

1. Product and Company Identification

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Product Name **RXSOL-19-1497-025**
Product Type Alum Powder

Company Details:

RX MARINE INTERNATIONAL
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2. Composition / Information on ingredients

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Product Name: Dry Alum (Aluminum sulfate)

CAS No: 16828-12-9

Formula: $Al_2(SO_4)_3 \cdot 14 H_2O$

3. Hazards Identification

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This material is classified hazardous under OSHA regulations in the United States and the WHMIS Controlled Product Regulation in Canada.

Odour	Odourless
Appearance	Solid. (Granules or powder.)
Contact with eyes	The dust becomes acidic following contact with moisture in the eye and may result in moderate to severe irritation to the eye.
Contact with skin	The dust becomes acidic following contact with moisture on the skin and mild to moderate irritation can occur. Alum is poorly absorbed through the skin and toxic effects would not be expected following short-term skin contact. Prolonged exposure to dilute solutions may cause irritation, redness, pain and drying and cracking of the skin.
Inhalation	Dusts of aluminum sulfate hydrate probably cause irritation of the nose, throat and respiratory tract based on pH. The dust becomes acidic following contact with moisture in the air or tissues of the respiratory tract.
Ingestion	May cause irritation of the lining of the stomach. Ingestion is not a typical route of occupational exposure
Medical conditions aggravated by overexposure	Skin irritation may be aggravated in individuals with existing skin lesions. Breathing of dust may aggravate acute or chronic pulmonary disease such as emphysema and bronchitis.
Over-exposure	Prolonged or repeated contact with dust may cause redness, dryness and itching of the skin (dermatitis).

4. First Aid Measures

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Contact with skin	Flush skin with lukewarm running water for a minimum of 5 minutes or until the chemical is removed. Start flushing contaminated clothing. If irritation persists, repeat flushing and obtain medical attention. Do not transport until the recommended flushing period is completed or flushing can be continued during transport. Discard heavily contaminated shoes in a manner, which limits further exposure. Otherwise, wash clothing separately before reuse.
Contact with eyes	Immediately flush eyes with lukewarm, gently running water for a minimum of 5 minutes or until the chemical is removed. Keep eyelids open during flushing. If irritation persists, repeat flushing. Obtain medical attention IMMEDIATELY. Do not transport until the recommended flushing period is completed unless flushing can be continued during transport
Ingestion	If irritation or discomfort occur, obtain medical advice immediately.
Inhalation	Move victim to fresh air. If irritation persists, obtain medical attention immediately. Give artificial respiration ONLY if breathing is stopped. Give Cardiopulmonary Resuscitation (CPR) if there is no breathing AND no pulse. Obtain medical attention IMMEDIATELY

5. Fire-fighting Measures

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Extinguishing Media: Use media suitable to extinguish surrounding fire.

Fire Fighting Methods and Protection: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.

Fire and/or Explosion Hazards: In case of fire and/or explosion do not breathe fumes. Contact with water produces sulfuric acid.

Hazardous Combustion Products: Sulfur Oxides, Aluminum oxide dust.

6. Accidental Release Measures

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Small spill and leak

Shovel into clean, dry, labelled containers and cover. Flush area with water. Do not get water inside containers or on skin.

Large spill and leak

Prevent solids from mixing with water or entering sewers or waterways. Shovel into clean, dry, labelled containers and cover. If acid is present, dike with inert material (sand, earth, etc.). Consider in situ neutralization and disposal. Ensure adequate decontamination tools and equipment following clean up. Comply with Federal, Provincial/State and local regulations on reporting releases. Chemicals: Lime, limestone, soda ash, sodium bicarbonate, dilute sodium hydroxide, dilute aqua ammonia

7. Handling and Storage

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Handling

Dry Alum is an irritating solid. Avoid generating dusts. Do not breathe dusts. Do not ingest. Do not get in eyes, on skin or clothes. Use proper tools when opening containers. Keep containers closed when not in use. Empty containers may contain hazardous residue. When there is a large-scale use, do not use in areas equipped with sprinkler systems. Post "DO NOT USE WATER" signs. Housekeeping is important to prevent accumulations of dust. Dry sweeping is not recommended.

Storage

Keep container tightly closed. Keep container in a cool, dry, well-ventilated area. Store away from incompatible materials and strong bases. Post warning signs.

8. Exposure controls and personal protection

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Engineering controls

Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. If user operations generate dust, fumes or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit. The most effective measures are the total enclosure of processes and the mechanical handling procedures to prevent all personal contact. Use a corrosion resistant ventilation system separate from other exhaust systems.

Personal protection

Eyes :Splash goggles

Body:Lab coat or coveralls.

Respiratory:NIOSH/MSHA approved dust mask, for dust concentrations of up to 10 mg/m³ . Air-purifying respirator for acid gas/fume, dust, mist cartridges for concentrations up to 20 mg/m³ . An air-supplied respirator if concentrations are unknown.

Hands :Gloves: Neoprene, PVC, vinyl or rubber.

Feet:Appropriate industrial footwear.

9. Physical and chemical properties

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Odour

Odourless

Appearance

Solid. (Granules or powder.),White.

Molecular weight

594.4 g/mole

Molecular formula

Al₂(SO₄)₃.14 H₂O

pH

> 2.9 @ 5%.

Boiling/condensation point

Not available.

Melting/freezing point

86°C (186.8°F)

Specific gravity Vapor

Not available.

pressure Vapor density	Not available.
Odor threshold	Not available.
Evaporation rate	Not available.

10. Stability and reactivity

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Stability and reactivity: The product is stable.

Incompatibility with various substances : Strong bases such as sodium hydroxide. Reaction may be violent.

Hazardous decomposition products : Sulfuric acid vapors may be released upon heating and sulfur dioxide and sulfur trioxide may be released upon decomposition.

Hazardous polymerization : Will not occur.

11. Toxicological information

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Information on Toxicological Effects - Product

Acute Toxicity (Oral): Not classified

Acute Toxicity (Dermal): Not classified Acute Toxicity (Inhalation): Not classified

LD50 and LC50 Data: Not available

Skin Corrosion/Irritation: Causes skin irritation.

pH: >2.9 @ 5%

Eye Damage/Irritation: Causes serious eye irritation.

pH: >2.9 @ 5%

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Carcinogenicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): May cause respiratory irritation.

Aspiration Hazard: Not classified

Symptoms/Effects After Inhalation: Irritation of the respiratory tract and the other mucous membranes.

Symptoms/Effects After Skin Contact: Redness, pain, swelling, itching, burning, dryness, and dermatitis.

Symptoms/Effects After Eye Contact: Contact causes severe irritation with redness and swelling of the conjunctiva.

Symptoms/Effects After Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: None expected under normal conditions of use.

12. Ecological information

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Toxicity	Ecology - General: Harmful to aquatic life with long lasting effects. Harmful to aquatic life.
Mobility in soil	Data are not available.

Persistence and Degradability	May cause long-term adverse effects in the environment.
Bioaccumulative Potential	Not established.
Other Information	Avoid release to the environment.

13. Disposal considerations

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Waste Disposal Recommendations: : Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

Additional Information Container may remain hazardous when empty. Continue to observe all precautions

Ecology - Waste Materials: Avoid release to the environment. This material is hazardous to the aquatic environment. Keep out of sewers and water bodies.

14. Transport information

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The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued. Not regulated for transport according to: US DOT, IMDG, IATA, and Canada's TDG.

15. Regulatory information

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TSCA Status: All components in this product are on the TSCA Inventory.

Chemical Name CAS § 313 Name § 304 RQ CERCLA RQ § 302 TPQ CAA 112(2)

Aluminum Sulfate, 18-Hydrate Number TQ

10043-01-3 No 5000lb 5000 Ib final No No

RQ RQ; 2270 kg

final RQ

16. Other information

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The information provided about the product on this Safety Data Sheet has been compiled from knowledge of the individual constituents. The data given here is based on current knowledge and experience. This Safety Data Sheet describes the product in terms of safety requirements and does not signify any warranty with regard to the product's properties. The data given here only applies when product used for proper application(s). The product is not sold as suitable for other applications - usage in such may cause risks not mentioned in this sheet. Do not use for other.

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