Material Safety Data Sheet

BOILPLEX AT Hardness Control (RXSOL-40-5027-025)

1. Product and Company Identifaction

Product Name	**Boilplex AT**
Product	**RXSOL-40-5027-025**

Company Details:
RX MARINE INTERNATIONAL
105, A wing , BSEL , TECH PARK.
VASHI ,NEW BOMBAY 400703 INDIA

Stock Point : Mumbai, GAndhidham, Kolkata, Chennai, Visakhapatnam, Fujairah, Muscat, Nairobi Kenya

Phone	+91 22 27611360 / 27815540
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2. Composition / informationon ingredients

Hazardous Components	CAS-No.	Concentration
MORPHOLINE	110-91-8	>=10-15%
POTASSIUM HYDROXIDE	1310-58-3	>=1.5-5%
INORGANIC SALT	254504001-5294	>=1-1.5%
POTASSIUM COMPOUND	254504001-5137	>=1-1.5%

Mixed Polymer : Proprietory Blend

3. Hazards Identification

DANGER! MAY AFFECT THE CENTRAL NERVOUS SYSTEM CAUSING DIZZINESS, HEADACHE OR NAUSEA. VAPOR MAY CAUSE TEMPORARY BLURRING OF VISION. MAY BE HARMFUL. MAY CAUSE SEVERE BURNS OF RESPIRATORY AND DIGESTIVE TRACTS. HARMFUL IF ABSORBED THROUGH THE SKIN. CAUSES SEVERE BURNS OF THE EYES AND SKIN.

Potential Health Effects

Exposure routes
Inhalation, Skin absorption, Skin contact, Eye Contact, Ingestion

Eye contact
Can cause permanent eye injury. Symptoms include stinging, tearing, redness, and swelling of eyes. Can injure the cornea and cause blindness. Additional symptoms of eye exposure may include: blurred vision halo vision (blurred vision around bright objects)

Skin contact Can cause permanent skin damage. Symptoms may include redness, burning, and swelling of skin, burns, and other skin damage. The feeling of irritation or burning may be delayed following skin contact with potassium hydroxide solutions. Contact with mist or dust may cause multiple small skin burns. Passage of this material into the body through the skin is possible, and skin contact may be
harmful.

Ingestion
Swallowing this material may be harmful or fatal. Symptoms may include severe stomach and intestinal irritation (nausea, vomiting, diarrhea), abdominal pain, and vomiting of blood. Swallowing this material may cause burns and destroy tissue in the mouth, throat, and digestive tract. Low blood pressure and shock may occur as a result of severe tissue injury.

Inhalation
Breathing of vapor or mist is possible. Breathing this material may be harmful or fatal. Symptoms may include severe irritation and burns to the nose, throat, and respiratory tract. Symptoms are not expected at air concentrations below the recommended exposure limits, if applicable (see Section 8.).

Aggravated Medical Condition
Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material:, Upper respiratory tract, Skin, lung (for example, asthma-like conditions), Liver, kidney, eye Symptoms
Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:, stomach or intestinal upset (nausea, vomiting, diarrhea), thirst, irritation (nose, throat, airways), runny nose, Cough, central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness), Weakness, Abdominal pain, lung edema (fluid buildup in the lung tissue), kidney damage, liver damage, lung damage

Target Organs
Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals:, nasal damage, eye damage, kidney damage, liver damage, lung damage

Carcinogenicity
This material is not listed as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or the Occupational Safety and Health Administration (OSHA).
Reproductive hazard
Based on the available information, risk to the fetus from maternal exposure to this material cannot be assessed.

Other information
Nitrites should not be added to this material because this can result in formation of nitrosamines. Many nitrosamines cause cancer in laboratory animals.

4. First Aid Measures

Eyes
If material gets into the eyes, immediately flush eyes gently with water for at least 15 minutes while holding eyelids apart. If symptoms develop as a result of vapor exposure, immediately move individual away from exposure and into fresh air before flushing as recommended above. Seek immediate medical attention.

Skin
Immediately flush skin with water for at least 15 minutes while removing contaminated clothing and shoes. Seek immediate medical attention. Wash clothing before reuse and discard contaminated shoes.

Ingestion
Seek immediate medical attention. Do not induce vomiting. Vomiting will cause further damage to the mouth and throat. If individual is conscious and alert, immediately rinse mouth with water and give milk or water to drink. If possible, do not leave individual unattended. Inhalation
If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, administer oxygen.

Notes to physician
Hazards: Excessive levels of phosphorus can cause low blood calcium, with tetany and convulsions.
Treatment: No information available.

5. Fire-fighting Measures

Inhalation
If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, administer oxygen.

Notes to physician
Hazards: Excessive levels of phosphorus can cause low blood calcium, with tetany and convulsions.
Treatment: No information available.

6. Accidental Release Measures

Personal precautions
For personal protection see section 8. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental precautions
No data

Methods for cleaning upPersons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source, dike area of spill to prevent spreading, pump liquid to salvage tank. Remaining liquid may be taken up on sand, clay, earth, floor absorbent, or other absorbent material and shoveled into containers. Neutralize and mop up solution.

7. Handling and Storage

Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source, dike area of spill to prevent spreading, pump liquid to salvage tank. Remaining liquid may be taken up on sand, clay, earth, floor absorbent, or other absorbent material and shoveled into containers. Neutralize and mop up solution.

8. Exposure controls and personal protection

Exposure Guidelines

MORPHOLINE		110-91-8
ACGIH	time weighted average	20 ppm
NIOSH	Recommended exposure limit (REL):	20 ppm
NIOSH	Recommended exposure limit (REL):	70 mg/m3
NIOSH	Short term exposure limit	30 ppm
NIOSH	Short term exposure limit	105 mg/m3
OSHA Z1	Permissible exposure limit	20 ppm
OSHA Z1	Permissible exposure limit	70 mg/m3

POTASSIUM HYDROXIDE		1310-58-3
ACGIH	Ceiling Limit Value:	2 mg/m3
NIOSH	Recommended exposure limit (REL):	2 mg/m3

General advice
These recommendations provide general guidance for handling this product. Personal protective equipment should be selected for individual applications and should consider factors which affect exposure potential, such as handling practices, chemical concentrations and ventilation. It is ultimately the responsibility of the employer to follow regulatory guidelines established by local authorities.

Exposure controls
Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s).

Eye protection
Chemical splash goggles and face shield (8" min.) in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. (Consult your industrial hygienist.) Contact lenses should not be worn.

Skin and body protection
To prevent repeated or prolonged skin contact, wear impervious clothing and boots.
Other protective equipment: eyewash station, emergency shower.
Wear resistant gloves such as:
Neoprene
Nitrile rubber
Respiratory protection
Exposures in the workplace should be monitored if worker exposure to vapor or mists exceeds the PEL or TLV. Only a NIOSH-approved respirator and cartridge (TC-23C) is to be used. Monitoring results must be used to assess the proper level of respiratory protection necessary (such as: full face piece respirator with chemical cartridges or self-contained breathing apparatus { scuba} , etc.). Proper engineering and/or administrative controls should be used to reduce worker exposure. The facility's respiratory program must meet the requirements established in 29 CFR 1910.134, which includes a program for medical evaluation.

9. Physical and chemical properties

Physical state	liquid
Form	no data available
Colour	light brown
Odour	No information available.
Boiling point/boiling range	212 °F / 100 °C @ 1,013.33 hPa Calculated Phase Transition Liquid/Gas
Melting point/range	16 °F / -9 °C
Sublimation point	no data available
pH	14
Flash point	> 212 °F / > 100 °C
Ignition temperature	no data available

Evaporation rate	(>)1 Ethyl Ether
Lower explosion limit/Upper explosion limit	1.8 %(V) / 10.8 %(V)
Particle size	no data available
Vapour pressure	23.333 hPa @ 68 °F / 20 °C Calculated Vapor Pressure
Relative vapour density	no data available
Density	1.080 g/cm3 @ 77.00 °F / 25.00 °C
Bulk density	No data
Water solubility	completely soluble
Solubility(ies)	no data available
Partition coefficient: n-octanol/water	no data available
log Pow	no data available
Autoignition temperature	no data available
Viscosity, dynamic	no data available
Viscosity, kinematic	no data available
Solids in Solution	no data available
Decomposition temperature	no data available
Burning number	no data available
Dust explosion constant	no data available
Minimum ignition energy	no data available

10. Stability and reactivity

Stability
Stable.

Conditions to avoid
None known.

Incompatible productsAcids, halogenated hydrocarbons, Strong oxidizing agents, nitrites and other nitrosating agents, Metals, chlorinated solvents, This product should not be used in conjunction with trimethylol propane or trimethylol propane-derived products. There is a possibility that bicyclic phosphates or phosphites can be produced as a result of the thermal decomposition of this product in combination with trimethylol propane, trimethylol propane-derived products or their corresponding trimethylol propane alkane homologs. Bicyclic phosphates and phosphites are a class of materials with acute neurotoxic properties which produce characteristic convulsive seizures in test animals.

Hazardous decomposition products
carbon dioxide and carbon monoxide, formaldehyde, nitrogen compounds, Oxides of phosphorus, potassium oxide

Hazardous reactions
Product will not undergo hazardous polymerization.

Thermal decomposition
No data

11. Toxicological information

Acute oral toxicity

MORPHOLINE :	no data available
POTASSIUM HYDROXIDE :	no data available
INORGANIC SALT :	LD L0 Rat: 4,640 mg/kg
POTASSIUM COMPOUND :	no data available

Acute inhalation toxicity

MORPHOLINE :	LC 50 Rat: 8000 ppm; 8 h
POTASSIUM HYDROXIDE :	no data available
INORGANIC SALT :	no data available
POTASSIUM COMPOUND :	no data available

Acute dermal toxicity

MORPHOLINE :	LD 50 Rabbit: 500 mg/kg
POTASSIUM HYDROXIDE :	LD 50 Rabbit: 1,260 mg/kg
INORGANIC SALT :	LD 50 Rabbit: > 4,640 mg/kg
POTASSIUM COMPOUND :	no data available

12. Ecological information

Biodegradability
MORPHOLINE : no data available

POTASSIUM HYDROXIDE : no data available

INORGANIC SALT : no data available

POTASSIUM COMPOUND : Not readily biodegradable.

Bioaccumulation
MORPHOLINE : no data available

POTASSIUM HYDROXIDE : no data available

INORGANIC SALT : no data available

POTASSIUM COMPOUND : no data availableEcotoxicity effects

Toxicity to fish
MORPHOLINE : no data available

POTASSIUM HYDROXIDE : 96 h LC 50 Western mosquitofish (Gambusia affinis): 80.00 mg/l Method: Static; MortalityINORGANIC SALT : no data available

POTASSIUM COMPOUND : no data available

Toxicity to daphnia and other aquatic invertebrates.
MORPHOLINE : no data available

POTASSIUM HYDROXIDE : no data available

INORGANIC SALT : no data available

POTASSIUM COMPOUND : no data available

Toxicity to algae
MORPHOLINE : no data available

POTASSIUM HYDROXIDE : no data available

INORGANIC SALT : no data available

POTASSIUM COMPOUND : no data available

Toxicity to bacteria
MORPHOLINE : no data available

POTASSIUM HYDROXIDE : no data available

INORGANIC SALT : no data available

POTASSIUM COMPOUND : no data available

Biochemical Oxygen Demand (BOD)

MORPHOLINE :	no data available
POTASSIUM HYDROXIDE :	no data available
INORGANIC SALT :	no data available
POTASSIUM COMPOUND :	no data available

Chemical Oxygen Demand (COD)

MORPHOLINE :	no data available
POTASSIUM HYDROXIDE :	no data available
INORGANIC SALT :	no data available
POTASSIUM COMPOUND :	no data available

Additional ecological information

MORPHOLINE :	no data available
POTASSIUM HYDROXIDE :	no data available
INORGANIC SALT :	no data available
POTASSIUM COMPOUND :	no data available

13. Disposal considerations

Waste disposal methods

Dispose of in accordance with all applicable local, state and federal regulations.

14. Transport information

REGULATION

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.
U.S. DOT - ROAD					
UN 1719	Caustic alkali liquids n.o.s (POTASSIUM HYDROXIDE, MORPHOLINE)	8		III	
U.S. DOT - RAIL					

UN	1719	Caustic alkali liquids n.o.s (POTASSIUM HYDROXIDE, MORPHOLINE)	8	III

U.S. DOT - INLAND WATERWAYS

UN	1719	Caustic alkali liquids n.o.s (POTASSIUM HYDROXIDE, MORPHOLINE)	8	III

TRANSPORT CANADA - ROAD

UN	1719	Caustic alkali liquids n.o.s (POTASSIUM HYDROXIDE, MORPHOLINE)	8	III

TRANSPORT CANADA - RAIL

UN	1719	Caustic alkali liquids n.o.s (POTASSIUM HYDROXIDE, MORPHOLINE)	8	III

TRANSPORT CANADA - INLAND WATERWAYS

UN	1719	Caustic alkali liquids n.o.s (POTASSIUM HYDROXIDE, MORPHOLINE)	8	III

INTERNATIONAL MARITIME DANGEROUS GOODS

UN	1719	Caustic alkali liquids n.o.s (POTASSIUM HYDROXIDE, MORPHOLINE)	8	III

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

UN	1719	Caustic alkali liquids n.o.s (POTASSIUM HYDROXIDE, MORPHOLINE)	8	III

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

UN	1719	Caustic alkali liquids n.o.s (POTASSIUM HYDROXIDE, MORPHOLINE)	8	III

MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES

UN	1719	Caustic alkali liquids n.o.s (POTASSIUM HYDROXIDE, MORPHOLINE)	8	III

***ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**
Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

15. Regulatory information

California Prop. 65

WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.
CADMIUM
LEAD

WARNING! This product contains a chemical known to the State of California to cause cancer.
FORMALDEHYDE
ARSENIC
CADMIUM

16. OTHER INFORMATION:
The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This MSDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).

DISCLAIMER OF LIABILITY :The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.