

## **MATERIAL SAFETY DATA SHEET**

### **PHOSPHOROUS RED 98%**

**(For Synthesis)**

**MSDS CAS: 7723-14-0**

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

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

**Product Name: PHOSPHOROUS RED**

**CAS#: 7723-14-0**

**Synonym: Red Phosphorus; Phosphorus Amorphous Red**

**Chemical Name: Not Available.**

**Chemical Formula: P**

**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.  
Tel: 91-250-2390989  
Tel/Fax: 91-250-2390032

#### **Section 2: Composition and Information on Ingredients**

##### **Composition:**

Substance name	CAS #	% by Weight
Phosphorous Red	7723-14-0	100

## Section 3: Hazards Identification

### Emergency Overview

**WARNING! FLAMMABLE SOLID. MAYIGNITE FROM FRICTION OR ROUGH HANDLING. CAUSES EYE IRRITATION. MAYBE HARMFULIFSW ALLOWED OR INHALED.**

### SAF-T-DATA Ratings (Provided here for your convenience)

**Health Rating: 3 - Severe (Life)**

**Flammability Rating: 3 - Severe (Flammable)**

**Reactivity Rating: 2 - Moderate**

**Contact Rating: 3 - Severe**

**Lab Protective Equip: GOGGLES & SHIELD; LAB COA**

**T& APRON; VENT HOOD; PROPER GLOVES; CLASS B EXTINGUISHER**

**Storage Color Code: Red (Flammable)**

### Potential Health Effects

**Inhalation:** Not considered highly toxic but acute exposure may cause coughing, bronchitis, possible liver or kidney impairment if contaminated with yellow phosphorus.

**Ingestion:** Red phosphorus is not readily absorbed and, in pure form, is considered non-poisonous. However, possible contamination with the yellow form must be considered, and symptoms such as nausea, vomiting, abdominal pain or garlic odor on breath will indicate poisoning by the latter. The estimated lethal adult human dose for white phosphorus is 50 - 100 mg.

**Skin Contact:** Red phosphorous is not harmful to skin. If contaminated with white phosphorus, however, contact may cause deep, slow healing burns.

**Eye Contact:** Red phosphorus causes eye irritation. If contaminated with yellow phosphorus, eye contact can cause severe irritation and burns.

**Chronic Exposure:** Chronic ingestion or inhalation may induce systemic phosphorous poisoning. Liver damage, kidney damage, jaw/tooth abnormalities, blood disorders and cardiovascular effects can result.

**Aggravation of Pre-existing Conditions:** Persons with pre-existing skin disorders or eye problems, jaw/tooth abnormalities, or impaired liver, kidney or respiratory function may be more susceptible to the effects of the substance.

## Section 4: First Aid Measures

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

**Ingestion:** If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately. Get medical attention.

## Section 4: First Aid Measures (Continued)

**Skin Contact:** Wash exposed area with soap and water. Get medical advice if irritation develops.

**Eye Contact:** Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

## Section 5: Fire and Explosion Data

**Fire:** Autoignition temperature: 260C (500F) Flammable solid. May ignite from friction or rough handling.

**Explosion:** May form explosive mixtures with oxidizing materials. Sensitive to static discharge.

**Fire Extinguishing Media:**

Water flooding followed by covering with wet sand, clay, ground limestone until clean-up.

**Special Information:**

Burning phosphorus produces irritating but not highly toxic oxides. Flame-retardant full protective clothing and full breathing apparatus should be worn with phosphorus fires. The red form can convert to the more readily-flammable yellow form at high temperatures.

## Section 6: Accidental Release Measures

Moisten the spilled phosphorus as a precaution and keep it under wet sand or the like until it can be collected and placed in a closed container for recovery or disposal. Remove all sources of ignition. Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Clean up spills in a manner that does not disperse dust into the air. Use non-sparking tools and equipment. Reduce airborne dust and prevent scattering by moistening with water. Pick up spill for recovery or disposal and place in a closed container. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802

## Section 7: Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from incompatible substances. Protect from light. Avoid dust formation and control ignition sources. Employ grounding, venting and explosion relief provisions in accord with accepted engineering practices in any process capable of generating dust and/or static electricity. Empty only into inert or non-flammable

## Section 7: Handling and Storage (Continued)

atmosphere. Emptying contents into a non-inert atmosphere where flammable vapors may be present could cause a flash fire or explosion due to electrostatic discharge. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

## Section 8: Exposure Controls/Personal Protection

**Airborne Exposure Limits:** None established.

**Ventilation System:** A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.

**Personal Respirators (NIOSH Approved):**

For conditions of use where exposure to dust or mist is apparent and engineering controls are not feasible, a particulate respirator (NIOSH type N95 or better filters) may be worn. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator.

**WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

**Skin Protection:** Wear protective gloves and clean body-covering clothing.

**Eye Protection:** Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

**Other Control Measures:**

Presence of yellow phosphorous as an impurity will change necessary protective equipment.

## Section 9: Physical and Chemical Properties

Appearance	: Red to violet powder.
Odor	: Odorless.
Molecular Weight	: 30.97 g/mole
Solubility	: Insoluble in water.
Specific Gravity	: 2.34 @ 20C/4C
pH	: No information found.

## Section 9: Physical and Chemical Properties (Continued)

**% Volatiles by volume @ 21C (70F): 0**

**Boiling Point** : No information found.

**Melting Point** : 280 °C

**Vapor Density (Air=1)** : No information found.

**Vapor Pressure (mm Hg)** : No information found.

**Evaporation Rate (BuAc=1)** : No information found.

## Section 10: Stability and Reactivity Data

**Stability:** Stable under ordinary conditions of use and storage.

**Hazardous Decomposition Products:**

White phosphorous, oxides of phosphorous, phosphine, and phosphoric acid (if water is present) may be released if this material is heated to decomposition.

**Hazardous Polymerization:** Will not occur.

**Incompatibilities:** Halogens, halides, sulfur, oxidizing materials and alkalis (forms phosphine).

**Conditions to Avoid:** Heat, flame, ignition sources, shock, friction, incompatibles.

## Section 11: Toxicological Information

No LD50/LC50 information found relating to normal routes of occupational exposure.

Ingredient	---NTP Carcinogen---		IARC Category
	Known	Anticipated	
Phosphorus (7723-14-0)	No	No	None

## Section 12: Ecological Information

**Environmental Fate:** No information found.

## Section 12: Ecological Information (Continued)

**Environmental Toxicity:** The substance is harmful to aquatic organisms May cause long-term adverse effects in the aquatic environment

## Section 13: Disposal Considerations

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

## Section 14: Transport Information

### Land transport (ADR-RID)

Proper shipping name: PHOSPHORUS, AMORPHOUS

UN N°: 1338

H.I. nr: 40

ADR - Class: 4.1

Labelling - Transport: 4.1: Flammable solids, self-reactive substances and desensitized explosives.

ADR - Group: III

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

Proper shipping name: PHOSPHORUS, AMORPHOUS

UN N°: 1338

IMO-IMDG - Class or division: 4.1: Flammable solids, self-reactive substances and desensitized explosives.

IMO-IMDG - Packing group: III

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

Proper shipping name: PHOSPHORUS, AMORPHOUS

UN N°: 1338

IATA - Class or division: 4.1: Flammable solids, self-reactive substances and desensitized explosives.

IATA - Packing group: III

**Regd Office:** Unit no 12, 1st Floor,  
Neminath Industrial Estate No.6,  
Navghar, Vasai (East), Palghar - 410210.  
Maharashtra, INDIA.

**Tel:** +91 250 2390032 / 2390989 / 2390990  
**Email:** sales@oxfordlabchem.com /  
info@oxfordlabchem.com  
**Web:** www.oxfordlabchem.com

## Section 15: Other Regulatory Information

-----\Chemical Inventory Status - Part 1\-----

Ingredient	TSCA	EC	Japan	Australia
-----	----	----	-----	-----
Phosphorus (7723-14-0)	Yes	Yes	No	Yes

-----\Chemical Inventory Status - Part 2\-----

--Canada--				
Ingredient	Korea	DSL	NDSL	Phil.
-----	----	----	-----	-----
Phosphorus (7723-14-0)	Yes	Yes	No	Yes

-----\Federal, State & International Regulations - Part 1\-----

-SARA302- -----SARA313-----				
Ingredient	RQ	TPQ	List	Chemical Catg.
-----	----	----	-----	-----
Phosphorus (7723-14-0)	1	100	Yes	No

-----\Federal, State & International Regulations - Part 2\-----

-RCRA- -TSCA-			
Ingredient	CERCLA	261.33	8(d)
-----	-----	-----	-----
Phosphorus (7723-14-0)	1	No	Yes

Chemical Weapons Convention: No TSCA 12(b): No CDTA: Yes  
SARA311/312: Acute: Yes Chronic: Yes Fire: Yes Pressure: No  
Reactivity: No (Pure / Solid)

## Section 16 - Additional Information

References: Not available.

Other Special Considerations: Not available.

**Regd Office:** Unit no 12, 1st Floor,  
Neminath Industrial Estate No.6,  
Navghar, Vasai (East), Palghar - 410210.  
Maharashtra, INDIA.

**Tel:** +91 250 2390032 / 2390989 / 2390990  
**Email:** sales@oxfordlabchem.com /  
info@oxfordlabchem.com  
**Web:** www.oxfordlabchem.com

***Disclaimer:***

\*\*\*\*\*

**The information contained herein in good faith but makes no representations as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.**

**Oxford Lab Fine Chem LLP makes no representations or warranties, either express or implied, including without limitation any warranties of merchantability, fitness for a particular purpose with respect to the information set forth herein or the product to which the information refers. Accordingly, Oxford Lab Fine Chem LLP will not be responsible for damages resulting from use of or reliance upon this information.**