

MATERIAL SAFETY DATA SHEET

POLY PHOSPHORIC ACID

1. Chemical Product and Company Identification

Product Name : Poly Phosphoric Acid (PPA)
Manufacturer : **S M Chemicals**
Address : S M Chemicals
311/312, Nand Prem, 142, Nehru Road, Vile Parle (E)
Mumbai- 400057
INDIA
Tel no. 91-22-26104202/26151500/26136732
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Regd. Office
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District Valsad, Gujarat
Tel No. 91-260-2781049/2780149/2781013
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socpl@vsnl.com

Emergency Contact No. : 91-22-26104202/26151500/26136732

2. Composition, Information on Ingredients

	CAS#	HS Code.	UN No.
Poly-Phosphoric Acid (P ₂ O ₅ content 83-85%)	7664-38-2	2809 2002	UN 1805

3. Hazards Identification

POTENTIAL HEALTH EFFECTS:

EYE: Corrosive, Causes Redness, pain and poor visibility

SKIN: Corrosive, Causes Redness, pain and burns

INHALATION: Corrosive, Causes sore throat, shortness of breath and dyspnoea

SIGNS AND SYMPTOMS: Eye, skin or respiratory tract irritation. Gastrointestinal disturbance, diarrhea

Physical & Chemical Hazards: Forms flammable & Explosive hydrogen through corrosion of metals. At high temperature: Thermal decomposition giving corrosive products.

4. First Aid Measures

EYE: Wash immediately & abundantly with water for at least 15 minutes. Consult an ophthalmologist immediately.

SKIN: On contact with eyes, rinse immediately with plenty of water and seek medical advice.

INGESTION: Do not induce vomiting, rinse mouth and lips with plenty of water if The subject is conscious, then hospitalize immediately.

INHALATION: Move to fresh air. If required, provide oxygen or artificial respiration. Hospitalize.

NOTE TO PHYSICIANS: Treat symptomatically. (See Section 3 For Observable Signs/Symptoms).

5. Fire Fighting Measures

Suitable extinguishing media : Incase of Fire nearby: Dry Powder, Foam, Carbon dioxide(CO₂)

Specific Methods : In case of Fire: remove exposed containers. Cool containers with water spray.

Special Protective Equipment for Firefighters: Incase of Fire: wear a self-contained breathing apparatus and acid resistant clothing.

6. Accidental Release Measures

Personal precaution : Avoid contact with skin and eyes and inhalation of hot vapors.

Environmental protection : Do not allow material to be released to the environment. Do not let the product enter into drains. Contain by damming.

Methods for cleaning up : -

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Recovery : Pump into an inert labeled emergency container. Clean up puddle of Product immediately. Dilute the puddles with water & recover it.

Neutralization : Dilute cautiously with water & then process. Neutralize with an alkaline carbonate or neutralize with slaked lime (Filter the salt obtained –neutralize the liquid)

7. Handling and Storage

Handling

Technical measures/ Precautions : Storage & handling precautions applicable to products. Ensure appropriate exhaust & ventilation at Machinery. Provide showers, eye baths.

Safe handling advice : Avoid splashing when handling. Do not pour water onto the acid (Exothermic reaction)

Storage

Technical measures : Keep containers tightly closed in a cool, well-ventilated place.

Storage Information : Store in well-insulated area. Store protected from moisture & heat. Keep at temperature above 16 ° C Provide a catch-tank & an impermeable corrosion resistant floor with drainage to a neutralization tank within a bunked area. Provide anti-corrosion electrical equipment.

Incompatible Products : Bases-Quicklime Alcohols-Ketones-Amines Water Nitrates-Chlorates-Calcium Carbide Metals-Finely divided metals Combustible Material.

Recommended : Stainless steel 316 L-Carbon Steel (Vulcanized Rubber coated Steel)

PlasticMaterials (Polyurethane) SmallQuantities: Glass protected by a fitted metallic Covering.

To be avoided : Metals: Ordinary Steel, Copper, Aluminum, (and alloys)

8. Exposure Controls, Personal Protection

Protective Provisions : Ensure sufficient air exchange and/ or exhaust in working areas.

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.

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Hand protection : Gloves.

Eye protection : Safety glasses / goggles. Face mask (in case of spattering).

Skin & body protection : Protective clothing Non-skid boots (Butyl rubber-chlorinated polyethylene-Neoprene-Polyvinyl Chloride).

Specific hygienic Measures : Avoid contact with skin and eyes and inhalation of hot.

9. Physical and Chemical Properties

Physical State : Viscous liquid

Color : Colorless

Odour : none

Solubility in Water : Completely soluble, formation of Orthophosphoric acid.

Solubility in solvents : Soluble in Alcohols

Specific gravity : 1.85-2.05 depending upon the concentration.

10. Stability and Reactivity

Conditions to avoid : Store protected from moisture & heat

Materials to avoid : Bases, Quicklime: Exothermic reaction-Violent reaction Alcohols- ketones -Amines:

Exothermic reaction Water: Very exothermic reaction & possibility of spitting Nitrates-Chlorates – Calcium Carbide:

Explosive reaction (Flammability) Metals – finely divided metals Combustible materials: Overheating and ignition.

Hazardous Decomposition products: Forms flammable & explosive hydrogen through corrosion of metals at Temperatures above 200 ° C. Formation of: Polyphosphoric Acid (Dehydration) At high temperature: Thermal decomposition giving

corrosive products: Oxydes of Phosphorus

Further Information : Hygroscopic product

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11. Toxicological Information

Acute toxicity : May be harmful by inhalation, ingestion, or skin absorption. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes and skin.

Inhalation : Inhalation may result in spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting

Chronic Effects : Target Organ(S): Liver, Blood, Bone Marrow

Additional toxicological Information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH

12. Ecological Information

Persistence/ degradability in water : Hydrolysis, formation of : H_3PO_4 (depends on the temperature) $t_{1/2}$ life = few days.

Aquatic Toxicity : -

Ecotoxicity : -

13. Disposal Considerations

Disposal of the Product : Recommendation: Consult state, local or national regulations for proper disposal. Dilute cautiously with water and then process. Neutralize with an alkaline carbonate or Neutralize with slaked lime (Filter the salt obtained- Neutralize the liquid).

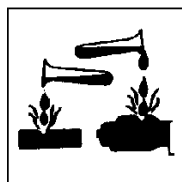
Recommendation : Disposal must be made according to official regulations.

14. Transport Information

UN number : UN 1805
Transport name : Poly phosphoric acid
ADR/RID/IMO Class : 8
Packing group : III
Label : 8

15. Regulatory Information

Symbol



16. Other Information

This information is based on our present state of knowledge. It should not therefore be constructed as guaranteeing specific properties of this product or their suitability for a particular application.