



# Safety Data Sheet

## Hydrochloric Acid, 37%

### 1. Identification

**Product Name:** Hydrochloric Acid, 37%

**Synonyms:** HCl, Muratic Acid, Hydrogen Chloride

**Recommended Use:** Laboratory Reagent

**Manufacturer:**

BBC Biochemical  
409 Eleanor Lane,  
Mount Vernon, WA 98273  
1-800-635-4477

**Item #:** 8571, 8575, DI0505082

**Web SDS:**

**Restrictions on Use:** Any use other than recommended

**In Case of Emergency:**

Chemtec US 1-800-424-9300  
Chemtec International 703-527-3887

### 2. Hazards Identification

**OSHA Hazard Classification(s):**

Acute Toxicity - Inhalation - Category 3

Skin Corrosion - Category 1B

Eye Damage - Category 1

**Signal Word:** Danger

**Hazard Statement(s):** Toxic if inhaled. Causes severe skin burns and eye damage. Causes serious eye damage.

**Pictogram(s):**



**Precautionary Statement(s):** Prevention: Avoid breathing dust, vapors. Use only outdoors or in a well-ventilated area. Do not breathe dusts or mists. Wash body thoroughly after handling. Wear protective gloves, protective clothing, eye protection and face protection. Wear eye protection, face protection.

Response: If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a doctor. Specific treatment (see first aid section on this label). If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Take off all contaminated clothing and wash it before reuse. Immediately call a doctor. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue Rinsing

Storage: Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Disposal: Dispose of contents/container in accordance with local regulations.

**Descriptions of Hazards not otherwise classified:** N/A

**Percent of mixture with unknown acute toxicity:** N/A

### 3. Composition and Information on Ingredients

Chemical Name	Common Name	CAS #	Concentration %
Hydrochloric Acid	Muratic Acid	7647-01-0	37
Water		7732-18-5	Balance

### 4. First Aid Measures

**Eye Contact:** If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

**Skin Contact:** If on skin (or hair): Take off immediately all contaminated clothing and wash before reuse. Wash with plenty of water. If skin irritation occurs: Get medical advice/attention.

**Inhalation:** Remove to fresh air; give artificial respiration if breathing has stopped. Get medical advice/attention if you feel unwell.

**Ingestion:** Do not induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Get medical attention.

**Symptoms:** Irritation eyes, nose, throat; headache, dizziness



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**Recommendations for immediate medical care/special treatment:** Get medical advice/attention if you feel unwell.

### 5. Fire- Fighting Measures

**Extinguishing Media:** Dry chemical, carbon dioxide, alcohol foam, water.

**Fire Hazards (Chemical):** Not flammable.

**Special Protective Equipment:** Fire fighters should use self-contained breathing apparatus and protective clothing.

**Precautions for Firefighters:** Carbon monoxide and unidentified organic compounds may be formed during combustion.

### 6. Accidental Release Measures

**Emergency Procedures:** Evacuate the area of all unnecessary personnel. Wear suitable protective equipment. Eliminate all sources of ignition and provide ventilation.

**Protective Equipment:** See section 8

**Environmental Precautions:** Prevent release to the environment by using barriers.

**Containment and Clean-Up Procedures:** Use barriers to prevent spreading. Collect spill in container. Call waste authorities.

### 7. Handling and Storage

**Handling:** Do not breathe vapors. Do not eat, drink or smoke when using this product.

**Storage:** Store in a well-ventilated place. Keep container tightly closed. Store locked up.

### 8. Exposure Controls/Personal Protection

**OSHA Permissible Exposure Limits (PELs):**

Reagent	CAS #	OSHA PEL TWA
Hydrochloric Acid	7647-01-0	5 ppm (7 mg/m <sup>3</sup> ) Ceiling

**ACGIH Threshold Limit Values (TLVs):**

Reagent	CAS #	ACGIH PEL TLV	ACGIH STEL
Hydrochloric Acid	7647-01-0	2 ppm (3 mg/m <sup>3</sup> ) Ceiling	

**Engineering Controls:** Use in a well ventilated area to prevent exposure. Maintain eyewash fountain and quick-drench facilities in work areas.

**Personal Protective Measures:** Wear gloves, lab coat, eye protection and impervious footwear. Contact lenses should not be worn when working with this material.

**Special PPE Requirements:** If ventilation hood not available wear respirator.

### 9. Physical and Chemical Properties Section

**Appearance:** Colorless, Liquid

**Molecular Weight:** 36.46

**Molecular Formula:** HCl

**pH:** Less than 1

**Boiling Point and Boiling Range:** -121°F

**Melting Point/Freezing Point:** -174°F

**Flash Point:** N/A

**Specific Gravity/Relative Density:** N/A

**Odor:** Pungent

**Odor Threshold:** N/A

**Color:** Colorless

**Flammability (solid/gas):** N/A

**Vapor Density:** N/A



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**Upper/Lower flammability or explosive limits:** N/A

**Vapor Pressure:** 40.5 atm

**Evaporation Rate:** N/A

**Partition Coefficient: n-octanol/water:** N/A

**Viscosity:** N/A

**Auto-ignition temperature:** N/A

**Solubility:** N/A

**Decomposition Temperature:** N/A

### 10. Stability and Reactivity

**Reactivity:**

**Chemical Stability:** Stable

**Conditions of Stability/Instability:** Stable under normal conditions of temperature and pressure.

**Stabilizers needed:** None

**Safety issue indicated by appearance change:** N/A

**Other:** N/A

**Hazardous Reactions:** N/A

**Hazardous Polymerization:** Does not occur

**Conditions to avoid:** N/A

**Classes of Incompatible Materials:** Oxidizers, Strong Acids, Strong Bases, Hydroxides, amines, alkalis, copper, brass, zinc. Corrosive to most metals.

**Hazardous Decomposition Products:** Thermal-oxidation degradation can produce oxides of carbon. Toxic gases and vapors (i.e. Carbon monoxide) may be released in a fire.

### 11. Toxicological Information

#### Likely Routes of Exposure

**Eyes:** Corrosive to eyes. May cause burning, reddening, damage to cornea and/or blindness. Damage may be permanent, may result in loss of vision.

**Skin:** Corrosive to skin. May cause burning, reddening, damage to multiple layers of skin, dermatitis and/or permanent scarring.

**Inhalation:** Dizziness, headache. Vapors are extremely hazardous by inhalation. May cause respiratory distress and asthma like conditions. May cause coughing spells when inhaled.

**Ingestion:** Corrosive solution. Will cause chemical burns to mouth, throat and stomach. Causes gastrointestinal discomfort including diarrhea. May cause permanent damage to internal tissue. Ingestion of large amounts may be fatal.

**Signs or Symptoms of Exposure:** Irritation nose, throat, larynx; cough, choking; dermatitis; solution: eye, skin burns; liquid: frostbite; in animals: laryngeal spasm; pulmonary edema

**Effects from short term exposure (delayed, immediate, chronic):** Irritation to the eyes, nose, throat; headache, dizziness, nausea.

**Acute Toxicity (Numerical Measures):** LD50(oral, rat)=900 mg/kg; LC50(inhalation, mouse)=1108 ppm/1H; LC50(inhalation, mouse)=3940 mg/m<sup>3</sup>/30M

**Carcinogenicity (NTP, IARC, OSHA):** Not listed as a carcinogen.

### 12. Ecological Information

**Ecotoxicity:** CAS 7647-01-0 Hydrochloric Acid

Fish: LC50 (96 Hr) Mosquito Fish: 282 mg/L LC100(24Hr) Trout: 10 mg/L

Invertebrates: LC50(48Hr) Starfish: 100-330 mg/L LC50 (48Hr) Shrimp: 100-330 mg/L

**Persistence and degradability:** N/A

**Bioaccumulation Potential (octanol-water partition coefficient, BCF):** N/A

**Mobility in the soil:** N/A

**Adverse Environmental Effects:** N/A



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### 13. Disposal Considerations

**Recommended Disposal Containers:** Check with your local waste authorities\*

**Recommended Disposal Methods:** Do not dispose of in drains, check with your local waste authorities.\*

**Physical/Chemical Properties affecting Disposal:** See section 2 and section 9 applicable information.\*

**Special Precautions for Landfill and Incineration Activities:** Check with your local waste authorities.\*

**Waste Stream:** Consult your local or regional authorities.\*

### 14. Transport Information

**UN Number:** UN1789

**UN Proper Shipping Name:** Hydrochloric acid solution

**Transport Hazard Class(es):** 8

**Packing Group Number:** II

**Environmental Hazards (IMDG code):**

**Marine Pollutant:** No

**Transport in Bulk (IBC Code):** N/A

**Special Transport Precautions:** N/A

### 15. Regulatory Information

**OSHA:**

**DOT:**

**EPA:**

**CPSC:**



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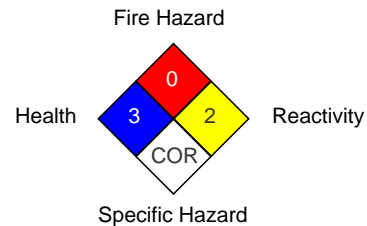
### 16. Other Information

Revision Date: 10/22/2014

#### NFPA

Health	3
Fire Hazard	0
Reactivity	2
Specific Hazard	COR

National Fire Protection Association (USA) NFPA



#### HMIS

Health	3
Flammability	0
Physical Hazard	2
Personal Protection	

Hazardous Material Information System HMIS

Health	3
Flammability	0
Physical Hazard	2
Personal Protection	

#### Notice to Reader:

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