

Material Safety Data Sheet

Effective Date: 01-31-08

I. CHEMICAL PRODUCT

Product: Hydrochloric Acid Solution (Catalog Numbers: H0500)
Synonyms: Hydrochloric acid; hydrochloric acid liquid; hydrochloric acid volumetric solution
General Use: Not applicable

EMERGENCY NUMBER (SPILLS, EXPOSURES): Company: 716-731-5567
CHEMTREC: 800-424-9300

II. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	Formula	Mole Weight	CAS No	EC No	Index No	Percent	Hazardous
Hydrochloric Acid	HCl	36.46	7647-01-0	231-595-7	017-002-01-X	1-38%	Yes
Water	H ₂ O	18.02	7732-18-5	231-791-2		99-62%	No

III. HAZARDS IDENTIFICATION**DANGER! CORROSIVE!****Emergency Overview****OSHA Hazards:** Corrosive**HMIS Classification****Health hazard:** 3**Flammability:** 0**Physical hazards:** 0**Potential Health Effects****Inhalation:** Destructive to the tissue of the mucous membranes and upper respiratory tract.**Skin:** Causes skin burns.**Eyes:** Causes eye burns.**Ingestion:** Causes burns.**IV. FIRST AID MEASURES**

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 10 minutes. Assure adequate flushing by separating the eyelids with fingers. Continue rinsing during transport to hospital. Call a physician

Skin: In case of skin contact take off contaminated clothing and shoes immediately, wash with soap and plenty of water. Consult physician.

Ingestion: If person is conscious and can swallow, give two glasses of water (16 oz.), but do not induce vomiting. If vomiting occurs, give water again. Have medical personnel determine if evacuation of stomach or induction of vomiting is necessary. Do not give anything by mouth to an unconscious or convulsing person.

Inhalation: If inhaled remove to fresh air. Get medical attention if breathing becomes difficult or respiratory irritation persists.

V. FIRE FIGHTING MEASURES

Extinguishing media: Water spray. Carbon dioxide, dry chemical powder or appropriate foam.

Decomposition products: N/A

General hazards: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Explosions hazards: N/A

NFPA rating: Health: 3
 Flammability: 0
 Reactivity: 0

VI. ACCIDENTAL RELEASE MEASURES

Personal precautions: Wear appropriate personal protective equipment to minimize direct contact with skin or eyes and prevent inhalation of vapors, mist or gas.
Environmental precautions: Close all the drains.
Clean up methods: Soak up with suitable absorbent material and place in a bag and hold for waste disposal. Prevent splashing and wash the site after material completely removed.

VII. HANDLING AND STORAGE

Handling: Avoid prolonged / repeated exposure. Avoid inhalation of vapor or mist, contact with eyes, skin and clothing.
Storage: Well ventilated area, room temperature and keep tightly closed. Containers must be opened carefully and kept upright.

VIII. EXPOSURE CONTROLS / PERSONAL PROTECTION

OSHA Permissible Exposure Limit (PEL): 2ppm CEIL
ACGIH Treshold Limit Value (TLV): 2 ppm C
Exposure control: Safety shower and eye bath. Mechanical exhaust. Wash thoroughly after handling.
Personal protective equipment:
Respiratory: Appropriate NIOSH type N95 or better dust mask may be worn up to 10 times the exposure levels. As a back up to engineering controls, a full-face air purifying respirator (NIOSH type N100) multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges must be worn at higher concentrations. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Eye: Chemical safety goggles or full facehield where splashing is possible.
Hand: Chemical resistant gloves.
Skin: Choose body protection according to concentration / amount. Wear imprevios protective clothing including shoes, lab coat, apron, or coveralls.

IX. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Colorless to yellowish liquid
Odor: Pungent
Solubility in water: Soluble
Density: 1.01 to 1.1 gm/cc
pH: < 1.0
Boiling point: > 100°C
Melting point: < 0°C
Vapor pressure: 170 mmHg at 21°C for 38% concentrated solution
Flash point: N/A
Flammability: N/A
Autoignition temperature: N/A

X. STABILITY AND REACTIVITY

Stability: Stable under ordinary conditions of use / storage.
Incompatibility: Avoid bases, amines, alkali metals, metals, permanganets, fluorine, metal acetylides, hexalithium disilicide.
Hazardous decomposition products: Hydrogen chloride. Thermal decomposition by reaction with certain metals may produce explosive hydrogen gas as well as toxic fumes of carbon monoxide, carbon dioxide.
Hazardous polymerization: Not applicable.

XI. TOXICOLOGICAL INFORMATION

Acute Toxicity:	LD50 Oral: 900 mg/kg (rabbit) LC 50 Inhalation: 3124 ppm for 1h (rat).
Chronic exposure:	No component of this product present at levels greater than 0.1% identified as probable or confirmed carcinogen by IARC, ACGIH, NTP and OSHA.
Route of exposure:	Skin Contact: May be harmful if absorbed by the skin and cause skin burns. Eye Contact: Causes eye burns. Inhalation: Material may be irritating to mucous membranes and upper respiratory tract. Ingestion: May be harmful if swallowed. Causes burns.

XII. ECOLOGICAL INFORMATION

Water/AIR Pollution:	Toxicity to fish (LC 50 = 250 mg /l in 96h to Mosquito fish).
Biodegradability:	Data not yet available.

XIII. DISPOSAL CONSIDERATIONS

Waste Disposal Method:	Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a mild caustic to neutralize and dispose in liquid form. Observe all federal, state and local regulations for disposal.
Container Disposal:	Observe all federal, state and local environmental regulation.

XIV. TRANSPORT INFORMATION

DOT:	Proper Shipping Name : Hydrochloric Acid UN-Number : 1789 Class : 8 Packing Group : II
IATA:	Proper Shipping Name : Hydrochloric Acid UN-Number : 1789 Class : 8 Packing Group : II.

XV. REGULATORY INFORMATION

U.S. Regulatory Information:	SARA Listed: Acute Health Hazard (311/312 Hazards) TSCA Inventory Item: Yes OSHA Hazards: Corrosive
Canada Regulatory Information:	WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR. DSL: Yes NDSL: No

XVI. OTHER INFORMATION

The information presented in this Material Safety Data Sheet is believed to be correct, but does not purport to be all inclusive and shall be used only as a guide for safety precautions. It does not relate to use in combination with any material or process. The data does not reflect a guarantee of any product properties.