

**Safety Data Sheet**  
**Monochloroacetic Acid**

**SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION**

**1.1 Product identifier**

**Product name:** Monochloroacetic Acid  
**Synonym(s):** 2-Chloroacetic acid; Chloroacetic acid

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

**General use:** Industrial and laboratory use  
**Uses advised against:** None specified

**1.3 Details of the supplier and of the safety data sheet**

**Manufacturer/Distributor**  
Silver Fern Chemical, Inc.  
2226 Queen Anne Avenue North, Suite C  
Seattle, WA 98109 USA 1-866-282-3384  
Website - www.silverfernchemical.com; email address - info@silverfernchemical.com

**1.4 Emergency telephone number**

+1-800-535-5053; Outside USA & Canada +1-352-323-3500

**SECTION 2 - HAZARDS IDENTIFICATION**

**2.1 Classification of substance or mixture**

**Product definition:** Substance  
**Classification in accordance with 29 CFR 1910 (OSHA HCS) and Regulation EC No. 1272/2008**  
Acute Toxicity, Oral - Category 3 [H301]  
Acute Toxicity, Dermal - Category 3 [H311]  
Skin Corrosion - Category 1B [H314]  
Acute Toxicity, Inhalation - Category 2 [H330]  
Single Target Organ Toxicity, Single Exposure - Category 3; STOT SE 3 [H335]  
Aquatic Toxicity, Acute - Category 1 [H400]

**2.2 Label elements**

**Hazard symbol(s):**



**Signal word:** Danger

**Hazard statement(s):**  
H301 - Toxic if swallowed  
H311 - Toxic in contact with skin  
H314 - Causes severe skin burns and eye damage  
H330 - Fatal if inhaled  
H335 - May cause respiratory irritation  
H400 - Very toxic to aquatic life

**Precautionary statements:**

**[Prevention]**  
P260 - Do not breathe dust or vapor.  
P264 - Wash hands and other exposed skin areas thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.  
P271 - Use only outdoors or in a well-ventilated area.  
P273 - Avoid release to the environment  
P280 - Wear protective gloves, protective clothing and eye protection.  
P284 - Wear respiratory protection.

**[Response]**  
P301 + P330 + P331 + P310 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor.  
P303 + P361 + P352 - IF ON SKIN: Remove immediately all contaminated clothing. Wash with plenty of soap and water. shower.  
P304 + P340 + P310 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor.  
P305 + P351 + P338 + P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.  
P321 - Specific treatment: Contact a POISON CENTER or doctor. Refer to Section 4 of this SDS.

P362 - Take off contaminated clothing and wash before reuse.  
P391 - Collect spillage.  
P405 + P403 + P233 - Store locked up in a well-ventilated place. Keep container tightly closed.  
P501 - Dispose of contents and containers in accordance with national and local regulations.

[Storage]

[Disposal]

### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

Rapidly absorbed through skin.

## SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

% by Weight	Ingredient	CAS Number	EC Number	Index Number	GHS Classification
≥ 99.6	Monochloroacetic acid	79-11-8	201-178-4	607-03-00-1	H301, H311, H314, H331, H400
≤ 0.2	Acetic Acid	64-19-7	200-580-7	607-002-00-6	H226, H314
≤ 0.05	Dichloroacetic acid	79-43-6	201-207-0	607-066-00-5	H314, H400

There are no additional ingredients present in this product which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

### 3.2 Mixtures

Not applicable

## SECTION 4 – FIRST AID MEASURES

### 4.1 Description of first aid measures

*Chloroacetic acid toxicity can cause irreversible systemic effects. Immediate medical attention is vital in any significant exposure event.*

**Inhalation:** If product dust or vapor causes respiratory irritation or distress, move the exposed person to fresh air immediately. If breathing is difficult or irregular, administer oxygen; if respiratory arrest occurs, start artificial respiration by trained personnel. Do not use mouth-to-mouth method if victim inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If unconscious, maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. Seek immediate medical attention.

**Eyes:** Immediately flush eyes with large amounts of water or saline solution for at least 20 minutes, occasionally lifting the upper and lower lids. Remove contact lenses, if present and easy to do, after first 2 minutes and continue rinsing. Seek immediate medical attention, preferably from an ophthalmologist.

**Skin:** Flush skin with large amounts of water while removing contaminated clothing. Wash affected area with soap and water followed by thorough rinsing for at least 15 minutes. Wash contaminated clothing thoroughly before reuse. Destroy contaminated shoes. Seek immediate medical attention for chemical burns. Seek immediate medical attention for chemical burns or if the victim feels unwell.

**Ingestion:** Rinse mouth with water if the victim is conscious. Remove dentures if present. DO NOT INDUCE VOMITING unless directed to do so by medical personnel. If vomiting occurs, the head should be kept lower than the waist to prevent aspiration of vomitus. Never give anything by mouth to an unconscious or convulsing person. Do not leave the victim unattended. If the victim is unconscious, place in the recovery position and get immediate medical attention. Immediately contact a POISON CENTER or doctor.

### 4.2 Most important symptoms and effects, both acute and delayed

#### Potential health symptoms and effects

**Eyes:** Causes burns to the eyes and serious eye damage. Symptoms may include inflammation, severe pain, tearing, blurred vision, corneal erosion and burns. Exposure can cause permanent eye damage and blindness. Vapor or dust can cause eye irritation and burns.

**Skin:** Toxic in contact with skin. Causes painful skin burns and tissue damage. Can cause deep, penetrating ulcers of the skin and permanent skin damage. Chloroacetic acid is readily absorbed through the skin. Prolonged contact with unprotected skin can result in the absorption of toxic amounts of material. Symptoms of exposure may be delayed. Burns to skin may cause marked fluid and electrolyte loss. Death may follow if more than 3% of the skin is exposed to this material.

**Inhalation:** Toxic, possibly fatal, if inhaled. Inhalation can cause chemical burns to the respiratory tract. Symptoms can include headache, bleeding of the nose and gums, sneezing, cough, wheezing, hoarseness, choking, laryngitis, breathing difficulty and chest pain. This material is extremely destructive to mucous membranes and the upper respiratory tract. Ulceration of the nasal and oral mucosa, pulmonary edema, chronic bronchitis, chemical pneumonitis and severe respiratory disturbances. Inhalation of high concentrations may cause central nervous system effects, characterized by nausea, dizziness, unconsciousness, coma and cerebral edema. Prolonged exposure can damage heart and kidneys.

**Ingestion:** Toxic if swallowed. Ingestion may be fatal. Causes severe burns to the lips, mouth, throat and gastrointestinal tract with salivation, intense thirst, difficulty swallowing, severe pain, vomiting, diarrhea, chills and shock. Vomitus generally has a coffee-ground appearance. Can cause perforation of and severe and permanent damage to the digestive tract. The potential for circulatory collapse is high following ingestion of chloroacetic acid. Aspiration may lead to pulmonary edema. Acute exposure by ingestion may interfere with essential enzyme systems in the body and cause intestinal perforation and peritonitis in humans.

**Chronic:** Individuals with pre-existing skin, eye and respiratory disorders may be more susceptible to the effects of this product. Prolonged or repeated exposure can cause damage to the respiratory system, including the lungs. Chronic exposure can damage the heart and kidneys. Can cause permanent eye and skin damage. Chloroacetic acid toxicity can cause irreversible systemic effects. Repeated or prolonged exposure to

acids may result in the erosion of teeth, swelling and or ulceration of mouth lining. Effects may be delayed.

#### 4.3 Indication of any immediate medical attention and special treatment needed

##### Advice to doctor and hospital personnel

Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum and high pulse pressure. Treat symptomatically and supportively.

### SECTION 5 – FIRE FIGHTING MEASURES

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#### 5.1 Extinguishing media

**Suitable methods of extinction:** Use extinguishing media suitable for the surrounding fire.

**Unsuitable methods of extinction:** There are no limitations of extinguishing agents for this material.

#### 5.2 Special hazards arising from the substance or mixture

May be combustible at high temperatures. Forms explosive mixtures with air on intense heating. Closed containers may rupture due to the buildup of pressure when exposed to extreme heat. During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent or may be delayed. Obtain medical attention.

**Explosion hazards:** Forms explosive mixtures with air on intense heating.

#### 5.3 Advice to firefighters

Firefighters should wear full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies. Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion when exposed to extreme heat. If possible, firefighters should control runoff to prevent environmental contamination. Notify appropriate authorities of potential fire and explosion hazard if liquid enters sewers or waterways.

### SECTION 6 – ACCIDENTAL RELEASE MEASURES

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#### 6.1 Personal precautions, protective equipment and emergency procedures

Evacuate non-essential personnel. Wear appropriate protective clothing and equipment designated in Section 8.2. Ventilate the area. Remove all sources of ignition. Avoid dust generation and accumulation. NO SMOKING. Clean up spills immediately.

#### 6.2 Environmental precautions

Avoid dispersal of spilled material or runoff and prevent contact with soil and entry into drains, sewers or waterways.

#### 6.3 Methods and materials for containment and cleaning up

Cover drains and contain spill. DO NOT FLUSH SPILL DOWN THE DRAIN. Collect product and place into an approved container for proper disposal. Do not use straw brooms or other combustible material to collect product. Do not return solid to the original container for reuse. Observe possible material restrictions (Sections 7.2 and 10.5). Clean contaminated area with soap and water. Do not allow material or runoff from rinsing contaminated areas to enter floor drains or storm drains and ditches that lead to waterways. Dispose of material via a licensed waste disposal contractor.

#### 6.4 Reference to other sections

For indications about waste treatment, see Section 13.

### SECTION 7 – STORAGE AND HANDLING

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#### 7.1 Precautions for safe handling

Wear all appropriate personal protective equipment specified in Section 8.2, including respiratory protection. Do not get in eyes or on skin or clothing. NO SMOKING. Do not breathe dust or vapor. If normal use of material presents a respiratory hazard, use only adequate ventilation or wear an appropriate respirator. *Use this material only under a fume hood in the lab.* Immediately remove contaminated clothing and wash before reuse. Destroy contaminated shoes.

##### Advice on protection against fire and explosion

Keep away from heat, hot surfaces and sources of ignition.

#### 7.2 Conditions for safe storage, including any incompatibilities

Store in a dry, well-ventilated area away from incompatible materials (see Section 10.5), food and drink. Transfer only to approved containers having correct labeling. Hygroscopic material! Keep containers tightly closed when not in use to prevent moisture absorption. Protect containers from physical damage. Containers that have been opened must be carefully resealed and kept upright to prevent spillage. Containers are hazardous when empty as they contain product residues. Use appropriate containment to avoid environmental contamination. Ventilate closed areas. Keep locked up and out of reach of children.

#### 7.3 Specific end uses

Apart from the uses mentioned in Section 1.2, no other specific uses are stipulated.

## SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1 Control parameters

#### Occupational exposure limit values

CAS Number	Ingredient	OSHA PEL	ACGIH TLV	NIOSH
79-11-8	Monochloroacetic acid	-----	0.05 ppm; 0.2 mg/m <sup>3</sup> TWA Skin	0.05 ppm; 0.2 mg/m <sup>3</sup> TWA 1.3 ppm IDHL
64-19-7	Acetic acid	10 ppm; 25 mg/m <sup>3</sup> TWA	10 ppm; 25 mg/m <sup>3</sup> TWA 15 ppm, 37 mg/m <sup>3</sup> STEL	10 ppm; 25 mg/m <sup>3</sup> TWA 15 ppm; 37 mg/m <sup>3</sup> STEL 50 ppm IDHL

A "skin" notation following the inhalation exposure guideline refers to the potential for dermal absorption of the material, including eyes and mucous membranes, either by direct contact with vapors or by direct skin contact. It is intended to alert the reader that inhalation may not be the only route of exposure and that measures to minimize dermal exposure should be considered.

### 8.2 Exposure controls

**Engineering measures:** Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. Use adequate ventilation. Local exhaust is preferable. Refer to Section 7.1.

**Individual protection measures:** Wear respiratory protection. Wear protective clothing to prevent repeated or prolonged contact with product. Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the representative supplier.

**Hygiene measures:** Facilities storing or using this material should be equipped with an eyewash station and safety shower. Change contaminated clothing. Preventive skin protection is recommended. Wash hands thoroughly after use, before eating, drinking, smoking or using the lavatory.

**Eye/face protection:** Wear protective splash goggles or safety glasses with unperforated side shields during use. A face shield is recommended if splashing is anticipated during use.

**Hand protection:** Wear latex or Nitrile rubber gloves or those recommended by glove supplier for protection against materials in Section 3. Gloves should be impermeable to chemicals and oil. Breakthrough time of selected gloves must be greater than the intended use period.

**Skin protection:** Wear protective clothing. Wear protective boots if the situation requires.

**Respiratory protection:** Respiratory protection is required when dusts or vapor are generated. Wear an approved dust mask when handling this material. Always use an approved respirator when vapor/aerosols exceed permissible exposure limits. Where risk assessment shows air-purifying respirators are appropriate use a half-mask respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Follow OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149.

**Environmental exposure controls:** Do not empty into drains.

*PPE must not be considered a long-term solution to exposure control. PPE usage must be accompanied by employer programs to properly select, maintain, clean fit and use. Consult a competent industrial hygiene resource to determine hazard potential and/or the PPE manufacturers to ensure adequate protection*



Splash Goggles



Gloves



Protective Apron



Vapor Respirator

## SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Appearance	Colorless to white crystalline solid or flakes
Odor	Pungent, vinegar-like
Odor Threshold	0.15 mg/m <sup>3</sup>
Molecular Weight	60.05 g/mol
Chemical Formula	C <sub>2</sub> H <sub>3</sub> ClO <sub>2</sub>
pH	< 1 (800 g/l @ 20 °C)
Freezing/Melting Point	63 °C (145 °F) @ 1,013 hPa
Boiling Point Range	189 °C (372 °F) @ 1,013 hPa
Evaporation Rate	No data available
Flammability (solid, gas)	Non-flammable
Flash Point	126 °C (259 °F)
Autoignition Temperature	516 °C (960.8 °F)
Decomposition Temperature	No data available
Lower Explosive Limit (LEL)	8% (v)
Upper Explosive Limit (UEL)	No data available

<b>Vapor Pressure</b>	0.02 hPa @ 20 °C
<b>Vapor Density</b>	3.26 [Air = 1]
<b>Specific Gravity</b>	1.64 g/cc (13.69 lb/ft <sup>3</sup> ) @ 20 °C
<b>Viscosity</b>	No data available
<b>Solubility in Water</b>	Miscible (> 1,000 g/l @ 20 °C)
<b>Partition Coefficient (n-octanol/water)</b>	log P <sub>ow</sub> = 0.49
<b>Oxidizing Properties</b>	Not applicable
<b>Explosive Properties</b>	Not applicable
<b>Volatiles by Weight @ 21 °C</b>	No data available

## 9.2 Other Data

Corrosive to metals.

## SECTION 10 – STABILITY AND REACTIVITY

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### 10.1 Reactivity

This material is stable under normal handling conditions and use.

### 10.2 Chemical Stability

This material is stable under recommended storage conditions. Hygroscopic material; absorbs moisture from the air.

### 10.3 Possibility of hazardous reactions

Forms explosive mixtures with air on intense hearing. Forms toxic gases or fumes in contact with carbonates, sulfides, and metals. Contact with incompatible materials may cause an exothermic reaction. Reacts explosively with furfuryl alcohol and hydrogen peroxide. Hazardous polymerization will not occur.

### 10.4 Conditions to avoid

Avoid extreme heat, moisture, exposure to air, contact with metals and contact with incompatible materials

### 10.5 Incompatible materials

Metals, strong acids, strong oxidizing agents, strong bases, alcohols, amines

### 10.6 Hazardous decomposition products

Thermal decomposition products include oxides of carbon, phosgene, hydrogen chloride gas, toxic fumes and gases.

## SECTION 11 – TOXICOLOGICAL INFORMATION

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### 11.1 Information on toxicological effects

#### Acute oral toxicity

LD<sub>50</sub>, rat: 90.4 mg/kg

#### Acute inhalation toxicity

LC<sub>50</sub>, rat: 0.38 - 0.45 mg/l - 4 h

#### Acute dermal toxicity

LD<sub>50</sub>, rat: 305 mg/kg (female)

#### Skin irritation

Causes severe skin burns.

#### Eye irritation

Causes serious eye damage. Risk of blindness!

#### Sensitization

No data available

#### Carcinogenicity

No data available

#### Germ cell mutagenicity

No data available

#### Reproductive toxicity

No data available

#### Specific organ toxicity - single exposure

May cause respiratory irritation.

#### Specific organ toxicity - repeated exposure

No data available

#### Aspiration hazard

No data available

## 11.2 Further information

This product contains no substances present at levels greater than or equal to the 0.1% threshold (de minimis) that are identified as probable, possible, potential or confirmed carcinogens by ACGIH, IARC, NTP or OSHA. No data is available regarding the mutagenicity or teratogenicity of this product, nor is there any available data that indicates it causes adverse developmental or fertility effects.

Handle in accordance with good industrial hygiene and safety practice.

## SECTION 12 - ECOLOGICAL INFORMATION

### 12.1 Toxicity

This material is very toxic to aquatic life.

<b>Toxicity to fish:</b>	LC <sub>50</sub> - Pimephales promelas (Fathead minnow), 96 h: 145 mg/l
<b>Toxicity to aquatic invertebrates:</b>	EC <sub>50</sub> - Daphnia magna (Water flea), static test, 48 h: 88 mg/l
<b>Toxicity to aquatic plants:</b>	IC <sub>50</sub> - Desmodesmus subspicatus (Green algae), static test, 72 h: 0.033 mg/l
<b>Toxicity to bacteria:</b>	EC <sub>10</sub> - Pseudomonas putida (Bacteria), 18 h: 4,630 mg/l

### 12.2 Persistence and degradability

This material is readily biodegradable.

### 12.3 Bioaccumulation potential

This material will not bioaccumulate.

### 12.4 Mobility in soil

This material has high mobility in soil.

### 12.5 Results of PBT and vPvB assessment

This material does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

### 12.6 Other effects

#### Additional ecological information

Do not allow material to run into surface waters, wastewater or soil.

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

## SECTION 13 – DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

Methods of disposal: The generation of waste should be avoided or minimized whenever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

**RCRA F-Series:** No listings above the reportable threshold (de minimis)

**RCRA U-Series:** No listings above the reportable threshold (de minimis)

## SECTION 14 – TRANSPORTATION INFORMATION

**Note:** Transportation information provided is for reference only. Customer is urged to consult 49 CFR 100 - 177, IMDG, IATA, EC, United Nations TDG and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

Limited quantity for poisonous materials (solid) in Packing Group II when inner packagings are not over 0.5 kg (1.1 lb) net capacity each, packed in a strong outer packaging.

#### USA DOT (Ground Transportation) - Bulk and Non-bulk

<b>Proper Shipping Name</b>	Chloroacetic acid, solid
<b>Hazard Class</b>	6.1, 8
<b>UN</b>	UN1751
<b>Packing Group</b>	II
<b>NAERG</b>	Guide #153
<b>Packaging Authorization</b>	Non-Bulk: 49 CFR 173.212; Bulk: 173.242
<b>Packaging Exceptions</b>	49 CFR 173.153

#### IMO/IMDG (Water Transportation)

<b>Proper Shipping Name</b>	Chloroacetic acid, solid
<b>Hazard Class</b>	6.1, 8
<b>UN</b>	UN1751
<b>Packing Group</b>	II
<b>Marine Pollutant</b>	No
<b>EMS Number</b>	F-A, S-B

Placard(s)



**ICAO/IATA (Air Transportation)**

**Proper Shipping Name** Chloroacetic acid, solid  
**Hazard Class** 6.1, 8  
**UN** UN1751  
**Packing Group** II  
**Quantity Limitations** 49 CFR 175.27 and 175.75 - Cargo Aircraft Only: 50 kg; Passenger Aircraft: 15 kg

**RID/ADR (Rail Transportation)**

**Proper Shipping Name** Chloroacetic acid, solid  
**Hazard Class** 6.1, 8  
**UN** UN1751  
**Packing Group** II

**SECTION 15 - REGULATORY INFORMATION****15.1 Safety, health and environmental regulations/legislation specific for substance or mixture****U. S. Federal Regulations**

**OSHA Hazard Communication Standard:** This material is classified as hazardous in accordance with OSHA 29 CFR 1910-1200.

**Toxic Substance Control Act (TSCA) Inventory:** All substances in this product are listed on the TSCA Inventory. This product is not subject to TSCA 12(b) Export Notification.

**Drug Enforcement Administration (DEA) List 2, Essential Chemicals (21 CFR 1310.02(b)) and 1310.4(f)(2)) and Chemical Code Number**  
Not listed

**Drug Enforcement Administration (DEA) Lists 1 & 2, Exempt Chemical Mixtures (21 CFR 1310.12(c)) and Code Number:** Not listed

**Department of Homeland Security (DHS) Chemical Facility Anti-Terrorism Standards (CFATS) Chemicals:** Not listed

**Superfund Amendments and Reauthorization Act (SARA)****SARA Section 311/312 Hazard Categories:**

Toxic if swallowed or in contact with skin                      Fatal if inhaled  
Causes severe skin burns and eye damage                      May cause respiratory irritation

**SARA 313 Information:** Chloroacetic Acid (CAS #79-11-8) is subject to the reporting levels established by Section 313 of the Emergency Planning and Community Right-to Know Act of 1986.

**SARA 302/304 Extremely Hazardous Substance:** Chloroacetic Acid (CAS #79-11-8) is subject to the reporting levels established by of these sections of Title III of SARA. Threshold planning quantity (TPQ) = 100/10,000 lb

**SARA 302/304 Emergency Planning & Notification:** Chloroacetic Acid (CAS #79-11-8) is subject to the reporting levels established by of these sections of Title III of SARA. Reportable quantity (RQ) = 100 lb

**Comprehensive Response Compensation and Liability Act (CERCLA):** This product contains the following CERCLA reportable substance:  
Acetic Acid (CAS #64-19-7): RQ = 2,267.96 kg (5,000 lb)                      Chloroacetic Acid (CAS #79-11-8): RQ = 45.36 kg (100 lb)

**Clean Air Act (CAA)**

Chloroacetic Acid is a Hazardous Air Pollutants (HAPs) designated in CAA Section 112 (b).

This product does not contain Class 1 ozone depletors.

This product does not contain Class 2 ozone depletors.

**Clean Water Act (CWA)**

Acetic Acid and Chloroacetic Acid are Hazardous Substances under the CWA.

This product does not contain any Priority Pollutants.

This product does not contain any Toxic pollutants.

**U.S. State Regulations****California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986**

**⚠ WARNING:** This product may expose you to Dichloroacetic Acid ( $\leq 500$  ppm), which is known to the state of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**Other U.S. State Inventories**

*Acetic Acid* (CAS #64-19-7) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollutants lists: CA, DE, FL, ID, MA, MN, NC, NJ, NY, PA, RI, WA, WI.

*Chloroacetic Acid* (CAS #79-11-8) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollutants lists: DE, MN, NJ, NY, PA, WV, WI.

*Dichloroacetic Acid* (CAS #79-43-6) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollutants lists: ME, NJ, NY.

**Canada****WHMIS Hazard Classification**

Toxic if swallowed                      Causes severe skin burns and eye damage  
Fatal in contact with skin                      Causes severe damage to the respiratory tract

**Canadian National Pollutant Release Inventory (NPRI):** Chloroacetic Acid (CAS #79-11-8) is listed on the NPRI.

**European Economic Community**

**WGK, Germany (Water danger/protection):** 3 (highly hazardous to water)

**Global Chemical Inventory Lists**

Country	Inventory Name	Listed
Canada	Domestic Substance List (DSL)	Yes
Canada	Non-Domestic Substance List (NDSL)	No
Europe	Inventory of New and Existing Chemicals (EINECS)	Yes
United States	Toxic Substance Control Act (TSCA)	Yes
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
New Zealand	New Zealand Inventory of Chemicals (NZIoC)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (KECI)	Yes
Philippines	Philippines Inventory of Chemicals and Chemical Substances (PICCS)	Yes

\*Yes - All components of this product comply with the inventory requirements administered by the governing country.  
 No - One or more components of this product are not on the inventory or are exempt from listing.

**15.2 Chemical safety assessment**

For this product a chemical safety assessment was not carried out.

**SECTION 16 - OTHER INFORMATION**

**Hazardous Material Information System (HMIS)**

HEALTH	3
FLAMMABILITY	1
PHYSICAL HAZARD	0
PERSONAL PROTECTION	H

H = safety glasses, gloves, apron & vapor respirator

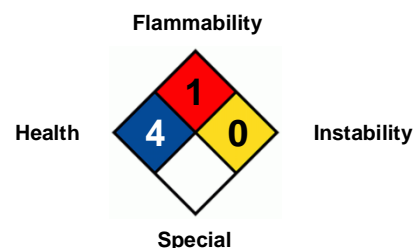
**HMIS Hazard Rating Legend**

0 = Minimal 1 = Slight 2 = Moderate  
 3 = Serious 4 = Severe  
 \* = Chronic Health Hazard

**NFPA Hazard Rating Legend**

0 = Insignificant 1 = Slight 2 = Moderate  
 3 = High 4 = Extreme

**National Fire Protection Association (NFPA)**



**Full Text of GHS Hazard Phrases Referenced in Section 3 (not covered in Section 2)**

H226 - Flammable liquid and vapor

**Abbreviation Key**

<b>ACGIH</b>	American Conference of Governmental Industrial Hygienists	<b>LD<sub>Lo</sub></b>	Lowest Lethal Dose
<b>ADR</b>	Accord Dangereux Routier (European regulations concerning the international transport of dangerous goods by road)	<b>mppcf</b>	Millions of Particles Per Cubic Foot
<b>CAS</b>	Chemical Abstract Services	<b>NA</b>	North America
<b>CFR</b>	Code of Federal Regulations	<b>NAERG</b>	North American Emergency Response Guide Book
<b>COC</b>	Cleveland Open Cup	<b>NIOSH</b>	National Institute for Occupational Safety & Health
<b>DOT</b>	Department of Transportation	<b>NTP</b>	National Toxicology Program
<b>EC<sub>50</sub></b>	Half maximal effective concentration	<b>OSHA</b>	Occupational Safety and Health Administration
<b>EMS</b>	Emergency Response Procedures for Ships Carrying	<b>PBT</b>	Persistent, Bioaccumulating and Toxic
<b>EPA</b>	Environmental Protection Agency	<b>PEL</b>	Permissible exposure limit
<b>ErC<sub>50</sub></b>	Reduction of Growth Rate	<b>PMCC</b>	Pensky-Martens Closed Cup
<b>ERG</b>	Emergency Response Guide Book	<b>ppm</b>	Parts Per Million
<b>FDA</b>	Food and Drug Administration	<b>RCRA</b>	Resource Conservation and Recovery Act
<b>GHS</b>	Globally Harmonized System of Classification and Labelling of Chemicals (GHS)	<b>RID</b>	Dangerous Goods by Rail
<b>HCS</b>	Hazard Communication Standard	<b>RQ</b>	Reportable Quantity
<b>IARC</b>	International Agency for Research on Cancer	<b>TCC/Tag</b>	Tagliabue Closed Cup
<b>IATA</b>	International Air Transport Association	<b>TLV</b>	Threshold Limit Value
<b>IC<sub>50</sub></b>	Half Maximal Inhibitory Concentration	<b>TSCA</b>	Toxic Substance Control Act
<b>ICAO</b>	International Civil Aviation Organization	<b>TWA</b>	Time-weighted Average
<b>IDLH</b>	Immediately Dangerous to Life and Health	<b>UN</b>	United Nations
<b>IMDG</b>	International Maritime Dangerous Goods	<b>VOC</b>	Volatile Organic Compounds
<b>IMO</b>	International Maritime Organization	<b>vPvB</b>	Very Persistent and Very Bioaccumulating
<b>LC<sub>50</sub></b>	50% Lethal Concentration	<b>WHMIS</b>	Workplace Hazardous Materials Information System
<b>LD<sub>50</sub></b>	50% Lethal Dose		



## **DISCLAIMER OF RESPONSIBILITY**

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