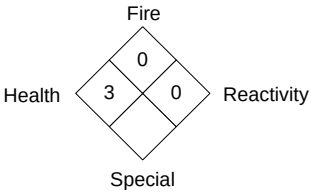
Georgia Gulf

Chemicals and Vinyls, LLC

Material Safety Data Sheet: Hydrochloric Acid Solution 15%-38%

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product name	**Hydrochloric Acid Solution 15%-38%**
Effective date	June, 2007
Synonyms	Muriatic acid, hydrogen chloride, hydrochloride
Chemical formula	HCl
CAS name & no.	Hydrochloric acid, 7647-01-0
Manufacturer's name and address	Georgia Gulf Chemicals and Vinyls, LLC P.O. Box 629 Plaquemine, LA 70765-0629
Emergency telephone number	For transportation emergencies: CHEMTREC (800) 424-9300 For all other emergencies: (225) 685-2500
MSDS contact	Corporate Health & Safety Department P.O. Box 629 Plaquemine, LA 70765-0629 Phone Number (225) 685-2500



NFPA Hazard Rating

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No.	Wt. %
Hydrochloric acid	7647-01-0	15% - 38%
Water	7732-18-5	62% - 85%

3. HAZARDS IDENTIFICATION

PRECAUTIONARY INFORMATION

Corrosive. Causes severe burns to skin, eyes and respiratory tract. Vapors are very irritating to eyes, nose and throat. Will cause respiratory tract burning, choking and coughing. Delayed severe breathing difficulties may occur. DO NOT get in eyes, on skin or on clothing. Wear goggles and face shield, chemical gloves, protective clothing and boots. Do not breathe vapors, use only with adequate ventilation.

Contact with most metals corrodes them severely and forms flammable hydrogen gas. Contact with alkali or active metal may develop enough heat to cause fire in adjacent combustible material.

POTENTIAL HEALTH EFFECTS

Primary Routes of Entry

Inhalation, ingestion, skin, and eye contact.

Acute Effects

Hydrogen chloride gas and the aqueous solution known as hydrochloric acid are both extremely corrosive to the skin, eyes, nose mucous membranes, respiratory tract, and gastrointestinal tract. As a gas, it may cause irritation of the respiratory tract, as well as burning, choking, and coughing, with severe breathing difficulties occurring later. It may also cause ulceration of the nose and throat. Ingestion of the liquid causes immediate pain in the mouth, throat, and stomach. Severe and fatal gastrointestinal burns with necrosis can occur. The gas and the liquid are both corrosive to the eyes and can cause severe burns and blindness. Both the gas and the liquid are corrosive to the skin and can cause severe burns with inflammation and scarring.

Chronic Effects

Chronic or prolonged exposure to hydrogen chloride or hydrochloric acid may be associated with changes in pulmonary function, chronic bronchitis, dermatitis, erosion of dental enamel (eventually leading to tooth loss), conjunctivitis, and overt symptoms resembling acute upper respiratory tract infection. Repeated exposure to hydrogen chloride gas or hydrochloric acid may result in skin rash or dermatitis.

Potential Adverse Chemical Interactions

Persons suffering from skin, respiratory, or digestive disease are at a greater risk of toxicity from hydrochloric acid and should be protected from work-related exposure.

Carcinogen Status: This chemical is not considered to be carcinogenic by OSHA, NIOSH, NTP, IARC or the EPA.

4. FIRST AID MEASURES

Inhalation
If a person breathes large amounts of this chemical, move the exposed person to fresh air at once. If breathing has stopped, give artificial respiration. Provide emergency airway support. If indicated, give 100% humidified supplemental oxygen. Get emergency medical attention as soon as possible.

Skin Contact
If this chemical contacts the skin, flush the contaminated skin with soap and plenty of water promptly for at least 15 minutes. If this chemical penetrates the clothing, promptly remove the clothing and flush the skin with soap and plenty of water. If irritation or pain persists, have a physician examine affected skin areas.

Eye Contact
If this chemical contacts the eyes, immediately wash the eyes with large amounts of room temperature water for at least 15 minutes, occasionally lifting the lower and upper lids. Get medical attention immediately and have the individual examined by an ophthalmologist. Contact lenses should not be worn when working with this chemical.

Ingestion
If this chemical has been swallowed, **do not attempt to make the person vomit.** Do not give sodium bicarbonate in an attempt to neutralize the acid. This can result in an exothermic reaction and worsen the burn. Immediate dilution with water or milk may be beneficial. Get medical attention immediately.

5. FIRE FIGHTING MEASURES

Flash Point Not Applicable

Flammable Limits (% By Vol.)

Lower Explosive Limit (LEL)	Not Applicable
Upper Explosive Limit (UEL)	Not Applicable

Autoignition Temperature Not Applicable

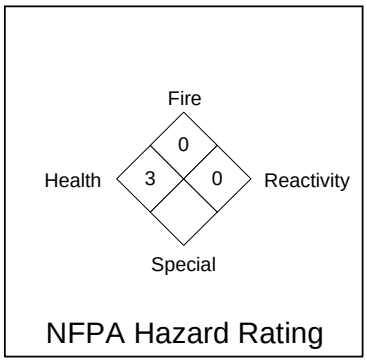
Fire Fighting Procedures/Fire Extinguishing Media
Hydrochloric acid solution does not ignite readily. Keep unnecessary people away; isolate hazard area and deny entry. Avoid breathing vapors, stay upwind. Use acid proof full protective clothing and NIOSH approved self-contained respirator. Use flooding amounts of water, dry chemical, or alcohol foam as appropriate to extinguish surrounding fire.

Unusual Fire and Explosion Hazards
Adding water to hydrochloric acid solution could produce a violent exothermic reaction. Hydrochloric acid will react with most metals to form flammable hydrogen gas.

5. FIRE FIGHTING MEASURES (continued)

National Fire Protection Association Hazard Rating

4 = Extreme
3 = High
2 = Moderate
1= Slight
0 = Insignificant



6. ACCIDENTAL RELEASE MEASURES

Protect People:

Restrict access to spill area, move unprotected personnel upwind of the area. Allow only trained personnel wearing appropriate protective clothing and respiratory equipment in the spill area. Do not touch spilled material.

Protect the Environment:

Prevent spills from entering waterways and sewers. Neutralize with base (e.g. soda ash, lime, sodium hydroxide, etc.) and place into containers for proper disposal.

Clean Up:

Dispose spill material in accordance with federal, state, and local regulations. Spill of hydrochloric acid over the reportable quantity (5,000 lbs) should be reported to the National Response Center (800-424-8802).

7. HANDLING AND STORAGE

Do not get into eyes, on skin, or on clothing. Avoid breathing mists or spray. All personal protective equipment should be selected in accordance with the hazard assessment required by 29 CFR 1910.132. (d).

Product can react vigorously with alkalis and many organic materials. Product also reacts with most metals to form flammable hydrogen gas.

Store away from incompatible materials. (See section 10, Stability and Reactivity of this MSDS) Follow all federal, state, and local regulations as well as all insurance codes when storing and handling hydrochloric acid.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

All personal protective equipment should be selected in accordance with the hazard assessment required by 29 CFR 1910.132 (d).

Respiratory Protection

Use appropriate NIOSH approved respirator in accordance with 29 CFR 1910.132 and 1910.134, to prevent overexposure. Respirators must be selected based on the airborne levels found in the workplace and must not exceed the working limits of the respirator.

Eye Protection

Use splash proof chemical safety goggles or appropriate full-face respirator. Follow face and eye protection guidelines of 29 CFR 1910.132 and 1910.133. Where there is any possibility that an individual's eyes may be exposed to hydrochloric acid, an eye wash fountain (in accordance with 29 CFR 1910.151) should be within the immediate work area for emergency use. Contact lenses should not be worn while working with this chemical.

Skin Protection

Chemical protective clothing and gloves impervious to hydrochloric acid must be used in accordance with 29 CFR 1910.132 and 29 CFR 1910.138.

Ventilation

Provide local ventilation to maintain exposure levels below recommended exposure limits.

Exposure Guidelines

OSHA	**PEL (Ceiling)**	**5 ppm**
ACGIH	**TLV-Ceiling**	**5 ppm**
NIOSH	**IDLH**	**50 ppm**

Other

Where there is a possibility of exposure of an individual's body to hydrochloric acid, facilities for quick drenching of the body should be provided (in accordance with 29 CFR 1910.151) within the immediate work area for emergency use. Such individuals should be provided with and required to use impervious clothing in accordance with 29 CFR 1910.132.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	White to yellow, clear liquid
Odor	Strong, irritating odor
Molecular Weight	36.46
Boiling Point	110° C
Melting Point	Not Determined
Solubility	Completely soluble in water
Specific Gravity (Water = 1.0)	1.17
Vapor Density (Air = 1.0)	0.75
Vapor Pressure	54 mm Hg at 20° C
pH	<1

NOTE: The physical and chemical properties listed are for 34% Hydrochloric Acid Solution.

10. STABILITY AND REACTIVITY

Stability
Stable under normal conditions.

Polymerization
Hazardous polymerization does not occur.

Hazardous Decomposition Products
Hydrochloric acid reacts with metals to form flammable hydrogen gas.

Incompatible Materials
Alkaline materials and oxidizing agents; highly corrosive to most metals.

11. TOXICOLOGICAL INFORMATION

Animal Toxicity

Oral:	Rabbit LD_{50}	900 mg/kg
	Human LD_{LO}	81 mg/kg
Dermal:	Mouse LC_{50}	1,108 ppm (1 hr)
	Mouse LC_{50}	13,745 ppm (5 min)
	Rat LC_{50}	3,124 ppm (1 hr)
	Rat LC_{50}	30,000 ppm (5 min)
	Human LC_{LO}	3,000 ppm (5 min)
	Human LC_{LO}	1,300 ppm (30 min)

LC_{50} - Air concentration that is lethal to 50% of a given species in a given period of time.
LC_{LO} - Lowest air concentration that is lethal to a given species in a given period of time.
LD_{LO} - Lowest lethal dose in a given species by a given route of exposure.
LD_{50} - Dose that is lethal to 50% of a given species by a given route of exposure.

12. ECOLOGICAL INFORMATION

Caution: Hydrochloric acid solutions may react violently with alkalis. Do not allow drainage into sewers, streams or storm conduits. Spills on areas other than pavement, such as dirt or sand may be handled by removing the affected soils and placing in approved containers.

Environmental Fate: The following information on hydrochloric acid is extracted from the TOXNET database maintained by the National Library of Medicine.

Terrestrial: When hydrochloric acid is spilled to the soil, it will begin to infiltrate. The presence of water in the soil will influence the rate of chemical movement. During movement through the soil, hydrochloric acid will be neutralized to some degree.

Aquatic: Hydrogen chloride will dissociate almost completely in water.

Biodegradation: Not Applicable

Ecotoxicity: Material is slightly toxic to the aquatic organisms on an acute basis (LC50 between 10 and 100 ppm in most sensitive species). May cause pH shifts outside of the range of 5-10 standards units; this change may be toxic to aquatic organisms.

13. DISPOSAL CONSIDERATIONS

Waste Management Information: Do not dump into any sewers, on the ground, or into any body of water. Any disposal practice must be in compliance with local, state and federal laws and regulations (contact local or state environmental agency for specific rules). Waste characterization and compliance with applicable laws are the responsibility of the waste generator.

14. TRANSPORTATION INFORMATION

Proper shipping name	Hydrochloric acid, solution
DOT Hazard class	8, (Corrosive)
DOT Shipping I.D. No.	UN 1789
DOT Labeling	Corrosive
Packing Group	II
RQ	5,000

15. REGULATORY INFORMATION

SARA Title III

Section 302 and 304 of the Act; Extremely Hazardous Substances (40 CFR 355)

COMPONENT	CAS No.	TPQ (lbs)	RQ (lbs)
None	Not Applicable	Not Applicable	Not Applicable to Solution (See below for CERCLA RQ)

Note: TPQ - Threshold Planning Quantity RQ - Reportable Quantity

Section 311 Hazard Categorization (40 CFR 370)

ACUTE	CHRONIC	FIRE	PRESSURE	REACTIVE
X				X

Section 313 Toxic Chemicals (40 CFR 372.65)

COMPONENT	CAS No.	WT.%
Hydrochloric acid	7647-01-0	15% - 38%

15. REGULATORY INFORMATION (Continued)

CERCLA

Section 102(a) Hazardous Substances (40 CFR 302.4)

COMPONENT	CAS No.	WT.%	RQ (lbs)
Hydrochloric acid	7647-01-0	15% - 38%	5,000 (100%)
			14,700 (34%)

RCRA

40 CFR 261.21 Hazardous waste number:

Hydrochloric acid waste is regulated as a corrosive characteristic hazardous waste with the hazardous waste number D002.

TSCA

Hydrochloric acid is listed on the TSCA inventory.

Proposition 65

Hydrochloric Acid is not listed on the California Proposition 65 list.

Canadian Environmental Protection Act (CEPA)

All substances in this product are listed on the Canadian Domestic Substances (DSL) list or are not required to be listed.

16. OTHER INFORMATION

IMPORTANT: The information and data herein are believed to be accurate and have been compiled from sources believed to be reliable. It is offered for your consideration, investigation and verification. Buyer assumes all risk of use, storage and handling of the product in compliance with applicable federal, state, and local laws and regulations. **GEORGIA GULF CHEMICALS AND VINYLS, LLC MAKES NO WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, CONCERNING THE ACCURACY OR COMPLETENESS OF THE INFORMATION AND DATA HEREIN.** Georgia Gulf will not be liable for claims relating to any party's use of or reliance on information and data contained herein regardless of whether it is claimed that the information and data are inaccurate, incomplete or otherwise misleading. This information relates to the material designated and may not be valid for such material used in combination with any other materials nor in any process.

MSDS Status: Revision Date 06/07/2007 Superseded 10/24/2003