MATERIAL SAFETY DATA SHEET
PRODUCT: PHOSPHORIC ACID

SECTION 1
CHEMICAL IDENTIFICATION
Trade name: Phosphoric Acid
Chemical Name: Phosphoric Acid
Synonyms: Orthophosphoric Acid, Monophosphoric acid

SECTION 2
COMPOSITION AND INFORMATION ON INGREDIENTS
CAS NO.: 7664-38-2
H S Code: 2809 20 01
UN Code: UN 1805

SECTION 3
HAZARDS IDENTIFICATION
Appearance & Odour: Clear, colourless, syrupy liquid with no odour.
Health Effects: Corrosive liquid causes eye and skin burns.
Physical & Chemical: Forms flammable & Explosive hydrogen through corrosion of metals.
Hazards At high temperature: Thermal decomposition giving corrosive products.
Specific Hazards: Corrosive causes eye and skin burns.

SECTION 4
FIRST-AID MEASURES
General Advice: Take off immediately all contaminated clothing (Including Shoes)
Inhalation: Move to fresh air. If required, provide oxygen or artificial respiration. Hospitalize.
Skin contact: Wash immediately, abundantly & thoroughly with water. If possible rinse with bicarbonate solution.
Eye contact: Wash immediately & abundantly with water for at least 15 minutes. Consult an ophthalmologist immediately.
After swallowing: Do not induce vomiting, rinse mouth and lips with plenty of water if the subject is conscious, then hospitalize immediately. Never give anything in mouth to an unconscious person.

SECTION 5
FIRE FIGHTING MEASURES
Suitable Extinguishing media: Incase of Fire nearby use dry Powder, Foam, Carbon dioxide (CO₂) media
Specific Methods: In case of Fire: remove exposed containers.
Special Protective Equipment for Firefighters: Cool containers with water spray. Incase of Fire: wear a self-contained breathing apparatus and Acid resistant clothing.

**SECTION 6**

**ACCIDENTAL RELEASE MEASURES**

**Personal Protection**
- Avoid contact with skin and eyes and inhalation of hot vapours.
- 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**
- Recovery: Pump into an inert labeled emergency container.

**Neutralization**
- Clean up puddle of Product immediately. Dilute the puddles with water & recover it.
- Dilute cautiously with water & then process.
- Neutralize with an alkaline carbonate or neutralize with slaked lime (Filter the salt obtained –neutralize the liquid)

**SECTION 7**

**HANDLING AND STORAGE**

**Technical measures/ Precautions**
- Storage & handling precautions applicable to products: Corrosive: Ensure appropriate exhaust & ventilation at machinery. Provide showers, eye baths.
- Keep containers tightly closed in a cool, well-ventilated place. Storage information Store in well-insulated area. Store protected from moisture & heat.
- Provide anti-corrosion electrical equipment.

**Safe handling advice**
- Avoid splashing when handling. Do not pour water

**Technical measures/ Storage information**
- 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.

**Incompatible Products**
- Bases-Quicklime
- Alcohols-Ketones-Amines
- Water
- Nitrates-Chlorates-Calcium Carbide
- Metals-Finely divided metals
- Combustible Material
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**Recommended**
- Stainless steel 316 L-Carbon Steel (Vulcanized Rubber coated Steel)
- Plastic Materials (Polyurethane) Small Quantities:
Glass protected by a fitted metallic covering

**SECTION 8**

**EXPOSURE CONTROL/PERSOAL PROTECTION**

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

Personal Protective Equipment:

- Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment
- Hand protection: Gloves
- Eye protection: Safety glasses/goggles. Face mask (in case of spattering)
- Skin & body protection: Protective clothing

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

**SECTION 9**

**PHYSICAL AND CHEMICAL PROPERTIES**

- Physical State (20° C): Liquid (viscous)
- Colour: Colourless
- Odour: None
- Specific gravity: Liquid (25° C) 1.5-1.7 depending upon Phosphoric acid strength
- Solubility in Water: Completely soluble
- Solvents: Soluble in Alcohols

**SECTION 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: Not known

**SECTION 11**

**TOXICOLOGICAL INFORMATION**

- Acute toxicity: May be harmful by inhalation, ingestion, or skin absorption. Material is 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.

SECTION 12 ECOLOGICAL INFORMATION
Phosphoric Acid is practically nontoxic to one species of fresh water fish. No toxicity data was available for other freshwater species.

SECTION 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.

SECTION 14 TRANSPORT INFORMATION
UN number: UN 1805
Description of goods: Phosphoric Acid
ADR/RID/IMO class: 8
Packing group: III
IATA Class: 8

SECTION 15 REGULATORY INFORMATION
European Information: Corrosive

R 34 Causes burns. S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S 27 Take Off Immediately All Contaminated Clothing.

S 36/37/39 Wear Suitable Protective Clothing, Gloves And Eye/Face Protection.

SECTION 16 OTHER INFORMATION
The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. Guizhou Sino-Phos Chemical Co., Ltd. shall not be held liable for any damage resulting from handling or from contact with the above product.