

1. Product and Company Identification

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Product Name RXSOL-22-2205-050
Product Type Muriatic Acid

Company Details:

RX MARINE INTERNATIONAL
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2. Composition / Information on ingredients

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Ingredient	CAS No	Percent
HYDROGEN CHLORIDE	7647-01-0	9 2 36
Water	7732-18-5	63-91

3. Hazards Identification

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NFPA RATINGS (SCALE 0-4)

HEALTH = 3
FIRE = 0
REACTIVITY = 0

HMIS RATINGS (SCALE 0-4)

HEALTH = 3
FLAMMABILITY = 0
REACTIVITY = 0

EMERGENCY OVERVIEW

COLOR	colorless
PHYSICAL FORM	liquid
ODOR	pungent odor
SIGNAL WORD	DANGER
MAJOR HEALTH HAZARDS	CAUSES BURNS TO THE RESPIRATORY TRACT, SKIN, EYES AND
GASTROINTESTINAL TRACT	CAUSES PERMANENT EYE DAMAGE. MAY BE HARMFUL OR FATAL IF SWALLOWED.
PHYSICAL HAZARDS	May spatter or generate heat when mixed with water. Contact with metals may evolve flammable hydrogen gas.
PRECAUTIONARY STATEMENTS	Do not breathe vapor or mist. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Wash thoroughly after handling. Use only with adequate ventilation.

SHORT TERM EXPOSURE

burns, eye damage, blindness

LONG TERM EXPOSURE

to our knowledge, no effects are known

INGESTION	
SHORT TERM EXPOSURE	Burns
LONG TERM EXPOSURE	ingestion of harmful amounts is unlikely
CARCINOGEN STATUS	
OSHA	no
NTP	no
IARC	no

4. First Aid Measures

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INHALATION	If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. If respiration or pulse has stopped, have a trained person administer Basic Life Support (Cardio-Pulmonary Resuscitation/Automatic External Defibrillator) and CALL FOR EMERGENCY SERVICES IMMEDIATELY.
Skin Contact	Immediately flush contaminated areas with water. Remove contaminated clothing, jewelry, and shoes immediately. Wash contaminated areas with soap and water. Thoroughly clean and dry contaminated clothing and shoes before reuse. Discard footwear which cannot be decontaminated. GET MEDICAL ATTENTION IMMEDIATELY.
EYE CONTACT	Immediately flush eyes with a directed stream of water for at least 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissues. Washing eyes within several seconds is essential to achieve maximum effectiveness. GET MEDICAL ATTENTION IMMEDIATELY.
INGESTION	Never give anything by mouth to an unconscious or convulsive person. If swallowed, do not induce vomiting. Give large amounts of water. If vomiting occurs spontaneously, keep airway clear. Give more water when vomiting stops. GET MEDICAL ATTENTION IMMEDIATELY.
NOTE TO PHYSICIAN	The absence of visible signs or symptoms of burns does NOT reliably exclude the presence of actual tissue damage. Probable mucosal damage may contraindicate the use of gastric lavage.

5. Fire-fighting Measures

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FIRE AND EXPLOSION HAZARDS	May release toxic gases.
EXTINGUISHING MEDIA	Use extinguishing agents appropriate for surrounding fire.
FIRE FIGHTING	Keep unnecessary people away, isolate hazard area and deny entry. Wear NIOSH approved positive-pressure self-contained breathing apparatus. Move containers from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas. Cool containers with water.
SENSITIVITY TO MECHANICAL IMPACT	Not sensitive
FLASH POINT	not flammable
HAZARDOUS COMBUSTION PRODUCTS	Thermal decomposition products or combustion: hydrogen chloride

6. Accidental Release Measures

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OCCUPATIONAL RELEASE: Evacuation of surrounding area may be necessary for large spills. Wear appropriate personal protective equipment recommended in Section 8 of the MSDS. Completely contain spilled material with dikes, sandbags, etc. Shut off ventilation system if needed. Reprocess or reuse if possible. Neutralize with soda ash or dilute caustic soda. Collect with appropriate absorbent and place into suitable container. Liquid material may be removed with a vacuum truck. Keep out of water supplies and sewers. This material is acidic and may lower the pH of the surface waters with low buffering capacity. Releases should be reported, if required, to appropriate agencies. Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ (U.S. SARA Section 304). If release occurs in the U.S. and is reportable under CERCLA Section 103, notify the National Response Center at (800) 424-8802 (USA) or (202) 426-2675 (USA).

7. Handling and Storage

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STORAGE

Store and handle in accordance with all current regulations and standards. Store in a cool, dry place. Store in a well-ventilated storage tanks. Keep separated from incompatible substances (see MSDS).

HANDLING

Avoid breathing vapor or mist. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. When mixing, slowly add to water to prevent generation and spattering.

8. Exposure controls and personal protection

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EXPOSURE LIMITS

HYDROGEN CHLORIDE, ANHYDROUS:

5 ppm (7 mg/m³) OSHA ceiling, 2 ppm ACGIH ceiling

HYDROGEN CHLORIDE (HYDROCHLORIC ACID)

VENTILATION

Use closed systems when possible. Provide local exhaust ventilation where vapor or mist may be generated. Ensure exposure levels are within applicable exposure limits.

EYE PROTECTION

Wear safety glasses with side shields. Wear chemical safety goggles with a faceshield or chemical splash hood. Provide a safety shower and eye wash fountain and quick drench shower in the immediate work area.

CLOTHING

Wear chemical resistant clothing and rubber boots when potential for contact with the material exists. Always place protective clothing and boots in a safe place.

GLOVES

Wear appropriate chemical resistant gloves.

PROTECTIVE MATERIAL TYPES

neoprene, nitrile, polyvinyl chloride (PVC), rubber, Kappler ® CPF3, Tychem

IMMEDIATELY DANGEROUS TO LIFE OR HEALTH

RESPIRATOR

Where vapor concentration exceeds or is likely to exceed applicable exposure limits, a NIOSH approved respirator with a canister is required. When an air-purifying respirator is not adequate for spills and/or emergencies of unknown concentrations, a NIOSH approved self-contained breathing apparatus or airline respirator with full-face piece is required. A respiratory protection program that meets 29 CFR 1910.134 must be followed whenever workplace conditions warrant use of a respirator.

9. Physical and chemical properties

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PHYSICAL STATE

liquid

Appearance

Clear.

COLOR

colorless

Odor

pungent odor

MOLECULAR WEIGHT

36.46

MOLECULAR FORMULA

HCl

BOILING POINT

140-221F (60.0-105 C)

FREEZING POINT

29 to 5 F (-34 to -15 C)

VAPOR PRESSURE

14.6 mmHg @ 20 C

VAPOR DENSITY (air = 1)

1.3 @ 20 C

SPECIFIC GRAVITY (water = 1)

1.05 @ 1.18

BULK DENSITY

8.75 lbs/gal

WATER SOLUBILITY

100%

PH

2 (0.2% solution)

VOLATILITY

9 @ 36% by volume

ODOR THRESHOLD

0.3 ppm (causes olfactory fatigue)

EVAPORATION RATE