Linphos Chemical, Inc.
—Specializing in Phosphorus Chemistry for 35 Years

NSF Certified to NSF/ANSI 60

Safety Data Sheet

Section 1 - Chemical Product and Company Identification

SDS Name: Phosphoric Acid, 75%∽86%

Synonyms: Orthophosphoric Acid; White phosphoric acid.

Chemical Formula : H_3PO_4

Supplier/Further Information: Linphos Chemical,Inc

Address: 113 Progress Drive,Rincon,GA 31326

Phone: (912) 677 - 9094 (281) 733 - 1634

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
7664-38-2	Phosphoric acid	75∽86	231-633-2
7732-18-5	Water	25∽14	231-791-2

Hazard Symbols: C

Risk Phrases: 34

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: APHA: 10 max - colorless viscous liquid. **Danger!** Corrosive. May cause severe respiratory tract irritation with possible burns. May cause severe digestive tract irritation with possible burns. Causes severe eye and skin irritation and burns. May cause cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood). Harmful if inhaled. May be harmful if swallowed.

Target Organs: Blood, liver, bone marrow.

Potential Health Effects

Eye: Contact with liquid is corrosive to the eyes and causes severe burns. May cause chemical conjunctivitis and corneal damage.

Skin: Contact with liquid is corrosive and causes severe burns and ulceration. May cause skin rash (in milder cases), and cold and clammy skin with cyanosis or pale color.

Ingestion: Causes gastrointestinal tract burns. Causes severe pain, nausea, vomiting, diarrhea, and shock. May cause hemorrhaging of the digestive tract. May cause corrosion and permanent tissue destruction of the esophagus and digestive tract. May be harmful if swallowed. May form methemoglobin which in sufficient concentration causes cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood).

Inhalation: Harmful if inhaled. May cause severe irritation of the respiratory tract with sore throat, coughing, shortness of breath and delayed lung edema. Causes chemical burns to the respiratory tract. Aspiration may lead to pulmonary edema.

Chronic: Prolonged or repeated skin contact may cause dermatitis. Prolonged or repeated eye contact may cause conjunctivitis. Effects may be delayed. Chronic exposure may cause liver damage. May cause cyanosis - a blue-gray coloring of the skin and lips caused by a lack of oxygen. Inhalation of vapors at high concentrations may produce pulmonary edema characterized by fluid build-up in the lungs.

Section 4 - First Aid Measures

Eyes: Get medical aid immediately. Do NOT allow victim to rub or keep eyes closed. Extensive irrigation with water is required (at least 30 minutes).

Skin: Get medical aid immediately. Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Discard contaminated clothing in a manner which limits further exposure. Destroy contaminated shoes.

Ingestion: Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation: Get medical aid immediately. Remove from exposure to fresh air immediately. If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

Notes to Physician: Persons with pre-existing skin disorders or impaired respiratory or pulmonary function may be at increased risk to the effects of this substance. Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas.

Extinguishing Media: Use extinguishing media most appropriate for the surrounding fire. Cool containers with flooding quantities of water until well after fire is out. Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Keep container tightly closed. Do not get on skin or in eyes. Do not ingest or inhale. Use with adequate ventilation. Use only in a chemical fume hood. Discard contaminated shoes.

Storage: Keep container closed when not in use. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from metals. Do not store in metal containers. Store away from alkalies.

Maximum Use Level: Phosphoric Acid 75%: 13mg/L Phosphoric Acid 85%: 12 mg/L

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use only under a chemical fume hood.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Phosphoric acid	1 mg/m³ TWA; 3 mg/m³ STEL	1 mg/m³ TWA 1000 mg/m³ IDLH	1 mg/m³ TWA
Water	none listed	none listed	none listed

OSHA Vacated PELs: Phosphoric acid: 1 mg/m3 TWA; 3 mg/m3 STEL Water: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR §1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

Section 9 - Physical and Chemical Properties

Physical State: Clear liquid

Appearance: colorless viscous liquid

Odor: odorless

pH: Not available.

Evaporation Rate: Not available.

Viscosity: 3.86 mPa.s @80℃ (just for reference)

Boiling Point: 135 to 158 deg C (275 to 316F) @ 760.00mm Hg

Freezing/Melting Point:42.35 deg C

Autoignition Temperature: Not applicable.

Flash Point: Not applicable.

Decomposition Temperature: Not available.

NFPA Rating: (estimated)
Health: 3; Flammability: 0; Reactivity: 0

Explosion Limits: Lower: Not available.
Upper: Not available.

Solubility: Miscible.

Specific Gravity/Density:1.58∽1.69g/cm^3

Molecular Formula: H_3PO_4

Molecular Weight:98.00

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Incompatible materials, metals, excess heat.

Incompatibilities with Other Materials: Strong bases, ammonia, finely powdered metals, organic peroxides, caustics (e.g. ammonia, ammonium hydroxide, calcium hydroxide, potassium hydroxide, sodium hydroxide), cyanides (e.g. potassium cyanide, sodium cyanide), fluorides (inorganic, e.g. ammonium fluoride, calcium fluoride, cesium fluoride), halogenated organics (e.g. dibromoethane, hexachlorobenzene, methyl chloride, trichloroethylene), mercaptans and other organic sulfides (e.g. butyl mercaptan, carbon disulfide, methanethiol), nitromethane, sodium tetrahydroborate, sulfites, mineral acids, bleeching powder, aldehydes, strong alkalies, chlorides, nickel carbonate.

Hazardous Decomposition Products: Phosphine, oxides of phosphorus, irritating and toxic fumes and gases.

Hazardous Polymerization: May occur.

Section 11 - Toxicological Information

SIGNS AND SYMPTOMS OF EXPOSURE

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. May cause cyanosis (blue-gray coloring of skin and lips causedby lack of oxygen). Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting. Inhalation may result in spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

ROUTE OF EXPOSURE

Multiple Routes: May be harmful by inhalation, ingestion, or skin absorption.

Section 12 - Ecological Information

Ecotoxicity: Fish: Mosquito Fish: LC50 = 138 mg/L; 96 Hr; Unspecified No data available.

Environmental: The acidity of phosphoric acid may be reduced readily by natural water hardness minerals, but the phosphate may persist indefinitely. During transport through the soil, phosphoric acid will dissolve some of the soil material, in particular, carbonate-based materials. The acid will be neutralized to some degree with adsorption of the proton and phosphate ions also possible. However, significant amounts of acid will remain for transport down toward the groundwater table.

Physical: No information available.

Other: Dangerous to aquatic life in high concentrations.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Section 14 - Transport Information

Transportation Status: IMPORTANT! Statements below provide additional data on listed DOT classification.

The listed Transportation Classification does not address regulatory variations due to changes in package size, mode of shipment or other regulatory descriptors.

Hazard Class: 8

Shipping Name: POLYPHOSPHORIC ACID75-86%

ID Number: UN1805

Packing Group: III

Labels: CORROSIVE

Emergency Guide : 154

Section 15 - Regulatory Information

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

INDICATION OF DANGER: C

Corrosive.

R-PHRASES: 34

Causes burns.

S-PHRASES: 26-36/37/39-45

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).