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## **MATERIAL SAFETY DATA SHEET**

### **PYRIDOXAL-5-PHOSPHATE 98%**

**(For Biochemistry)**

**MSDS CAS: 853645-22-4**

#### **Section 1: Chemical Product and Company Identification**

##### **Section 1: Chemical Product**

**Product Name: PYRIDOXAL-5-PHOSPHATE**

**CAS#: 853645-22-4**

**Synonym: Pyridoxal, 5-(dihydrogen phosphate), monohydrate;  
Pyridoxal phosphate monohydrate; Phosphopyridoxal monohydrate**

**Chemical Name: 3-Hydroxy-2-methyl-5-  
[(phosphonoxy)methyl]-4-pyridinecarboxaldehyde**

**Chemical Formula: C8-H-10-N-O6-P.H2O**

**Brand: OXFORD**

##### **Details Of The Supplier Of The Safety Data Sheet :**

**Company identification: OXFORD LAB FINE CHEM LLP  
Unit. No. 12, 1st Floor, Neminath Industrial Estate No. 6,  
Navghar, Vasai (East). Palghar - 401 210.  
Mumbai, Maharashtra, INDIA.  
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#### **Section 2: Composition and Information on Ingredients**

##### **Composition:**

Name	CAS #	% by Weight
Pyridoxal-5-Phosphate	853645-22-4	100

**Toxicological Data on Ingredients: Pyridoxal-5-phosphate, Monohydrate: ORAL (LD50): Acute: 5900 mg/kg [Rat]. 4640 mg/ kg [Mouse].**

## Section 3: Hazards Identification

**Potential Acute Health Effects:** Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.

**Potential Chronic Health Effects:** CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. Repeated or prolonged exposure is not known to aggravate medical condition.

## Section 4: First Aid Measures

**Eye Contact:** Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.

**Skin Contact:** In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

**Serious Skin Contact:** Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

**Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Serious Inhalation:** Not available.

**Ingestion:** 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 if symptoms appear.

**Serious Ingestion:** Not available.

## Section 5: Fire and Explosion Data

**Flammability of the Product:** May be combustible at high temperature.

**Auto-Ignition Temperature:** Not available.

**Flash Points:** Not available.

## Section 5: Fire and Explosion Data (Continued)

**Flammable Limits:** Not available.

**Products of Combustion:** These products are carbon oxides (CO, CO<sub>2</sub>), nitrogen oxides (NO, NO<sub>2</sub>...), phosphates.

**Fire Hazards in Presence of Various Substances:** Slightly flammable to flammable in presence of heat. Non-flammable in presence of shocks.

**Explosion Hazards in Presence of Various Substances:** Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

**Fire Fighting Media and Instructions:** SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

**Special Remarks on Fire Hazards:** Not available.

**Special Remarks on Explosion Hazards:** Not available.

## Section 6: Accidental Release Measures

**Small Spill:** Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

**Large Spill:** Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

## Section 7: Handling and Storage

**Precautions:** Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, acids, alkalis.

**Storage:** Light Sensitive. Store in light-resistant containers. Keep container tightly closed. Keep container in a cool, well-ventilated area.

## Section 8: Exposure Controls/Personal Protection

**Engineering Controls:** Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

**Personal Protection:** Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

**Personal Protection in Case of a Large Spill:** Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

**Exposure Limits:** Not available.

## Section 9: Physical and Chemical Properties

**Physical state and appearance:** Solid. (Crystalline powder.)

<b>Odor</b>	: Not available.
<b>Taste</b>	: Not available.
<b>Molecular Weight</b>	: 265.17 g/mole
<b>Color</b>	: Yellowish. (Light.)
<b>pH (1% soln/water)</b>	: Not applicable.
<b>Boiling Point</b>	: Not available.
<b>Melting Point</b>	: 141.5°C (286.7°F)
<b>Critical Temperature</b>	: Not available.
<b>Specific Gravity</b>	: Not available.
<b>Vapor Pressure</b>	: Not available.
<b>Vapor Density</b>	: Not available.
<b>Volatility</b>	: Not available.
<b>Odor Threshold</b>	: Not available.
<b>Water/Oil Dist. Coeff.</b>	: Not available.
<b>Ionicity (in Water)</b>	: Not available.
<b>Dispersion Properties</b>	: See solubility in water.
<b>Solubility</b>	: Soluble in cold water. Solubility in water: 5 g/l water at 20 deg. C

## Section 10: Stability and Reactivity Data

**Stability:** The product is stable.

**Instability Temperature:** Not available.

**Conditions of Instability:** Excess heat, incompatible materials, light, dust generation.

**Incompatibility with various substances:** Reactive with oxidizing agents, acids, alkalis.

**Corrosivity:** Not available.

**Special Remarks on Reactivity:** Sensitive to light.

**Special Remarks on Corrosivity:** Not available.

**Polymerization:** Will not occur.

## Section 11: Toxicological Information

**Routes of Entry:** Inhalation. Ingestion.

**Toxicity to Animals:** Acute oral toxicity (LD50): 4640 mg/kg [Mouse].

**Chronic Effects on Humans:** Not available.

**Other Toxic Effects on Humans:** Hazardous in case of skin contact (irritant), of ingestion, of inhalation.

**Special Remarks on Toxicity to Animals:** Not available.

**Special Remarks on Chronic Effects on Humans:** Not available.

**Special Remarks on other Toxic Effects on Humans:** Acute Potential Health Effects: Skin: May cause skin irritation. Eyes: May cause eye irritation. Inhalation: May cause respiratory tract irritation. Ingestion: May cause digestive tract irritation with diarrhea, and hypermotility. May affect behavior/ central nervous system (excitement, convulsions), and respiration (dyspnea). The toxicological properties of this substance have not been fully investigated.

## Section 12: Ecological Information

**Ecotoxicity:** Not available.

**BOD5 and COD:** Not available.

**Products of Biodegradation:** Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation:**  
The product itself and its products of degradation are not toxic.

**Special Remarks on the Products of Biodegradation:** Not available.

## Section 13: Disposal Considerations

**Waste Disposal:**  
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

## Section 14: Transport Information

**Land transport (ADR-RID)**

**General information:** Not regulated.

**Sea transport (IMDG) [English only]**

**General information:** Not regulated.

**Air transport (ICAO-IATA) [English only]**

**General information:** Not regulated.

## Section 15: Other Regulatory Information

**Federal and State Regulations:** No products were found.

## Section 15: Other Regulatory Information (Continued)

**Other Regulations:** Not available.

**Other Classifications:**

**WHMIS (Canada):** Not controlled under WHMIS (Canada).

**DSCL (EEC):** R36/38- Irritating to eyes and skin. S24/25- Avoid contact with skin and eyes. S28- After contact with skin, wash immediately with plenty of [\*\*\*] S37- Wear suitable gloves. S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**HMIS (U.S.A.):**

**Health Hazard:** 2

**Fire Hazard:** 1

**Reactivity:** 0

**Personal Protection:** E

**National Fire Protection Association (U.S.A.):**

**Health:** 2

**Flammability:** 1

**Reactivity:** 0

**Specific hazard:**

**Protective Equipment:** Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Splash goggles.

## Section 16 - Additional Information

**References:** Not available.

**Other Special Considerations:** Not available.

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