

# Safety Data Sheet

## Hydrochloric Acid, 0.1M

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

### Section 1 Product Description

**Product Name:** Hydrochloric Acid, 0.1M  
**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 skin and eye irritation Toxic if inhaled.

**GHS Classification:**  
Skin Corrosion/Irritation Category 3

### Section 3 Composition / Information on Ingredients

<u>Chemical Name</u>	<u>CAS #</u>	<u>%</u>
Water	7732-18-5	99.64
Hydrogen Chloride	7647-01-0	0.36

### 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. If eye irritation persists: Get medical advice/attention.  
**Skin Contact:** IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.  
**Ingestion:** If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

### Section 5 Firefighting Procedures

**Extinguishing Media:** Use media suitable to extinguish surrounding fire.  
**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

### Section 6 Spill or Leak Procedures

# Safety Data Sheet

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

Exposure to the spilled material may be irritating or harmful. Follow personal protective equipment recommendations found in Section 8 of this SDS. Additional precautions may be necessary based on special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred. Also consider the expertise of employees in the area responding to the spill.  
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.

## Section 7 Handling and Storage

**Handling:** 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:** Green - general chemical storage

## Section 8 Protection Information

Chemical Name	ACGIH		OSHA PEL	
	(TWA)	(STEL)	(TWA)	(STEL)
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. General room ventilation might be required to maintain operator comfort under normal conditions of use.  
**Personal Protective Equipment (PPE):** Lab coat, apron, eye wash, safety shower.  
**Respiratory Protection:** No respiratory protection required under normal conditions of use.  
**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:** No information available

## Section 9 Physical Data

<b>Formula:</b> See Section 3	<b>Vapor Pressure:</b> No data available
<b>Molecular Weight:</b> 36.46 (Hydrogen Chloride)	<b>Evaporation Rate (BuAc=1):</b> No data available
<b>Appearance:</b> Colorless Liquid	<b>Vapor Density (Air=1):</b> No data available
<b>Odor:</b> Mild Pungent	<b>Specific Gravity:</b> Approx. 1
<b>Odor Threshold:</b> No data available	<b>Solubility in Water:</b> Soluble
<b>pH:</b> 1	<b>Log Pow (calculated):</b> No data available
<b>Melting Point:</b> No data available	<b>Autoignition Temperature:</b> No data available
<b>Boiling Point:</b> No data available	<b>Decomposition Temperature:</b> No data available
<b>Flash Point:</b> No data available	<b>Viscosity:</b> No data available
<b>Flammable Limits in Air:</b> No data available	<b>Percent Volatile by Volume:</b> No data available

## Section 10 Reactivity Data

**Reactivity:** Not generally reactive under normal conditions.  
**Chemical Stability:** Stable under normal conditions.  
**Conditions to Avoid:** None known.  
**Incompatible Materials:** Water-reactive materials  
**Hazardous Decomposition Products:** Hydrogen chloride  
**Hazardous Polymerization:** Will not occur

## Section 11 Toxicity Data

**Routes of Entry:** Inhalation and ingestion.  
**Symptoms (Acute):** Respiratory Irritation, Dermatitis

# Safety Data Sheet

**Delayed Effects:** No data available

**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:**

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

## Section 12

## Ecological Data

<b>Overview:</b>	This material is not expected to be harmful to the ecology.
<b>Mobility:</b>	This material is expected to have high mobility in soil. It absorbs weakly to most soil types.
<b>Persistence:</b>	Dissolved into water, Evaporation into atmosphere, dissolved in water.
<b>Bioaccumulation:</b>	Bioconcentration is not expected to occur.
<b>Degradability:</b>	No data
<b>Other Adverse Effects:</b>	No data

Chemical Name	CAS Number	Eco Toxicity
Hydrogen Chloride	7732-18-5	No data available
	7647-01-0	96 HR LC50 GAMBUSIA AFFINIS 282 MG/L [STATIC]

## Section 13

## Disposal Information

<b>Disposal Methods:</b>	Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.
<b>Waste Disposal Code(s):</b>	If discarded, this product is considered a RCRA corrosive waste, D002.

## Section 14

## Transport Information

<b>Ground - DOT Proper Shipping Name:</b> UN1789, Hydrochloric Acid Solutions, 8, PG III	<b>Air - IATA Proper Shipping Name:</b> UN1789, Hydrochloric Acid Solutions, 8, PG III
---	---

## 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
---------------	------------	------------	----------	-----------	-----------	---------------

# Safety Data Sheet

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

Revised: 10/06/2015

Replaces: 10/06/2015

Printed: 10-29-2015

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