CONTACT : LEONID CHEMICALS
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## Orthophosphoric acid 100% 88734

## SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**MSDS Name**: Orthophosphoric acid 100%
**Catalog Numbers:**
O008
**Synonyms:**
Orthophosphoric acid; White phosphoric acid.
**Company Identification:**
LEONID CHEMICALS
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## SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS

| | | |
|---|---|---|
| CAS # | : | 7664-38-2 |
| Chemical Name | : | Phosphoric acid |
| % | : | 100 |
| EINECS# | : | 231-633-2 |
| Hazard Symbols | : | C |
| Risk Phrases | : | 34 |

## SECTION 3 - HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW**
Causes burns.Hygroscopic (absorbs moisture from the air).

**Potential Health Effects**

Eye:
May cause irreversible eye injury. Contact with liquid is corrosive to the eyes and causes severe burns.

Skin:
Contact with liquid is corrosive and causes severe burns and ulceration. The severity of injury depends on the concentration of the solution and the duration of exposure.

Ingestion:
Causes gastrointestinal tract burns. May cause corrosion and permanent tissue destruction of the esophagus and digestive tract.

Inhalation:
Causes chemical burns to the respiratory tract. Because its vapor pressure is negligible, it exists in the air only as a mist or

spray.

Chronic:

Prolonged or repeated skin contact may cause dermatitis.

## SECTION 4 - FIRST AID MEASURES

**Eyes:**

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid immediately.

**Skin:**

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Wash clothing before reuse.

**Ingestion:**

If swallowed, do NOT induce vomiting. Get medical aid immediately. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person.

**Inhalation:**

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

**Notes to Physician:**

Persons with pre-existing skin disorders or impaired respiratory or pulmonary function may be at increased risk to the effects of this substance. Treat symptomatically and supportively.

## 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. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Substance is noncombustible. Contact with metals may evolve flammable hydrogen gas.

**Extinguishing Media:**

Use extinguishing media most appropriate for the surrounding fire.

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

**General Information**: Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:**

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation. Spill may be carefully neutralized with lime (calcium oxide, CaO).



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## SECTION 7 - HANDLING and STORAGE

**Handling:**

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Do not ingest or inhale. Use with adequate ventilation. Discard contaminated shoes.

**Storage:**

Keep container closed when not in use. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from metals. Do not store in metal containers. Store protected from moisture. Store away from alkalies.

## SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

**Engineering Controls:**

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

**Personal Protective Equipment**

Eyes:

Not available.

Skin:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Crystals
Color: colorless
Odor: Not available.
pH: Not available.
Vapor Pressure: Not available.
Viscosity: Not available.
Boiling Point: 261 deg C
Freezing/Melting Point: 22 deg C
Autoignition Temperature: Not available.
Flash Point: Not available.
Explosion Limits, lower: Not available.
Explosion Limits, upper: Not available.
Decomposition Temperature: Not available.



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Solubility in water: Miscible with water.
Specific Gravity/Density: Not available.
Molecular Formula: H3PO4
Molecular Weight: 98.00

## SECTION 10 - STABILITY AND REACTIVITY

**Chemical Stability:**
Stable under normal temperatures and pressures.
**Conditions to Avoid:**
Excess heat, exposure to moist air or water.
**Incompatibilities with Other Materials:**
Metals, strong oxidizing agents, strong bases, amines, ammonia, sulfuric acid, nitromethane, sodium tetrahydroborate, A 5% solution of H3PO4 is DOT corrosive to both aluminum & carbon steel (results: 272.1 mils/yr & 319.6 mils/yr, respectively). A 4% H3PO4 solution corrodes aluminum at 209.1 mils/yr & carbon steel at 240.9 mils/yr..
**Hazardous Decomposition Products:**
Oxides of phosphorus.
Hazardous Polymerization: Will not occur.

## SECTION 11 - TOXICOLOGICAL INFORMATION

**RTECS#:**
CAS# 7664-38-2: TB6300000
**LD50/LC50:**
CAS# 7664-38-2: Draize test, rabbit, eye: 119 mg Severe; Draize test, rabbit, skin: 595 mg/24H Severe; Inhalation, mouse: LC50 = 25.5 mg/m3; Inhalation, rat: LC50 = >850 mg/m3/1H; Inhalation, rat: LC50 = 25.5 mg/m3; Oral, mouse: LD50 = 1.25 gm/kg; Oral, rat: LD50 = 1530 mg/kg; Oral, rat: LD50 = 1.25 gm/kg; Skin, rabbit: LD50 = 2740 mg/kg.
**Carcinogenicity:**
Phosphoric acid -
Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
See actual entry in RTECS for complete information.

## SECTION 12 - ECOLOGICAL INFORMATION

**Ecotoxicity:**
Fish: Mosquito Fish: LC50: 24 mg/L; 96 Hr; Unspecified

## SECTION 13 - DISPOSAL CONSIDERATIONS

Products which are considered hazardous for supply are classified as Special Waste and the disposal of such chemicals is covered by regulations which may vary according to location. Contact a specialist disposal company or the local waste regulator for advice. Empty containers must be decontaminated before


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returning for recycling.

## SECTION 14 - TRANSPORT INFORMATION

**IATA**
Shipping Name: PHOSPHORIC ACID
Hazard Class: 8
UN Number: 1805
Packing Group: III

**IMO**
Shipping Name: PHOSPHORIC ACID
Hazard Class: 8
UN Number: 1805
Packing Group: III

**RID/ADR**
Shipping Name: PHOSPHORIC ACID
Hazard Class: 8
UN Number: 1805
Packing group: III

USA RQ:CAS# 7664-38-2: 5000 lb final RQ; 2270 kg final RQ

## SECTION 15 - REGULATORY INFORMATION

**European/International Regulations**
European Labeling in Accordance with EC Directives
Hazard Symbols: C
Risk Phrases:
R 34 Causes burns.
Safety Phrases:
S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)
CAS# 7664-38-2: 1

**United Kingdom Occupational Exposure Limits**
CAS# 7664-38-2: OES-United Kingdom, TWA 1 mg/m3 TWA
CAS# 7664-38-2: OES-United Kingdom, STEL 2 mg/m3 STEL

**United Kingdom Maximum Exposure Limits**

**Canada**
CAS# 7664-38-2 is listed on Canada's DSL List.
CAS# 7664-38-2 is listed on Canada's Ingredient Disclosure List.

**Exposure Limits**
CAS# 7664-38-2: OEL-ARAB Republic of Egypt:TWA 1 mg/m3
OEL-AUSTRALIA:TWA 1 mg/m3;STEL 3 mg/m3
OEL-BELGIUM:TWA 1 mg/m3;STEL 3 mg/m3
OEL-DENMARK:TWA 1 mg/m3
OEL-FINLAND:TWA 1 mg/m3;STEL 3 mg/m3;Skin
OEL-FRANCE:TWA 1 mg/m3;STEL 3 mg/m3


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OEL-JAPAN:TWA 1 mg/m3
OEL-THE NETHERLANDS:TWA 1 mg/m3
OEL-THE PHILIPPINES:TWA 1 mg/m3
OEL-SWEDEN:TWA 1 mg/m3;STEL 3 mg/m3
OEL-SWITZERLAND:TWA 1 mg/m3
OEL-THAILAND:TWA 1 mg/m3
OEL-UNITED KINGDOM:TWA 1 mg/m3;STEL 1 ppm (3 mg/m3)
OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV
OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

**US FEDERAL**

TSCA

CAS# 7664-38-2 is listed on the TSCA inventory.

## SECTION 16 - ADDITIONAL INFORMATION

MSDS Creation Date: 6/23/2004 Revision #0 Date: Original.

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.



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