



SAFETY DATA SHEET

MONOCHLOROACETIC ACID 80% - 90% AQ Solution

Revision Date: May 2014

Previous date: November 2013

Print Date: May 2014

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product information

Commercial Product Name

Monochloroacetic Acid
Chemical Formula $\text{ClCH}_2\text{CO}_2\text{H}$ Molecular wt. 94.50
80-90% Solution

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

Use of the Substance/Mixture

Recommended restrictions on use

Reserved for industrial and professional use.

1.3 Details of the supplier of the safety data sheet

Niacet Corporation
400 47th Street
Niagara Falls, NY
14304 U.S.A.
Telephone +1 716-285-1474 Telefax +1 716-285-1497
niacetcsr@niacet.com

1.4 Emergency telephone number

For Niacet Corporation, Niagara Falls, U.S.A. products:
Chemtrec: +1 (800) 424 9300, +1 (703) 527-3887

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to OSHA Hazards

Target Organ Effect (Central Nervous System, Heart, Skeletal Muscle, Kidney), Toxic by ingestion, Toxic by skin absorption, Corrosive

Rapidly absorbed through skin

Classification according to GHS Classification

Acute toxicity, Oral (Category 3)
Acute toxicity, Inhalation (Category 3)
Skin corrosion (Category 1B)
Serious eye damage (Category 1)



SAFETY DATA SHEET

MONOCHLOROACETIC ACID 80% - 90% AQ Solution

Revision Date: May 2014

Previous date: November 2013

Print Date: May 2014

Acute aquatic toxicity (Category 1)



2.2 Label elements

Labeling according to 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.

H400 Very toxic to aquatic life

P273 Avoid release to the environment

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P305 + P351 + P338 IF IN EYES:

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or doctor/ physician.

2.3 Other hazards

HMIS Classification

Chronic Health hazard: *

Flammability: 1

Physical hazards:0

NFPA Rating

Health hazard: 3

Fire: 1

Reactivity Hazard: 0

Potential Health Effects

Inhalation Toxic if inhaled. Material is extremely destructive to the tissue of the mucous membranes and



SAFETY DATA SHEET

MONOCHLOROACETIC ACID 80% - 90% AQ Solution

Revision Date: May 2014

Previous date: November 2013

Print Date: May 2014

	upper respiratory tract.
Skin	Harmful if absorbed through skin. Causes skin burns.
Eyes	Causes eye burns.
Ingestion	Toxic if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Chemical nature: Monochloroacetic Acid
Formula: $\text{ClCH}_2\text{CO}_2\text{H}$
Synonyms: MCA, MCAA, chloroacetic acid
Molecular Weight: 94.50 g/mol
Component Classification Concentration 80-90%

Monochloroacetic Acid
CAS-No. 79-11-8

4. FIRST AID MEASURES

4.1 Description of first aid measures

General

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.

Skin Contact

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

Eye Contact

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

Symptoms : No information available.

4.3 Indication of immediate medical attention and special treatment needed, if necessary

Treatment : No information available.



SAFETY DATA SHEET

MONOCHLOROACETIC ACID 80% - 90% AQ Solution

Revision Date: May 2014

Previous date: November 2013

Print Date: May 2014

5. FIREFIGHTING MEASURES – NOT FLAMMABLE OR COMBUSTABLE

5.1 Extinguishing media

Extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide

5.2 Special hazards arising from the substance or mixture

Hazardous decomposition products formed under fire conditions. – Carbon oxides, Hydrogen chloride gas

5.3 Special protective actions for fire-fighters

Wear self contained breathing apparatus for firefighting if necessary.

5.4 Further Information

Not Flammable or Combustible

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

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. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

7.2 Conditions for safe storage, including any incompatibilities

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

7.3 Specific end uses



SAFETY DATA SHEET

MONOCHLOROACETIC ACID 80% - 90% AQ Solution

Revision Date: May 2014

Previous date: November 2013

Print Date: May 2014

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Exposure Limit Values

Components CAS-No. Value Control parameters Basis

Chloroacetic acid 79-11-8 TWA 0.5 ppm

USA. ACGIH Threshold Limit Values (TLV)

Remarks Skin contact does contribute to exposure. Not classifiable as a human carcinogen

TWA 0.5 ppm USA. ACGIH Threshold Limit Values (TLV)

Upper respiratory tract irritation. Not classifiable as a human carcinogen

Danger of cutaneous absorption TWA 0.5 ppm USA. Workplace Environmental Exposure Levels (WEEL)

Skin

8.2.1 Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. In case of insufficient ventilation, wear suitable respiratory equipment. Ensure that eyewash stations and safety showers are close to the workstation location.

8.2.2 Individual protection measures, such as personal protective equipment

Hand 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

Splash Protection

Material: Nitrile rubber

If used in solution, or mixed with other substances, and under conditions which differ from the supplier, contact the supplier of the 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.

Eye 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 and 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 respirator with multi-purpose combination (US) or type (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).

Hygiene Measures

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



SAFETY DATA SHEET

MONOCHLOROACETIC ACID 80% - 90% AQ Solution

Revision Date: May 2014

Previous date: November 2013

Print Date: May 2014

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

General Information (appearance, odor)

Physical state	Liquid
Color	Colorless
Odor	pungent

Important health safety and environmental information

Flash point	None – closed cup
Melting point / freezing point	16-42°C – lit.
pH	<1.0 at 800 g/l at 20°C
Boiling point	116-145° C – lit.
Ignition temperature	no data available
Auto-ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapor pressure	(17.5 mmHg) at 20°C
Specific Gravity	1.25-1.35
Water solubility	Soluble
Partition coefficient: octanol/water	No data available
Viscosity	No data available
Relative Vapor Density	No data available
Odor Threshold	No data available
Evaporation rate	No data available



SAFETY DATA SHEET

MONOCHLOROACETIC ACID 80% - 90% AQ Solution

Revision Date: May 2014

Previous date: November 2013

Print Date: May 2014

9.2 Other data

Surface tension

no data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : no data available

10.4 Conditions to avoid

Conditions to avoid : no data available.

10.5 Incompatible materials

Materials to avoid: Strong oxidizing agents, Strong Bases, Strong reducing agents

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. – Carbon Oxide, Hydrogen chloride gas

Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

LD50/Oral/Rat : 55 mg/kg
LD50/Oral/Mouse: 165 mg/kg
LC50/Inhalation/Rat: 180 mg/m³
LD50/Dermal/Rabbit: 175 mg/kg

Irritation and corrosion

No data available

Sensitization

Respiratory or Skin: no data available



SAFETY DATA SHEET

MONOCHLOROACETIC ACID 80% - 90% AQ Solution

Revision Date: May 2014

Previous date: November 2013

Print Date: May 2014

Long term toxicity

- Carcinogenicity:** This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.
IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans.
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:** No Data Available
- Specific Target Organ:** The substance or mixture is classified as specific target organ toxicant, single exposure. No Data Available. (single exposure; Globally Harmonized System)
Repeated exposure; Globally Harmonized System – No Data Available
- Aspiration Hazard:** No Data Available

Human experience

- Inhalation**
Toxic if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
- Ingestion**
Harmful if swallowed
- Skin contact**
Toxic if absorbed through skin. Causes skin burns.
- Eye contact**
Causes eye burns.
- Signs and Symptoms of Exposure**
Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Cough, Shortness of breath, Headache, Nausea
- Additional Information**
RTECS: AF8575000

12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity effects

Toxicity to other organisms



SAFETY DATA SHEET

MONOCHLOROACETIC ACID 80% - 90% AQ Solution

Revision Date: May 2014

Previous date: November 2013

Print Date: May 2014

Toxicity to fish LC50 - *Poecilia reticulata* (guppy) - 369 mg/l - 96.0 h
Toxicity to daphnia and other aquatic invertebrates
EC50 - *Daphnia magna* (Water flea) - 71 - 85 mg/l - 48 h
Toxicity to algae EC50 - *Desmodesmus subspicatus* (green algae) - 28 - 70 mg/l - 48 h
EC50 - *Scenedesmus quadricauda* (Green algae) - 0.028 mg/l - 48 h

12.2 Persistence and degradability

Biological degradability: Biodegradability aerobic
Result: 91 % - Biodegradable
Method: OECD Test Guideline 301C

Readily biodegradable: No Data Available

12.3 Bioaccumulative potential

No Data Available

12.4. Mobility in soil

No Data Available

12.5. Results of PBT and vPvB assessment

No Data Available

12.6 Other adverse effects

Very toxic to aquatic life.
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal

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.

Contaminated Packaging

Dispose of as unused product in accordance with federal, state and local regulations



SAFETY DATA SHEET

MONOCHLOROACETIC ACID 80% - 90% AQ Solution

Revision Date: May 2014

Previous date: November 2013

Print Date: May 2014

14. TRANSPORT INFORMATION

14.1 UN number

DOT (US)

UN number: 1750 Class: 6.1 (8) Packing group: II
Primary: Poison
Subsidiary: Corrosive
Labels: Toxic
Proper shipping name: Chloroacetic Acid, liquid
Reportable Quantity (RQ): 100 lbs
Poison Inhalation Hazard: No

IMDG

UN number: 1750 Class: 6.1 (8) Packing group: II
Proper shipping name: Chloroacetic Acid, liquid
Marine Pollutant: Yes

IATA

UN number: 1750 Class: 6.1 (8) Packing group: II
Proper shipping name: Chloroacetic Acid, liquid

14.6 Special precautions for user

No data available



SAFETY DATA SHEET

MONOCHLOROACETIC ACID 80% - 90% AQ Solution

Revision Date: May 2014

Previous date: November 2013

Print Date: May 2014

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

- OSHA Hazards: Target Organ Effect, Toxic by ingestion, Toxic by skin absorption, Corrosive
- SARA 302 Components: The following components are subject to the reporting requirements of SARA Title III, Section 302.
Chloroacetic Acid CAS-No. 79-11-8
- SARA 313 Components: The following components are subject to reporting levels established by SARA Title III, Section 313:
Chloroacetic Acid CAS-No. 79-11-8
- SARA 311/312 Hazards: Acute Health Hazard, Chronic health hazard
- Massachusetts Right To Know Component: Chloroacetic Acid CAS-No. 79-11-8
- Pennsylvania Right to Know Component: Chloroacetic Acid CAS-No. 79-11-8
- New Jersey Right To Know Component: Chloroacetic Acid CAS-No. 79-11-8
- 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.
- Other regulation: None known.

15.2 Chemical Safety Assessment

not applicable

16. OTHER INFORMATION

Training advice

Read the safety data sheet before using the product.

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Sources of key data used to compile the Safety Data Sheet

Regulations, databases, literature, own tests.

Additions, Deletions, Revisions



SAFETY DATA SHEET

MONOCHLOROACETIC ACID 80% - 90% AQ Solution

Revision Date: May 2014

Previous date: November 2013

Print Date: May 2014

IMPORTANT

Monochloroacetic acid is an extremely hazardous substance and a toxic chemical subject to reporting requirements of Section 302 & 313 of the Emergency Planning and Community Right to Know Act of 1986, Superfund Amendments and Reauthorization Act of 1986 (SARA), Title III.

In New York State, this product may not be delivered to a tank that is not registered with New York State Department of Environmental Conservation under regulation 6NYCRR Part 596, Registration of Hazardous Substances Bulk Storage Tanks. Similar regulations may exist in other states.

The information herein is given in good faith and believed to be accurate and has been compiled from sources believed to be reliable. Buyer assumes all risk of use, storage and handling of this product in compliance with applicable federal, State, and local laws and regulations.