Safety Data Sheet

Part Number 326232

Section 1. Substance Identity and Company Contact Information

Product Name	Phosphoric Acid - 5%	**Product Part Number(s)**	169244, 326244, 110080
Trade Name	Phosphoric Acid	**Unit Size**	1 L, 1 gallon
Company	OI Analytical, P.O. Box 9010, College Station, TX 77842-9010 Phone: (979) 690-1711, Fax: (979) 690-0440		

Emergency No. 1-800-424-9300 (Chemtrec). Use only in the event of chemical emergencies involving spills, leaks, fire, exposure, or accidents involving chemicals.

Section 2. Hazards Identification

Pictogram(s)

Signal Word Danger

Precautionary Statement(s) The substance may be toxic to blood, liver, skin, eyes, and bone marrow. Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation on one or many human organs.

Target Organ(s) Eyes and skin. Repeated or prolonged exposure to the substance can produce target organ damage.

Potential Health Effects

Eye:	Very hazardous in case of eye contact (irritant/corrosive). Inflammation of the eye is characterized by redness, watering, and itching. Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes.
Skin:	Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering. Very hazardous in case of skin contact (irritant). Hazardous in case of skin contact (corrosive, permeator), of eye contact (corrosive). Skin contact may produce burns.
Ingestion:	Very hazardous in case of ingestion. Liquid or spray mist may produce tissue damage in mouth.
Inhalation:	Slightly hazardous in case of inhalation (lung sensitizer). Liquid or spray mist may produce tissue damage to the respiratory tract. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Severe over-exposure can result in death.

Chronic Effects/ Carcinogenicity

IARC:	Not data available
NTP:	Not data available
OSHA:	Not data available

Teratology (Birth Defects) Information	No data available	
Reproductive Information	No data available	
NFPA Ratings	Health:	2
	Flammability:	0
	Reactivity:	0
HMIS Rating	Health:	3
	Flammability:	0
	Reactivity:	0
	Protective Equipment:	Gloves, full suit, and vapor respirator. Be sure to use an approved/ certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Face shield.

Section 3. Chemical Composition and Data on Components

Ingredient	CAS No.	Percent	Hazard Data	
			ACGIH TLV	OSHA PEL
Phosphoric Acid	7664-38-2	5	Not data available	Not data available
Water, deionized	7732-18-5	95	Not data available	Not data available

Section 4. First Aid Measures

General Advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If Inhaled

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately. Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt, or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation.

In Case of Skin Contact

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately. Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream.

In Case of Eye Contact

Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

If Swallowed

Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt, or waistband. Get medical attention immediately.

Indication of Any Immediate Medical Attention and Special Treatment Needed

No data available.

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.
Suitable Extinguishing Media	Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.
Special Hazards Arising from the Substance or mixture	Thermal decomposition may produce fumes of phosphorus oxides and/or phosphine.
Advice for Firefighters	Wear a self-contained breathing apparatus for fire fighting, if necessary.
Flash Point	Not data available
Autoignition Temperature	Not data available
Further Information	No data available

Section 6. Accidental Release Measures

Personal Precautions, Protective Equipment, and Emergency Procedures	Wear respiratory protection. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.
Environmental Precautions	Do not let product enter drains.
Methods and Materials for Containment and Cleaning	Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.
Reference to Other Sections	For disposal, see Section 13.

Section 7. Handling and Storage

Precautions for Safe Handling	Avoid inhalation of vapor or mist.
Conditions for Safe Storage, Including any Incompatibilities	Keep container tightly closed in a dry and well-ventilated place. Containers that are opened must be carefully resealed and kept upright to prevent leakage.
Specific End Use(s)	Apart from the uses mentioned in Section 1, no other specific uses are stipulated.

Section 8. Exposure Controls and Personal Protection

Components with Workplace Control Parameters	Phosphoric Acid
Appropriate Engineering Controls	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of the work day.
Eye/Face Protection	Face shield and safety glasses
Skin Protection	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
Body Protection	Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory Protection	Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator. If the respirator is the only means of protection, use a full-face supplied air respirator.
Control of Environmental Exposure	Do not let product enter drains.

Section 9. Physical and Chemical Properties

Appearance	Form: Liquid; Color: Clear
Odor	No data available
Odor Threshold	No data available
pH	Acidic
Melting Point/Freezing Point	Melting point/range: 40 °C (104 °F) - lit.
Initial Boiling Point and Boiling Range	158 °C (316 ° F) - lit.
Flash Point	No data available
Evaporation Rate	No data available
Flammability (solid, gas)	No data available
Upper/Lower Flammability or Explosive Limits	No data available
Vapor Pressure	No data available
Vapor Density	No data available
Relative Density	1.685 g/mL at 25 °C (77 °F)
Water Solubility	Soluble
Partition Coefficient : n-octanol/water	No data available
Auto-ignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available
Explosive Properties	No data available
Oxidizing Properties	No data available
Other Safety Information	No data available

Section 10. Stability and Reactivity

Reactivity	No data available
Chemical Stability	Stable under recommended storage conditions
Possibility of Hazardous Reactions	No data available
Conditions to Avoid	No data available
Incompatible Materials	Strong bases, powdered metals

Section 11. Toxicological Information

Routes of Exposure	*On the skin:*	Corrosive and causes severe skin irritation and can cause severe skin burns. May affect behavior (somnolence or excitement) if absorbed through skin.
	On the eye:	Corrosive. Liquid or vapor causes severe eye irritation and can cause severe eye burns leading to permanent corneal damage or chemical conjunctivitis.
	Inhalation:	May be harmful if inhaled. Causes irritation and burns of the respiratory tract and mucous membranes with sore throat, coughing, shortness of breath, and delayed lung edema.
	Ingestion:	May be harmful if swallowed. Causes irritation and burns of the gastrointestinal (digestive) tract. Causes severe pain, nausea, vomiting, diarrhea hematemesis, gastrointestinal hemorrhaging, and shock. May cause corrosion and permanent tissue destruction of the esophagus and digestive tract. May affect behavior and urinary system, liver (hepatocellular damage, hepatic enzymes increased), blood (blood dyscrasia). May also cause hypocalcemia, hyperhosphatemia, or hypophosphatemia, and acidosis.
Respiratory or Skin Sensitization	Not data available	
Signs and Symptoms of Overexposure	Repeated or prolonged skin contact may cause dermatitis, conjunctivitis, or liver damage.	
Toxicity Data	*Oral Rat*	LD_{50} 17,688 mg/kg (calculated value for mixture) Dermal Rat: (LD_{50}) 31676 mg/kg (calculated value for mixture)

Section 12. Ecological Information

General Notes No information is available

Section 13. Disposal Considerations

Product	Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
Contaminated Packaging	Dispose of as unused product

Section 14. Transport Information

DOT Shipping Name	Phosphoric Acid Solution
UNProper Shipping Name	Not data available
DOT Hazard Class	8
Packing Group	III
UN Number	UN1805
Hazardous Ingredients	Phosphoric Acid
DOT Label	Corrosive
DOT Placard	Corrosive
IMDG Shipping Name	PHOSPHORIC ACID SOLUTION
UN Number	UN1805
Class	8

Packing Group	III
IATA Shipping Name	Phosphoric Acid Solution
Technical Shipping Name	Not data available
IATA Hazard Class	8
UN Number	UN1805
Hazardous Ingredients	Phosphoric Acid
IATA Label	Corrosive
IATA Placard	Corrosive

Section 15. Regulatory Information

OSHA Status	Not data available	
TSCA Status	Phosphoric Acid; Water	
CERCLA Reportable Quantity	Hazardous substances. Phosphoric acid:5,000 lbs. (2,268 kg)	
SARA Title III	Not data available	
RCRA Status	Not data available	
California Proposition 65	Not data available	
Chemical Weapons Convention	No	
TSCA 12 (b)	Not data available	
SARA 311/312	Acute:	Not data available
	Chronic:	Not data available
	Fire:	Not data available
	Pressure:	Not data available
	Reactivity:	Not data available
Australian Hazchem Code	Not data available	
Poison Schedule	Not data available	
WHMIS	Class E: Corrosive liquid	

Section 16. Other Information

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