

# Safety Data Sheet

## Hydrochloric Acid, 10%

**CAROLINA**<sup>®</sup>  
www.carolina.com

### Section 1 Product Description

**Product Name:** Hydrochloric Acid, 10%  
**Recommended Use:** Science education applications  
**Synonyms:** Muriatic Acid  
**Distributor:** Carolina Biological Supply Company  
2700 York Road, Burlington, NC 27215  
1-800-227-1150  
**Chemical Information:** 800-227-1150 (8am-5pm (ET) M-F)  
**Chemtrec:** 800-424-9300 (Transportation Spill Response 24 hours)

### Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

**DANGER**



Causes severe skin burns and eye damage. Causes serious eye damage. Toxic if inhaled.

**GHS Classification:**

Skin Corrosion/Irritation Category 1B, Serious Eye Damage/Eye Irritation Category 1, Acute Toxicity - Inhalation Vapor Category 3

### Section 3 Composition / Information on Ingredients

<u>Chemical Name</u>	<u>CAS #</u>	<u>%</u>
Water	7732-18-5	96.28
Hydrogen Chloride	7647-01-0	3.72

### Section 4 First Aid Measures

**Emergency and First Aid Procedures**

**Inhalation:** IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
**Eyes:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
**Skin Contact:** IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.  
**Ingestion:** IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

### Section 5 Firefighting Procedures

**Extinguishing Media:** Water fog in flooding quantities. Apply water from as far a distance as possible.  
**Fire Fighting Methods and Protection:** Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.  
**Fire and/or Explosion Hazards:** Fire or excessive heat may produce hazardous decomposition products.  
**Hazardous Combustion Products:** Hydrogen chloride

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## Section 6

## Spill or Leak Procedures

### Steps to Take in Case Material Is Released or Spilled:

Exposure to the spilled material may be severely irritating or toxic. Follow personal protective equipment recommendations found in Section 8 of this SDS. Personal protective equipment needs must be evaluated based on information provided on this sheet and the special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred, and the expertise of employees in the area responding to the spill. Never exceed any occupational exposure limits.

Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation. Use an inert absorbent such as sand or vermiculite. Place in properly labeled closed container.

## Section 7

## Handling and Storage

### Handling:

Do not breathe dust/fume/gas/mist/vapors/spray. Avoid breathing dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.

### Storage:

Store in a well-ventilated place. Keep container tightly closed. Store locked up. Keep container tightly closed in a cool, well-ventilated place.

### Storage Code:

White - Corrosive. Separate acids from bases; separate oxidizer acids from organic acids.

## Section 8

## Protection Information

<u>Chemical Name</u>	<u>ACGIH</u>		<u>OSHA PEL</u>	
	<u>(TWA)</u>	<u>(STEL)</u>	<u>(TWA)</u>	<u>(STEL)</u>
Hydrogen Chloride	N/A	2 ppm (Ceiling)	N/A	5 ppm (Ceiling)

### Control Parameters

#### Engineering Measures:

No exposure limits exist for the constituents of this product. Use local exhaust ventilation or other engineering controls to minimize exposures and maintain operator comfort.

#### Personal Protective Equipment (PPE):

Lab coat, apron, eye wash, safety shower.

#### Respiratory Protection:

No respiratory protection required under normal conditions of use. Provide general room exhaust ventilation if symptoms of overexposure occur as explained Section 11. A respirator is not normally required.

#### Eye Protection:

Wear chemical splash goggles when handling this product. Have an eye wash station available.

#### Skin Protection:

Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

#### Gloves:

Natural latex,

## Section 9

## Physical Data

**Formula:** See Section 3

**Molecular Weight:** 36.46 (Hydrogen Chloride)

**Appearance:** Colorless Liquid

**Odor:** No data available Pungent

**Odor Threshold:** No data available

**pH:** -0.4

**Melting Point:** No data available

**Boiling Point:** No data available

**Flash Point:** No data available

**Flammable Limits in Air:** No data available

**Vapor Pressure:** No data available

**Evaporation Rate (BuAc=1):** No data available

**Vapor Density (Air=1):** No data available

**Specific Gravity:** No data available

**Solubility in Water:** Soluble

**Log Pow (calculated):** No data available

**Autoignition Temperature:** No data available

**Decomposition Temperature:** No data available

**Viscosity:** 10

**Percent Volatile by Volume:** No data available

## Section 10

## Reactivity Data

### Reactivity:

No data available

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**Chemical Stability:** Stable under normal conditions.  
**Conditions to Avoid:** Reaction with water is exothermic.  
**Incompatible Materials:** Water-reactive materials, Water, Caustics (bases), Oxidizing materials, Acetic anhydride, Amines, Alkanolamines, Isocyanates, Copper, Metals  
**Hazardous Decomposition Products:** Hydrogen chloride  
**Hazardous Polymerization:** Will not occur

## Section 11 Toxicity Data

**Routes of Entry:** Inhalation and ingestion.  
**Symptoms (Acute):** Respiratory Irritation  
**Delayed Effects:** Pulmonary Edema

### Acute Toxicity:

Chemical Name	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
Water	7732-18-5	Oral LD50 Rat 90000 mg/kg		
Hydrogen Chloride	7647-01-0	Oral LD50 Rabbit 900 mg/kg		INHALATION LC50 Rat 3700 ppm INHALATION LC50 Mouse 1108 ppm INHALATION LC50 Rat 45000 MG/M3 INHALATION LC50 Rat 8300 MG/M3

### Carcinogenicity:

Chemical Name	CAS Number	IARC	NTP	OSHA
Hydrogen Chloride	7647-01-0	Not listed	Not listed	Not listed

### Chronic Effects:

**Mutagenicity:** No evidence of a mutagenic effect.  
**Teratogenicity:** No evidence of a teratogenic effect (birth defect).  
**Sensitization:** No evidence of a sensitization effect.  
**Reproductive:** No evidence of negative reproductive effects.  
**Target Organ Effects:**  
**Acute:** No information available  
**Chronic:** No data available

## Section 12 Ecological Data

**Overview:** This material is not expected to be harmful to the ecology.  
**Mobility:** This material is expected to have very high mobility in soil. It does not absorb to most soil types.  
**Persistence:** Evaporation into atmosphere, dissolved in water.  
**Bioaccumulation:** Bioconcentration is not expected to occur.  
**Degradability:** No data  
**Other Adverse Effects:** No data

Chemical Name	CAS Number	Eco Toxicity
Water	7732-18-5	No data available
Hydrogen Chloride	7647-01-0	Aquatic LC50 (96h) Mosquitofish ( <i>Gambusia affinis</i> ) 282 MG/L

## Section 13 Disposal Information

**Disposal Methods:** Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.

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**Waste Disposal Code(s):**

If discarded, this product is considered a RCRA corrosive waste, D002.

## Section 14

## Transport Information

**Ground - DOT Proper Shipping Name:**  
UN 1789, Hydrochloric Acid, P.G. III Class 8

**Air - IATA Proper Shipping Name:**  
UN 1789, Hydrochloric Acid, P.G. III Class 8

## Section 15

## Regulatory Information

**TSCA Status:** All components in this product are on the TSCA Inventory.

Chemical Name	CAS Number	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
Hydrogen Chloride	7647-01-0	Hydrochloric acid	5000 lb RQ	5000 lb final RQ; (2270 kg)	500 lb TPQ (gas only)	No

## Section 16

## Additional Information

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**Replaces: None**

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The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

### Glossary

ACGIH	American Conference of Governmental Industrial Hygienists	NTP	National Toxicology Program
CAS	Chemical Abstract Service Number	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
DOT	U.S. Department of Transportation	ppm	Parts per million
IARC	International Agency for Research on Cancer	RCRA	Resource Conservation and Recovery Act
N/A	Not Available	SARA	Superfund Amendments and Reauthorization Act
		TLV	Threshold Limit Value
		TSCA	Toxic Substances Control Act
		IDLH	Immediately dangerous to life and health