

1. Product and Company Identification

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Product Name HEXA METHYLENEIMINE
Part Number RXSOL-19-1314-025

Company Details:

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

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Chemical Name	CAS	EC number	Weight	Formula
Hexamethyleneimine	111-49-9	203-875-9	300 °C	
Viscosity,kinematic	No data available			
Vapour pressure	12,5 hPa at 20 °C			
Density	0,88 g/cm ³ at 25 °C - lit.			
Relative Vapour Density	3,43 - (Air = 1.0)			
Freezing point	No data available			
Specific Gravity	No data available			
Partition coefficient	log Pow: 1,7 at 20 °C			
Explosive properties	No data available			
Solubility	at 20 °C soluble			
Ignition temperature	No information available.			
Particle characteristics	No data available			

10. Stability and reactivity

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Reactivity	Vapors may form explosive mixture with air.
Stability	The product is chemically stable under standard ambient conditions (room temperature) .
Possibility of hazardous reactions	Violent reactions possible with: Strong oxidizing agents Strong acids
Conditions to avoid	Warming.
Incompatible materials	No data available
Hazardous Polymerization	In the event of fire: see section 5

11. Toxicological information

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Acute toxicity	LD50 Oral - Rat - 410 mg/kg Remarks: (External MSDS) Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach. LD50 Oral - Rat - 20,7 mg/kg Remarks: Behavioral:Food intake (animal). Lungs, Thorax, or Respiration:Pulmonary emboli. Liver:Other changes. LC50 Inhalation -
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Skin corrosion/irritation	Mouse - 2 h - 10.800 mg/m3 Dermal: No data available Skin - Rabbit Result: Corrosive after 1 to 4 hours of exposure - 4 h Remarks: (ECHA)
Serious eye damage/eye irritation	Eyes - Rabbit Result: Causes burns. Remarks: (Lit.) Remarks: Causes serious eye damage.
Respiratory or skin sensitization	No data available
Carcinogenicity	No data available
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: Mutagenicity (mammal cell test): chromosome aberration. Test system: Human lymphocytes Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 473 Result: negative
Reproductive toxicity	No data available
Specific target organ toxicity - single exposure	Inhalation - May cause respiratory irritation. - Respiratory system
Special Remarks on other Toxic Effects on Humans	Acute Potential Health Effects: Skin: Causes skin irritation. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. Eyes: Causes eye irritation. Ingestion: Causes gastrointestinal (digestive) tract irritation with nausea, vomiting, and diarrhea. May be harmful if swallowed. Inhalation: Causes respiratory tract irritation. May cause chemical pneumonitis and pulmonary edema, inflammation, edema of bronchi and larynx. Chronic Potential Health Effects: Repeated or prolonged skin exposure may cause allergic reactions in sensitive individuals. Repeated or prolonged exposure by inhalation may affect respiration and metabolism.
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 - NOAEL (No observed adverse effect level) - 50 mg/kg RTECS: CM3150000 Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. 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	Biodegradability Result: > 60 % - Moderately (partly) eliminable (DOC reduction 20- 70 %). (OECD Test Guideline 302B) Remarks: (External MSDS)
Bioaccumulative potential	No data available
Toxicity to fish	Flow-through test LC50 - Oncorhynchus mykiss (rainbow trout) - > 100 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	Flow-through test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	Static test ErC50 - Selenastrum capricornutum (green algae) - 88 mg/l - 72 h (OECD Test Guideline 201) static test NOEC - Selenastrum capricornutum (green algae) - 10 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to bacteria	EC5 - Bacteria - 127 mg/l Remarks: (Hommel)
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 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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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

Dispose of as unused product.

Waste treatment Method

No data available .

14. Transport information

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UN number

ADR/RID: 2493 IMDG: 2493 IATA: 2493

UN proper shipping name

ADR/RID:Hexamethyleneimine IMDG: Hexamethyleneimine
IATA:Hexamethyleneimine

Transport hazard class(es)

ADR/RID: 3 (8) IMDG: 3 (8) IATA: 3 (8)

Packaging group

ADR/RID: II IMDG: II IATA: II

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.

Transport in bulk according to IMO instruments

No data available

15. Regulatory information

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Inventory status

Components are on the following inventories: Polymaleic acid: - US TSCA, Canadian DSL, EU EINECS, Australian AICS, Korean, Philippine PICCS and Chinese Xi irritant R 36/38 Irritant to eyes & skin R 41 Risk of serious damage to eyes S24/25 Avoid contact with skin and eyes S26/28 In case of contact eyes & skin, rinse with plenty water and seek medical advice Section 312/313: Not listed. Not listed under California proposition 65.

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.

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. H2 ACUTE TOXIC P5c FLAMMABLE LIQUIDS

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 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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