

MATERIAL SAFETY DATA SHEET

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Version 1.6

Section 1 - Product and Company Information

| | |
|---------------------------|-------------------------|
| Product Name | POTASSIUM FERRICYANIDE |
| Product Number | P8131 |
| Brand | SIGMA |
| Company | Sigma-Aldrich |
| Street Address | 3050 Spruce Street |
| City, State, Zip, Country | SAINT LOUIS MO 63103 US |
| Technical Phone: | 314 771 5765 |
| Emergency Phone: | 414 273 3850 Ext. 5996 |
| Fax: | 800 325 5052 |

Section 2 - Composition/Information on Ingredient

| | | |
|------------------------|--|----------|
| Substance Name | CAS # | SARA 313 |
| POTASSIUM FERRICYANIDE | 13746-66-2 | No |
| Formula | K ₃ Fe(CN) ₆ | |
| Synonyms | Tripotassium hexacyanoferrate * Ferrate(3-), hexakis(cyano-kappa-C)-, tripotassium, (OC-6-11) * Iron potassium cyanide * Potassium cyanoferrate * Red prussiate * Potassium ferricyanate * Potassium ferricyanide * Tripotassium ferric hexacyanide * Tripotassium ferricyanide * Tripotassium hexacyanoferrate(3-) * Tripotassium iron hexacyanide | |
| RTECS Number: | LJ8225000 | |

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Contact with acids liberates very toxic gas.

HMIS RATING

HEALTH: 2

FLAMMABILITY: 0

REACTIVITY: 1

NFPA RATING

HEALTH: 2

FLAMMABILITY: 0

REACTIVITY: 1

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

ORAL EXPOSURE

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

INHALATION EXPOSURE

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

DERMAL EXPOSURE

In case of contact, immediately wash skin with soap and copious amounts of water.

EYE EXPOSURE

In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

Section 5 - Fire Fighting Measures

FLASH POINT

N/A

AUTOIGNITION TEMP

N/A

FLAMMABILITY

N/A

EXTINGUISHING MEDIA

Suitable: Noncombustible. Use extinguishing media appropriate to surrounding fire conditions.

FIREFIGHTING

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Specific Hazard(s): Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

HANDLING

User Exposure: Do not breathe dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

STORAGE

Suitable: Keep tightly closed.

Section 8 - Exposure Controls / PPE

ENGINEERING CONTROLS

Safety shower and eye bath. Mechanical exhaust required.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Government approved respirator.
Hand: Compatible chemical-resistant gloves.
Eye: Chemical safety goggles.

GENERAL HYGIENE MEASURES

Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties

| | | |
|-----------------------|--|----------------------------|
| Appearance | Physical State: Solid Color: Red Form: Fine crystals | |
| Property | Value | At Temperature or Pressure |
| Molecular Weight | 329.26 AMU | |
| pH | 6 - 9 | |
| BP/BP Range | N/A | |
| MP/MP Range | N/A | |
| Freezing Point | N/A | |
| Vapor Pressure | N/A | |
| Vapor Density | N/A | |
| Saturated Vapor Conc. | N/A | |
| SG/Density | 1.89 g/cm ³ | |
| Bulk Density | N/A | |
| Odor Threshold | N/A | |
| Volatile% | N/A | |
| VOC Content | N/A | |
| Water Content | N/A | |
| Solvent Content | N/A | |
| Evaporation Rate | N/A | |
| Viscosity | N/A | |
| Surface Tension | N/A | |
| Partition Coefficient | N/A | |
| Decomposition Temp. | N/A | |
| Flash Point | N/A | |
| Explosion Limits | N/A | |
| Flammability | N/A | |
| Autoignition Temp | N/A | |
| Refractive Index | N/A | |
| Optical Rotation | N/A | |
| Miscellaneous Data | N/A | |
| Solubility | Solubility in Water: 1 M in H ₂ O, 20°C complete, orange-brown | |

N/A = not available

Section 10 - Stability and Reactivity

STABILITY

Conditions of Instability: May discolor on exposure to light.
Materials to Avoid: Strong acids, Strong oxidizing agents,
Ammonia, Hydrochloric acid, Avoid contact with sodium nitrite and
chromium trioxide.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide,
Nitrogen oxides, Hydrogen cyanide.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

Section 11 - Toxicological Information

ROUTE OF EXPOSURE

Skin Contact: May cause skin irritation.
Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: May cause eye irritation.
Inhalation: May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.
Ingestion: May be harmful if swallowed.

SIGNS AND SYMPTOMS OF EXPOSURE

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

TOXICITY DATA

Oral
Mouse
2970 mg/kg
LD50

Section 12 - Ecological Information

ACUTE ECOTOXICITY TESTS

Test Type: EC50 Daphnia
Species: Daphnia magna
Time: 48 h
Value: 549 mg/l

Test Type: LC50 Fish
Species: Onchorhynchus mykiss (Rainbow trout)
Time: 96 h
Value: 869 mg/l

Test Type: LC50 Fish
Species: Pimephales promelas (Fathead minnow)
Time: 96 h
Value: > 100 mg/l

Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT

Proper Shipping Name: Environmentally hazardous substances, solid, n.o.s.
UN#: 3077
Class: 9
Packing Group: Packing Group III
Hazard Label: Class 9
PIH: Not PIH

IATA

Non-Hazardous for Air Transport: Non-hazardous for air transport.

Section 15 - Regulatory Information

EU ADDITIONAL CLASSIFICATION

R: 32

Risk Statements: Contact with acids liberates very toxic gas.

US CLASSIFICATION AND LABEL TEXT

Risk Statements: Contact with acids liberates very toxic gas.

UNITED STATES REGULATORY INFORMATION

SARA LISTED: No

TSCA INVENTORY ITEM: Yes

CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: Yes

NDSL: No

Section 16 - Other Information

DISCLAIMER

For R&D use only. Not for drug, household or other uses.

WARRANTY

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. Sigma-Aldrich Inc., 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 2005 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.