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In Case Of Emergency Call Chemtrec®  
(U.S.) (800) 424-9300  
(International) (703) 527-3887

## Phosphorous, Red Safety Data Sheet

### 1. Product and Company

Product name: Phosphorous, Red  
Synonym: Red Amorphous Phosphorous  
CAS-No.: 7723-14-0  
Company: Hummel Croton Inc.  
10 Harmich Rd.  
South Plainfield, NJ 07080  
Telephone: 908-754-1800  
Fax: 908-754-1815

HMIS Rating	
Health	1
Flammability	2
Reactivity	1
Personal Protection	E

Emergency telephone number

Emergency Phone #: Chemtrec US: 800-424-9300  
Chemtrec International: 703-527-3887

### 2. Hazards

GHS Classification Flammable solids (Category 2), H228  
Acute aquatic toxicity (Category 3), H402  
Chronic aquatic toxicity (Category 3), H412

#### GHS Label elements

Pictogram(s)



Signal word **WARNING**

Hazard statement(s)

H228 Flammable solid.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statement(s)

- P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/ eye protection/ face protection.
- P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
- P501 Dispose of contents/ container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC) or not covered by GHS

None.

### 3. Composition/Ingredients

Substance  
Formula: P  
Molecular weight: 30.97 g/mol  
CAS-No.: 7723-14-0

Material	CAS	%	OSHA	ACGIH
Phosphorous, Red	7723-14-0	100%	15 mg/m <sup>3</sup> as Nuisance Dust	15 mg/m <sup>3</sup> as Nuisance Dust

### 4. First Aid

**First Aid For Eye:** In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

**First Aid For Skin:** In case of contact, flush skin with water. Wash clothing before reuse. Call a physician if irritation occurs.

**First Aid For Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

**First Aid For Ingestion:** If swallowed, call a physician immediately.

### 5. Fire Data

Flammability: Non-Flammable

Flash Point: Not Applicable

Auto Ignition: 260°C

Flammable Limits: Not Applicable

Extinguishing Media: Water as a fine mist or fog. Cover with wet sand. DO NOT USE – Jets of high pressured water.

Fire Fighting Procedure: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Fire/Explosion Hazards: Avoid excessive dusting, open flames, open lights, or welding in area of dry product. Ignites easily by friction or static electrical spark. May give rise to dust explosion. Red Phosphorous is sensitive to static discharge  $7.8 \times 10^{-4}\text{J}$  & to mechanical impact sensitivity of  $7.0 \times 10^4\text{J/m}^2$ .

## 6. Accidental Release

Spill Or Leak Procedures: Utilize recommended protective clothing and equipment. Clean spills in a manner that does not disperse dust into the air. Spill area can be washed with water. Collect wash water for approved disposal. Keep from entering water or ground water.

## 7. Handling And Storage

Storage Temperatures: Store at ambient temperature

Shelf Life: Unlimited in tightly sealed container

Special Sensitivity: None.

Handling/Storage Precautions: Avoid breathing dust. Avoid getting in eyes or on skin. Wash thoroughly after handling. Avoid breathing dust. Avoid getting in eyes or on skin. Wash thoroughly after handling. Use non-sparking tools. Ground equipment to avoid static discharge. Avoid dust-forming conditions and dust build-up. Store in a dry place away from direct sunlight, heat and incompatible materials (see Section VIII). Reseal containers immediately after use. Store away from food and beverages.

## 8. Exposure Controls/Personal Protection

Eye Protection: Safety glasses or goggles.

Skin Protection: PVC gloves with impervious boots, apron or coveralls. Wash hands and face before eating, drinking or using tobacco.

Respirator: Work ambient concentrations should be monitored and if the recommended exposure limit is exceeded, a NIOSH/MSHA approved dust respirator must be worn.

Ventilation: Use local ventilation if dusting is a problem, to maintain air levels below the recommended exposure limit.

Additional Measures: Emergency showers and eye wash stations should be available. Educate and train employees in the safe handling of hazardous chemicals.

## 9. Physical And Chemical Properties

Physical Form: Solid, Amorphous Powder

Color: Red

Odor: Slight

Molecular Weight: 30.79 g/mol

Boiling Point: Sublimes above  $417^{\circ}\text{C}$

Melting/Freezing Point: Sublimes above  $417^{\circ}\text{C}$

Solubility In Water: Insoluble

Specific Gravity: 2.34

Vapor Density: 4.77\*

\*Red Amorphous Phosphorous will form significant amounts of vapor only when heated strongly. When vapor is formed it is the same vapor from yellow phosphorous. When this

vapor is condensed it may form yellow phosphorous, which is more hazardous than Red Amorphous Phosphorous.

## 10. Stability And Reactivity

Stability: Stable.

Hazardous Polymerization: Will not occur.

Incompatibilities: Oxidizers, aluminum and magnesium powders, alkalis.

Instable Conditions: Excessive temperatures (see incompatibilities).

Decomposition Temperature: Auto Ignition 260°C

Decomposition Products: Phosphine, highly toxic and highly flammable, is slowly released in wet alkaline conditions. Burning red amorphous phosphorous gives off dense white smoke of phosphorous pentoxide, an irritant that absorbs water to become phosphoric acid, which is corrosive.

## 11. Toxicological Information

RTECS Number: TH 3495000

Routes of Exposure: Eye contact. Ingestion. Inhalation. Skin contact.

Toxicity Data: Oral LD50: is greater than 10,000 mg/kg (rat)

Chronic Toxic Effects: This product has no known chronic effects. Repeated or prolonged exposure to this compound is not known to aggravate medical conditions.

Acute Toxic Effects: Irritating to the skin and eyes on contact. Inhalation will cause irritation to the lungs and mucus membrane. Irritation to the eyes will cause watering and redness.

Reddening, scaling, and itching are characteristics of skin inflammation. Follow safe industrial hygiene practices and always wear protective equipment when handling this compound.

## 12. Ecological Information

Ecotoxicity: Not available at this time.

## 13. Disposal Considerations

Waste Disposal Method: Waste disposal should be in accordance with existing federal, state and local environmental regulations.

## 14. Transportation Information

Proper Shipping Name: Phosphorous, Amorphous

UN Number: 1338

Class: 4.1

P.G.: III

Label Code: 4.1

Reportable Quantity: 1 (0.454)

## 15. Regulatory Information

OSHA Status: This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

TSCA Chemical Inventory: This compound is on the EPA Toxic Substance Control Act (TSCA) Inventory List

California Proposition 65: To the best of our knowledge, this product contains no levels of listed substances, which the State of California has found to cause cancer, birth defects or other reproductive effects.

SARA 313 Title III:

Section 320 Extremely Hazardous Substances: None

Section 311/312 Hazardous Categories: None

Section 313 Toxic Chemicals: None

## **16. Other Information**

Prepared By: Michael Richard

Date: June 1, 2015

Reason For Issue: GHS Compliance

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