

# Material Safety Data Sheet

Trade Name: 0-52-0  
 Registration No: None

M12010

<b>Section 1</b>	<b>Chemical Product and Company Information</b>
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Product Name: 0-52-0 Merchant Grade Phosphoric Acid  
 Common Name: Phosphoric Acid, Ortho Phosphoric Acid,  
 Merchant Grade Phosphoric Acid  
 Chemical Type: Phosphoric Acid

Emergency Phone - Chemtrec: 1-800-424-9300

<b>Section 2</b>	<b>Composition/Information on Ingredients</b>
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Chemical Name and Synonyms	C.A.S. No.	Chemical Formula	WT% Hazardous	TLV	PEL
Ortho Phosphoric Acid	7664-38-2	H <sub>3</sub> PO <sub>4</sub>	72	1 mg/M <sup>3</sup> 3 mg/M <sup>3</sup> STEL	1 mg/m3
Inert Ingredients			Non-Hazardous 25		

<b>Section 3</b>	<b>Hazards Identification</b>
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**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. Some rail cars of Phosphoric acid may have an off gas of chlorine. 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.

<b>Section 4</b>	<b>First Aid Measures</b>
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**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.

<b>Section 5</b>	<b>Fire Fighting Measures</b>
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**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

<b>Section 6</b>	<b>Accidental Release Measures</b>
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**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.

<b>Section 7</b>	<b>Handling and Storage</b>
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**Precautions to be taken in handling and storing:**  
 When unloading a rail car always open vent valve on top of rail car before opening dome and let sit an adequate amount of time to mitigate possible exposure to any off gas of chlorine. 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.

<b>Section 8</b>	<b>Exposure Controls/Personal Protection</b>
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**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  
Density: 1.39 - 2.00 Sp. Gr.  
Flashpoint: Not-Applicable  
pH: Strongly acidic; <1.0  
Appearance: Green, viscous liquid. Odorless when cold; pungent when hot.  
Reaction with Water: Exothermic, produces heat.  
Extinguishing Media: Non-flammable. Use media suitable to extinguish source of fire.

Solubility in Water: Complete  
% Volatiles (by volume): <1.0  
Vapor Pressure, mm Hg: 5.0 @ 78°F

**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.  
Conditions to Avoid: Not-Applicable

**Section 11 Toxicology Information**

Ingestion: LD<sub>50</sub>, oral, rat = 1530 mg/kg.  
Inhalation: TCL<sub>0</sub>, human: 100 mg/M<sup>3</sup>.  
Skin Absorption: LD<sub>50</sub>, skin, rabbit = 2740 mg/kg.  
Aquatic toxicity rating: TLM 96: 1000-100 ppm.

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

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)    by CAL/OSHA: Yes ( ) No (X)

California Prop 66:  
Yes ( ) No (X)

This product contains phosphoric acid, CAS No. 7664-38-2, which is subject to the reporting requirements of section 313 of Title III of the Superfund Amendments Act of 1986 and 40 CFR Part 372.

**Section 16 Other Information**

Flash Point (Test Method): Non-flammable  
Autoignition Temperature: Not-Applicable  
Hazard Rating (N.F.P.A.):  
Non-fire: Health: 3 Fire: 0  
Fire: Health: 2 Fire: 0

Flammable Limits (% BY VOLUME)  
Reactivity: 0  
Specific: Not-Applicable

LOWER UPPER  
N/A N/A

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: 3

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