

MATERIAL SAFETY DATA SHEET

EM SCIENCE

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Manufacturer.....:

EM SCIENCE
A Division of EM Industries
P.O. Box 70
480 Democrat Road
Gibbstown, N.J. 08027

Preparation Date.: 3/13/95

Information Phone Number.: 856-423-6300

Hours: Mon. to Fri. 8:30-5

Chemtrec Emergency Number: 800-424-9300

Hours: 24 hrs a day

Catalog Number(s):

PX1040

Product Name:

Phosphorus Pentoxide

Synonyms:

Phosphoric Anhydride, Phosphoric Oxide

Chemical Family:

Inorganic Acid Anhydride

Formula:

P₂O₅

Molecular Weight.:

141.94

2. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS #	Appr %
Phosphorus Pentoxide	1314-56-3	100%

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

CAUSES SEVERE BURNS.

HARMFUL IF INHALED.

REACTS VIOLENTLY WITH WATER.

CONTENTS UNDER PRESSURE.

Appearance:

White, nearly odorless powder

POTENTIAL HEALTH EFFECTS (ACUTE AND CHRONIC)

Symptoms of Exposure:

Harmful if inhaled. Contact with skin or eyes causes burns, possibly severe. Inhalation of dust causes severe irritation and burning of respiratory passages.

Medical Cond. Aggravated by Exposure:

Respiratory conditions

Routes of Entry:

Inhalation, ingestion

Carcinogenicity:

The material is not listed (IARC, NTP, OSHA) as cancer causing agent.

4. FIRST AID MEASURES

Emergency First Aid:

GET MEDICAL ASSISTANCE FOR ALL CASES OF OVEREXPOSURE.

Skin: Immediately flush thoroughly with large amounts of water.

Eyes: Immediately flush thoroughly with water for at least 15 minutes.

Inhalation: Remove to fresh air; give artificial respiration if breathing has stopped.

Ingestion: Do not induce vomiting; if conscious, give water freely and get medical attention.

Remove contaminated clothing and wash before reuse.

5. FIRE FIGHTING MEASURES

Flash Point (F): Noncombustible

Flammable Limits LEL (%): N/A

Flammable Limits UEL (%): N/A

Extinguishing Media:

Foam, CO₂, Dry chemicals. DO NOT USE WATER

Fire Fighting Procedures:

Wear self-contained breathing apparatus and protective clothing.

Fire & Explosion Hazards:

Dangerous due to violent reaction with water and other materials. May evolve sufficient heat to ignite flammable and combustible materials.

6. ACCIDENTAL RELEASE MEASURES

Spill Response:

Evacuate the area of all unnecessary personnel. Wear suitable protective equipment listed under Exposure / Personal Protection. Eliminate any ignition sources until the area is determined to be free from explosion or fire hazards. Contain the release and eliminate its source, if this can be done without risk. Take up and containerize for proper disposal as described under Disposal. Comply with Federal, State, and local regulations on reporting releases. Refer to Regulatory Information for reportable quantity and other regulatory data.

7. HANDLING AND STORAGE

Handling & Storage:

Keep container tightly closed. Store in a cool, dry area away from ignition sources and oxidizers. Do not breathe dust. Do not get in eyes, on skin, or on clothing.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS AND PERSONAL PROTECTIVE EQUIPMENT:

Ventilation, Respiratory Protection, Protective Clothing, Eye Protection:

Respiratory Protection: If workplace exposure limit(s) of product or any component is exceeded (see TLV/PEL), a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (see your safety equipment supplier). Engineering and/or administrative controls should be implemented to reduce exposure. Material must be handled or transferred in an approved fume hood or with equivalent ventilation. Protective gloves must be worn to prevent skin contact (Neoprene or equivalent) Safety glasses with side shields must be worn at all times. Impervious protective clothing should be worn to prevent skin contact.

Work/Hygenic Practices:

Wash thoroughly after handling. Do not take internally. Eye wash and safety equipment should be readily available.

EXPOSURE GUIDELINES

OSHA - PEL:

Component	TWA		STEL		CL		Skin
	PPM	MG/M3	PPM	MG/M3	PPM	MG/M3	
<hr/> Phosphorus Pentoxide							

ACGIH - TLV:

Component	TWA		STEL		CL		Skin
	PPM	MG/M3	PPM	MG/M3	PPM	MG/M3	
<hr/> Phosphorus Pentoxide							

If there are no exposure limit numbers listed in the Exposure Guidelines chart, this indicates that no OSHA or ACGIH exposure limits have been established.

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point (C 760 mmHg) : 360C

Melting Point (C) : 340C

Specific Gravity (H₂O = 1) : 2.3

Vapor Pressure (mm Hg) : N/A

Percent Volatile by vol (%) : N/A

Vapor Density (Air = 1) : N/A

Evaporation Rate (BuAc = 1) : N/A

Solubility in Water (%) : Reacts

Appearance :

White, nearly odorless powder

10. STABILITY AND REACTIVITY

Stability: Yes

Hazardous Polymerization:

Does not occur

Hazardous Decomposition:

Phosphoric acid

Conditions to Avoid:

Forms phosphoric acid with water

Materials To Avoid:

- Water
- Acids
- Bases
- Corrosives
- Oxidizers
- Other: Na_2CO_3 , NaOH, water

11. TOXICOLOGICAL INFORMATION

Toxicity Data

ihl-rat LC50: 1217 mg/cu.m./1H

ihl-mus LC50: 271 mg/cu.m./1H

Toxicological Findings:

None

Cited in Registry of Toxic Effects of Chemical Substances (RTECS)

12. DISPOSAL CONSIDERATIONS

EPA Waste Numbers: D001

Treatment:

Specified Technology - Contact your local permitted waste disposal site (TSD) for permissible treatment sites. ALWAYS CONTACT A PERMITTED WASTE DISPOSER (TSD) TO ASSURE COMPLIANCE WITH ALL CURRENT LOCAL, STATE AND FEDERAL REGULATIONS.

13. TRANSPORT INFORMATION

DOT Proper Shipping Name:

Phosphoric Pentoxide

DOT ID Number :

UN1807

|14. REGULATORY INFORMATION

TSCA Statement:

The CAS number of this product is listed on the TSCA Inventory.

Component	SARA EHS (302)	SARA EHS TPQ (lbs)	CERCLA RQ (lbs)
Phosphorus Pentoxide	Y	10	

Component	OSHA Floor List	SARA 313	DeMinimis for SARA 313 (%)
Phosphorus Pentoxide			

If there is no information listed on the regulatory information chart, this indicates that the chemical is not covered by the specific regulation listed.

15. OTHER INFORMATION

Comments:

None

NFPA Hazard Ratings:

Health : 3
Flammability : 0
Reactivity : 2
Special Hazards : W

Revision History: 9/1/81 8/1/84 10/27/87 10/20/88
3/1/91 7/9/93

| = Revised Section

N/A = Not Available

N/E = None Established

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