

SPI Supplies Division

Structure Probe, Inc.

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Manufacturer's CAGE: 1P573

Safety Data Sheet

Date Effective: June 5, 2017

SPI Catalog # 02536-AB

SPI Chem™ Potassium Ferricyanide

Section 1.1: Identification

Chemical Name/Synonyms Potassium Ferricyanide

Product or Trade Name Potassium Ferricyanide

CAS #'s 13746-66-2

Chemical Formula..... $K_3Fe(CN)_6$

Section 1.2: Relevant Uses/Restrictions

Laboratory Chemical; microscopy stain.

Section 1.3: Supplier of the Safety Data Sheet

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Section 1.4: Emergency telephone number

Emergencies

Contacting CHEMTREC:

24 Hour Emergency Use Only #'s...

Worldwide phone: 1-(703)-741-5970

Toll-free phone: 1-(800)-424-9300 USA + Canada only

Section 2: Hazard Identification

2.1 Classification of the substance

Not classified as a hazardous substance or mixture according to the Globally Harmonized System (GHS).

2.2 Label elements

Pictogram: None

Signal Word: None

Hazard statements: None

Precautionary statements: None

2.3 Other Hazards:

Contact with acids liberates very toxic gas.

Hazardous Material Information System USA

Health 1
Fire Hazard 0
Reactivity 0
Personal Protection

NFPA Rating (estimated)

Health 0
Flammability..... 0
Reactivity 0

Section 3: Composition

3.1 Substances:

Potassium Ferricyanide CAS No. 13746-66-2 ED No. 237-323-3 Mol. Wt. 329.24 99 –
100 %

RTECS: LJ82500

Section 4: First Aid Measures

4.1 Description of first aid measures:

General advice:

Consult a physician. Show this safety data sheet to the doctor in attendance.

Inhalation:

If breathed in, move person into fresh air.
If not breathing, give artificial respiration.
Consult a physician.

Skin Contact:

Wash off with soap and plenty of water.
Consult a physician.

Eye Contact:

Flush eyes with water as a precaution.

Ingestion:

Never give anything by mouth to an unconscious person.
Rinse mouth with water.
Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed:

The most important known symptoms and effects are described in the labelling (see Section 2.2) and/or

in Section 11.

4.3 Indication of any immediate medical attention and special treatment needed:

No further relevant information available.

Section 5: Fire Fighting Measures

5.1 Extinguishing media

Suitable extinguishing media: Dry powder

5.2 Special hazards arising from the substance or mixture

No data available.

5.3 Advice for firefighters

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face-piece operated in the pressure demand or other positive pressure mode. May emit toxic and flammable fumes of cyanide if involved in a fire.

Section 6: Accidental Release Measures

6.1 Personal precautions

Ventilate area of leak or spill.

Wear appropriate personal protective equipment as specified in Section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and material for containment and cleaning up

Spills: Sweep up and containerize for reclamation or disposal.

Vacuuming or wet sweeping may be used to avoid dust dispersal.

6.4 Reference to other sections

For disposal, see Section 13.

Section 7: Handling and Storage

7.1 Precautions for safe handling

Protective measures

Avoid formation of dust and aerosols.

The potential for combustible dust formation should be taken into consideration before additional processing occurs.

Provide appropriate exhaust ventilation at places where dust is formed.

7.2 Conditions for safe storage, including any incompatibilities

Keep in a tightly closed container.

Store in a cool, dry, ventilated area.

Protect against physical damage.

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.

7.3 Specific end uses

Microscopy stain.

This material is not being offered for clinical or diagnostic applications, agricultural uses or for human or animal consumption.

Section 8: Exposure Controls and Personal Protection

8.1 Control parameter and Personal Protection

Workplace exposure limits: None established.

Biological limit values: No data available.

8.2 Exposure controls

8.2.1 Appropriate engineering controls: No data available.

8.2.2 Individual protection measures:

General Information:

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other reengineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Eye / face protection:

Use tight fitting goggles if dust is generated.

Skin protection:

Hand protection: Wear protective gloves.
Other: Wear suitable protective clothing.

Respiratory protection:

In case of inadequate ventilation use suitable respirator.

Hygiene measures:

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/ or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Provide eyewash station and safety shower.

8.2.3 Environmental exposure controls: No further relevant information available.

Section 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance:

Physical state: Solid

Form: Crystalline Powder

Color: Red

Odor: Odorless

Odor threshold: No data available.

pH: No data available.

Melting point/Freezing point: 300 °C

Boiling point/Boiling point range: No data available

Flash Point: No data available
Evaporation rate: No data available
Flammability (solid, gas): No data available
Upper/lower flammability or explosive limits: No data available
Vapor Pressure: No data available
Vapor density: No data available
Relative density: 1.85 (17 °C)
Solubility:
 In water: 464 g/l (20 °C)
 In alcohol: Slightly soluble
Partition coefficient (n-octanol/water): No data available
Auto-ignition temperature: No data available
Decomposition temperature: No data available
Viscosity: No data available

9.2 Other information

Molecular weight: 329.25 g/mol [K₃Fe(CN)₆]

Section 10: Stability and Reactivity

10.1 Reactivity: No dangerous reaction known under conditions of normal use.

10.2 Chemical Stability: Material is stable under normal conditions.

10.3 Possibility of Hazardous Reactions: Hazardous polymerization does not occur.

10.4 Conditions to avoid: Contact with incompatible materials, Heat, Light

10.5 Incompatible materials: Ammonia, Acids

10.6 Hazardous decomposition products: Thermal decomposition may produce oxides of nitrogen, cyanides.

Section 11: Toxicological Information

11.1 Information on toxicological effects

INFORMATION ON LIKELY ROUTES OF EXPOSURE:

Ingestion: May cause irritation of the gastrointestinal tract.

Inhalation: May cause irritation to the respiratory system.

Skin contact: May cause irritation.

Eye contact: May cause temporary eye irritation.

INFORMATION ON TOXICOLOGICAL EFFECTS:

- A. Acute toxicity
Oral: No data available.
Dermal: No data available.
Inhalation: No data available.
Repeated dose toxicity: No data available.
 - B. Skin corrosion/irritation
May cause skin irritation.
 - C. Serious eye damage/irritation
May irritate eyes.
 - D. Respiratory of skin sensitization
Not a skin sensitizer.
 - E. Germ cell mutagenicity
In vitro: No mutagenic components identified.
In vivo: No mutagenic components identified.
 - F. Carcinogenicity
Product: This substance has no evidence of carcinogenic properties.
IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:
No carcinogenic components identified.
US national Toxicology Program (NTP) Report on Carcinogens:
No carcinogenic components identified.
US OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):
No carcinogenic components identified.
 - G. Reproductive toxicity:
No components toxic to reproduction.
 - H. STOT-single exposure:
No data available.
 - I. STOT-repeated exposure:
No data available.
 - J. Aspiration hazard:
Not classified
- Other effects: None known.

Section 12: Ecological Information

12.1 Ecotoxicity:

- Acute hazards to the aquatic environment:
 - Fish: No data available.
 - Aquatic invertebrates: No data available.
- Chronic hazards to the aquatic environment:
 - Fish: No data available.
 - Aquatic invertebrates: No data available.
 - Toxicity to aquatic plants: No data available.

12.2 Persistence and degradability:

- Biodegradation: There are no data on the degradability of this product.
- BOD/COD ratio: No data available.

12.3 Bio-accumulative potential:

Bio-concentration factor (BCF): No data available on bio-accumulation.
Partition coefficient n-octanol / water (log K_{ow}): No data available.

12.4 Mobility in soil:

No data available.

12.5 Results of PBT and vPvB assessment:

PBT: No data available.
vPvB: No data available.

12.6 Other adverse effects:

The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Section 13: Disposal Considerations

13.1 Waste treatment methods

Disposal instructions:

Discharge, treatment, or disposal may be subject to national, state, or local laws.

Contaminated packagings:

Since emptied containers retain product residue, follow label warnings even after container is emptied.

Section 14: Transport Information

DOT: Not regulated.

IATA: Not regulated.

IMDG: Not regulated.

Section 15: Regulatory Information

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

US Federal Regulations:

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D))

US OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

None present or none present in regulated quantities.

SARA 302 Components:

Not subject to the reporting requirements of SARA Title III, Section 302.

SARA 311/312 Hazards:

No SARA hazards.

SARA 313 Components:

Does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3):

None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112® Accidental Release Prevention (40 CFR 68.130):

None present or none present in regulated quantities.

US State Regulations:

Massachusetts Right to Know Components:

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right to Know Components:

Tripotassium hexacyanoferrate CAS# 13746-66-2 Revision Date: 1989-08-11

New Jersey Right to Know Components:

Tripotassium hexacyanoferrate CAS# 13746-66-2 Revision Date: 1989-08-11

California Prop. 65 Components:

WARNING: This product contains a chemical know to the State of California to cause birth defects or other reproductive harm.

Tripotassium hexacyanoferrate CAS# 1347-66-2 Revision Date: 2013-07-26

15.2 Chemical Safety Assessment

Date of Preparation: 05 June 2017

Abbreviations and acronyms

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

CMRG: Chemical Manufacturer's Recommended Guidelines

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

AIHA: American Industrial Hygiene Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bio-accumulative and Toxicological

vPvB: very Persistent and very Bio-accumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

STEL: Short Term Exposure Limit

CEIL: Ceiling

Section 16: Other Information

Disclaimer of Liability:

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