

## 1. IDENTIFICATION

**Product Name** Phosphorus Acid 99%  
**Recommended use** Synthesis of substances  
**Supplier** Valudor Products, LLC.  
 179 Calle Magdalena, Suite 100  
 Encinitas, CA 92024  
 (760) 635-8500  
**Emergency Telephone** (800) 535-5053 (Infotrac)

## 2. HAZARD IDENTIFICATION

### Classification

This product is considered hazardous under the U.S. OSHA 29 CFR 1910.1200 Hazard Communication Standard.

Acute Tox. (Oral)	Category 4
Skin Corrosion/Irritation	Category 1
Eye Damage/Irritation	Category 1
Corrosive to metals	Category 1

### Label Elements

#### GHS Pictograms



#### Signal Word Hazard Statements

**Danger**  
 May be corrosive to metals  
 Harmful if swallowed  
 Causes severe skin burns and eye damage

#### Precautionary Statements -Prevention

Keep only in original container  
 Wash thoroughly after handling  
 Do not eat, drink or smoke when using this product  
 Do not breathe dusts or mists  
 Wear protective gloves/protective clothing/eye protection/face protection.

#### -Response

Skin

Inhalation

Ingestion

Absorb spillage to prevent material damage  
 Wash contaminated clothing before reuse.  
 Immediately call a poison center/doctor  
 If on skin (or hair): take off immediately all contaminated clothing. Rinse skin with water/shower.  
 If inhaled: Remove person to fresh air and keep comfortable for breathing.  
 If swallowed: Rinse mouth. Do NOT induce vomiting  
 If swallowed: Call a poison center/doctor if you feel unwell

Eye	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
-Storage	Store in corrosive resistant container with a resistant inner liner.
-Disposal	Store locked up Dispose of contents in accordance with local/regional/national regulations.
Hazards not other classified	None

---

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

---

**Mixture**

Chemical name	CAS-No	Weight-%
Phosphorous acid	13598-36-2	>=99

---

### 4. FIRST-AID MEASURES

---

**First Aid Measures**

<b>General Advice</b>	If exposed or concerned get medical advice. Show this safety data sheet to the doctor in attendance.
<b>Eye Contact</b>	Immediately rinse with plenty of water. Remove contact lenses, if present and easy to do so. Keep eye wide open while rinsing. Continue rinsing for 15 minutes. Seek immediate medical attention.
<b>Skin Contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Immediately remove all contaminated clothes and shoes. Seek immediate medical attention.
<b>Inhalation</b>	Remove to fresh air. If not breathing, give artificial respiration. Get medical attention.
<b>Ingestion</b>	Do not induce vomiting without medical advice. Rinse mouth with water. Never give anything by mouth to an unconscious person. Get medical attention.

**Most important symptoms/effects, acute and delayed**

<b>Symptoms</b>	After inhalation: Irritations of the mucous membranes, coughing, and dyspnoea. After skin contact: irritant and caustic effects. After eye contact: irritant and caustic effects, severe mucosal irritations. Risk of corneal clouding. After swallowing: irritations of mucous membranes in the mouth, pharynx, esophagus and gastrointestinal tract
-----------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

---

### 5. FIRE-FIGHTING MEASURES

---

**Suitable extinguishing Media** Powder. Alcohol resistant foam. Water spray (fog). Carbon dioxide (CO<sub>2</sub>).

Unsuitable Extinguishing Media No information available

**Specific Hazards Arising from the chemical**

Contact with metals may evolve flammable hydrogen gas.

**Hazardous combustion products** Thermal decomposition can lead to the release of irritation or toxic gases and vapors; including and not limited to:  
Phosphorus oxides

**Protective equipment and precautions for fire-fighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

---

**6. ACCIDENTAL RELEASE MEASURES**

---

**Personal precautions, protective equipment, and emergency procedures**

**Personal precautions** Avoid contact with eyes, skin and clothing. Do not breathe dust/fume/vapor/spray. Evacuate personnel to safe areas. Use personal protection recommended in Section 8. Ensure adequate ventilation.

**Methods and materials for containment and cleanup**

**Methods for clean-up** Collect spillage. Keep unauthorized personnel away. Keep in suitable closed containers for disposal.

**Environmental Precautions** Prevent entry into waterways or sewers. Avoid release to the environment.

---

**7. HANDLING AND STORAGE**

---

**Precautions for safe handling**

Handle in a well-ventilated environment. Do not breathe vapors / spray / mist / fume. Avoid contact with skin, eyes or clothing. Wear personal protective equipment in section 8. Wash contaminated clothing before reuse. Wash thoroughly after handling. Wash before breaks and at the end of the workday. Do not eat, drink or smoke when using this product. Clean equipment and work area regularly.

**Conditions for safe storage, including any incompatibilities**

Keep container tightly closed in a dry and well-ventilated place. Keep containers closed and labeled when not in use. Store locked up. Store in corrosive resistant container. Store under inert gas. Air sensitive.

---

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

---

**Exposure Guidelines**

This product does not contain any hazardous materials with occupational exposure limits established by the regional specific regulatory bodies.

**Appropriate engineering controls**

Ensure adequate ventilation, especially in confined areas. Consider the potential hazards of this material, applicable exposure limits, job activities and other substances in the workplace when designing controls and selecting personal protective equipment.

**Personal Protective Equipment**

<b>Eye/face protection</b>	Tightly fitting safety goggles.
<b>Skin protection</b>	Long sleeved protective clothing. Choose the appropriate protective clothing and gloves based on the tasks being performed to avoid exposure to skin. Wear protective gloves. The following materials are suitable for protective gloves (Permeation time $\geq$ 8 hours): Natural rubber/Natural latex - NR (0.5 mm) (use non-powdered and allergen free products) Polychloroprene - CR (0.5 mm) Nitrile rubber/Nitrile latex - NBR (0.35 mm) Butyl rubber - Butyl (0.5 mm) Fluoro carbon rubber - FKM (0.4 mm) Polyvinyl chloride - PVC (0.5 mm)
<b>Respiratory protection</b>	If exposure limits are exceeded or if irritation or other symptoms are experienced use a NIOSH/MSHA approved respirator.
<b>Hygiene Measures</b>	Handle in accordance with good industrial hygiene and safety practices. Do not eat, drink or smoke when using this product.

---

## 9. PHYSICAL and CHEMICAL PROPERTIES

---

<b>Appearance</b>	White
<b>Physical state</b>	Solid
<b>Odor</b>	Odorless
<b>Odor threshold</b>	No information available
<b>pH</b>	< 1 in a 1% aqueous solution
<b>Melting point / freezing point</b>	62.5 C / 144 F
<b>Boiling point / Boiling range</b>	258 C / 496 F
<b>Flash point</b>	No information available
<b>Evaporation rate</b>	Not applicable
<b>Flammability</b>	No information available
<b>Flammability or explosive limits</b>	
<b>Upper</b>	No information available
<b>Lower</b>	No information available
<b>Vapor pressure</b>	<1 hPa at 20C
<b>Vapor density</b>	No information available
<b>Specific Gravity</b>	1.837 g/cm <sup>3</sup> at 20C
<b>Solubility in water</b>	Soluble
<b>Partition coefficient</b>	No information available
<b>Auto-ignition temperature</b>	No information available
<b>Decomposition temperature</b>	No information available
<b>Viscosity</b>	No information available

---

## 10. STABILITY AND REACTIVITY

---

<b>Reactivity</b>	None known under normal conditions.
<b>Chemical stability</b>	Stable under ordinary conditions of use and storage.
<b>Possibility of hazardous</b>	None known under normal processing.

**reactions**

- Conditions to avoid** Exposure to air or moisture over prolonged periods.
- Incompatible materials** Strong bases. Oxidizing agent. Metals.
- Hazardous decomposition products** Hazardous combustion can lead to the release of irritating gases and vapors.

**11. TOXICOLOGICAL INFORMATION**

**Information on likely routes of exposure**

- Skin contact** Causes serious skin damage
- Eye contact** Causes serious eye damage
- Inhalation** Harmful if inhaled
- Ingestion** Harmful if swallowed

**Symptoms related to the physical chemical and toxicological characteristics**

No information available

**Delayed and immediate effects and also chronic effects form short and long-term exposure**

- Skin damage/irritation** Causes severe skin burns
- Eye damage/irritation** Causes serious eye damage
- Sensitization** Not classified
- Mutagenic effects** Not classified
- Carcinogenicity** Not classified
- Reproductive toxicity** Not classified
- STOT – single exposure** Not classified
- STOT – repeated exposure** Not classified
- Aspiration hazard** Not classified

**Acute Toxicity**

**Component information**

Component	Cas-No	LD50 Oral	LD50 Dermal	LC50 Inhalation
Phosphorous acid	13598-36-2	1560 mg/kg	-	-

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity** Should not be released to environment

Component	Freshwater Fish	Freshwater Algae	Water Flea
Phosphorous acid 13598-36-2	LC50: >100 mg/L/96 h (Cyprinus carpio)	EC50: 153 mg/L/72h (Pseudokirchnerella Subcapitata)	EC50: >1000 mg/l/48h (Daphnia magna)

**Persistence and degradability** No information available

**Bioaccumulative potential** No information available

**Mobility in soil** No information available

**Other adverse effects** No information available

---

**13. DISPOSAL CONSIDERATIONS**

---

**Waste Disposal Methods** Processing, use, or contamination of this product may occur during product use. Accordingly, it is the responsibility of the user to determine the proper disposal methodologies. Consult the appropriate state, regional or local regulations to ensure complete and accurate classification. Dispose of contaminated packaging in accordance with local regulations.

---

**14. TRANSPORT INFORMATION**

---

<b>DOT</b>	Regulated
<b>UN-No</b>	2834
<b>Proper Shipping Name</b>	Phosphorous Acid
<b>Hazard Class</b>	8
<b>Packing Group</b>	III
<b>IATA</b>	Regulated
<b>UN-No</b>	2834
<b>Proper Shipping Name</b>	Phosphorous Acid
<b>Hazard Class</b>	8
<b>Packing Group</b>	III
<b>IMDG</b>	Regulated
<b>UN-No</b>	2834
<b>Proper Shipping Name</b>	Phosphorous Acid
<b>Hazard Class</b>	8
<b>Packing Group</b>	III

---

**15. REGULATORY INFORMATION**

---

**International Inventories**

<b>TSCA</b>	Listed
<b>DSL</b>	Listed

**US Federal Regulations**

**TSCA section 12(b) Export Notification**  
Not regulated

**SARA 313**  
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA).  
Not applicable

**SARA 311/312 Hazard Categorization**

Acute health hazard	Yes
Chronic Health Hazard	Yes
Fire hazard	No

**Product name:** Phosphorous acid 99%

**Date of Issue:** 9/19/2019

Pressure No  
Reactivity No

**CERCLA/SARA 302 & 304**

Section 302 & 304 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA).

Not Applicable

**CWA (Clean Water Act)**

Not Applicable

**US State Regulations**

**California Proposition 65**

This product does not contain any proposition 65 chemicals

---

**16. OTHER INFORMATION**

---

**NFPA Ratings**            Health: 3                            Flammability: 0                    Reactivity: 1

Creation Date:            9/19/2019

Revision Date:

Revision Number:        1

Revision Information:    Creation

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.