Section 1  Product Description

Product Name: Hydrochloric Acid, 6M
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

Acute Toxicity Dermal Contains 18.6 % of the mixture consists of ingredient(s) of unknown toxicity

Section 3  Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS #</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>81.4</td>
</tr>
<tr>
<td>Hydrogen Chloride</td>
<td>7647-01-0</td>
<td>18.6</td>
</tr>
</tbody>
</table>

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. Flammable Hydrogen gas may be produced over long periods of exposure to Aluminum, Tin, Lead, and Zinc.
Hazardous Combustion Products: Hydrogen chloride

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. If this material is released into a work area, evacuate the area immediately.

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. Suitable for any general chemical storage.

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

Section 8 Protection Information

Chemical Name | Chemical Name | ACGIH | OSHA PEL
--- | --- | --- | ---
Hydrogen Chloride | | 2 ppm (Ceiling) | 5 ppm (Ceiling)

Control Parameters

Engineering Measures: Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure.

Personal Protective Equipment (PPE):

Respiratory Protection: Respiratory protection may be required to avoid overexposure when handling this product. General or local exhaust ventilation is the preferred means of protection. Use a respirator if general room ventilation is not available or sufficient to eliminate symptoms.

Respirator Type(s): None required where adequate ventilation is provided. If airborne concentrations are above the applicable exposure limits, use NIOSH/MSHA approved respiratory protection.

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,, Butyl rubber, Nitrile, Neoprene

Section 9 Physical Data

Formula: See Section 3
Molecular Weight: 36.46 (Hydrochloric Acid)
Appearance: Colorless Liquid
Odor: Strong Pungent
Odor Threshold: No data available
pH: -0.7
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): 2.0
Vapor Density (Air=1): No data available
Specific Gravity: >1
Solubility in Water: Soluble
Log Pow (calculated): No data available
Autoignition Temperature: No data available
Decomposition Temperature: No data available
Viscosity: No data available
Percent Volatile by Volume: No data available

Section 10 Reactivity Data

Reactivity: Mildly reactive - See below
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

Incompatible Materials:
Water-reactive materials, Water, Caustics (bases), Oxidizing materials, Acetic anhydride, Amines, Alkanolamines, Isocyanates, Copper, Metals

Section 11 Toxicity Data

Routes of Entry: Inhalation and ingestion.

Symptoms (Acute): Respiratory Irritation

Delayed Effects: No data available

Acute Toxicity:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>Oral LD50 Rat 90000 mg/kg</td>
<td></td>
<td>INHALATION LC50 Rat 3700 ppm</td>
</tr>
<tr>
<td>Hydrogen Chloride</td>
<td>7647-01-0</td>
<td>Oral LD50 Rabbit 900 mg/kg</td>
<td></td>
<td>INHALATION LC50 Mouse 1108 ppm</td>
</tr>
</tbody>
</table>

Carcinogenicity:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen Chloride</td>
<td>7647-01-0</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

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 information available

Section 12 Ecological Data

Overview: Slight ecological hazard. In high concentrations, this product may be dangerous to plants and/or wildlife.

Mobility: This material is expected to have high mobility in soil. It absorbs weakly to most soil types.

Persistence: Evaporation into atmosphere, dissolved in water.

Bioaccumulation: No data

Degradability: No data

Other Adverse Effects: No data

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>Eco Toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>No data available</td>
</tr>
<tr>
<td>Hydrogen Chloride</td>
<td>7647-01-0</td>
<td>96 HR LC50 GAMBUSIA AFFINIS 282 MG/L [STATIC]</td>
</tr>
</tbody>
</table>

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.

Waste Disposal Code(s): If discarded, this product is considered a RCRA corrosive waste, D002.
Section 14

Transport Information

Ground - DOT Proper Shipping Name:
UN1789
Hydrochloric Acid
Class 8
P.G. II

Air - IATA Proper Shipping Name:
UN1789
Hydrochloric Acid
Class 8
P.G. II

Section 15

Regulatory Information

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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>§ 313 Name</th>
<th>§ 304 RQ</th>
<th>CERCLA RQ</th>
<th>§ 302 TPQ</th>
<th>CAA 112(2) TQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen Chloride</td>
<td>7647-01-0</td>
<td>Hydrochloric acid</td>
<td>5000 lb RQ</td>
<td>5000 lb final RQ; 2270 kg final RQ</td>
<td>500 lb TPQ (gas only)</td>
<td>No</td>
</tr>
</tbody>
</table>

Section 16

Additional Information

Revised: 09/09/2015
Replaces: 07/21/2015
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
CAS Chemical Abstract Service Number
CERCLA Comprehensive Environmental Response, Compensation, and Liability Act
DOT U.S. Department of Transportation
IARC International Agency for Research on Cancer
N/A Not Available
NTP National Toxicology Program
OSHA Occupational Safety and Health Administration
PEL Permissible Exposure Limit
ppm Parts per million
RCRA Resource Conservation and Recovery Act
SARA Superfund Amendments and Reauthorization Act
TLV Threshold Limit Value
TSCA Toxic Substances Control Act
IDLH Immediately dangerous to life and health