

Material Safety Data Sheet

Chloroacetic Acid

ACC# 04690

Section 1 - Chemical Product and Company Identification

MSDS Name: Chloroacetic Acid

Catalog Numbers: A176 500, A176-500, A176500

Synonyms: Chloroethanoic Acid; Monochloroacetic Acid; Momochloroethanoic Acid

Company Identification:

Fisher Scientific

1 Reagent Lane

Fair Lawn, NJ 07410

For information, call: 201-796-7100

Emergency Number: 201-796-7100

For CHEMTREC assistance, call: 800-424-9300

For International CHEMTREC assistance, call: 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
79-11-8	CHLOROACETIC ACID	>98	201-178-4

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: colorless or white solid.

Danger! Corrosive. Causes eye and skin burns. Causes digestive and respiratory tract burns. May be harmful if swallowed. May cause central nervous system effects. May cause lung damage. May cause liver and kidney damage.

Target Organs: Kidneys, central nervous system, liver.

Potential Health Effects

Eye: May cause irreversible eye injury. Contact with liquid is corrosive to the eyes and causes severe burns.

Skin: Contact with liquid is corrosive and causes severe burns and ulceration.

Ingestion: May cause perforation of the digestive tract. Causes severe digestive tract burns with abdominal pain, vomiting, and possible death. May cause corrosion and permanent tissue destruction of the esophagus and digestive tract. May be harmful if swallowed.

Inhalation: Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. May cause liver and kidney damage. Causes severe irritation of upper respiratory tract with coughing, burns, breathing difficulty, and possible coma. May cause pulmonary edema and severe respiratory disturbances. May cause kidney damage.

Chronic: May cause liver and kidney damage.

Section 4 - First Aid Measures

Eyes: Get medical aid immediately. Do NOT allow victim to rub eyes or keep eyes closed. Extensive irrigation with water is required (at least 30 minutes).

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

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

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. 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: Chloroacetic acid causes competitive inhibition of acetate oxidation and acetylates sulfhydryl residues in the liver and kidney.

Section 5 - Fire Fighting Measures

General Information: 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. Wear appropriate protective clothing to prevent contact with skin and eyes. Wear a self-contained breathing apparatus (SCBA) to prevent contact with thermal decomposition products. Contact with metals may evolve flammable hydrogen gas. Containers may explode when heated. Combustible material; may burn but does not ignite readily.

Extinguishing Media: Water or foam may cause frothing. Use water spray to cool fire-exposed containers. Do NOT get water inside containers. 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: 126 deg C (258.80 deg F)

Autoignition Temperature: 470 deg C (878.00 deg F)

Explosion Limits, Lower:8.0.

Upper: Not available.

NFPA Rating: (estimated) Health: 3; Flammability: 1; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Remove all sources of ignition. Provide ventilation. Do not get water inside containers. Cover with dry earth, dry sand, or other non-combustible material followed with plastic sheet to minimize spreading and contact with water.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Minimize dust generation and accumulation. Keep container tightly closed. Do not get on skin or in eyes. Do not ingest or inhale. Discard contaminated shoes.

Storage: 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. Keep away from reducing agents. Do not store in metal containers. Do not store near alkaline substances.

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 ventilation to keep airborne concentrations low.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
CHLOROACETIC ACID	none listed	none listed	none listed

OSHA Vacated PELs: CHLOROACETIC ACID: 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: 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.

Section 9 - Physical and Chemical Properties

Physical State: Solid

Appearance: colorless or white

Odor: acetic odor

pH: 1.93 (0.1M)

Vapor Pressure: .75 mm Hg @ 20C

Vapor Density: 3.2 (air=1)

Evaporation Rate: 1 (butyl acetate=1)

Viscosity: 2.16 cp@70C

Boiling Point: 189 deg C

Freezing/Melting Point: 62 deg C

Decomposition Temperature: Not available.

Solubility: Soluble in water.

Specific Gravity/Density: 1.404 (water=1)

Molecular Formula: C₂H₃ClO₂

Molecular Weight: 94.4728

Section 10 - Stability and Reactivity

Chemical Stability: Stable at room temperature in closed containers under normal storage and handling conditions.

Conditions to Avoid: Incompatible materials, ignition sources, dust generation, moisture, metals, excess heat.

Incompatibilities with Other Materials: Strong oxidizers, amines, alcohols, reducing agents, metals, and alkali.

Hazardous Decomposition Products: Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:

CAS# 79-11-8: AF8575000

LD50/LC50:

CAS# 79-11-8:

Inhalation, rat: LC50 = 180 mg/m³;

Oral, rat: LD50 = 55 mg/kg;

Carcinogenicity:

CAS# 79-11-8: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information available.

Teratogenicity: No information available.

Reproductive Effects: No information available.

Mutagenicity: This chemical has shown mutagenic effects in laboratory animals.

Neurotoxicity: No information available.

Other Studies:

Section 12 - Ecological Information

Ecotoxicity: No data available. 96-hr LC50; fathead minnow: GT100 mg/L 96-Hr LC50; water flea: 80 mg/L

Environmental: Plant germination effects: No adverse effects at: Ryegrass 10 mg/L Radish 10 mg/L Lettuce 10 mg/L Plant seedling effects: No adverse effects at: Nargold 10 mg/L Radish 10 mg/L Lettuce 10 mg/L Corn 100 mg/L

Physical: No information available.

Other: No information available.

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:	CHLOROACETIC ACID, SOLID	CHLOROACETIC ACID SOLID
Hazard Class:	6.1	6.1(8)
UN Number:	UN1751	UN1751
Packing Group:	II	II

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 79-11-8 is listed on the TSCA inventory.

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

CAS# 79-11-8: 1 lb statutory RQ; 0.454 kg statutory RQ; 100 lb final RQ; 45.4 kg final RQ

SARA Section 302 Extremely Hazardous Substances

CAS# 79-11-8: 100 lb TPQ (lower threshold); 10000 lb TPQ (upper threshold)

SARA Codes

CAS # 79-11-8: immediate, delayed.

Section 313

This material contains CHLOROACETIC ACID (CAS# 79-11-8, >98%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Clean Air Act:

CAS# 79-11-8 is listed as a hazardous air pollutant (HAP).

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# 79-11-8 can be found on the following state right to know lists: New Jersey, Pennsylvania, Minnesota, Massachusetts.

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:

T N

Risk Phrases:

R 25 Toxic if swallowed.

R 34 Causes burns.

R 50 Very toxic to aquatic organisms.

Safety Phrases:

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

S 37 Wear suitable gloves.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 61 Avoid release to the environment. Refer to special instructions /safety data sheets.

WGK (Water Danger/Protection)

CAS# 79-11-8: 2

Canada - DSL/NDSL

CAS# 79-11-8 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of D1A, E.

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

CAS# 79-11-8 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 2/09/1999

Revision #4 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.