

**Product Name:** Hydrochloric acid  
**CAS#:** Mixture.  
**TSCA: TSCA 8(b) inventory:** Hydrochloric acid  
**CI#:** Not applicable.  
**Synonym:** Hydrochloric Acid;  
**Chemical Name:** Hydrogen Chloride  
**Chemical Formula:** HCl

## 1. Product and Company Identification

[www.rxmarine.com](http://www.rxmarine.com)

Product Name **RXSOL-19-1107-210**  
Product Type **HYDROCHLORIC ACID**

### Company Details:

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## 2. Composition / Information on ingredients

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Chemica Name	CAS #	% by weight
Hydrogenchloride	7647-01-0	32-38
Water	7732-18-5	68-62

Toxicological Data on Ingredients: Hydrogen chloride: GAS (LC50): Acute: 4701 ppm 0.5 hours [Rat].

## 3. Hazards Identification

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### Potential Acute Health Effects

Very hazardous in case of skin contact (corrosive, irritant, permeant (irritant, corrosive), of ingestion, . Slightly hazardous in case of (sensitizer). Non-corrosive for lungs. Liquid or spray mist may produce particularly on mucous membranes of eyes, mouth and respiratory tract may produce burns. Inhalation of the spray mist may produce severe respiratory tract, characterized by coughing, choking, or shortness of breath. over-exposure can result in death. Inflammation of the eye is characterized by watering, and itching. Skin inflammation is characterized by itching, swelling, or, occasionally, blistering.

### Potential Chronic Health Effects

Slightly hazardous in case of skin contact (sensitizer).

### Carcinogenic Effects

Classified 3 (Not classifiable for human.)by IARC [Hydrochloric acid]

### Mutagenic Effects

Not available

### Teratogenic Effects

Not available

### Developmental Toxicity

Not available

The substance may be toxic to kidneys, liver, mucous membranes, upper respiratory tract, skin, eyes, Circulatory System, teeth. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation.Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs



Small Spill	Dilute with water and mop up, or absorb with an inert dry material into an appropriate waste disposal container. If necessary: Neutralize the residue with a solution of sodium carbonate.
Large Spill	Corrosive liquid. Poisonous liquid. Stop leak if without risk. Absorb with sand or other non-combustible material. Do not get water inside of container. Do not touch spilled material. Use water spray curtain to divert vapor drift. Use water to reduce vapors. Prevent entry into sewers, basements or confined areas. Call for assistance on disposal. Neutralize the residue with a dilute solution of sodium carbonate. Be careful that the product is not present at a concentration above the TLV. Check TLV on the MSDS and with local authorities.

## 7. Handling and Storage

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Precautions	Keep locked up.. Keep container dry. Do not ingest. Do not breathe vapor/spray. Never add water to this product. In case of insufficient ventilation, use suitable respiratory equipment. If ingested, seek medical advice immediately. Read the container or the label. Avoid contact with skin and eyes. Incompatible with oxidizing agents, organic materials, metals, acids and bases. May corrode metallic surfaces. Store in a metallic or coated fiberboard container with a strong polyethylene inner package.
Storage	Keep container tightly closed. Keep container in a cool, well-ventilated area.

## 8. Exposure controls and personal protection

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Engineering Controls	Provide exhaust ventilation or other engineering controls to keep the concentrations of vapors below their respective threshold limit value. Eyewash stations and safety showers are proximal to the work-station.
Personal Protection	Face shield. Full suit. Vapor respirator. Be sure to use an approved/compatible respirator or equivalent. Gloves. Boots.
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suitable protective clothing might not be sufficient; consult a specialist BEFORE handling.
Exposure Limits	CEIL: 5 (ppm) from OSHA (PEL) [United States] CEIL: 7 (mg/m <sup>3</sup> ) from OSHA (PEL) [United States] CEIL: 5 from NIOSH CEIL: 7 (mg/m <sup>3</sup> ) from NIOSH STEL: 5 (ppm) [United Kingdom (UK)] TWA: 2 STEL: 8 (mg/m <sup>3</sup> ) [United Kingdom (UK)] Consult local authorities for acceptable exposure limits.

## 9. Physical and chemical properties

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Physical state and appearance	Liquid.
Odor	Pungent. Irritating (Strong.)
Taste	Not available.
Molecular Weight	Not applicable.
Color	Colorless to light yellow.
pH (1% soln/water)	Acidic.
Boiling Point	108.58 C @ 760 mm Hg (for 20.22% HCl in water) 83 C @ 760 mm Hg (for 37% HCl in water) 50.5 C (for 37% HCl in water)
Melting Point	-62.25°C (-80°F) (20.69% HCl in water) -46.2 C (31.24% HCl in water) (39.17% HCl in water)
Critical Temperature	Not available.
Specific Gravity	1.1- 1.19 (Water = 1) 1.10 (20% and 22% HCl solutions) 1.12 (24% HCl solution) 1.16 (32% HCl solution) 1.19 (37% and 38% HCl solutions)
Vapor Pressure	16 kPa (@ 20°C) average
Vapor Density	1.267 (Air = 1)
Volatility	Not available.



upper respiratory tract edema, chest pains, as well as headache, dizziness, and nausea. Inhalation of high concentrations can result in corrosive burns, necrosis of the respiratory epithelium, constriction of the larynx and bronchi, nasospetal closure, occur, particularly if exposure is prolonged. May affect the central nervous system. May be fatal if swallowed. Causes irritation and burning, ulceration, and necrosis of the gastrointestinal tract and resultant peritonitis, gastric hemorrhage and shock. Also cause nausea, vomiting (with "coffee ground" emesis), diarrhea, and difficulty swallowing, salivation, chills, fever, uneasiness, shock, stricture of the esophagus (esophageal, gastric, pyloric). May affect behavior (excitement), the cardiovascular system (weak rapid pulse, tachycardia), respiration (shallow respiration), and the renal system (kidneys- renal failure, nephritis). Acute exposure via inhalation can also cause erosion of tooth enamel. Chronic Potential Health Effects include bronchitis. Chemical pneumonitis and pulmonary edema can also occur.

## 12. Ecological information

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Ecotoxicity

Not available.

BOD5 and COD

Not available.

Products of Biodegradation

Possibly hazardous short term degradation products are not likely. However, degradation products may arise.

Toxicity of the Products of Biodegradation

The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation

Not available.

## 13. Disposal considerations

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Waste Disposal

Waste must be disposed of in accordance with federal, state and local control regulations.

## 14. Transport information

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DOT Classification

Class 8: Corrosive material

Identification

Hydrochloric acid, solution UNNA: 1789 PG: II

Special Provisions for Transport

Not available.

## 15. Regulatory information

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Federal and State Regulations

Connecticut hazardous material survey.:

Hydrochloric acid Illinois toxic substances disclosure to employee act

Hydrochloric acid Illinois chemical safety act

Hydrochloric acid New York release reporting list

Hydrochloric acid Rhode Island RTK hazardous substances

Hydrochloric acid Pennsylvania RTK

Hydrochloric acid Minnesota

Hydrochloric acid Massachusetts

RTK

Hydrochloric acid Massachusetts spill list

Hydrochloric acid New Jersey

Hydrochloric acid New Jersey spill list:

Hydrochloric acid Louisiana RTK reporting list

Hydrochloric acid Louisiana spill reporting

Hydrochloric acid California

Director's List of Hazardous Substances

Hydrochloric acid TSCA 8(b) inventory

Hydrochloric acid TSCA 4(a) proposed testrules

Hydrochloric acid SARA 302/304/311/312 extremely hazardous substances notification and release reporting

Hydrochloric acid SARA 313 toxic chemical

Hazardous substances

Hydrochloric acid CERCLA

Other Regulations

Hydrochloric acid: 5000 lbs. (2268 kg)

OSHA

Hazardous by definition of Hazard Communication Standard (29 CFR 155)

EINECS

This product is on the

## Other Classifications

WHMIS (Canada)

CLASS D-2A

CLASS E

DSCL (EEC)

Material causing other toxic effects

Corrosive liquid.

R34- Causes burns. R37- Irritating to respiratory system. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. In case of accident or if you feel unwell, seek medical advice immediately (show label if possible).

**HMS (U.S.A.):**

Health Hazard : 3

Fire Hazard : 0

Reactivity : 1

Personal Protection:

National Fire Protection Association (U.S.A.):

Health : 3

Flammability : 0

Reactivity : 1

Specific hazard :

Protective Equipment :

Gloves. Full suit. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Face shield.

**16. Other information**[www.rxmarine.com](http://www.rxmarine.com)**References**

Hawley, G.G.. The Condensed Chemical Dictionary, 11e ed., New York: Van Nostrand Reinold, 1987. -SAX, N.I. Dangerous Properties of Industrial Materials, 8th ed. Toronto, Van Nostrand Reinold, 6e ed. 1984. -The Sigma-Aldrich Library of Chemical Safety Data, Edition II. -Guide de la loi et du règlement sur les marchandises dangereuses au Canada. Centre de conformité internationale.

Other Special Considerations

Not available

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