

1. Product and Company Identification

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Product Name Aluminum sulfate LIQ
Part Number RXSOL-40-1904-270

Company Details:

RX MARINE INTERNATIONAL
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2. Composition / Information on ingredients

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Chemical Name	Cas No	EC No	Formula	Molecular weight
Aluminum sulfate LIQ	10043-01-3	233-135-0	Al ₂ O ₁₂ S ₃	342,15 g/mol

3. Hazards Identification

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Signal Word	Danger
Hazard Statements	H290 May be corrosive to metals. H318 Causes serious eye damage.
Precautionary statements	P234 Keep only in original packaging. P280 Wear eye protection/ face protection. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Classification of the substance or mixture	P390 Absorb spillage to prevent material damage.
Other hazards	none This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

4. First Aid Measures

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General advice	Show this material safety data sheet to the doctor in attendance.
If inhaled	After inhalation: fresh air.
Eye Contact	After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.
Skin Contact	In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.
If swallowed	After swallowing: immediately make victim drink water (two glasses at

Most important symptoms and effects, both acute and delayed	most). Consult a physician. The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
Indication of any immediate medical attention and special treatment needed	No data available

5. Fire-fighting Measures

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Suitable extinguishing media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	For this substance/mixture no limitations of extinguishing agents are given.
Special hazards arising from the substance or mixture	Sulfur oxides Aluminum oxide Not combustible. Ambient fire may liberate hazardous vapours.
Further information	Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system
Advice for firefighters	In the event of fire, wear self-contained breathing apparatus.

6. Accidental Release Measures

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Personal precautions, protective equipment and emergency procedures	Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.
Environmental Precaution	Do not let product enter drains.
Methods and materials for containment and cleaning	Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts..
Reference to other sections	For disposal see section 13.

7. Handling and Storage

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Precautions for safe handling	For precautions see section 2.2.
Conditions for safe storage, including any incompatibilities	Storage conditions No metal containers. Tightly closed. Dry. hygroscopic Store under inert gas. Storage class Storage class (TRGS 510): 8B: Non-combustible, corrosive hazardous materials
Specific end use(s)	Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. Exposure controls and personal protection

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Engineering Control	Provide adequate general and local exhaust ventilation. Work in fume cupboard. Must not be handled in confined space without sufficient ventilation.
Eye/face protection	Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles

Body Protection	protective clothing
Respiratory protection	Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system. Recommended Filter type: Filter type P2
	The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.
Control of environmental exposure	Do not let product enter drains.

9. Physical and chemical properties

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Physical state	Powder
Colour	White
Odor	odorless
pH	No data available
Melting point/freezing point	Melting point/range: 770 °C - dec.
Initial boiling point and boiling range	112 - 116 °C
Upper/lower flammability or explosive limits	No data available
Autoignition temperature	No data available
Viscosity	Viscosity, kinematic: No data available
	Viscosity, dynamic: No data available
Density	2,71 g/mL at 25 °C - lit.
Relative Density	No data available
Solubility	ca.0,00001 g/l at 21,5 °C - insoluble

10. Stability and reactivity

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Reactivity	No data available
Chemical stability	The product is chemically stable under standard ambient conditions (room temperature) .
Possibility of hazardous reactions	No data available
Conditions to avoid	Air Exposure to moisture. no information available
Incompatible materials	No data available
Hazardous product decomposition	In the event of fire: see section 5

11. Toxicological information

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Acute toxicity	LD50 Oral - Rat - male and female - > 2.000 mg/kg (OECD Test Guideline 401) Inhalation: No data available LD50 Dermal - Rabbit - male and female - > 5.000 mg/kg (OECD Test Guideline 402)
Skin corrosion/irritation	Skin - Rabbit Result: No skin irritation - 4 h (OECD Test Guideline 404)
Respiratory or skin sensitization	Local lymph node assay (LLNA) - Mouse Result: negative (OECD Test Guideline 429)
Serious eye damage/eye irritation	Eyes - Rabbit Result: Irreversible effects on the eye
Germ cell mutagenicity	Test Type: Ames test
	Test system: Escherichia coli/Salmonella typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471
	Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: mouse lymphoma cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476

Result: negative

Test Type: Micronucleus test Test system: Human lymphocytes Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 487

Result: negative

Test Type: Micronucleus test Species: Rat Application Route: Oral Method: OECD Test Guideline 474

Result: negative

Remarks: (in analogy to similar products) The value is given in analogy to the following substances: aluminium hydroxide Species: Rat Application Route: Oral

Remarks: Cytogenetic analysis

12. Ecological information

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Toxicity

Toxicity to fish semi-static test LC50 - Danio rerio (zebra fish) - > 87,5 mg/l - 96 h (OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates static test EC50 - Daphnia magna (Water flea) - > 200 mg/l - 48 h (OECD Test Guideline 202)

Toxicity to algae static test ErC50 - Pseudokirchneriella subcapitata (microalgae) - 0,24 mg/l - 72 h (OECD Test Guideline 201)

Toxicity to bacteria static test EC50 - activated sludge - > 200 mg/l - 3 h (OECD Test Guideline 209)

Toxicity to fish(Chronic toxicity) semi-static test NOEC - Salvelinus fontinalis (Brook trout) - 0,024 mg/l - 60 d Remarks: (ECHA) semi-static test NOEC - Salvelinus fontinalis (Brook trout) - 0,024 mg/l - 60 d Remarks: (ECHA) semi-static test NOEC - Salvelinus fontinalis (Brook trout) - 0,024 mg/l - 60 d Remarks: (ECHA)

Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity) semi-static test NOEC - Ceriodaphnia dubia (water flea) - 3,8 mg/l - 8 d (US-EPA)

Persistence and degradability

The methods for determining biodegradability are not applicable to inorganic substances.

Mobility in soil

Moderate mobility.

Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher

Endocrine disrupting properties Product: Assessment

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

13. Disposal considerations

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14. Transport information

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UN number	ADR/RID: 3260 IMDG: 3260 IATA: 3260
UN proper shipping name	ADR/RID: CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (aluminium sulfate)
	IMDG: CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (aluminium sulfate)
	IATA: Corrosive solid, acidic, inorganic, n.o.s. (aluminium sulfate)
Transport hazard classes	ADR/RID: 8 IMDG: 8 IATA: 8
Packaging group	ADR/RID:III IMDG:III ICAO :III
Environmental hazards	No data available

15. Regulatory information

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Safety, health and environmental regulations/legislation specific for the substance or mixture	Uk Regulatory References Chemicals (Hazard Information & Packaging) Regulations. Approved Code Of Practice Safety Data Sheets for Substances and Preparations. Classification and Labelling of Substances and Preparations Dangerous for Supply. Guidance Notes Workplace Exposure Limits EH40. EU Legislation Dangerous Substance Directive 67/548/EEC. Dangerous Preparations Directive 1999/45/EC. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments.
Chemical Safety Assessment	No information

16. Other information

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Other Information	<p>The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall we be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Rx Marine International has been advised of the possibility of such damages.</p> <p>DISCLAIMER OF LIABILITY :The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond</p>
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No data available

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.