

**1. PRODUCT AND COMPANY IDENTIFICATION**

**1.1 Product identifiers**

Product name : Chloroacetic acid

CAS-No. : 79-11-8

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

Identified uses : Laboratory chemicals, Manufacture of substances

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

Company : Quality Environmental Containers, Inc.  
607 Industrial Park Rd. • PO Box 1160  
Beaver, WV 25813

Telephone : +1 800-255-3950

**1.4 Emergency telephone number**

Chemtrec : (800) 424-9300

**2. HAZARDS IDENTIFICATION**

**2.1 Classification of the substance or mixture**

**GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

Acute toxicity, Oral (Category 3), H301  
Acute toxicity, Inhalation (Category 2), H330  
Acute toxicity, Dermal (Category 3), H311  
Skin corrosion (Category 1B), H314  
Serious eye damage (Category 1), H318  
Acute aquatic toxicity (Category 1), H400

For the full text of the H-Statements mentioned in this Section, see Section 16.

**2.2 GHS Label elements, including precautionary statements**

Pictogram



Signal word

Danger

Hazard statement(s)

H301 + H311

Toxic if swallowed or in contact with skin

H314

Causes severe skin burns and eye damage.

H318

Causes serious eye damage.

H330

Fatal if inhaled.

H400

Very toxic to aquatic life.

Precautionary statement(s)

P260

Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

P264

Wash skin 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/ eye protection/ face protection.   |
| P284                      | Wear respiratory protection.  |
| P301 + P310 + P330        | IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician. Rinse mouth.   |
| P301 + P330 + P331        | IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  |
| P303 + P361 + P353        | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.   |
| P304 + P340 + P310        | IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.   |
| 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/ physician. |
| P362                      | Take off contaminated clothing and wash before reuse.   |
| P391                      | Collect spillage.   |
| P403 + P233               | Store in a well-ventilated place. Keep container tightly closed.  |
| P405                      | Store locked up.  |
| P501                      | Dispose of contents/ container to an approved waste disposal plant.   |

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

Rapidly absorbed through skin.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

|                  |  |
|------------------|--|
| Synonyms         | : Monochloroacetic acid                          |
| Formula          | : C <sub>2</sub> H <sub>3</sub> ClO <sub>2</sub> |
| Molecular weight | : 94.50 g/mol                                    |
| CAS-No.          | : 79-11-8  |
| EC-No.           | : 201-178-4                                      |
| Index-No.        | : 607-003-00-1                                   |

#### Hazardous components

| Component                | Classification  | Concentration |
|--------------------------|---|---------------|
| <b>Chloroacetic acid</b> | Acute Tox. 3; Acute Tox. 2;<br>Acute Tox. 3; Skin Corr. 1B;<br>Eye Dam. 1; Aquatic Acute 1;<br>H301 + H311, H314, H318,<br>H330, H400 | <= 100 %      |

For the full text of the H-Statements mentioned in this Section, see Section 16.

## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

**If swallowed**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

No data available

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**5. FIREFIGHTING MEASURES****5.1 Extinguishing media****Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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

Carbon oxides, Hydrogen chloride gas

**5.3 Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

**5.4 Further information**

No data available

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**6. ACCIDENTAL RELEASE MEASURES****6.1 Personal precautions, protective equipment and emergency procedures**

Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

**6.2 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.

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

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

**6.4 Reference to other sections**

For disposal see section 13.

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**7. HANDLING AND STORAGE****7.1 Precautions for safe handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs.

Provide appropriate exhaust ventilation at places where dust is formed.

For precautions see section 2.2.

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

Keep container tightly closed in a dry and well-ventilated place.

Storage class (TRGS 510): Non-combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials

**7.3 Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1 Control parameters**

**Components with workplace control parameters**

| Component         | CAS-No. | Value  | Control parameters | Basis   |
|-------------------|---------|--|--------------------|---|
| Chloroacetic acid | 79-11-8 | TWA  | 0.500000 ppm       | USA. ACGIH Threshold Limit Values (TLV)             |
|                   | Remarks | Upper Respiratory Tract irritation<br>Not classifiable as a human carcinogen<br>Danger of cutaneous absorption |                    |   |
|                   |         | TWA  | 0.500000 ppm       | USA. Workplace Environmental Exposure Levels (WEEL) |
|                   |         | Skin   |                    |   |

## 8.2 Exposure controls

### Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

### Personal protective equipment

#### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

#### Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

#### Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) 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).

#### Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

- a) Appearance                      Form: crystalline  
   Colour: white

|   |   |
|---|---|
| b) Odour  | No data available   |
| c) Odour Threshold                              | No data available   |
| d) pH   | < 1.0 at 800 g/l at 20 °C (68 °F)   |
| e) Melting point/freezing point                 | Melting point/range: 60 - 63 °C (140 - 145 °F) - lit.                         |
| f) Initial boiling point and boiling range      | 189 °C (372 °F) - lit.  |
| g) Flash point                                  | 126 °C (259 °F) - closed cup  |
| h) Evaporation rate                             | No data available   |
| i) Flammability (solid, gas)                    | The product is not flammable. - Flammability (solids)                         |
| j) Upper/lower flammability or explosive limits | Lower explosion limit: 8 %(V)   |
| k) Vapour pressure                              | ca.2 hPa (2 mmHg) at 50 °C (122 °F)<br>ca.0.2 hPa (0.2 mmHg) at 20 °C (68 °F) |
| l) Vapour density                               | No data available   |
| m) Relative density                             | No data available   |
| n) Water solubility                             | 3,170 g/l at 10 °C (50 °F) - soluble  |
| o) Partition coefficient: n-octanol/water       | log Pow: 0.2  |
| p) Auto-ignition temperature                    | 460 °C (860 °F) at 1,013 hPa (760 mmHg)                                       |
| q) Decomposition temperature                    | No data available   |
| r) Viscosity                                    | No data available   |
| s) Explosive properties                         | No data available   |
| t) Oxidizing properties                         | No data available   |

## 9.2 Other safety information

|                       |                              |
|-----------------------|------------------------------|
| Bulk density          | 0.75 - 0.80 g/l              |
| Surface tension       | 1.29 mN/m at 100 °C (212 °F) |
| Dissociation constant | 2.86                         |

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## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

No data available

### 10.5 Incompatible materials

Strong oxidizing agents, Strong bases, Strong reducing agents

### 10.6 Hazardous decomposition products

Other decomposition products - No data available  
In the event of fire: see section 5

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## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - female - 90.4 mg/kg  
(OECD Test Guideline 401)

LC50 Inhalation - Rat - 180 mg/m<sup>3</sup>

LD50 Dermal - Rat - female - 305 mg/kg  
(OECD Test Guideline 402)

LD50 Subcutaneous - Rat - female - 97.4 mg/kg

#### Skin corrosion/irritation

Skin - Rabbit

Result: Corrosive - 24 h

#### Serious eye damage/eye irritation

Eyes - Rabbit

Result: Corrosive - 24 h

#### Respiratory or skin sensitisation

No data available

#### Germ cell mutagenicity

Ames test

S. typhimurium

Result: negative

OECD Test Guideline 477

Drosophila melanogaster - male

Result: negative

#### Carcinogenicity

Carcinogenicity - Mouse - Subcutaneous

Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Lungs, Thorax, or Respiration: Tumors. Liver: Tumors.

Carcinogenicity - Mouse - Subcutaneous

Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Tumorigenic: Tumors at site or application.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

#### Reproductive toxicity

No data available

No data available

#### Specific target organ toxicity - single exposure

No data available

#### Specific target organ toxicity - repeated exposure

No data available

#### Aspiration hazard

No data available

#### Additional Information

Repeated dose toxicity - Rat - male - Oral - No observed adverse effect level - 3.5 mg/kg

RTECS: AF8575000

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.,  
Cough, Shortness of breath, Headache, Nausea

Stomach - Irregularities - Based on Human Evidence

Stomach - Irregularities - Based on Human Evidence

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## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

Toxicity to fish                      semi-static test LC50 - Danio rerio (zebra fish) - 370 mg/l - 96 h  
(OECD Test Guideline 203)

Toxicity to daphnia and              static test EC50 - Daphnia magna (Water flea) - 77 mg/l - 48 h  
other aquatic                              (DIN 38412)  
invertebrates

Toxicity to algae                      static test EC50 - Desmodesmus subspicatus (Scenedesmus subspicatus) -  
0.033 mg/l - 72 h  
(OECD Test Guideline 201)

### 12.2 Persistence and degradability

Biodegradability                      aerobic - Exposure time 21 d  
Result: 65 % - Readily biodegradable  
(OECD Test Guideline 301C)

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

### 12.6 Other adverse effects

Very toxic to aquatic life.

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

No data available

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## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

#### Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

#### Contaminated packaging

Dispose of as unused product.

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## 14. TRANSPORT INFORMATION

### DOT (US)

UN number: 1751              Class: 6.1 (8)                      Packing group: II

Proper shipping name: Chloroacetic acid, solid

Reportable Quantity (RQ): 100 lbs

Poison Inhalation Hazard: No

### IMDG

UN number: 1751              Class: 6.1 (8)                      Packing group: II                      EMS-No: F-A, S-B

Proper shipping name: CHLOROACETIC ACID, SOLID

Marine pollutant:yes

### IATA

UN number: 1751              Class: 6.1 (8)                      Packing group: II

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## 15. REGULATORY INFORMATION

### SARA 302 Components

The following components are subject to reporting levels established by SARA Title III, Section 302:

|                   | CAS-No. | Revision Date |
|-------------------|---------|---------------|
| Chloroacetic acid | 79-11-8 | 2007-07-01    |

### SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

|                   | CAS-No. | Revision Date |
|-------------------|---------|---------------|
| Chloroacetic acid | 79-11-8 | 2007-07-01    |

### SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

### Massachusetts Right To Know Components

|                   | CAS-No. | Revision Date |
|-------------------|---------|---------------|
| Chloroacetic acid | 79-11-8 | 2007-07-01    |

### Pennsylvania Right To Know Components

|                   | CAS-No. | Revision Date |
|-------------------|---------|---------------|
| Chloroacetic acid | 79-11-8 | 2007-07-01    |

### New Jersey Right To Know Components

|                   | CAS-No. | Revision Date |
|-------------------|---------|---------------|
| Chloroacetic acid | 79-11-8 | 2007-07-01    |

### California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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## 16. OTHER INFORMATION

### Full text of H-Statements referred to under sections 2 and 3.

|               |  |
|---------------|--|
| Acute Tox.    | Acute toxicity                             |
| Aquatic Acute | Acute aquatic toxicity                     |
| Eye Dam.      | Serious eye damage                         |
| H301          | Toxic if swallowed.                        |
| H301 + H311   | Toxic if swallowed or in contact with skin |
| H311          | Toxic in contact with skin.                |
| H314          | Causes severe skin burns and eye damage.   |
| H318          | Causes serious eye damage.                 |
| H330          | Fatal if inhaled.                          |
| H400          | Very toxic to aquatic life.                |

### HMIS Rating

|                        |   |
|------------------------|---|
| Health hazard:         | 4 |
| Chronic Health Hazard: | * |
| Flammability:          | 1 |
| Physical Hazard        | 0 |

### NFPA Rating

|                    |   |
|--------------------|---|
| Health hazard:     | 4 |
| Fire Hazard:       | 1 |
| Reactivity Hazard: | 0 |

### Further information

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