

Phosphor P-22



MATERIAL SAFETY DATA SHEET

I. PRODUCT IDENTIFICATION

Manufacturer/Supplier:

ESPI Metals

1050 Benson Way, Ashland, OR 97520

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E-Mail: sales@espimetals.com**Product Name:** Phosphor P-22**Formula:** ZnS:Ag**CAS Number:** 1314-98-3 (ZnS)**Synonyms:** Phosphor type 130, 132, 1320, 1330, Zinc Sulfide, Silver Activated

II. HAZARDOUS INGREDIENTS

Hazardous Component: Zinc Sulfide Silver**Percent (%):** 0-100 <0.1**OSHA/PEL:** N/E 0.01 mg/m³**ACGIH/TLV:** N/E 0.1 mg/m³

Note: This material contains greater than 99% zinc sulfide. No TLV or PEL has been established for zinc sulfide. Silver is present in concentrations of less than 1% and is part of the chemical structure.

Note: This material is subject to the reporting requirements of section 313 of title III of the superfund amendment and re-authorization act of 1986 and 40 CFR Part 372.

III. PHYSICAL DATA

Boiling Point: N/A**Specific Gravity:** 4.0

Solubility in H₂O: Insoluble

Appearance and Odor: White powder, odorless

IV. FIRE AND EXPLOSION HAZARDS DATA

Flash Point (Method used): N/A

Flammable Limits: Upper: N/A **Lower:** N/A

Extinguishing Media: Use suitable extinguishing media for surrounding material and type of fire.

Special Firefighting Procedures: Firefighters must wear a full face, self-contained breathing apparatus to prevent inhalation of dust, mist and/or fumes that may be generated during fire fighting activities.

Unusual Fire & Explosion Hazard: Zinc sulfide decomposes at temperatures greater than 400 °C in air and/or in oxidizing atmospheres. Zinc sulfide produces zinc and sulfur fumes at temperatures greater than 900 °C in inert atmospheres. Contact with strong acids may liberate hydrogen sulfide which may form explosive mixtures in air.

V. HEALTH HAZARD INFORMATION

Effects of Exposure:

To the best of our knowledge the chemical, physical and toxicological properties of phosphor p-22 have not been thoroughly investigated and recorded.

Zinc compounds have variable toxicity, but generally are of low toxicity. Zinc is not inherently a toxic element. However, when heated, it evolves a fume of zinc oxide which when inhaled fresh can cause a disease known as "brass founders", "ague" or "brass chills." Zinc oxide dust which is not freshly formed is virtually innocuous. There is no cumulative effect from the inhalation of zinc fumes.

Sulfides of the heavy metals are generally insoluble and have little toxic action except through the liberation of hydrogen sulfide. (Sax, Dangerous Properties of Industrial Materials, eighth edition)

Acute Effects:

Inhalation: May cause brass chills.

Ingestion: May cause coughing, dyspnea and sweating.

Skin: May cause irritation.

Eyes: May cause irritation.

Chronic Effects: Inhalation may cause respiratory tract irritation with nasopharyngitis and laryngitis. No other chronic health effects recorded.

Medical Conditions Generally Aggravated by Exposure: Pre-existing respiratory disorders.

Carcinogenicity: NTP: No IARC: No OSHA: No

EMERGENCY AND FIRST AID PROCEDURES:

INHALATION: Remove to fresh air, keep warm and quiet, give oxygen if breathing is difficult and seek medical attention.

INGESTION: Give 1-2 glasses of milk or water and induce vomiting, seek medical attention. Never induce vomiting or give anything by mouth to an unconscious person.

SKIN: Remove contaminated clothing, brush material off skin, wash affected area with mild soap and water, seek medical attention if symptoms persist.

EYES: Flush eyes, including under eyelids, for 15 minutes. Seek medical attention.

VI. REACTIVITY DATA

Stability: Stable

Conditions to Avoid: None

Incompatibility (Material to Avoid): Acids, bases, oxidizing agents.

Hazardous Decomposition Procedures: Zinc oxide, oxides of sulfur, zinc hydride and hydrogen sulfide.

Hazardous Polymerization: Will not occur

VII. SPILL OR LEAK PROCEDURES

Steps to Be Taken in Case Material Is Released or Spilled: Wear appropriate respiratory and protective equipment specified in section VIII. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for proper disposal. Take care not to raise dust.

Waste Disposal Method: In accordance with all applicable Federal, State, and Local Regulations.

VIII. SPECIAL PROTECTION INFORMATION

Respiratory Protection: NIOSH approved dust respirator.

Ventilation: Use local exhaust to maintain concentration of exposure at low levels. General exhaust is recommended.

Protective Gloves: Gloves are recommended if prolonged or repeated contact is likely.

Eye Protection: Safety glasses or goggles are recommended.

Other Protective Clothing or Equipment: Normal lab wear.

IX. SPECIAL PRECAUTIONS

Precautions To Be Taken In Handling and Storage: Store in tightly sealed containers in a cool, dry area. Maintain good housekeeping procedures to prevent accumulation of dust. Use clean-up methods which minimize dust generation such as vacuuming or wet clean-up. If airborne dust is generated, use an appropriate NIOSH approved respirator.

Other Precautions: Store away from acids and oxidizing agents.

Work Practices: Implement engineering and work practice controls to reduce and maintain concentration of exposure at low levels. Use good housekeeping and sanitation practices. Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air. Maintain eyewash capable of sustained flushing, safety drench shower and facilities for washing.

DOT Regulations:

Hazard Class: None

Although ESPI has attempted to provide current and accurate information herein, ESPI makes no representations regarding the accuracy or completeness of the information and assumes no liability for any loss, damage, injury of any kind which may result from or arise out of the use of or reliance on the information by any person.

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