

1. Product and Company Identification

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Product Name Ethyl Magnesium Bromide

Part Number RXSOL-19-3388-025

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

Website www.rxmraine.com

2. Composition / Information on ingredients

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Chemical Name	Cas No	EC No	Whight
Bromoethylmagnesium	925-90-6	213-127-3	>= 30 - < 50 %

3. Hazards Identification

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Signal Word	Danger
Hazard Statements	H224 Extremely flammable liquid and vapor. H260 In contact with water releases flammable gases which may ignite spontaneously. H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H336 May cause drowsiness or dizziness.
Precautionary statements	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P231 + P232 Handle and store contents under inert gas. Protect from moisture. P233 Keep container tightly closed. 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. P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
Classification of the substance or mixture	Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.
Supplemental Hazard Statements	EUH014 Reacts violently with water. EUH019 May form explosive peroxides.
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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General advice First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

If inhaled After inhalation: fresh air. Call in physician.

Eye Contact	After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.
Swallowed	After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.
Skin Contact	In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.
Inhalation	Remove patient to fresh air, keep warm and at rest and get medical assistance in necessary.
Ingestion	Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.
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	May be combustible at high temperature.
Suitable extinguishing media	Carbon dioxide (CO ₂) Dry powder
Unsuitable extinguishing media	Foam Water
Special hazards arising from the substance or mixture	Carbon oxides Hydrogen bromide gas Magnesium oxide Combustible. Pay attention to flashback. Vapors are heavier than air and may spread along floors. May not get in touch with: Water Development of hazardous combustion gases or vapours possible in the event of fire. Forms explosive mixtures with air at ambient temperatures.
Further information	Remove container from danger zone and cool with water. 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	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	Use personal protective equipment.
Specific Hazards Arising from the Chemical	Has a fire-promoting effect due to the release of oxygen. Ambient fire may liberate hazardous vapours.

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	Oxidizing material. Stop leak if without risk. Avoid contact with a combustible material (wood, paper, oil, clothing...). Keep substance damp using water spray. Do not touch spilled material. Prevent entry into sewers, basements or confined areas dike if needed. Eliminate all ignition sources. Call for assistance on disposal.
Personal Protection	Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert. Advice for emergency responders: Protective equipment see section 8.
Environmental 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.

For disposal see section 13.

Reference to other sections

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. Take precautionary measures against static discharge.

Incompatible materials

Keep away from alkalis, strong oxidizing agents and metals. Provide containment walls of adequate capacity to hold any accidental spills.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2.

Precautions for safe handling

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols. Keep workplace dry. Do not allow product to come into contact with water.

Conditions for safe storage, including any incompatibilities

Store the container tightly closed in a dry, cool and well-ventilated place. Store apart from foodstuff containers or incompatible materials.

Storage conditions

Tightly closed. Keep away from heat and sources of ignition. Never allow product to get in contact with water during storage. Handle and store under inert gas. Handle and open container with care. Heat- and air-sensitive. Light sensitive. Dry residue is explosive. Test for peroxide formation periodically and before distillation.

Storage class

Storage class (TRGS 510): 4.3: Hazardous materials, which set free flammable gases upon contact with water

Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

Advice on general occupational hygiene

Advice on safe handling Observe label precautions. Change contaminated clothing. Wash hands after working with substance.

8. Exposure controls and personal protection

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Exposure controls

No specific additional engineering controls are required. Provide good natural or artificial ventilation.

Engineering Control

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

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

Flame retardant antistatic protective clothing.

Skin protection

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. Splash contact Material: Fluorinated rubber Minimum layer thickness: 0,7 mm Break through time: 10 min Material tested: Vitoject® (KCL 890 / Aldrich Z677698, 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.

Respiratory protection

Required when vapours/aerosols 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 AX 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.

Handle in accordance with good industrial hygiene and safety practice.

Do not let product enter drains. Risk of explosion.

Other Protection Measure

Control of environmental exposure



Gloves Suit

9. Physical and chemical properties

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Physical state	Liquid
Colour	No data available
Odour	No data available
Odor Threshold	Not Applicable
pH	No data available
Melting Point	No data available
Boiling Point	34,6 °C at 1.013
Flash Point	40 °C - closed cup
Evaporation Rate	Not Applicable
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
Density	No data available
Relative Density	No data available
Freezing point	No data available
Specific Gravity	No data available
Partition coefficient	No data available
Explosive properties	No data available
Solubility	No data available
Ignition temperature	No information available.
Particle characteristics	No data available

10. Stability and reactivity

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Reactivity	Formation of peroxides possible. Vapors may form explosive mixture with air.
Stability	Sensitive to moisture
Possibility of hazardous reactions	No data available
Conditions to avoid	Warming. Moisture.

Incompatible materials	Oxidizing agents, Strong oxidizing agents, Strong acids, Violent chemical reaction; water reactive
Hazardous Polymerization	Peroxides In the event of fire: see section 5

11. Toxicological information

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Acute toxicity	Oral: No data available Acute toxicity estimate Oral - 1.864 mg/kg (Calculation method) Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach. Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:., damage of respiratory tract Dermal: No data available
Skin corrosion/irritation	Local lymph node assay (LLNA) - Mouse Result: negative (OECD Test Guideline 429)
Serious eye damage/eye irritation	Remarks: Mixture causes serious eye damage. Risk of blindness!
Respiratory or skin sensitization	No data available
Carcinogenicity	No data available
Germ cell mutagenicity	Test Type: Micronucleus test Test system: Human lymphocytes Result: negative Test Type: In vitro mammalian cell gene mutation test Test system: Mouse lymphoma test Result: negative Method: OECD Test Guideline 474 Species: Mouse - male and female Result: negative
Reproductive toxicity	No data available
Specific target organ toxicity - single exposure	May cause drowsiness or dizziness. - Central nervous system Acute oral toxicity - Risk of aspiration upon vomiting., Aspiration may cause pulmonary edema and pneumonitis. Acute inhalation toxicity - mucosal irritations
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. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice.

12. Ecological information

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Persistence and degradability	No data available
Toxicity to fish	LC50 - Leuciscus idus (Golden orfe) - 2.840 mg/l - 48 h Remarks: (ECOTOX Database)
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 1.380 mg/l - 48 h Remarks: (IUCRID)
Toxicity to bacteria	Static test EC50 - activated sludge - 21.000 mg/l - 3 h (OECD Test Guideline 209) static test NOEC - activated sludge - 42 mg/l - 3 h (OECD Test Guideline 209)
Toxicity to algae	Static test ErC50 - Desmodesmus subspicatus (green algae) - > 100 mg/l - 72 h (OECD Test Guideline 201)
Products Biodegradation	The methods for determining the biological degradability are not applicable to inorganic substances.
Mobility in soil	No Information 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

Other adverse effects	Regulation (EU) 2018/605 at levels of 0.1% or higher. We have no quantitative data concerning the ecological effects of this product. Biological effects: Product reacts with water. Further information on ecology Discharge into the environment must be avoided.
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13. Disposal considerations

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Disposal methods	The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.
Contaminated packaging	Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.
Waste treatment Method	No data available

14. Transport information

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UN number	ADR/RID:3399 IMDG: 3399 IATA:3399
UN proper shipping name	ADR/RID:Organometallic substance, liquid, water-reactive, flammable (Diethyl ether, Bromoethylmagnesium) IMDG:Organometallic substance, liquid, water-reactive, flammable (Diethyl ether, Bromoethylmagnesium) IATA:Organometallic substance, liquid, water-reactive, flammable (Diethyl ether, Bromoethylmagnesium)
Transport hazard class(es)	ADR/RID: 4.3 (3) IMDG:4.3 (3) IATA: 4.3 (3)
Packaging group	ADR/RID: I IMDG: I IATA: I
Environmental hazards	ADR/RID: No IMDG: No IATA: No
Special precautions for user	Tunnel restriction code : (C/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 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.
National legislation	Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. : FLAMMABLE LIQUIDS OTHER HAZARDS : OTHER HAZARDS
Authorisations and/or restrictions on use	Regulation (EU) 2019/1148 on the marketing and use of explosives precursors : potassium nitrate
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,
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