

Safety Data Sheet (SDS)

Muriatic Acid

Issue date 08/01/2011

Reviewed on 10/03/2018

1. Identification

- **Product Identifier**
- **Name of the product:** Muriatic Acid or Hydrochloric Acid
- **CAS No:** 7647-01-0

- **Details of the Supplier of the Safety Data Sheet:**
- **Manufacturer/Supplier:**
Ramsay Browne Chemical & Company
PO Box 6425
Moraga, CA 94570
General Number: (925) 280-1661
- **Emergency telephone number: (925) 280-1661**

2. Hazard(s) Identification



- **Danger: Corrosive Liquid, Corrosive, Causes Skin Burns**
- Prolonged or repeated contact may result in dermatitis
- Causes eye burns
- Causes digestive tract burns
- May cause respiratory tract irritation
- Severely irritating to eyes, skin, respiratory tract
- Ingestion may cause gastric disturbances
- May cause pulmonary edema
- Avoid contact with the skin, eyes and clothing
- Avoid inhalation of gases
- Avoid inhalation of mists/vapors
- Use with local exhaust ventilation
- Wear a NIOSH-certified acid gas/particulate respirator as needed
- Wear NIOSH-certified chemical goggles
- Wear protective clothing
- Eye wash fountains and safety showers must be easily accessible

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2. Hazard(s) Identification (continued)

- Potential health effects
- **Primary routes of exposure**
Routes of entry for solids and liquids include eye and skin contact, ingestion and inhalation. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.
- **Acute toxicity**
- *Information on: Hydrochloric acid*
Hydrochloric acid is highly corrosive by all routes of exposure and may cause severe burns. Inhalation of the gases or mists of HCL may result in coughing and choking sensation due to irritation of the upper respiratory tract and may even produce respiratory or lung damage. Direct contact with the liquid may be corrosive to the skin, eyes, and mucous membranes and result in damage to the eyes and skin. Severe overexposures to HCL may result in laryngeal spasm, laryngeal edema, and pulmonary edema. Ingestion may result in nausea, vomiting and damage to the G.I. tract, with ulceration and hemorrhage.
- **Irritation:**
- *Information on: Hydrochloric acid*
Hydrochloric acid (HCL) is corrosive to the body tissues. Burns and permanent eye injury may occur. Skin contact may result in dermatitis and deep burns.
- **Repeated dose toxicity:**
- *Information on: Anhydrous Hydrochloric acid*
Chronic or prolonged exposure may be associated with changes in pulmonary function, chronic bronchitis, dermatitis, erosion of tooth enamel, conjunctivitis and upper respiratory tract irritation.
- **Medical conditions aggravated by overexposure:**
Individuals with pre-existing diseases of the skin, asthma, or other respiratory disorders may have increased susceptibility to excessive exposures.

3. Composition / Information on ingredients

CAS #	Content (W/W)	Chemical Name
7732-18-5	66-68%	Water
7647-01-0	32-34%	Hydrogen chloride

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4. First-aid measures

- **General advice:** Remove contaminated clothing.
- **If inhaled:** Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary. Immediate medical attention required.
- **If on skin:** Wash affected areas thoroughly with soap and water. Immediate medical attention required.
- **If in the eyes:** In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water. Immediate medical attention required.
- **If swallowed:** Rinse mouth and then drink plenty of water. Do not induce vomiting. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Immediate medical attention is required.

5. Emergency response procedures

- **Flash point:** No data available
- **Auto ignition:** No data available
- **Hazards during fire-fighting:** No particular hazards known.
- **Protective equipment for fire-fighting:** Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.
- **Further information:** Use water to control vapors.

6. Handling and storage

- **Clean up:** Contain spills and dilute cautiously with water. Neutralize with soda or slacked lime.

7. Physical and chemical properties

- **Handling:**
- **Protection against fire and explosion:** No explosion proofing necessary. Substance/product is non-flammable. See Section 10 – Stability and reactivity.

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7. Physical and chemical properties (continued)

- **Storage:**
- **General advice:** Due to the hazardous nature of the substance/product, storage facilities must be properly designed and diked to contain any spillage. Avoid all sources of ignition: heat, sparks, open flame.
- **Storage Incompatibility:** General – Segregate from metals.
- **Storage stability:** The stated storage temperature should be noted.

8. Exposure Controls / Personal Protection ---begin updating from here

- **Components with workplace control parameters**
- **Hydrogen chloride:** OSHA – CLV 5ppm, 7mg/m³, ACGIH – CLV 2 ppm
- **Advice on system design:** Provide local exhaust ventilation to control vapors/mist.
- **Personal protective equipment**
- **Respiratory protection:** Wear the following respiratory protection if exposure limits may be exceeded. Wear a NIOSH-certified (or equivalent) acid gas respirator. Do not exceed the maximum use concentration for the respirator face piece/cartridge combination.
- **Hand protection:** Chemical resistant protective gloves.
- **Eye protection:** Wear face shield or tightly fitting safety goggles (chemical goggles) if splashing hazard exists.
- **Body protection:** Hardhat.
- **General safety and hygiene measures:** Eye wash fountains and safety showers must be easily accessible. Observe the appropriate PEL value. Wear protective clothing as necessary to prevent contact. Contaminated equipment or clothing should be cleaned after each use or disposed of.

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9. Physical and Chemical Properties

- **Form:** Liquid
- **Odor:** strong, pungent odor
- **Color:** colorless
- **Freezing point:** -26°C (760 mmHg)
- **Boiling point:** approx 48°C (760 mmHg)
- **Vapor pressure:** 200 mmHg
- **Relative density:** 1.19
- **Miscibility with water:** soluble

10. Stability and Reactivity

- **Substances to avoid:** Metal. See Section 5 – Firefighting measures.
- **Hazardous reactions:** Reacts with metals, with evolution of hydrogen.
- **Decomposition products:** No hazardous decomposition products known.
- **Thermal decomposition:** 1,782°C. Thermal decomposition above the indicated temperature is possible.
- **Corrosion to metals:** Corrosive effect on metals.

11. Disposal Considerations

- **Waste disposal of substance:** Dispose of in accordance with national, state and local regulations.
- **Container disposal:** Dispose of in accordance with national, state and local regulations.
- **RCRA:** D002

12. Transport Information

- **Land transportation:**
- *USDOT*
- **Proper shipping name:** Hydrochloric Acid Solution
- **Hazard class:** 8
- **ID-Number:** UN1789
- **Packing group:** II

- **Sea transport:**
- *IMDG*
- **Proper shipping name:** Hydrochloric Acid Solution
- **Hazard class:** 8

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12. Transport Information (continued)

- **ID-Number:** UN1789
- **Packing group:** II

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

13. Regulatory Information

- **Federal Regulations**
- **Registration status:**
- **TSCA, US:** released/listed
- **OSHA hazard category:** OSHA PEL established ACGIH TLV established, skin and/or eye irritant, corrosive to skin and/or eyes, chronic target organ effects reported, acute target organ effects reported, toxic-inhalation.
- **CERCLA RQ:** 5,000 lbs
- **CAS Number:** 7647-01-0
- **Chemical name:** Hydrogen chloride
- **SARA hazard categories (RPCRA 311/312):** Chronic, Acute

- **SARA 313:**
- **CAS Number:** 7647-01-0
- **Chemical name:** Hydrogen chloride

- **State Regulations:**
- **State RTK:**
- **CAS Number:** 7647-01-0
- **Chemical name:** Hydrogen chloride
- **State RTK:** MA, NJ, PA

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14. Other Information

- **HMIS III rating:**
- **Health: 3, Flammability: 0, Physical hazard: 0**
- HMIS uses a numbering scale ranging from 0 to 4 to indicate the degree of hazard. A value of zero means that the substance possesses essentially no hazard; a rating of four indicates high hazard.

Disclaimer of Responsibility

The information on this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, expressed or implied, regarding its correctness. Some information presented and conclusions drawn herein are from sources other than direct test data on the substance itself. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expense arising out of or in any way connected with handling, storage, use, or disposal of this product. If the product is used as a component in another product, this SDS information may not be applicable.