

Material Safety Data Sheet
J. R. Simplot Company
AgriBusiness

M12005

Trade Name: Purified Phosphoric Acid as H₃PO₄
Registration No: None

SECTION 1 CHEMICAL PRODUCT AND COMPANY INFORMATION

Manufacturer or Formulator: J.R. Simplot Company
P.O. Box 70013
Boise, ID 83707
Emergency Phone - Chemtrec: 1-800-424-9300

Product Name: Purified Phosphoric Acid as H₃PO₄
Common Name: Phosphoric Acid
Chemical Type: Phosphoric Acid

SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name and Synonyms	C.A.S. No.	Chemical Formula	WT%	TLV	PEL
Phosphoric Acid AS	7664-38-2	H ₃ PO ₄	Hazardous	1 mg/m ³	1 mg/m ³
			75%	3 mg/m ³ STEL	
None listed			Non-Hazardous		
			25%		

SECTION 3 HAZARDS IDENTIFICATION

Ingestion: Ingestion may result in irritation and burning of mucous membranes and/or gastrointestinal tract.
Inhalation: Inhalation of acid mist may produce mild to severe irritation of respiratory tract. Follow proper unloading procedures on this sheet under section 7 to eliminate possible exposure.
Eye Contact: Will produce severe irritation. Prolonged contact may result in burn to eye causing permanent damage.
Skin Absorption: May produce mild to severe irritations. Prolonged contact may result in chemical burns.
Skin Contact: May produce mild to severe irritations. Prolonged contact may result in chemical burns.
Effects of Overdose: Severe conjunctivitis which may result in permanent damage. Can result in nausea and vomiting with severe abdominal pain. Prolonged contact with acid mist can result in severe respiratory irritation.

SECTION 4 FIRST AID MEASURES

Ingestion: Dilute with 2-3 glasses of milk or water. Do not induce vomiting. Consult a physician immediately.
Inhalation: Remove person to fresh air. If person is not breathing, perform artificial respiration if properly trained. Seek medical attention immediately.
Eyes: Promptly flush eyes with clean, cool water for at least 15 minutes. Contact a physician immediately.
Skin: Promptly remove contaminated clothing and rinse area with clear water for 15 minutes.

SECTION 5 FIRE FIGHTING MEASURES

Extinguishing Media: Non-flammable. Use media suitable to extinguish source of fire.
Special Fire Fighting Procedures: When phosphoric acid mists from hot fires may be encountered, self-contained breathing apparatus (SCBA) should be worn.
Unusual Fire and Explosion Hazards: Not listed

SECTION 6 ACCIDENTAL RELEASE MEASURES

Environmental Precautions: Low toxicity to aquatic life. Do not contaminate any watercourse or other body of water by direct application, disposal, or cleaning of equipment.
Steps to be taken in case material is released or spilled:
Dike around spill for containment and recover for re-processing. Small spills can be safely neutralized with limestone or soda ash. Caustic soda should be avoided because of excessive reactivity.

SECTION 7 HANDLING AND STORAGE

Precautions to be taken in handling and storing:
Always wear proper protective equipment. Avoid storage and/or transfer in tanks, lines and other equipment constructed or materials not specifically designed and approved for phosphoric acid service. Avoid freezing weather below 1°F. Have adequate first aid water available.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation Protection: General area ventilation.
Respiratory Protection: Approved respirators suitable for protection against acid mists and vapors. Not required for normal work procedures, but if misting occurs and always during unloading, use a high efficiency particulate respirator or self-contained breathing apparatus, with a full face shield when exposed above the TLV. Check with respirator manufacturer to determine the appropriate type of equipment for a given application.
Protective Clothing: Rubber clothing, chemical gloves, footwear and chemical hat or hood suitable for protection against acids.
Eye Protection: Tight sealing splash proof goggles.
Other: Eyewash and safety shower in work areas.

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SECTION 9

PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point:	Approx. 270°F @ 1 atmosphere	Solubility in Water:	Complete
Specific Gravity:	1.6 - 1.7	% Volatiles (by volume):	<1.0
Flashpoint:	Not applicable	Vapor Pressure, mm Hg:	2-8 @ 77°F
pH:	Strongly acidic; <2.0	Reaction with Water:	Exothermal, produces heat.
Appearance:	Clear to pale yellow; odorless when cold; pungent when hot.		
Extinguishing Media:	Non-flammable. Use media suitable to extinguish source of fire.		

SECTION 10

STABILITY AND REACTIVITY

Stability (Normal Conditions): Stable
Conditions to Avoid: Avoid contact with strong alkalis or metals other than certain stainless steels.
Incompatibility (Material to Avoid): Reacts violently with strong alkalis producing heat. Contact with many metals may result in severe corrosion attack of the metal and liberation of hydrogen gas.
Hazardous Decomposition Products: High temperatures will liberate phosphorus oxides.
Hazardous Polymerization: Will not occur

SECTION 11

TOXICOLOGY INFORMATION

Acute Oral Toxicity: LD₅₀ (rat) is greater than 1,530 mg/kg; not acutely toxic by oral exposure. (TFI Product Testing Results, OECD Guideline 425)
Acute Dermal Toxicity: LD₅₀ (rat) is greater than 3,160 mg/kg (ppm); not acutely toxic by dermal exposure. (TFI Product Testing Results, OECD Guideline 402).
Acute Inhalation Toxicity: LC₅₀ (guinea pig, mouse, rat, rabbit) is 61-1,689 mg/m³; highly toxic by inhalation. (TFI Product Testing Results)
Acute Fish Toxicity: 96-hour LC₅₀ is 3.0-3.5 mg/L (ppm); moderate toxicity to aquatic organisms. (TFI Product Testing Results, OECD Guideline 203)

SECTION 12

ECOLOGICAL INFORMATION

None listed.

SECTION 13

DISPOSAL CONSIDERATIONS

Waste Disposal Procedures: Collect and reprocess where possible. Following neutralization with limestone or soda ash, consult local, state and federal regulations before final disposal.

SECTION 14

TRANSPORT INFORMATION

Shipping name:	RQ Phosphoric Acid, 8, UN1805, P.G. III	C.A.S. Number:	7664-38-2
Hazard Class:	8	D.O.T. Number:	UN1805
Reportable Quantity (RQ):	5000 lbs.	Haz Waste No:	D002
Labels Required:	Corrosive	EPA Regist No:	None
Placard:	Corrosive		
Packaging Group:	III		

Refer to 49 CFR 172.101 Hazardous Material Table for further provisions, packaging authorizations and quantity limitations.

SECTION 15

REGULATORY INFORMATION

Carcinogenicity: by IARC?: Yes () No (X) by NTP?: Yes () No (X)

Not on the 302 list of SARA reportable quantities

SECTION 16

OTHER INFORMATION

Flash Point (Test Method):	Non-flammable	Flammable Limits	LOWER	UPPER
Autoignition Temperature:	Not applicable	(% BY VOLUME)	N/A	N/A

Hazard Rating (N.F.P.A.): Health: 2 Fire: 0 Reactivity: 0 Specific: Not applicable
This N.F.P.A. rating is a recommendation by the manufacturer using the guidelines or published evaluations prepared by the National Fire Protection Association (N.F.P.A.).

MSDS Version Number: 8 (Revision to section 15)

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