

MATERIAL SAFETY DATA SHEET

1 OF 2

Section I: IDENTIFICATION

Product Name: **Hydrochloric Acid, 1 Normal**

Date Prepared: 07/15/02

Item Number(s): 3396-16

Emergency Phone, Infotrac: 800-424-9300

Section II: COMPOSITION

<i>Hazardous Component(s):</i>	<i>CAS Number</i>	<i>OHSA PEL, ACGIH TLV/STEL(PPM)</i>	<i>NFPA</i>
Hydrochloric Acid 3.65% (Corrosive Liquid)	7647-01-0	5 5/50	Health 3 Flammability 0 Reactivity 0

Section III: PHYSICAL DATA

<i>Boiling Point:</i>	~ 212°F	<i>Specific Gravity (H₂O = 1):</i>	~1
<i>Vapor Pressure mm Hg/20°C:</i>	50-60	<i>Percent Volatile by Vol:</i>	NA
<i>Vapor Density (Air 1:1):</i>	NE	<i>Evaporation Rate (ether = 1):</i>	>1
<i>Solubility in H₂O:</i>	Complete	<i>Appearance & Odor:</i>	Clear liquid, chlorine odor

Section IV: FIRE/EXPLOSION HAZARD

Flash Point: Non-Flammable *Flammable Limits:* LEL: NA UEL: NA

Extinguishing Media: Water spray, dry chemical, CO₂ and foam

Special Fire Fighting Procedures: Wear protective clothing with NIOSH approved breathing apparatus. Products of combustion may be harmful in a fire situation. Do not use direct water stream.

Unusual Fire & Explosion Hazards: Hydrogen and chloride gas

Section V: REACTIVITY

Stability: Stable *Material to Avoid:* Strong bases, slightly corrosive to metals

Hazardous Decomposition or Byproducts: Oxides of chlorine

Hazardous Polymerization: Does not occur *Conditions to Avoid:* Strong bases

Section VI: HEALTH HAZARDS

Routes of Entry: Inhalation, Skin and Ingestion *Target Organs:* Respiratory system

Acute/Chronic: Solution as offered will not cause a high level of health risk, however, it will burn eyes and result in skin irritation. Chlorine vapors are relatively low.

Carcinogenicity: Not classified as a human carcinogen.

Signs/Symptoms of Exposure: Skin, eyes and possible respiratory irritation.

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Section VI: HEALTH HAZARDS

Emergency First Aid:

Skin: Remove contaminated clothing. Wash affected area with soap and water.

Eyes: Thoroughly flush eyes with water. Contact a physician if irritation persist.

Ingestion: Rinse mouth with water, provided person is conscious and contact a physician.

Inhalation: Remove person to fresh air. If not breathing, give artificial respiration and contact physician.

Section VII: SAFE HANDLING

Chemical Release or Spill: Wear full protective clothing especially NIOSH approved respirator. Isolate the spill area with sand, or other absorbent material. Neutralize with sodium carbonate. Place all contaminated material in a closed container for proper disposal.

Waste Disposal Method: All liquid and or contaminated material should be disposed of in DOT approved waste containers. Comply with all Federal, State and Local regulations for disposal.

Precautions for Handling and Storing: Store in acid safety cabinet. Avoid excessive heat.

Section VIII: CONTROL MEASURES

Respiratory Protection: NIOSH approved respirator required.

Ventilation: Exhaust hood system for corrosives

Protective Gloves: Chemical resistant *Eye Protection:* Safety glasses

Other Protective Clothing or Equipment: Normal laboratory apparel suggested by Good Laboratory Practices

Work/Hygienic Practices: Wash thoroughly with soap and water after handling.

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. Astral shall not be held liable for any damage resulting from handling or contact with this product.
