

1. Product and Company Identification

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Product Name **RXSOL-19-1107-040**
Product Type **HYDROCHLORIC ACID**

Company Details:

RX MARINE INTERNATIONAL
105, A wing , BSEL , TECH PARK.
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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, permeating irritant, corrosive), of ingestion, . Slightly hazardous in case of inhalation (irritant, corrosive), sensitization (sensitizer). Non-corrosive for lungs. Liquid or spray mist may produce irritation, particularly on mucous membranes of eyes, mouth and respiratory tract. Skin contact may produce burns. Inhalation of the spray mist may produce severe irritation of the 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, redness, 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

4. First Aid Measures

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Eye Contact

Check for and remove any contact lenses. In case of contact, immediately flush with plenty of water for at least 15minutes. Cold water may be used if available. Attention immediately.

| | |
|----------------------|--|
| Skin Contact | In case of contact, immediately flush skin with plenty of water for a while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly wash hands before reuse. Get medical attention immediately. |
| Serious Skin Contact | Wash with a disinfectant soap and cover the contaminated skin with a protective cream. Seek immediate medical attention. |
| Inhalation | If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately. |
| Serious Inhalation | Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If not breathing, perform mouth-to-mouth resuscitation. WARNING: If you are not trained to provide first aid, do not attempt mouth-to-mouth resuscitation. If the material is toxic, infectious or corrosive. Seek immediate medical attention. |
| Ingestion | If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately. |
| Serious Ingestion | Not available. |

5. Fire-fighting Measures

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|---|---|
| Flammability of the Product | Non-flammable. |
| Auto-Ignition Temperature | Not applicable. |
| Flash Points | Not applicable. |
| Flammable Limits | Not applicable. |
| Products of Combustion | Not available. |
| Fire Hazards in Presence of Various Substances | of metals |
| Explosion Hazards in Presence of Various Substances | Non-explosive in presence of open flames and sparks, of shocks. |
| Fire Fighting Media and Instructions | Not applicable. |
| Special Remarks on Fire Hazards | Non combustible. Calcium carbide reacts with hydrogen chloride to produce acetylene and incandescence. Uranium phosphide reacts with hydrochloric acid to produce spontaneously flammable phosphine. Rubidium acetylene carbides burn in warm hydrochloric acid. Lithium silicide in contact with hydrogen chloride is incandescent. When dilute hydrochloric acid is used, gas spontaneously ignites in air. Magnesium boride treated with concentrated hydrochloric acid produces a spontaneously flammable gas. Cesium acetylene carbide burns in air. Cesium carbide ignites in contact with hydrochloric acid unless acid is diluted with most metals to produce flammable hydrogen gas. |
| Special Remarks on Explosion Hazards: | Hydrogen chloride in contact with the following can cause an explosion on contact, or other violent/vigorous reaction: Acetic anhydride, AgClO ₄ , Aluminum cyanide, Aluminum-titanium alloys (with HCl), Ethanol, Ammonium hydroxide, Calcium carbide, Ca ₃ P ₂ , Chlorine, Chloroform (evolves gas), Chlorosulfonic acid, Cesium carbide, Cesium fluoride, 1,1-Difluoroethylene, Ethylene diamine, Ethylene imine, Fluorine, Hydrogen, Hydrogen disilicide, H ₂ SO ₄ , Metal acetylides or carbides, Magnesium boride, Oleum, Potassium permanganate, beta-Propiolactone, Propylene carbonate, Rubidium, acetylene carbide, Sodium (with aqueous HCl), Sodium tetraselenide, Sulfonic acid, Tetraselenium tetranitride, U ₃ O ₈ , Silver perchlorate with carbon tetrachloride in the presence of water produces trichloromethyl perchlorate which detonates at 40 deg. C. |

6. Accidental Release Measures

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|-------------|--|
| 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 solution 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. |

reduce vapors. Prevent entry into sewers, basements or confined areas. Call for assistance on disposal. Neutralize the residue with a dilute 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. See the container or the label. Avoid contact with skin and eyes. Incompatible with oxidizing agents, organic materials, metals, acids. 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/m³) (PEL) [United States] CEIL: 5 from NIOSH CEIL: 7 (mg/m³) from NIOSH STEL: 5 (ppm) [United Kingdom (UK)] TWA: 2 STEL: 8 (mg/m³) [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 20.22% HCl in water) 50.5 C (for 37% HCl in water), 84 C (for 33% HCl in water)

Critical Temperature

Not available.

Vapor Pressure

16 kPa (@ 20°C) average

Vapor Density

1.267 (Air = 1)

Volatility

Not available.

Odor Threshold

0.25 to 10 ppm

Water/Oil Dist. Coeff

Not available.

Ionicity (in Water)

Not available.

Dispersion Properties

See solubility in water, diethyl ether.

Solubility

Soluble in cold water, hot water, diethyl ether.

swallowing, salivation, chills, fever, uneasiness, shock, stricture (esophageal, gastric, pyloric). May affect behavior (excitement), the nervous system (weak rapid pulse, tachycardia), respiration (shallow respiration), circulatory system (kidneys- renal failure, nephritis). Acute exposure via inhalation can also cause erosion of tooth enamel. Chronic Potential Health Effects: bronchitis. Chemical pneumonitis and pulmonary edema can also occur. Also

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 test substances

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 European Inventory of Existing Commercial Chemical Substances.

Other Classifications

WHMIS (Canada)

CLASS D-2A

Material causing other toxic effects

CLASS E

Corrosive liquid.

DSCL (EEC)

R34- Causes burns. R37- Irritating to respiratory system. S26- In case of contact with skin, wash immediately with plenty of water.

eyes, rinse immediately with plenty of water and seek medical advice. In case of an accident or if you feel unwell, seek medical advice immediately (showing this SDS if possible).

HMIS (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

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References

Hawley, G.G.. The Condensed Chemical Dictionary, 11e ed., New York: Van Nostrand Reinold, 1987. -SAX, N.I. Dangerous Properties of Industrial Materials, 9th 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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