

## 1. Product and Company Identification

www.rxmarine.com

Product Name Ammonium molybdate tetrahydrate  
Part Number RXSOL-19-1048-025

Company Details:....

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

Phone +91 22 20871200 - 1400  
Fax +91 22 27612100 ::AOH :0091 9821214367  
Email [mail@rxmarine.com](mailto:mail@rxmarine.com)  
Website [www.rxmarine.com](http://www.rxmarine.com)

## 2. Composition / Information on ingredients

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### Substances

Formula  $(\text{NH}_4)_6\text{Mo}_7\text{O}_{24} \cdot 4\text{H}_2\text{O}$   
Molecular weight 1.235,86 g/mol  
CAS-No 12054-85-2  
EC-No. 234-320-9

## 3. Hazards Identification

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Classification of the substance or mixture Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.  
Label elements Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008  
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

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### Description of first aid measures

**If inhaled** After inhalation: fresh air.  
**In case of skin contact** In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower  
**In case of eye contact** After eye contact: rinse out with plenty of water. Remove contact lenses.  
**If swallowed** After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.  
**Most important symptoms and effects, both acute and delayed** 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

### Extinguishing media

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

Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard.

In a fire or if heated, a pressure increase will occur and the container may burst, with the

risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along

the ground. Vapors may accumulate in low or confined areas or travel a considerable

distance to a source of ignition and flash back.

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distance to a source of ignition and flash back.

Nitrogen oxides (NO<sub>x</sub>)

Molybdenum oxides

Not combustible.

Fire may cause evolution of:

nitrogen oxides

Ambient fire may liberate hazardous vapours.

Advice for firefighters

Further information

In the event of fire, wear self-contained breathing apparatus.

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

spray to keep fire-exposed containers cool.Promptly isolate the scene by removing all persons from the vicinity of the incident if

there is a fire. No action shall be taken involving any personal risk or without suitable

training. Move containers from fire area if this can be done without risk. Use water

spray to keep fire-exposed containers cool.

## 6. Accidental Release Measures

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Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert.

Environmental precautions

For personal protection see section 8.

Methods and materials for containment and cleaning up

Do not let product enter drains.

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

Recommended storage temperature see product label.

Recommended storage temperature see product label.Tightly closed.

Specific end use(s)

Recommended storage temperature see product label.

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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Control parameters

Ingredients with workplace control parameters

Exposure controls

Personal protective equipment

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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
Skin protection	<p>This recommendation applies only to the product stated in the safety data sheet,</p> <p>supplied by us and for the designated use. When dissolving in or mixing with other</p> <p>substances and under conditions deviating from those stated in EN374 please</p> <p>contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell,</p> <p>Internet: <a href="http://www.kcl.de">www.kcl.de</a>).</p> <p>Full contact</p> <p>Material: Nitrile rubber</p> <p>Minimum layer thickness: 0,11 mm</p> <p>Break through time: 480 min</p> <p>Material tested:KCL 741 Dermatril® L</p> <p>This recommendation applies only to the product stated in the safety data sheet,</p> <p>supplied by us and for the designated use. When dissolving in or mixing with other</p> <p>substances and under conditions deviating from those stated in EN374 please</p> <p>contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell,</p> <p>Internet: <a href="http://www.kcl.de">www.kcl.de</a>).</p> <p>Splash contact</p> <p>Material: Nitrile rubber</p> <p>Minimum layer thickness: 0,11 mm</p> <p>Break through time: 480 min</p> <p>Material tested:KCL 741 Dermatril® L</p>
Respiratory protection	<p>Required when dusts are generated.</p> <p>Our recommendations on filtering respiratory protection are based on the following</p> <p>standards: DIN EN 143, DIN 14387 and other accompanying standards relating to</p> <p>the used respiratory protection system.</p> <p>Recommended Filter type: Filter type P1</p>

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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.

Do not let product enter drains..

Control of environmental exposure

## 9. Physical and chemical properties

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### Information on basic physical and chemical properties

Appearance	Form: solid
Odor	Color: colorless
Odor Threshold	Odorless
pH	Not applicable
Melting point/freezing point	No data available
Initial boiling point and boiling range	Melting point: 400 °C
Flammability (solid, gas)	205,7 °C at 977,6 hPa - OECD Test Guideline 103
Upper/lower flammability or explosive limits	No data available
Flash point	No data available
Autoignition temperature	138,6 °C - closed cup
Decomposition temperature	360 °C
	No data available
	materials. Extremely flammable in the presence of the following materials or conditions: oxidizing
	materials.
pH	No data available
Viscosity	Viscosity, kinematic: No data available
	Viscosity, dynamic: No data available
Water solubility	256,084 g/l at 25 °C - OECD Test Guideline 105- completely soluble
Partition coefficient: n-octanol/water	log Pow: -0,698 at 30 °C - Bioaccumulation is not expected., (ECHA)
Vapor pressure	< 0,1 hPa at 20 °C
Density	1,116 g/cm <sup>3</sup> at 20 °C at 975,5 hPa - OECD Test Guideline 109
Relative density	No data available
Relative vapor density	No data available
Particle characteristics	No data available
Explosive properties	No data available
Oxidizing properties	None
<b>Other safety information</b>	
Bulk density	400 - 500 kg/m <sup>3</sup>

## 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	No information available
Incompatible materials	Strong acids

## 11. Toxicological information

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### Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - male and female - &gt; 2.000 mg/kg

(OECD Test Guideline 420)

LC50 Inhalation - Rat - male and female - 4 h - &gt; 5,05 mg/l

(OECD Test Guideline 403)

Remarks: (in analogy to similar products)

LD50 Dermal - Rat - male and female - &gt; 2.000 mg/kg

(OECD Test Guideline 402)

Remarks: (in analogy to similar products)

#### Skin corrosion/irritation

The value is given in analogy to the following substances: disodium molybdate

Skin - Rabbit

Result: No skin irritation - 4 h

(OECD Test Guideline 404)

Remarks: (in analogy to similar products)

The value is given in analogy to the following substances: Molybdenum dioxide

#### Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation

(OECD Test Guideline 405)

Remarks: (in analogy to similar products)

The value is given in analogy to the following substances: Molybdenum dioxide

#### Respiratory or skin sensitization

Maximization Test - Guinea pig

Result: negative

(OECD Test Guideline 406)

Remarks:

(in analogy to similar products)

#### Germ cell mutagenicity

Test Type: Micronucleus test

Test system: Human lymphocytes

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 487

Result: negative

Remarks: (in analogy to similar products)

The value is given in analogy to the following substances: Disodium molybdate dihydrate

Test Type: Ames test

Test system: Escherichia coli/Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Remarks: (in analogy to similar products)

The value is given in analogy to the following substances: Disodium molybdate dihydrate

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

Remarks: (in analogy to similar products)

The value is given in analogy to the following substances: Disodium molybdate dihydrate

No data available

No data available

No data available

No data available

No data available

Carcinogenicity

Reproductive toxicity

Specific target organ toxicity - single exposure

Specific target organ toxicity - repeated exposure

**Aspiration hazard**

## 12. Ecological information

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Persistence and degradability

No data available

Toxicity to fish

Static test LC50 - Oncorhynchus mykiss (rainbow trout) - 75 mg/l - 96 h (OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates

Static test EC50 - Daphnia magna (Water flea) - 42,81 mg/l - 48 h (OECD Test Guideline 202) Remarks: (in analogy to similar products)

Toxicity

The value is given in analogy to the following substances: maleic acid  
Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 1.520 mg/l - 96 h

Toxicity to bacteria

EC10 - Bacteria - 14 mg/l - 72 h Remarks: (Lit.) EC5 - E.coli - 15.000 mg/l Remarks: (Lit.) (maximum permissible toxic concentration)

Toxicity to algae

Static test ErC50 - Pseudokirchneriella subcapitata (green algae) - 74,35 mg/l - 72 h (OECD Test Guideline 201) Remarks: (in analogy to similar products) The value is given in analogy to the following substances: maleic acid

Products Biodegradation

The methods for determining the biological degradability are not applicable to inorganic substances.

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	No data available
Other adverse effects	No data available .

### 13. Disposal considerations

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Product	Offer surplus and non-recyclable solutions to a licensed disposal company. Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.
Contaminated packaging	Dispose of as unused product.
Waste treatment Method	See <a href="http://www.retrologistik.com">www.retrologistik.com</a> for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

### 14. Transport information

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UN number	ADR/RID:2404 IMDG:2404 IATA: 2404
UN proper shipping name	ADR/RID:PROPIONITRILE IMDG:PROPIONITRILE IATA:PROPIONITRILE
Transport hazard class(es)	ADR/RID: 3 (6.1) IMDG: 3 (6.1) IATA:3 (6.1)
Packaging group	ADR/RID: II IMDG: II IATA:II
Environmental hazards	ADR/RID: No IMDG: 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

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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	Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable. Take note of Dir 94/33/EC on the protection of young people at work.
Chemical Safety Assessment	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 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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