

1. Product and Company Identification

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Product Name RXSOL-22-2205-025

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
Muriatic Acid	7647-01-0	30 36
The balances of chemical ingredients are not identified as hazardous under OSHA's Hazard Communication Rule	-----	64-70

29 CFR 1910.1200.

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 tightly 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 lines. Dike and vent storage tanks. Keep separated from incompatible substances (see Section 10 of the 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 minimize heat generation and spattering.

8. Exposure controls and personal protection

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EXPOSURE LIMITS

HYDROGEN CHLORIDE (HYDROCHLORIC ACID)

VENTILATION

Muriatic Acid, ANHYDROUS

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

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

EYE PROTECTION

Wear safety glasses with side shields. Wear chemical safety goggles with a faceshield or chemical splash hood. Provide an emergency 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 pants legs over 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

50 ppm

RESPIRATOR

Where vapor concentration exceeds or is likely to exceed applicable exposure limits, a NIOSH approved respirator with acid gas 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 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 - 9.83 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	