

## SAFETY DATA SHEET

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

#### 1.1 Product identifiers

Product name Hydrochloric Acid

CAS number 7732-18-5

Synonyms Muriatic acid

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

Identified uses Laboratory chemicals

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

Company Lab Alley, LLC  
12501 Pauls Valley Road  
Austin, Texas 78737  
U.S.A.

Telephone 512-668-9918

Fax 512-886-4008

#### 1.4 Emergency telephone

**Emergency Phone #** US & Canada: 1-800-535-5053 INFOTRAC  
International 1-352-323-3500 INFOTRAC


### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

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

Corrosive to metals	Category 1
Skin corrosion/irritation	Category 1B
Serious Eye Damage/Eye Irritation	Category 1
Specific target organ toxicity (single exposure)	Category 3
Target Organs - Respiratory system	
Specific target organ toxicity (repeated exposure)	Category 2
Target Organs - Kidney, Liver	

## 2.2 GHS Label elements, including precautionary statements

Pictogram	
Signal Word	Danger
Hazard statements	May be corrosive to metals. Causes severe skin burns and eye damage. May cause respiratory irritation. May cause damage to organs through prolonged or repeated exposure.
Precautionary statements:	
Prevention	Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Use only outdoors or in a well-ventilated area. Keep only in original container.
Response	Immediately call a POISON CENTER or doctor/physician.
Inhalation	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Skin	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.
Eyes	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Ingestion	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
Spills	Absorb spillage to prevent material damage.
Storage	Store locked up. Store in a well-ventilated place. Keep container tightly closed. Store in a corrosive resistant polypropylene container with a resistant inliner. Store in a dry place.
Disposal	Dispose of contents/container to an approved waste disposal plant.

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

None identified

## SECTION 3: Composition/information on ingredients

### 3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Hydrochloric acid	Muriatic acid	7647-01-0	35-38%
Water	H <sub>2</sub> O, Aqua	7732-18-5	62-65%

## SECTION 4: First aid measures

### 4.1 Description of first-aid measures

#### General advice

<b>If inhaled</b>	Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim or inhaled the substance; induce artificial respiration with a respiratory medical device. Immediate medical attention is required.
<b>In case of skin contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.
<b>In case of eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.
<b>If swallowed</b>	Do not induce vomiting. Call a physician or Poison Control Center immediately.

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

Cause burns by all exposure routes. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.

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

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

<b>Suitable extinguishing media</b>	Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.
<b>Unsuitable extinguishing media</b>	No information available

### 5.2 Specific hazards arising from the substance or mixture

Corrosive material. Causes burns by all exposure routes. Thermal decomposition can lead to release of irritating gases and vapors. Hazardous combustion products: Hydrogen chloride gas.

### 5.3 Special protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### 5.4 Further information

**Flash Point** No information available

**Autoignition Temperature** No information available

**Explosion limits**

**Upper** No data available  
**Lower** No data available  
**Sensitivity to Mechanical Impact** No information available  
**Sensitivity to Static Discharge** No information available

**NFPA**

Health	Flammability	Instability	Physical hazards
3	0	0	N/A

**SECTION 6: Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Ensure adequate ventilation. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Do not get in eyes, on skin, or on clothing.

**6.2 Environmental precautions**

Should not be released into the environment. See Section 12 for additional ecological information.

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

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

**6.4 Reference to other sections**

See section 2 for full list of hazard and precaution statements.

**SECTION 7: Handling and storage**

**7.1 Precautions for safe handling**

**Precautions on safe handling**

Wear personal protective equipment. Do not breathe vapors or spray mist. Do not get in eyes, on skin, or on clothing. Do not ingest.

**Hygiene measures**

Handle in accordance with good industrial hygiene and safety practice.

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

**Storage conditions**

Keep containers tightly closed in a dry, cool and well-ventilated place. Corrosives area.

## Incompatibilities

No information available

## SECTION 8: Exposure controls/personal protection

### 8.1 Occupational exposure limits

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Component	Type	Value	
Hydrochloric acid	PEL (Ceiling)	5 ppm	7 mg/m <sup>3</sup>
	PEL (Vavated (Ceiling))	5 ppm	7 mg/m <sup>3</sup>

#### US. ACGIH Threshold Limit Values

Component	Type	Value
Hydrochloric acid	TLV	2 ppm

#### US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value	
Hydrochloric acid	IDLH	50 ppm	
	Ceiling	5 ppm	7 mg/m <sup>3</sup>

#### Biological occupational exposure limits

No information available

### 8.2 Exposure controls

#### Appropriate engineering controls

Ensure that eyewash stations and safety showers are close to the workstation location.

#### Personal protective equipment

##### Eye/face protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

##### Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

##### Respiratory protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

#### Control of environmental exposure

No information available

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Colorless
Odor	Pungent
Odor Threshold	No information available
pH	< 1
Melting Point/Range	-35 °C / -31 °F
Boiling Point/Range	57 °C / 135 °F @ 760 mmHg
Evaporation Rate	No information available
Flammability (solid)	No information available
Flammability or explosive limit	
Upper	No data available
Lower	No data available
Vapor Pressure	125 mbar @ 20 °C
Vapor Density	1.27 (Air = 1.0)
Density	1.18
Solubility	Soluble in water
Partition coefficient; n-octanol/water	No data available
Autoignition Temp	No information available
Decomposition Temp	No information available
Viscosity	1.8 mPa.s @ 15 °C
Molecular Formula	HCl.H <sub>2</sub> O
Molecular Weight	36.46
VOC Content(%)	No information available
Oxidizing properties	No information available

### 9.2 Other safety information

No information available

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

None known, based on information available

### 10.2 Chemical stability

Stable under normal conditions

### 10.3 Possibility of hazardous reactions

Contact with metals may evolve flammable hydrogen gas.

### 10.4 Conditions to avoid

Incompatible products. Excess heat

### 10.5 Incompatible materials

Metals, strong oxidizing agents, sodium hypochlorite, Amines, Bases, Fluorine, Cyanides, alkaline.

## 10.6 Hazardous decomposition products

Hydrogen chloride gas

### SECTION 11: Toxicological information

#### 11.1 Information on toxicological effects

##### Product Information, Component Information

##### Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Hydrochloric acid	238 - 277 mg/kg (rat)	5010 mg/kg (rabbit)	1.68 mg/L (rat) 1 h

##### Skin corrosion/irritation

Causes burns by all exposure routes

##### Serious eye damage/eye irritation

Causes burns by all exposure routes

##### Respiratory or skin sensitization

Causes burns by all exposure routes

##### Germ cell mutagenicity

Mutagenic effects have occurred in experimental animals.

##### Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Hydrochloric acid	7647-01-0	Group 3	Not listed	Not listed	Not listed	Not listed

##### Specific target organ toxicity - single exposure

Respiratory system

##### Specific target organ toxicity - repeated exposure

Kidney, Liver

##### Reproductive toxicity

Experiments have shown reproductive toxicity effects on laboratory animals

##### Chronic effects

No information available

#### 11.2 Additional Information

No information available

### SECTION 12: Ecological information

## 12.1 Toxicity

Do not empty into drains

Product		Species	Test Results
Hydrochloric acid	LC50	Freshwater fish	282 mg/L 96 h

## 12.2 Persistence and degradability

Persistence is unlikely based on information available

## 12.3 Bio accumulative potential

No information available

## 12.4 Mobility in soil

Will likely be mobile in the environment due to its water solubility

## 12.5 Results of PBT and vPvB assessment

No information available

## 12.6 Endocrine disrupting properties

No information available

## 12.7 Other adverse effects

See actual entry in RTECS for complete information .

## SECTION 13: Disposal considerations

### 13.1 Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## SECTION 14: Transport information

### DOT (US)

UN-No UN1789  
Proper Shipping Name HYDROCHLORIC ACID  
Hazard Class 8  
Packing Group II

### IMDG

UN-No UN1789  
Proper Shipping Name HYDROCHLORIC ACID  
Hazard Class 8  
Packing Group II

### IATA

UN-No UN1789  
Proper Shipping Name HYDROCHLORIC ACID



Hazard Class 8  
Packing Group II

**SECTION 15: Regulatory information**

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**  
Not listed

**CERCLA Hazardous Substance List (40 CFR 302.4)**  
Listed: Hydrochloric acid, 5000 lb

**SARA 304 Emergency release notification**  
Not listed

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**  
Listed: Hydrochloric acid, 5000 lb

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**  
**SARA 302 Extremely hazardous substance**  
Not listed.

**SARA 311/312 Hazardous**  
Listed: Acute Health Hazard, Chronic Health Hazard.

**SARA 313 (TRI reporting)**  
Listed: Hydrochloric acid

Component	CAS-No	Weight %	SARA 313 - Threshold Values %
Hydrochloric acid	7647-01-0	35-38	1.0

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**  
Listed: Hydrochloric acid

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**  
Not regulated.

**Safe Drinking Water Act**  
Listed: Hydrochloric acid, 5000 lb

**FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace**  
Not listed

**US state regulations**

**US. Massachusetts RTK - Substance List**  
Listed: Hydrochloric acid

**US. New Jersey Worker and Community Right-to-Know Act**

Listed: Hydrochloric acid

**US. Pennsylvania Worker and Community Right-to-Know Law**

Listed: Hydrochloric acid

**California Proposition 65**

Not listed

**SECTION 16: Other information**

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**SECTION 17: Disclaimer**

The information provided on 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.