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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.
Safety Information	:	
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(CO_2) media
Special hazards	:	Non-flammable product. Forms flammable and explosive hydrogen through corrosion of Metals. Temperature above 200 ^{0}C: Formation of Polyphosphoric Acid (Dehydration) At High Temperature: Thermal decomposition giving corrosive products: Phosphorus Oxides.
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.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal Protection	:	Avoid contact with skin and eyes and inhalation of hot vapours.
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	:	-
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)

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.
Safe handling advice	:	Avoid splashing when handling. Do not pour water
Storage	:	
Technical measures/ Storage information	:	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 ^{0} 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)
		Plastic Materials (Polyurethane) Small Quantities:

		Glass protected by a fitted metallic covering
To be avoided	:	Metals: Ordinary Steel, Copper, Aluminum, (and alloys)

SECTION 8 EXPOSURE CONTROL/PERSONAL PROTECTION

Protective Provisions	:	Ensure sufficient air exchange and/ or exhaust in working areas
Personal Protectective 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
		Non-skid boots (Butyl rubber-chlorinated polyethylene-Neoprene-Polyvinyl Chloride)
Specific hygienic Measures	:	Avoid contact with skin and eyes and inhalation of hot vapours

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	:	at 20 ° C 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 theliquid)
Recommendation	:	Disposal must be made according to official regulations.

SECTION 14 : TRANSPORT INFORMATION

UN number	:	UN 1805
Description of goods	:	Phosphoric Acid
ADR/RID/IMOclass	:	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.