



Monochloroacetic acid

Safety Data Sheet

According to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

| | | |
|----------------------|---|--|
| Date of Compilation | : | September 21, 2011 |
| Date of Revision | : | March 29, 2024 |
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Monochloroacetic acid

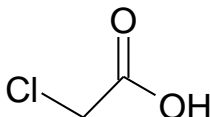
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

| | |
|------------------------|---|
| Product identification | : Monochloroacetic acid |
| CASRN | : 79-11-8 |
| EC# | : 201-178-4 |
| Trade name | : Monochloroacetic acid |
| Systematic Name | : 2-Chloro-ethanoic acid |
| Synonyms | : Chloroethanoic acid, Chloressigsauer, Chlorethansauere, MCA, Monochloressigsauer, Monochloroacetic acid, Monochloroethanoic acid, Chloroacetic acid |
| Molecular Formula | : C ₂ H ₃ ClO ₂ |
| Structural Formula: | |



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

1.2.1. Relevant identified uses

It is mainly used as a chemical intermediate for the synthesis of products like Carboxymethylcellulose, Carboxymethyl starch, Crop protection chemicals (like 2,4-D and MCPA), Plastics, Thioglycol acid, Sodium salt of MCAA and other products such as esters and amides. Other minor applications of MCAA are that it is used as a constituent in acidic paint remover or graffiti remover, can coating for food, escharotics agent, wart remover and as an analytical reagent.

Uses advised against: None

1.3. Details of the supplier of the safety data sheet

Jubilant Ingrevia Limited

FACTORY OFFICE: Jubilant Ingrevia Limited., Nimbut village- Nira (R.S), Dist. Pune, Maharashtra, India-412102

HEAD OFFICE: Jubilant Ingrevia Limited., Plot 1-A, Sector 16-A, Institutional Area, Noida, Uttar Pradesh, 201301 – India

T: FACTORY OFFICE : Phone No. : +91-2112-269155-57

HEAD OFFICE: T +91-120-4361000 E-mail: support@jubl.com

1.4. Emergency telephone number

For Chemical Emergency ONLY (in the case of fire, leak, spill, exposure or accident) Call

Chemtrec: 1-800-424-9300 (US), 1-703-527-3887 (Outside U.S.)

Chemtrec (India) : 000-800-100-7141

For ALL other emergencies call Emergency Control Room Gajraula at 99970 22412

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US Classification

| | |
|---|------|
| Corrosive to metals: Category 1 | H290 |
| Acute toxicity Oral: Category 3 | H301 |
| Acute Toxicity Dermal: Category 3 | H311 |
| Acute Toxicity Inhalation: Category 3 | H331 |
| Skin corrosion / irritant: Category 1B | H314 |
| Eye damage/irritation: Category 1 | H318 |
| Specific target organ toxicity(Single exposure): Category 3 | H335 |
| Acute aquatic toxicity: Category 1 | H400 |
| Chronic aquatic toxicity: Category 1 | H410 |

2.2. Label Elements

GHS US Classification

Pictograms:



GHS05 – Corrosive



GHS06-Toxic



GHS09-Aquatic Hazards



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Signal word: Danger!

HAZARD AND PRECAUTIONARY STATEMENTS:

HAZARD STATEMENTS

- H290: May be corrosive to metals.
- H301: Toxic if swallowed.
- H311: Toxic in contact with skin.
- H331: Toxic if inhaled
- H314: Causes severe skin burns and eye damage.
- H335: May cause respiratory irritation.
- H410: Very toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

- P234: Keep only in original container.
- P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
- P271: Use only outdoors or in a well-ventilated area.
- P280: Wear protective gloves/protective clothing/eye protection/face protection.
- P264: Wash hands thoroughly after handling.
- P273: Avoid release to the environment.
- P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P311: Call a POISON CENTER or doctor/physician.
- P302+P352: IF ON SKIN: Wash with plenty of soap and water.
- P361: Remove/Take off immediately all contaminated clothing.
- P363: Wash contaminated clothing before reuse.
- P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P390: Absorb spillage to prevent material damage.
- P391: Collect spillage.
- P403+P233: Store in a well-ventilated place. Keep container tightly closed.
- P405: Store locked up.
- P406: Store in corrosive resistant/... container with a resistant inner liner.
- P501: Dispose of contents/container to local/regional/national/international regulations.

2.3 Other Hazards

- Substance is not classified as PBT nor as vPvB. For further details see section 12.

SECTION 3: Composition/information on ingredients

| Substance | CAS No. | EINECS No. | Purity | GHS US Classification |
|-------------------------|---------|------------|-----------|--|
| Mono Chloro acetic acid | 79-11-8 | 201-178-4 | > 99.00 % | Corrosive to metals: Category 1 Acute toxicity Oral: Category 3 Acute Toxicity Dermal: Category 3 Acute Toxicity Inhalation: Category 3 Skin corrosion / irritant: Category 1B Eye damage/irritation: Category 1 Specific target organ toxicity(Single exposure): Category 3 Acute aquatic toxicity: Category 1 Chronic aquatic toxicity: Category 1 |

SECTION 4: First aid measures

4.1. Description of first aid measures

Key symptoms

Acute effects

- Rinse eyes cautiously with water for at least 15 minutes. Remove contact lenses if easy to do so. Continue rinsing. Seek medical attention.
- Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- Call a POISON CENTER or doctor/physician if you feel unwell.

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

Acute effects:

- **Eyes:** If the eyes have come in contact with chloroacetic acid, then irritation, pain, swelling, corneal erosion, and blindness may result.



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- **Skin:** Dermal exposure may result in dermatitis (red, inflamed skin), severe burns, and pain.
- **Ingestion:** Signs and symptoms of acute ingestion of chloroacetic acid may be severe and include salivation, intense thirst, and difficulty in swallowing, chills, and shock. Oral, esophageal, and stomach burns are common and often associated with severe pain. Vomitus generally has a coffee-ground appearance.
- **Inhalation:** Acute inhalation exposure may result in sneezing, hoarseness, choking, laryngitis, dyspnea (shortness of breath), respiratory tract irritation, and chest pain. Bleeding of nose and gums, ulceration of the nasal and oral mucosa, pulmonary edema, chronic bronchitis, and pneumonia may also occur.

Chronic effects:

- Repeated or prolonged exposure to this compound is not known to aggravate existing medical conditions.

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

Eyes:

- If eye exposure has occurred, eyes must be flushed with lukewarm water for at least 15 minutes.
- Wash exposed skin areas THOROUGHLY with soap and water.
- Obtain authorization and/or further instructions from the local hospital for administration of an antidote or performance of other invasive procedures.
- RUSH to a health care facility.

Skin:

- Remove victims from exposure. Emergency personnel should avoid self-exposure to chloroacetic acid.
- Evaluate vital signs including pulse and respiratory rate, and note any trauma. If no pulse is detected, provide CPR. If not breathing, provide artificial respiration. If breathing is labored, administer oxygen or other respiratory support.
- Remove contaminated clothing as soon as possible.
- RUSH to a health care facility.

Inhalation:

- Move victims to fresh air. Emergency personnel should avoid self-exposure to chloroacetic acid.
- Evaluate vital signs including pulse and respiratory rate, and note any trauma. If no pulse is detected, provide CPR. If not breathing, provide artificial respiration. If breathing is labored, administer oxygen or other respiratory support.
- Obtain authorization and/or further instructions from the local hospital for administration of an antidote or performance of other invasive procedures.
- RUSH to a health care facility.

Ingestion:

- Evaluate vital signs including pulse and respiratory rate, and note any trauma. If no pulse is detected, provide CPR. If not breathing, provide artificial respiration. If breathing is labored, administer oxygen or other respiratory support.
- Rinse mouth with large amounts of water. Instruct victims not to swallow this water.
- DO NOT induce vomiting or attempt to neutralize!
- Activated charcoal is of no value.
- Give the victims water or milk: children up to 1 year old, 125 mL (4 oz or 1/2 cup); children 1 to 12 years old, 200 mL (6 oz or 3/4 cup); adults, 250 mL (8 oz or 1 cup). Water or milk should be given only if victims are alert and conscious.
- Obtain authorization and/or further instructions from the local hospital for administration of an antidote or performance of other invasive procedures.

SECTION 5 : FIRE-FIGHTING MEASURES

5.1 Extinguishing media

- *Appropriate extinguishing media:* Dry chemical powder, chemical foam, and alcohol resistant foam. Water may also be used. Water sprays can be effective in cooling down the fire-exposed containers and knocking down the vapors. Water jets may be used to flush spills away and dilute the same to non-flammable mixtures.

5.2. Special hazards arising from the substance or mixture

- Toxic vapors may be released on thermal decomposition including nitrogen oxides, carbon monoxide and cyanide.
- High vapor concentration may result in an explosion hazard.
- When heated to decomposition, it emits highly toxic fumes of phosgene and chlorides.
- Vapors are heavier than air. May travel considerable distance from source and flashback.
- Water may cause frothing if it gets below surface of the liquid and turns to steam. Contact with metals may evolve flammable hydrogen gas.

5.3. Advice for firefighters

- This material is extremely hazardous to health, but fire fighters may enter areas with extreme care. Full protective clothing including a self-contained breathing apparatus, coat, pants, gloves, boots and bands around legs, arms and waist should be provided. No skin surface should be exposed.
- Evacuate the area and fight fires from a safe distance.
- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions or as per locally valid procedures.
- Fire-fighters must wear Self Contained Breathing Apparatus (SCBA)



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- Report any run-off of firewater's contaminated with this chemical as per local and federal procedures applicable.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel

- Wear protective clothing, full boots, impervious gloves, safety glasses and Self Contained Breathing Apparatus (SCBA), as may be deemed appropriate.
- Avoid breathing vapors and contact with skin and eyes.
- Shut off leak source if possible.
- Shut off all possible sources of ignition.
- Wipe up.
- Decontaminate all equipment.
- Use non-sparking tools.

6.1.2 For emergency personnel

- Wear protective clothing, full boots, impervious gloves, safety glasses and Self Contained Breathing Apparatus (SCBA), as may be deemed appropriate.
- Alert Emergency Responders and tell them location and nature of hazard.
- Shut off all possible sources of ignition and increase ventilation.
- Stop leaks if possible.
- Clean up all spills immediately following relevant Standard Operating Procedures.
- Avoid breathing vapors and contact with skin and eyes.

6.2. Environmental precautions

- Clean up all spills immediately following relevant Standard Operating Procedures.
- Inform authorities in event of contamination of any public sewers, drains or water bodies.
- Wipe up.
- Prevent, by any means available, spillage from entering drains or water and watercourses.
- Collect recoverable product into labeled containers for recycling, recovery or disposal.
- Contain spill with sand, earth or vermiculite.
- Spread area with lime or absorbent material, and leave for at least 1 hour before washing

6.3. Methods and material for containment and cleaning up

- Clean up all tools and equipment.
- Decontaminate all equipment.

6.4. Reference to other sections

- For more information please refer to section 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

- Do not breathe vapor or mist.
- Wear protective gloves/clothing and eye/face protection.
- Wash thoroughly after handling.
- Ground and secure containers when dispensing or pouring product.
- Avoid contact with incompatible materials.
- When handling, DO NOT eat, drink or smoke.
- Launder contaminated clothing before re-use.
- If on skin or hair, IMMEDIATELY remove all contaminated clothing and rinse/shower with plenty of water.
- Use in a well ventilated place/Use protective clothing commensurate with exposure levels.

7.2. Conditions for safe storage, including any incompatibilities

- Store at ambient temperature in a dry and well ventilated place.
- Store in a flame proof area.
- Store away from incompatible materials.
- Keep only in original container.
- Keep securely closed when not in use.

7.3. Specific end use(s)

- It is mainly used as a chemical intermediate for the synthesis of products like Carboxymethylcellulose, Carboxymethyl starch, Crop protection chemicals (like 2,4-D and MCPA), Plastics, Thioglycol acid, Sodium salt of MCAA and other products such as esters and amides. Other minor applications of MCAA are that it is used as a constituent in acidic paint remover or graffiti remover, can coating for food, escharotics agent, wart remover and as an analytical reagent.

SECTION 8 : EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters

8.1.1 Exposure Limits Values



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| Chemical name | ACGIH TLV | OSHA PEL |
|-----------------------|-----------------|-----------------|
| Monochloroacetic acid | Not established | Not established |

For Monochloroacetic acid: AIHA WEEL is 0.5 ppm TWA, Skin.

- A "skin" notation following the exposure guideline refers to the potential for dermal absorption of the material including mucous membranes and the eyes either by 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.

8.1.2 Exposure Limits (International):

- OES (UK) 1 mg/m³.
- AIHA WEEL Guide Limit: 1mg/m³; 15 min: 4mg/m³.
- 0.3 ppm (TWA), skin contact can invalidate TWA.
- 1.0 ppm (STEL), skin contact can invalidate STEL.

8.1.3 Derived No-Effect-Levels (DNEL) / Predicted No-effect-concentration (PNEC)

- DNEL and PNEC data not available.

8.2. Exposure controls

8.2.1 Appropriate Engineering Controls:

- Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits. Local ventilation is usually preferred. Ensure that eyewash stations and safety showers are close to the workstation location.

8.2.2. Personal Protection:

- Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.
- Hands:** Rubber or neoprene gloves and additional protection including impervious boots, apron or coveralls as needed in areas of unusual exposure to prevent skin contact.
Material ratings: Butyl gloves>3hours; PE>3 hours; Viton gloves> 3hours
- Eyes:** Safety goggles/ Chemical Safety glasses and Face shield.
- Clothing:** Boots and clothing to prevent contact.
- Respirator:** Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.
For emergency situations, wear a positive pressure, pressure-demand, full face piece self-contained breathing apparatus (SCBA) or pressure-demand supplied air respirator with escape SCBA and a fully-encapsulating, chemical resistant suit. (EPA,1998).

General Hygiene and general comments:

- Wash hands and face after working with substance.
- Immediately change contaminated clothing.
- Apply skin protective barrier cream.

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties.

| Sr.No. | Parameter | Typical value |
|--------|--|--|
| 1. | Appearance | Colorless to white solid |
| 2. | Odor | Pungent odor |
| 3. | Odor Threshold | 0.045 ppm |
| 4. | pH | 3.2 (100 mg/l) |
| 5. | Melting point/Freezing point | 61.3-63°C |
| 6. | Boiling Point | 189-190° C at 1,013 hPa |
| 7. | Flash point | 126°C(melt), not applicable in view of aggregation point |
| 8. | Evaporation rate (n-BuAc=1) | Not available |
| 9. | Flammability (Liquid) | Non Flammable |
| 10. | Upper/lower flammability or Explosive limits | 8% (LEL) |
| 11. | Vapor pressure | 2.14 Pa at 20 °C |
| 12. | Vapor density (air=1) | Not available |



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| | | |
|-----|---|---------------------------------|
| 13. | Relative density | 1.640 g/cm ³ @ 20 °C |
| 14. | Solubility | Miscible, 4210 g/l at 20°C, |
| 15. | Partition coefficient : n-(Octonol / water) | 0.49 |
| 16. | Auto-ignition temperature | 475 °C |
| 17. | Decomposition temperature | Not available |
| 18. | Viscosity | Not available |
| 19. | Explosive property | No |
| 20. | Oxidizing property | No |

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

- Monochloroacetic acid is a colorless to white solid. with a Pungent odor. This chemical is not flammable or combustible in classification, but its health hazard must be considered. It will like any other chemical burn in the presence of a fire. It is soluble in water.

10.2. Chemical stability

- The product is stable at ambient temperature and atmospheric pressure as well as under recommended storage and handling conditions. It is a stable and has a long shelf life under sealed conditions. It is insensitive to any physical impact.

10.3. Possibility of hazardous reactions

- Hazardous Polymerization: Not reported.

10.4. Conditions to avoid

- Keep away from heat, sparks, flame, high temperature and incompatible chemicals. Hygroscopic. Avoid temperatures above 280°C. Product may decompose beyond this temperature.

10.5. Incompatible materials

- Strong bases, oxidizing agents, most metals. Avoid contact with aluminum, zinc, brass, bronze, copper, galvanized metals, iron, and mild steel. Avoid contact with alcohol.

10.6. Hazardous decomposition products

- Depends on temperature, air supply and conditions. When Heated to decomposition gives off hydrogen chloride. (Sax). It may also give off phosgene in fire conditions. (US Cameo database).
- Thermal decomposition may produce carbon monoxide, carbon dioxides, oxides of nitrogen.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

a) Acute toxicity

Irritant/Corrosive to skin, mucous membrane.

Ingestion/Inhalation graded symptoms.

Corrosion of mucous membranes of mouth, throat, and esophagus, with immediate pain and dysphagia. The necrotic areas are at first grayish white but soon acquire a blackish discoloration and sometimes a shrunken or wrinkled texture; the process is described as a "coagulation necrosis."

Epigastric pain, which may be associated with nausea and the vomiting of mucoid and "coffee-ground" material. At times, gastric hemorrhage may be intense, and the vomitus then contains fresh blood. Profound thirst.

Ulceration of all membranes and tissues with which the acid comes in contact

Circulatory collapse with clammy skin, weak and rapid pulse, shallow respirations, and scanty urine. Circulatory shock is often the immediate cause of death.

Asphyxial death due to glottic edema.

Late esophageal, gastric and pyloric strictures and stenoses, which may require major surgical repair, should be anticipated. Signs of obstruction commonly appear within a few weeks but may be delayed for months and even years. Permanent scars may also appear in the cornea, skin and oropharynx.

Uncorrected circulatory collapse of several hours' duration may lead to renal failure and ischemic lesions in the liver and heart.

Chronic effects:

Inhalation guinea pig: LDLo 20,800µg/m³ 17 weeks intermittent: Kidney, urether, bladder. Pigmented or nucleated red blood cells.

Sensitization: Absent.

TOXICITY:

RTECS#: AF8575000

| | |
|----------------------|-----------------------|
| ORL RAT LD50: | 55mg/kg |
| DERMAL RAT LD50: | 250 mg/kg |
| INHALATION RAT LD50: | 180 mg/m ³ |



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- b) **Skin corrosion/irritation**
 - Causes severe skin burns.
- c) **Serious eye damage/irritation**
 - Causes serious eye damage.
- d) **Respiratory or skin sensitization**
 - Not sensitizing
- e) **Germ cell Mutagenicity**
 - In vitro Mutagenicity studies were negative in some cases and positive in other cases. Animal Mutagenicity studies were negative.
- f) **Carcinogenicity**
 - Not listed by NTP, IARC and OSHA.
 - Not present on the EU CMR list.
 - According to information presently available Monochloric acetic acid is not found to be carcinogenic.
- g) **Reproductive toxicity**
 - No data is available.
- h) **STOT-single exposure**
 - May cause respiratory irritation.
- i) **STOT- repeated exposure**
 - No data available.
- j) **Aspiration Hazards**
 - No data available.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity:

- | | | | Value | Hours | Ref. |
|---|------------------------|-----------|-------|-------|-----------------------|
| • | Pimephalespromelas | LC50 mg/L | 145 | 96 | SIDS 1994 (fish) |
| • | Brachydaniorerio | LC50 mg/L | 370 | 96 | ECETOX 1999 (fish) |
| • | PoecilliaReticulata | LC50 mg/L | 369 | 96 | BUA 1993 (fish) |
| • | Daphnia magna | EC50 mg/L | 88 | 48 | BUA 1993 (crustacean) |
| • | Scenedesmussubspicatus | EC50 mg/L | 0.025 | 72 | BUA 1993 (Algae) |
- Based on the estimated values it is expected that this material is harmful to the environment. Efforts must be undertaken to prevent its entry into environmental bodies, especially aquatic bodies. Local regulations must be consulted in event of any release and appropriate authorities must be informed.
 - **Toxicity to birds:** Sodium salt is reportedly toxic to birds. Geese LD50: 75 mg/kg (ECETOC 1999). MCAA is also expected to be toxic to birds and poultry.

12.2. Persistence and degradability

- Based on vapor pressure chloroacetic acid if released in the atmosphere will reside primarily in the atmosphere where it will be photochemically degraded with a half-life of 20days. (HSDB 939 November 8, 2002)
- On release to the soil chloroacetic acid based on the Koc value will have high mobility through soil. (HSDB).
- Chloroacetic acid is readily biodegraded in screening studies using a sewage or acclimated sludge inoculum; greater than 70-90% degradation was reported in 5-10 days. Biodegradation improves considerably with acclimatization. (HSDB, IUCLID 19-2-2000).

12.3. Bioaccumulative potential

- BCF = 3.162
- Log Kow = 0.49 Low potential to bioaccumulate.
- Based on the log Pow value the possibility of bioaccumulation is low.

12.4. Mobility in soil

- Log Koc = 1.201 (predicted). Moderate absorption in soil.
- Henry's Law Constant = 1.573E-007 atm-m³/mole.
- Log Kow = 0.49. Low potential to bioaccumulate.

12.5. Results of PBT and vPvB assessment

- The substance does not meet the criteria for PBT or vPvB in accordance with Annex XIII

12.6. Other adverse effects

Environment Fate:

- Based on the environmental modeling, this material has a low potential to get moderate absorbed in the organic matter of soil and is slightly volatile from water bodies. Since this is an estimated result it is recommended that the material should not be disposed into the environment. The material should never be disposed into the sewage.

SECTION 13: Disposal considerations

- **Waste treatment methods**

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- Burn in a chemical incinerator equipped with an afterburner and scrubber.
- Dispose of this material in accordance with standard practice for disposal of potentially hazardous materials as required by applicable federal, state or local laws. Note that disposal regulations may also apply to empty containers and equipment rinsates.

SECTION 14: Transport information

- This substance is considered to be hazardous for transport by Air/Rail/Road and Sea and thus regulated by IMO/ IMDG/ IATA/ ICAO.

| S.No | Agency | UN Number | Proper Shipping name | Hazard Class | Packing Group |
|--------------------|---------|------------------|--------------------------|--|---------------|
| Land transport | ADR/RIC | UN 1751 | Chloroacetic acid, Solid | 6(6.1), 8 | II |
| Maritime Transport | IMDG | UN 1751 | Chloroacetic acid, Solid | 6(6.1), 8 | II |
| Air Transport | IATA | UN 1751 | Chloroacetic acid, Solid | 6(6.1), 8 | II |
| Hazard Label | | Toxic, Corrosive | |   | |

Environmental hazards

- Marine pollutant.: YES



SECTION 15: REGULATORY INFORMATION

- **European Union Information**

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

- European/International Regulations.

Classification (as per Regulation (EC) No 1272/2008):

- **Hazards Class and Category:** *Corrosive to metals: Category 1, Acute tox. Oral: Category 3, Acute Tox. Dermal: Category 3 Acute Tox. Inhalation: Category 3, Skin corrosion / irritant: Category 1B, Eye damage/irritation: Category 1, Specific target organ toxicity(Single exposure): Category 3, Acute aquatic toxicity: Category 1, Chronic aquatic toxicity: Category 1*
- **Hazard Statements:** H290, H301, H311, H331, H314, H318, H335, H400, H410

Chemical Inventories

| Chemical Inventory Lists: | Status |
|----------------------------------|-----------------|
| TSCA: | Listed (Active) |
| EINECS: | 201-178-4 |
| Canada(DSL/NDSL): | Listed/DSL |
| Japan: | Listed |
| Korea: | Listed |
| Australia: | Listed |
| China: IECSC | Listed |



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| | |
|-------------|--------|
| Philippines | Listed |
| New Zealand | Listed |

US information

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act): This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

| Component | Hazardous Substances RQs | CERCLA EHS RQs |
|-------------------|--------------------------|----------------|
| Chloroacetic acid | 100 lb | 100 lb |

SARA 302/304 :

Section 302 (RQ)

- CAS# 79-11-8: statutory RQ = 1 pound (0.454 kg); final RQ = 100 pounds (45.4 kg)

Section 302 (TPQ)

- CAS# 79-11-8: TPQ = 100/10,000 pounds; RQ = 100 pounds

SARA 311/312 : See section 2 for more information

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

California Prop. 65: Monochloroacetic acid is not listed

CAA (Clean Air Act): CAS# 79-11-8 is listed as a hazardous air pollutant (HAP).

- This material does not contain any Class 1 Ozone depletors.
- This material does not contain any Class 2 Ozone depletors.

CWA (Clean Water Act): Monochloroacetic acid is not listed

EU Information

Water hazard class (WGK): WGK 2 (Moderate hazards to water)

Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006: Monochloroacetic acid is not listed

SECTION 16: OTHER INFORMATION

a) Compilation information of safety data sheet

Date of compilation : September 21, 2011
Chemical : Monochloroacetic acid
CAS # : 79-11-8
File Name : 0243Nr Ghs15 Div.1 sds Monochloroacetic acid
Revision Number : 15
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b) A key or legend to aberrations and acronyms used in the safety data sheet

- PBT = Persistent Bioaccumulative and Toxic.
- vPvB= Very Persistent and Very Bioaccumulative.
- SCBA= Self Contained Breathing Apparatus.
- RTECS= Registry of Toxic Effects of Chemical Substances.
- NTP=National Toxicology Program.
- IARC= International Agency for Research on Cancer.
- EPA=Environmental Protection Agency.
- TSCA= Toxic Substances Control Act.
- CERCLA= Comprehensive Environmental Response, Compensation, and Liability Act.
- SARA= Superfund Amendments and Reauthorization Act.
- NFPA= National Fire Protection Association.
- WHIMS= Workplace Hazardous Materials Information System.
- DSL/NDL= Domestic/Non-Domestic Substances List.
- CSR=Chemical Safety Report.
- BCF = Bio Concentration Factor.
- DNEL = Derived No Effect Level.
- PNEC = Predicted No Effect Concentration.



Monochloroacetic acid

Safety Data Sheet

According to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

- TLV = Threshold Limit Value.
- ACGIH = American Conference of Governmental Industrial Hygienists.
- REACH = Registration, Evaluation, Authorization and Restriction of Chemicals.
- CLP = Classification, Labeling and Packaging.
- LD / LC = Lethal Doses / Lethal Concentration.
- GHS = Globally Harmonized System.
- ADR = Accord européen relative au transport international de marchandises.
- IMDG-Code = International Maritime Code for Dangerous Goods.
- EmS = Emergency measures on Sea.
- ICAO = International Civil Aviation Organization.
- IATA/DGR= International Air Transport Association/Dangerous Goods Regulation.

c) Key Literature reference and sources for data

Biographical reference and data sources

- CLP REG (regulation) (EC) no. 1272/2008, last modification by regulation (EC) no. 790/2009
- DIR 67/548/EWG, last modification by DIR 2009/2/EC
- REG (EC) no. 1907/2006, last modification by REG (EC) Nr. 453/2009

d) List of hazard statements

| Hazards Statements | |
|--------------------|---|
| | <ul style="list-style-type: none">• H290: May be corrosive to metals.• H301: Toxic if swallowed.• H311: Toxic in contact with skin.• H331: Toxic if inhaled• H314: Causes severe skin burns and eye damage.• H335: May cause respiratory irritation.• H410: Very toxic to aquatic life with long lasting effects. |

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

(End of Safety Data Sheet)