

1. Product and Company Identification

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Product Name

Silver nitrate ip

Part Number

RXSOL-60-6125-025

Company Details:

RX MARINE INTERNATIONAL
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2. Composition / Information on ingredients

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Chemical Name	Cas No	EC No	Weight	Formula
Silver nitrate cryst. extra pure	7761-88-8	231-853-9	169,88 g/mol	AgNO ₃

3. Hazards Identification

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Signal Word

Danger

Hazard Statements

H272 May intensify fire; oxidizer. H290 May be corrosive to metals. H314 Causes severe skin burns and eye damage. H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P260 Do not breathe dust. P273 Avoid release to the environment. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. 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

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. 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.

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	Rinse out with plenty of water. Remove contact lenses
Swallowed	Make victim drink water (two glasses at most). Consult doctor if feeling unwell.
Skin Contact	In case of skin contact Take off immediately all contaminated clothing. Rinse skin with water/ shower.
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

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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	Nitrogen oxides (NOx) Silver/silver oxides Not combustible. Fire may cause evolution of: nitrogen oxides Has a fire-promoting effect due to release of oxygen.
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	No data available
Advice for firefighters	Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.
Protective Equipment	No data available
Specific Hazards Arising from the Chemical	No data available

6. Accidental Release Measures

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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	Avoid dust formation. Avoid breathing vapors, mist or gas. For personal protection see section 8
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 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

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Advice on protection against fire and explosion	Keep away from open flames, hot surfaces and sources of ignition
Incompatible materials	No data available
Hygiene measures	Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2.

Advice on safe handling	No data available
Conditions for safe storage, including any incompatibilities	No data available
Storage conditions	No metal containers. Protected from light. Tightly closed. Do not store near combustible materials. Recommended storage temperature see product label.
Storage class	Storage class (TRGS 510) 5.1B Oxidizing 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

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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	This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de). Full contact Material: Viton® Minimum layer thickness: 0,7 mm Break through time: 480 min Material tested: Vitoject® (KCL 890 / Aldrich Z677698, Size M) This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de). Splash contact Material: butyl-rubber Minimum layer thickness: 0,7 mm Break through time: 30 min Material tested: Butoject® (KCL 898)
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 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.
Other Protection Measure	No data available

9. Physical and chemical properties

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Physical state	Crystals
Colour	Colorless
Odour	No data available
Odor Threshold	No data available
pH	No data available
Melting Point	212 °C
Boiling Point	440 °C - Decomposes on heating
Flash Point	No data available
Evaporation Rate	No data available
Flammability (solid, gas)	Not flammable.
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	1 hPa at 107 °C
Viscosity	No data available
Density	4,350 g/cm ³
Relative Density	No data available
Specific Gravity	No data available
Partition coefficient	log Pow 5
Explosive properties	No data available
Solubility	No data available
Ignition temperature	No data available
Particle characteristics	No data available

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	Risk of explosion with Acetaldehyde Acetylene Nitriles Ammonia ammonium hydroxide azides combustible substances carbides ethanol Fluoroacetylene Hydrazine hydrate acetylidene Sodium hydroxide Nitromethane Organic Substances phosphorus Millipore- 1.01510 Page 8 of 13 The life science business of Merck operates as MilliporeSigma in the US and Canada phosphorus hydrogen sulfur Titanium Zinc charcoal Activated charcoal Ammonia with ethanol Ammonia with Sodium hydroxide solution powdered magnesium with Water Risk of ignition or formation of inflammable gases or vapours with: arsenic oxidisable substances Exothermic reaction with: nonmetals oxidisable substances iodides strong reducing agents halogen-halogen compounds
Conditions to avoid	Strong heating.
Incompatible materials	Aluminum, Mild steelMetals
Hazardous product decomposition	No data available

11. Toxicological information

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Acute toxicity	D50 Oral - Rat - male and female - 3.804 mg/kg (OECD Test Guideline 401) LC50 Inhalation - Rat - male and female - 4 h - > 0,075 mg/l - aerosol (OECD Test Guideline 403) LD50 Dermal - Rat - male and female - > 2.000 mg/kg (OECD Test Guideline 402)
Skin corrosion/irritation	Skin - reconstructed human epidermis (RhE) Corrosive - 3 - 60 min (OECD Test Guideline 431) (Regulation (EC) No 1272/2008, Annex VI)
Serious eye damage/irritation	Causes serious eye damage. Risk of permanent damage due to staining of the cornea.
Respiratory or skin sensitization	No data available
Carcinogenicity	No data available
Germ cell mutagenicity	Micronucleus test Test system Human lymphocytes Metabolic activation with and without metabolic activation Method OECD Test Guideline 487 Result negative In vitro mammalian cell gene mutation test Test system mouse lymphoma cells Metabolic activation with and without metabolic activation Method OECD Test Guideline Positive results were obtained in some in vitro tests.
Reproductive toxicity	No data available
Specific target organ toxicity- single exposure	No data available
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 and female - Oral - 52 Days - NOAEL (No observed adverse effect level) - $\geq$ 250 mg/kg May cause argyria (a slate-gray or bluish discoloration of the skin and deep tissues due to the deposit of insoluble albuminate of silver)., Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. Ecological information

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Persistence and degradability	The methods for determining the biological degradability are not applicable to inorganic substances.
Toxicity to fish	Semi-static test LC50 - Pimephales promelas (fathead minnow) - 0,0012 mg/l - 96 h (US-EPA)
Toxicity to daphnia and other aquatic invertebrates	Semi-static test LC50 - Daphnia magna (Water flea) - 0,00022 mg/l - 48 h (ECHA)
Toxicity	No data available
Toxicity to bacteria	No data available
Toxicity to algae	No data available
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	Biological effects Forms corrosive mixtures with water even if diluted. Discharge into the environment must be avoided.

13. Disposal considerations

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Product	No data available
Contaminated packaging	No data available
Waste treatment Method	No data available

14. Transport information

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UN number	ADR/RID:1493 IMDG:1493 IATA:1493
UN proper shipping name	ADR/RID: SILVER NITRATE IMDG: SILVER NITRATE IATA: Silver nitrat
Transport hazard classes	ADR/RID:5.1 IMDG:5.1 IATA: 5.1
Packaging group	ADR/RID:II IMDG:II IATA:II
Environmental hazards	ADR/RID:Yes IMDG Marine pollutant:Yes IATA:No
Special precautions for user	Tunnel restriction code (E)
Further information	Not classified as dangerous in the meaning of transport regulations.

15. Regulatory information

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Safety, health and environmental regulations/legislation specific for the This material safety data sheet complies with the requirements of

substance or mixture
Other regulations
Chemical Safety Assessment

Regulation (EC) No. 1907/2006
Take note of Dir 94/33/EC on the protection of young people at work.
For this product a chemical safety assessment was not carried out

16. Other information

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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 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.

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