Material Safety Data Sheet

Hypo Phosphorous Acid 50% (RXSOL-61-6399-100)

1. Product and Company Identifaction

Product Name	Hypophosphorous Acid
Product Type	**RXSOL-61-6399-100**

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

Phone	+91 22 65113333/ 5555 / 9999 / 27611360 / 27815540
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2. Composition / informationon ingredients

Chemical nature Aqueous solution

Substance: not applicable

Mixture

Chemical Name	(Concentration)	CAS-No.
Hypophosphorous acid	(>= 50 % - = 100 %)	6303-21-5

Skin corrosion, Category 1B, H314

Hazardous components (1999/45/EC)
Chemical Name (Concentration)
CAS-No. Classification
Hypophosphorous acid (>= 50 % - = 100 %)
6303-21-5 C, Corrosive; R34

3. Hazards Identification

Classification of the substance or mixture
Classification (REGULATION (EC) No 1272/2008)
Skin corrosion, Category 1B, H314
For the full text of the H-Statements mentioned in this Section, see Section 16.

Classification (67/548/EEC or 1999/45/EC)
C Corrosive R34
For the full text of the R-phrases mentioned in this Section, see Section 16.

Prevention Wear protective gloves/ protective clothing/ eye protection/ face protection.Response
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or concerned: immediately call a POISON CENTER or doctor/ physician.

Hazard statements Causes severe skin burns and eye damage. Precautionary statements : Wear protective gloves/ protective clothing/ eye protection/ face protection.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P311 IF exposed or concerned: Call a POISON CENTER or doctor/ physician.

Other hazards : None known.

4. First Aid Measures

Description of first aid measures
General advice
First aider needs to protect himself.
After inhalation: fresh air. Call in physician.
After skin contact: wash off with plenty of water. Remove contaminated clothing. Call a physician immediately.
After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist.
After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

Most important symptoms and effects, both acute and delayed
Irritation and corrosion, Cough, Shortness of breath, Dizziness, Nausea, Vomiting Risk of blindness!

Indication of any immediate medical attention and special treatment needed
No information available.

5. Fire-fighting Measures

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
Not combustible. Ambient fire may liberate hazardous vapours. Fire may cause evolution of: Oxides of phosphorus

Advice for firefighters
Special protective equipment 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.

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

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures
Advice for non-emergency personnel: Avoid substance contact. Do not breathe vapours, aerosols. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. Advice for emergency responders: Protective equipment see section 8.

Environmental precautions
Do not empty into drains.

Methods and materials 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 and neutralising material (e.g. Chemizorb® H ?, Merck Art. No. 101595). Dispose of properly. Clean up affected area.

Reference to other sections
Indications about waste treatment see section 13.

7. Handling and Storage

Precautions for safe handling
Advice on safe handling
Observe label precautions.

Hygiene measures
Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

Conditions for safe storage, including any incompatibilities
Storage conditions. Tightly closed.

Recommended storage temperature see product label.

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
Contains no substances with occupational exposure limit values.

Exposure controls
Engineering measures
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

Individual protection measures
Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Eye/face protection
Tightly fitting safety goggles

Hand protection
full contact:

Glove material :	Nitrile rubber
Glove thickness	0.11 mm
Break through time	> 480 min

splash contact:

Glove material :	Nitrile rubber
Glove thickness	0.11 mm
Break through time	> 480 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.
This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves.

Other protective equipment : Acid-resistant protective clothing

Respiratory protection
required when vapours/aerosols are generated.
Recommended Filter type : filter ABEK
The entrepeneur 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.

Environmental exposure controls
Do not empty into drains.

9. Physical and chemical properties

Information on basic physical and chemical properties

Form	Liquid
Colour	C-olourless
Odour	Odourless
Odour Threshold	Not applicable
pH	1 at 20 °C
Melting point	-25 °C

Boiling point/boiling range	108 °C at 1,013 hPa (decomposition)
Flash point	Not applicable
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Vapour pressure	30 hPa at 20 °C
Relative vapour density	No information available.
Density	1.21 - 1.26 g/cm³ at 20 °C
Relative density	No information available.
Water solubility	at 20 °C soluble
Partition coefficient: n-octanol/water	No information available.
Auto-ignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	No information available.
Explosive properties	Not classified as explosive.
Oxidizing properties	None

10. Stability and reactivity

Chemical stability
The product is chemically stable under standard ambient conditions (room temperature) .

Possibility of hazardous reactions
Risk of ignition or formation of inflammable gases or vapours with: Metals
Violent reactions possible with: Strong oxidizing agents, bases, mercury(II) nitrate
Risk of explosion with: mercury oxide
A risk of explosion and/or of toxic gas formation exists with the following substances:
hydrochloric acid, sulphuric acid, Zinc, phosphine

Conditions to avoid : No information available

Incompatible materials
Metals :Gives off hydrogen by reaction with metals.

Hazardous decomposition products : in the event of fire: See section 5.

11. Toxicological information

Information on toxicological effects
Mixture
Acute oral toxicity
Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach. Acute inhalation toxicity Symptoms: burns of mucous membranes, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

Acute dermal toxicity	This information is not available.
Skin irritation	Mixture causes burns
Eye irritation	Mixture causes serious eye damage. Risk of blindness!
Sensitisation	This information is not available.
Germ cell mutagenicity	This information is not available.
Carcinogenicity	This information is not available.
Reproductive toxicity	This information is not available.
Teratogenicity	This information is not available.
Specific target organ toxicity - single exposure	This information is not available.
Specific target organ toxicity - repeated exposure	This information is not available.
Aspiration hazard	This information is not available.

Further information
Further toxicological data:
After absorption:
Nausea, Vomiting, Dizziness, Causes poorly healing wounds.
Other dangerous properties can not be excluded.
Handle in accordance with good industrial hygiene and safety practice.

Components
Hypophosphorous acid
No information available.

12. Ecological information

Toxicity to fish	LC50 Oncorhynchus mykiss (rainbow trout): > 100 mg/l; 96 h (Hommel)
Toxicity to daphnia and other aquatic invertebrates	EC50 Daphnia magna (Water flea): > 100 mg/l; 48 h (Hommel)
Toxicity to algae	IC50 algae: 4 mg/l; 72 h (Hommel)

Persistence and degradability : No information available.

Bioaccumulative potential : No information available.

Mobility in soil : No information available.

Results of PBT and vPvB assessment
Substance(s) in the mixture do(es) not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII, or a PBT/vPvB assessment was not conducted.

Other adverse effects : Additional ecological information
Harmful effect due to pH shift.
Discharge into the environment must be avoided.

Components
Hypophosphorous acid
No information available.

13. Disposal considerations

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.

14. Transport information

Land transport (ADR/RID)

UN number	UN 3264
Proper shipping name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (HYPOPHOSPHOROUS ACID)
Class	8
Packing group	III
Tunnel restriction code E	-
Special precautions for user	yes
Inland waterway transport (ADN)	Not relevant

Air transport (IATA)

UN number	UN 3264
Proper shipping name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (HYPOPHOSPHOROUS ACID)
Class	8
Packing group	III
Tunnel restriction code E	-
Special precautions for user	yes
Inland waterway transport (ADN)	Not relevant

Sea transport (IMDG)

UN number	UN 3264
Proper shipping name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (HYPOPHOSPHOROUS ACID)
Class	8
Packing group	III
Tunnel restriction code E	-
Special precautions for user	yes
Inland waterway transport (ADN)	Not relevant

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not relevant

15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture
EU regulations
Major Accident Hazard Legislation : 96/82/EC Directive 96/82/EC does not apply
Occupational restrictions : Take note of Dir 94/33/EC on the protection of young people at work.
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : not regulated
Regulation (EC) No 850/2004 of the European Parliament and of not regulated the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC : not regulated
Regulation (EC) No 689/2008 concerning the export and import of dangerous chemicals : not regulated

Substances of very high concern (SVHC) :
This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of ? 0.1 % (w/w).

National legislatio Storage class : 8B

Chemical Safety Assessment
For this product a chemical safety assessment was not carried out.

16. Other information

Text of R and S phrase codes used in this safety data sheet:- R34: Causes burns; R36: Irritating to eyes; R37: Irritating to respiratory system; R41: Risk of serious damage to eyes. The information provided about the product on this Safety Data Sheet has been compiled from knowledge of the individual constituents The data given here is based on current knowledge and experience. This Safety Data Sheet describes the product in terms of safety requirements and does not signify any warranty with regard to the product's properties The data given here only applies when product used for proper application(s). The product is not sold as suitable for other applications - usage in such may cause risks not mentioned in this sheet. Do not use for other application(s) without seeking advice from manufacturer.