

# SAFETY DATA SHEET

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## SECTION 1. IDENTIFICATION

**Product Identifier:** Ferrophosphorus

**Product Code:** FER-P-01-SLD

**CAS Number:** 8049-19-2

**Relevant identified uses of the substance:** Scientific research and development

Supplier details:

American Elements  
10884 Weyburn Ave.  
Los Angeles, CA 90024  
Tel: +1 310-208-0551  
Fax: +1 310-208-0351  
Emergency telephone number:  
+1 800-424-9300

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## SECTION 2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW – NON-HAZARDOUS WHEN USED AS INTENDED.

NFPA Rating: Health - 0, Flammability - 0, Reactivity - 0

NFPA Definitions: (0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme).

POTENTIAL HEALTH EFFECTS:

INHALATION: None

INGESTION: None

SKIN CONTACT: None

EYE CONTACT: None

CHRONIC EXPOSURE: No Chronic effects.

AGGRAVATION OF PRE-EXISTING CONDITIONS: None known.

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## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Ferrophosphorus  
Cas No.: 8049-19-2

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## **SECTION 4. FIRST AID MEASURES**

### Inhalation:

Remove victim from area of exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. Seek medical advice if effects persist.

### Skin Contact:

If skin contact occurs, remove contaminated clothing and wash skin with running water. If irritation occurs seek medical advice.

### Eye Contact:

If in eyes, wash out immediately with water. In all cases of eye contamination it is a sensible precaution to seek medical advice.

### Ingestion:

Rinse mouth with water. If swallowed, give a glass of water to drink. If vomiting occurs give further water. Seek medical advice.

Indication of immediate medical attention and special treatment needed:

Treat symptomatically.

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## **SECTION 5. FIREFIGHTING MEASURES**

### Suitable Extinguishing Media:

Extinguishing media appropriate to surrounding fire conditions.

Specific hazards arising from the substance or mixture:

Non-combustible material.

Special protective equipment and precautions for fire-fighters:

Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to products of decomposition.

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## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

### Emergency procedures/Environmental precautions:

If contamination of sewers or waterways has occurred advise local emergency services.

Personal precautions/Protective equipment/Methods and materials for containment and cleaning up:

Use personal protective equipment to prevent skin and eye contact and breathing in dust. Work up wind or increase ventilation. Cover with damp absorbent (inert material, sand or soil). Sweep or vacuum up, but avoid generating dust. Collect and seal in properly labelled containers or drums for disposal.

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## **SECTION 7. HANDLING AND STORAGE**

### Precautions for safe handling:

Avoid skin and eye contact and breathing in dust. Avoid handling which leads to dust formation. May form flammable dust clouds in air. For precautions necessary refer to Safety Data Sheet "Dust Explosion Hazards". Take precautionary measures against static discharges.

Product Name: FERRO PHOSPHORUS

Conditions for safe storage, including any incompatibilities:

Store in a cool, dry, well ventilated place and out of direct sunlight. Protect from moisture. Store away from incompatible materials described in Section 10. Keep containers closed when not in use - check regularly for spills.

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## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters:

Workplace Exposure Standard(s) for particulates:

Dusts not otherwise classified: 8hr TWA = 10 mg/m<sup>3</sup>

TWA - The time-weighted average airborne concentration of a particular substance when calculated over an eight-hour working day, for a five-day working week.

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

Appropriate engineering controls:

Ensure ventilation is adequate to maintain air concentrations below Workplace Exposure Standards. Avoid generating and breathing in dusts. Use with local exhaust ventilation or while wearing dust mask. Keep containers closed when not in use.

Individual protection measures, such as Personal Protective Equipment (PPE):

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

Wear overalls, safety glasses and impervious gloves. Avoid generating and inhaling dusts. If determined by a risk assessment an inhalation risk exists, wear a dust mask/respirator. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Solid

Color: Grey

Odor: Odorless when dry. When damp smells of garlic.

Solubility: Insoluble in water.

Specific Gravity: Not available

Relative Vapor Density (air=1): Not available

Vapor Pressure(20°C): Not available

Flash Point(°C): N/A

Flammability Limits (%): Not available

Autoignition(°C): Not available

Melting Point/Range(°C): 1050-1100

Decomposition Point(°C): >900

pH: N/A

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## SECTION 10. STABILITY AND REACTIVITY

Chemical stability: No data available.

Possibility of hazardous reactions:

Reacts with acids to form a corrosive solution with the liberation of phosphine gas.

May react with cement powder at 65°C to generate hydrogen. Reacts with salt air to release phosphine. May react with water to emit phosphine, arsine and hydrogen. Finely divided dusts in air may ignite if size is < 50 micron and concentration is > 1.5 g/L. Will not explode.

Conditions to avoid:

Avoid dust generation. Avoid exposure to moisture.

Incompatible materials: Incompatible with acids , and water .

Hazardous decomposition products: Oxides of phosphorus.

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## **SECTION 11. TOXICOLOGICAL INFORMATION**

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:  
Ingestion:

No adverse effects expected, however, large amounts may cause nausea and vomiting.

Eye contact:

May be an eye irritant. Exposure to the dust may cause discomfort due to particulate nature. May cause physical irritation to the eyes.

Skin contact:

Contact with skin may result in irritation.

Inhalation:

Breathing in dust may result in respiratory irritation.

Acute toxicity:

No LD50 data available for the product.

Chronic effects:

No data available for the product.

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## **SECTION 12. ECOLOGICAL INFORMATION**

Ecotoxicity

Avoid contaminating waterways.

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## **SECTION 13. DISPOSAL CONSIDERATIONS**

Disposal methods:

Refer to Waste Management Authority. Dispose of contents/container in accordance with local/regional/national/international regulations.

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## **SECTION 14. TRANSPORT INFORMATION**

Road and Rail Transport- DOT

Not classified as Dangerous Goods

Marine Transport- IMDG

Not classified as Dangerous Goods

Air Transport- IATA

Not classified as Dangerous Goods

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## **SECTION 15. REGULATORY INFORMATION**

Safety, health and environmental regulations/legislation specific for the substance or mixture

#### National regulations

All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.

All components of this product are listed on the Canadian Non-Domestic Substances List (NDSL).

SARA Section 313 (specific toxic chemical listings)

Substance is not listed.

California Proposition 65

Prop 65 - Chemicals known to cause cancer

Substance is not listed

Prop 65 - Developmental toxicity

Substance is not listed.

Prop 65 - Developmental toxicity, female

Substance is not listed.

Prop 65 - Developmental toxicity, male

Substance is not listed.

Information about limitation of use:

For use only by technically qualified individuals.

Other regulations, limitations and prohibitive regulations

Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006.

Substance is not listed.

The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed.

Substance is not listed.

Annex XIV of the REACH Regulations (requiring Authorisation for use)

Substance is not listed.

REACH - Pre-registered substances

Substance is listed.

Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

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## 16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2019 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.