

Material Safety Data Sheet

Sodium Nitrate Solution for Passivation (RXSOL-19-3769-025)



1. Product and Company Identification

Product Name **Sodium Nitrate Solution for Passivation**
Part Number **RXSOL-19-3769-025**

Company Details:

RX MARINE INTERNATIONAL
105, A wing , BSEL , TECH PARK.
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2. Composition / information on ingredients

Synonyms	Nitric acid sodium salt Nitrate of Soda		
Formula	NaNO ₃		
Molecular weight	84.99g/mol		
CAS-No.	7631-99-4		
EC-No.	232-554-3		
Chemical Entity	Formula	CAS Number	Proportion
Sodium nitrate	NaNO ₃	7631-99-4	25 - 50 %
Water	H ₂ O	7732-18-5	Balance %

3. Hazards Identification

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 Eye irritation (Category 2), H319
For the full text of the H-Statements mentioned in this Section, see Section 16.

Label elements

Signal Word Warning
Hazard statement(s) H319 Causes serious eye irritation.
P264 Wash skin thoroughly after handling.
P280 Wear eye protection/ face protection.
Precautionary statement(s) P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
Supplemental Hazard Statements None

Reduced Labeling (= 125 ml)

Signal Word Warning
Hazard statement(s) None

Precautionary statement(s)	None
Supplemental Hazard Statements	None
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. Ecological 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. Toxicological 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.

4. First Aid Measures

General Advice	Show this material safety data sheet to the doctor in attendance.
Swallowed	IF SWALLOWED: Rinse mouth. Do not induce vomiting. Call a Poison Centre or doctor/physician for advice. Never give anything by mouth to an unconscious person.
Eye	IF IN EYES: Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. If eye irritation persists, get medical advice/attention.
Skin	IF ON SKIN: Remove and isolate contaminated clothing and shoes. Immediately flush skin with running water for at least 15 minutes. If skin irritation occurs, get medical advice/attention. Wash contaminated clothing and shoes before reuse. *Contaminated clothing may be a fire risk when dry.
Inhaled	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If respiratory symptoms persist, get medical advice/attention. Give artificial respiration if victim is not breathing. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Administer oxygen if breathing is difficult.
Advice to Doctor	Treat symptomatically. Keep victim calm and warm. Ensure that attending medical personnel are aware of identity and nature of the product(s) involved, and take precautions to protect themselves. *Most important symptoms and effects, both acute and delayed: Absorption of nitrates by ingestion, inhalation or through burnt or broken skin may cause dilation of the blood vessels by direct smooth muscle relaxation with a subsequent lowering of blood pressure and may also cause breathing difficulties, blueness of the skin (cyanosis) and methaemoglobinaemia. Following inhalation of oxides of nitrogen the patient should be observed in hospital for 24 hours for delayed onset of pulmonary oedema
Indication of any immediate medical attention and special treatment needed	No data available

5. Fire-fighting Measures

General Measures	Move containers from fire area if you can do it without risk. Do not move cargo or vehicle if cargo has been exposed to heat. Cool containers with flooding quantities of water until well after fire is out. ALWAYS stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.
Flammability Conditions	OXIDISING SUBSTANCE: Will accelerate burning when involved in a fire.
Extinguishing Media	If material is involved in a fire, use water for extinction. Do not use dry chemicals or foams. CO2 or Halon® may provide limited control. *Large fire: Flood fire area with water from a distance
Fire and Explosion Hazard	Risk of violent reaction or explosion! May explode from heat or contamination. May ignite combustibles. Containers may explode when heated. Runoff may create fire or explosion hazard
Hazardous Products of Combustion	Fire or heat may produce irritating and/or toxic gases, including oxides of nitrogen. .
Special Fire Fighting Instructions	Contain runoff from fire control or dilution water - Runoff may cause pollution.
Personal Protective Equipment	Wear positive pressure self-contained breathing apparatus (SCBA). Wear chemical protective clothing - It may provide little or no thermal protection. Structural firefighters' protective clothing will only provide limited protection.

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. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.
Environmental precautions	Do not let product enter drains.
Methods and material for containment and cleaning up	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

Precautions for safe handling	For precautions see section 2.2.
Conditions for safe storage, including any incompatibilities	
Storage conditions	Tightly closed. Dry.
Storage class	Storage class (TRGS 510): 11: Combustible Solids
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

Control parameters

Ingredients with workplace control parameters

Derived No Effect Level (DNEL)

General	No exposure standards have been established for this product.ermal
Engineering Measures	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.
Personal Protection Equipment	Respiratory protection: Not required under normal conditions of use. If engineering controls do not maintain airborne concentrations below recommended exposure limits or to an acceptable level, an approved respirator must be worn. Recommended: Air-purifying respirator with an appropriate, government approved, filter, cartridge or canister Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Wear splash-proof goggles. - Hand protection: Wear protective gloves. Recommended: Wear appropriate chemical resistant gloves, e.g. PVC or rubber gloves. - Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Wear appropriate
Work Hygienic Practices	Do not eat, drink or smoke when using this product. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated footwear that cannot be cleaned.
Exposure Limits	No Data Available
Biological Limits	No information available.
Special Hazards Precautions	No information available

Exposure controls

Personal protective equipment

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
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Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested: Dermatrill® (KCL 740 / Aldrich Z677272, Size M)

Skin protection

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested: Dermatrill® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail

sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the EC approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection

Protective clothing

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.

Respiratory protection

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

Physical state	Liquid
Color	Colourless
Odor	Odourless or slight odour
pH Value(5% in water)	5.5- 8.3
Assay	High purity, often >99% for the solid sodium nitrate used to prepare the solution, ensuring effective passivation
Solubility	Complies with standards (e.g., 10% solution clear)
Chloride (Cl)	0.01%
Sulphate (SO4)	0.01%
Iron (Fe)	0.002%
Lead (Pb)	0.002%
Potassium (K)	0.01%

10. Stability and reactivity

Reactivity	The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.
Chemical stability	The product is chemically stable under standard ambient conditions (room temperature) .
Possibility of hazardous reactions	Violent reactions possible with: Oxidizing agents Aluminum Zinc Tin
Conditions to avoid	No information available
Incompatible materials	No data available

11. Toxicological information

Acute toxicity	LD50 Oral - Rat - male and female - > 10.500 mg/kg Remarks: (ECHA) The value is given in analogy to the following substances: Sorbic acid LC50 Inhalation - Rat - 4 h - > 5,15 mg/l - dust/mist (OECD Test Guideline 403) LD50 Dermal - Rat - male and female - > 2.000 mg/kg (OECD Test Guideline 402) Remarks: The value is given in analogy to the following substances: Sorbic acid
Skin corrosion/irritation	Skin - Rabbit Result: No skin irritation - 4 h (OECD Test Guideline 404)
Serious eye damage/eye irritation	Eyes - Rabbit Result: Eye irritation (OECD Test Guideline 405) Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)
Respiratory or skin sensitization	Maximization Test - Guinea pig Result: negative (Regulation (EC) No. 440/2008, Annex, B.6) Remarks: The value is given in analogy to the following substances: Sorbic acid
Germ cell mutagenicity	In vivo tests did not show mutagenic effects Test Type: In vitro mammalian cell gene mutation test Test system: Chinese hamster ovary cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative Test Type: Ames test Test system: S. typhimurium Metabolic activation: with and without metabolic activation Method: Regulation (EC) No. 440/2008, Annex, B.13/14 (Ames test) Result: negative Remarks: The value is given in analogy to the following substances: Sorbic acid Test Type: Mutagenicity (mammal cell test): chromosome aberration. Test system: Chinese hamster lung cells Metabolic activation: without metabolic activation Method: Regulation (EC) No. 440/2008, Annex, B.10 Result: positive Test Type: UDS (Unscheduled DNA synthesis assay) Test system: mammalian cells Metabolic activation: with and without metabolic activation Method: Regulation (EC) No. 440/2008, Annex, B.18 Result: negative Remarks: The value is given in analogy to the following substances: Sorbic acid Test Type: In vivo micronucleus test Species: Mouse Cell type: Bone marrow Application Route: Oral Method: OECD Test Guideline 474 Result: negative Remarks: The value is given in analogy to the following substances: Sorbic acid
Carcinogenicity	No data available
Reproductive toxicity	No data available
Specific target organ toxicity - single exposure	No data available
Specific target organ toxicity - repeated exposure	No data available
Aspiration hazard	No data available
Additional Information Endocrine disrupting properties	
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. RTECS: WG2170000 To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. Ecological information

Toxicity	
Toxicity to fish	Elevated levels of nitrates in water are generally harmful to aquatic life.
Impact on Drinking Water	Nitrate contamination in groundwater can pose human health risks if consumed, especially for infants.
Potential for Nitrite Formation	In certain conditions (e.g., during decomposition or specific biological processes), nitrate (NO ₃ ⁻) can be reduced to nitrite (NO ₂ ⁻), which is a more acutely toxic substance.
Disposal Hazards	Solutions used in industrial processes can contain heavy metals and other chemicals from the passivation process, which makes the waste stream more complex and expensive to treat and dispose of safely.
Biodegradability	aerobic - Exposure time 28 d Result: 74,9 % - Readily biodegradable. (OECD Test Guideline 301D) Remarks: The value is given in analogy to the following substances: Sorbic acid
Bioaccumulative potential	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 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.
Other adverse effects	No data available

13. Disposal considerations

Waste Treatment Methods	No data available
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14. Transport information

UN number	ADR/RID: IMDG: IATA:
UN proper shipping name	ADR/RID: Not dangerous goods IMDG: Not dangerous goods IATA: Not dangerous goods
Transport hazard class(es)	ADR/RID: IMDG: IATA:
Packaging group	ADR/RID: IMDG: IATA:
Environmental hazards	ADR/RID: No IMDG Marine pollutant: No IATA: No
Special precautions for user	No data available
Further information	Not classified as dangerous in the meaning of transport regulations.

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 has been 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 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 Ma Atrialine International has been advised of the possibility.