignition sources, excess heat, strong oxidants, active metals.

Incompatibilities with Other Materials: Strong oxidizing agents, liquid oxygen, nitric acid, potassium, lithium, sodium, caustics (e.g. ammonia, ammonium hydroxide, calcium hydroxide, potassium hydroxide, sodium hydroxide), potassium-tert-butoxide, sodium potassium alloys, powdered aluminum, Active metals (such as potassium and magnesium)., nitrogen tetroxide, N-methyl-N-nitrosourea + potassium hydroxide, powdered magnesium.

Hazardous Decomposition Products: Hydrogen chloride, phosgene, carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.

Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#:**CAS#** 1665-00-5 unlisted.**LD50/LC50:**

Not available.

Carcinogenicity:

CAS# 1665-00-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: IARC has determined there is sufficient evidence for carcinogenicity to animals but limited evidence for carcinogenicity to humans.**Teratogenicity:** Inhalation, rat: TCLO = 4500 ppm/24H (female 1-17 day(s) after conception) Effects on Newborn - behavioral.; Inhalation, rat: TCLO = 1250 ppm/7H (female 6-15 day(s) after conception) Specific Developmental Abnormalities - musculoskeletal system and urogenital system.**Reproductive Effects:** Adverse reproductive effects have occurred in experimental animals.**Mutagenicity:** DNA inhibition: Human, Fibroblast = 5000 ppm/1H (Continuous).; Morphological transformation: Rat, Embryo = 160 umol/L.; DNA damage: Oral, rat = 1275 mg/kg.; Inhalation, mouse: TCLO = 2000 ppm/5H/2Y-C (Tumorigenic - Carcinogenic by RTECS criteria-- Lungs, Thorax, or Respiration - Tumors).**Neurotoxicity:** No information found**Other Studies:**

Section 12 - Ecological Information

Ecotoxicity: Fish: Bluegill/Sunfish: 230mg/L; 24H; StaticFish: Fathead Minnow: 196mg/L; 96H; This chemical has a moderate potential to affect some aquatic organisms. It is resistant to biodegradation, and has a low potential to persist in the aquatic environment. 96-hr. EC50 (loss of equilibrium); Fathead minnow: 99mg/L; 96-hr. EC10: 66.3 mg/L. Bluegill sunfish: 96-hr. LC50=220 mg/L; Water flea: 24-hr. LC50=2270 mg/L; No observed effect level:1550 mg/L.**Environmental:** Terrestrial: Expected to evaporate from near surface soil into the atmosphere; expected to leach. Aquatic: Primarily lost by evaporation to the atmosphere which should take several hours depending on wind and mixing conditions. Atmospheric: Will degrade by reaction with hydroxyl radicals with a half life of several months. . Dichloromethane is reported to completely biodegrade under aerobic conditions with sewage seed or activated sludge between 6 hours to 7 days. Not expected to bioconcentrate due to its low octanol/water coefficient.**Physical:** No information available.**Other:** For more information, see "HANDBOOK OF ENVIRONMENTAL FATE AND EXPOSURE DATA."

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.**RCRA U-Series:** None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	DOT regulated - small quantity provisions apply (see 49CFR173.4)	DICHLOROMETHANE
Hazard Class:		6.1
UN Number:		UN1593
Packing Group:		III

Section 15 - Regulatory Information

US FEDERAL**TSCA**

CAS# 1665-00-5 is not listed on the TSCA inventory. It is for research and development use only.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

Section 313 No chemicals are reportable under Section 313.**Clean Air Act:**

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 1665-00-5 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations**European Labeling in Accordance with EC Directives****Hazard Symbols:**

XN

Risk Phrases:

R 40 Limited evidence of a carcinogenic effect.

Safety Phrases:

S 23 Do not inhale gas/fumes/vapour/spray.

S 24/25 Avoid contact with skin and eyes.

S 36/37 Wear suitable protective clothing and gloves.

WGK (Water Danger/Protection)

CAS# 1665-00-5: No information available.

Canada - DSL/NDSL

None of the chemicals in this product are listed on the DSL or NDSL list.

Canada - WHMIS

not available.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

Section 16 - Additional Information

MSDS Creation Date: 9/02/1997

Revision #5 Date: 10/03/2005

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.