Material Safety Data Sheet

ALUMINIUM SULPHATE Liquid (RXSOL-40-1904-026)

1. Product and Company Identifaction

Porduct Name	ALUMINIUM SULPHATE
Part Number	RXSOL-40-1904-025

RX MARINE INTERNATIONAL
105, A wing , BSEL , TECH PARK.
VASHI ,NEW BOMBAY 400703 INDIA

Branch : Kandla, Mumbai , Chennai, Vizag, Kolkata, UAE , OMAN , CANADA and KENYA

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2. Composition / informationon ingredients

Chemical Name	Cas No	EC No	Weight	Formula
Aluminum sulfate	10043-01-3	233-135-0	342,15 g/mol	$A_{l2}O_{12}S_3$

3. Hazards Identification

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. P390 Absorb spillage to prevent material damage.
Classification of the substance or mixture	No data available
Supplemental Hazard Statements	No data available
Other hazards	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

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. Call in ophthalmologist. Remove contact lenses.
Swallowed	After swallowing: fresh air. Make victim drink
Skin Contact	In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.
Inhalation	No data available
Ingestion	No data available
Most important symptoms and effects, both acute and delaye	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

Flammability	No data available
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.
Hazardous combustion products	Fire may cause the evolution of Sulphur oxides, nitrogen oxides.
Advice for firefighters	In the event of fire, wear self-contained breathing apparatus.
Protective Equipment	No data available
Specific Hazards Arising from the Chemical	No data available

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8
Spillage	No data available
Personal Protection	No data available
Enviromental Precaution	Do not let product enter drains. Risk of explosion.
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 carefully with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.
Reference to other sections	For disposal see section 13.

7. Handling and Storage

Advice on protection against fire and explosion	No data available
Incompatible materials	No data available
Hygiene measures	No data available
Advice on safe handling	No data available
Conditions for safe storage, including any incompatibilities	Tightly closed. Dry. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons. Moisture sensitive.
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
Advice on general occupational hygiene	No data available

8. Exposure controls and personal protection

Exposure controls	Personal Protective equipment.
Engineering Control	No data available
Eye/face protection	Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses
Body Protection	Protective Clothing.
Skin protection	No data available

Respiratory protection	Required when dusts are generated. 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 entrepeneur 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.
Other Protection Measure	No data available
Control of environmental exposure	Do not let product enter drains. Risk of explosion.

9. Physical and chemical properties

Physical state	Powder
Colour	White
Odour	Odorless
Odor Threshold	No data available
pH	No data available
Melting Point	770 °C - dec.
Boiling Point	112 - 116 °C
Flash Point	No data available
Evaporation Rate	Not data available
Flammability (solid, gas)	No data available
Explosive limits	No data Available
Upper/lower flammability or explosive limits	No data available
Autoignition temperature	No data available
Decomposition temperature	No data available
Vapour pressure	No data available
Viscosity	No data available
Density	2,71 g/mL at 25 °C - lit.
Relative Density	No data available
Specific Gravity	No data available
Partition coefficient	No data available
Explosive properties	No data available
Solubility	ca.0,00001 g/l at 21,5 °C - insoluble
Ignition temperature	No information available.
Particle characteristics	No data available

10. Stability and reactivity

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
Incompatible materials	No data available
Hazardous decomposition products	In the event of fire: see section 5

11. Toxicological information

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)

Serious eye damage/irritation	Eyes - Rabbit Result: Irreversible effects on the eye (OECD Test Guideline 405)
Respiratory or skin sensitization	Local lymph node assay (LLNA) - Mouse Result: negative (OECD Test Guideline 429)
Carcinogenicity	No data avialable
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 (in analogy to similar products) The value is given in analogy to the following substances: aluminium hydroxide Species: Rat Application Route: Oral Cytogenetic analysis
Reproductive toxicity	No data availalble
Specific target organ toxicity - single exposure	Mixture may cause respiratory irritation.
Additional Information	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. Repeated dose toxicity - Rat - male - Oral - NOAEL (No observed adverse effect level) - 18 mg/kg - LOAEL (Lowest observed adverse effect level) - 90 mg/kg Remarks: (in analogy to similar products) The value is given in analogy to the following substances: aluminium(III) chloride, anhydrous RTECS: BD1700000 To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. Ecological information

Persistence and degradability	The methods for determining biodegradability are not applicable to inorganic substances
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	No data available
Toxicity to bacteria	Static test EC50 - activated sludge - > 200 mg/l - 3 h (OECD Test Guideline 209)
Toxicity to algae	Static test ErC50 - Pseudokirchneriella subcapitata (microalgae) - 0,24 mg/l - 72 h (OECD Test Guideline 201)
Products Biodegradation	No data available
Mobility in soil	No data available
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	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
Other adverse effects	No data available .

13. Disposal considerations

Product	See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

14. Transport information

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 class(es)	ADR/RID: 8	IMDG:8	IATA:8
Packaging group	ADR/RID: lll	IMDG: lll	IATA:lll
Environmental hazards	ADR/RID:No	IMDG:No	IATA: No

Special precautions for user	Tunnel restriction code (E)
Further information	No data available

15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture	This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.
Other regulations	Take note of Dir 94/33/EC on the protection of young people at work.
Chemical Safety Assessment	A Chemical Safety Assessment was not carried out for this substance.

16. Other information

Other Information	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 weassume 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 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. 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 our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.