

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 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 rubber-lined steel, acid-resistant plastic or glass containers. Keep containers closed and properly labeled. Store in a cool, dry place. Store in a well-ventilated area. Do not store in aluminum container or use aluminum fittings or transfer to vent 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 heat generation and spattering.

8. Exposure controls and personal protection

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EXPOSURE LIMITS

HYDROGEN CHLORIDE, ANHYDROUS:

HYDROGEN CHLORIDE
(HYDROCHLORIC ACID)

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

VENTILATION

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

EYE PROTECTION

Wear safety glasses with side shields. Wear chemical safety goggles with a faceshield or chemical splash hood. Provide 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 plastic boots.

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 canister is required. When an air-purifying respirator is not adequate for spills and/or emergencies of unknown concentration, a NIOSH approved self-contained breathing apparatus or airline respirator with full-face piece is required. A respirator 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 to 105 C)

FREEZING POINT

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

VAPOR PRESSURE

14.6 to 80 mmHg @ 20 C

VAPOR DENSITY (air = 1)

1.3 @ 20 C

SPECIFIC GRAVITY (water = 1)

1.05 to 1.18

BULK DENSITY

8.75 to 9.83 lbs/gal

WATER SOLUBILITY

100%

PH

2 (0.2% solution)

VOLATILITY

9 to 36% by volume

ODOR THRESHOLD

0.3 ppm (causes olfactory fatigue)

EVAPORATION RATE