



LABORATORY CHEMICALS AND CONSUMABLES

# MATERIAL SAFETY DATA SHEET

## POTASSIUM FERRICYANIDE

### 1. Chemical Product and Company information.

**Product name:** Potassium Ferricyanide

**Contact Information:**

Radchem cc  
PO Box 166982  
Brackendowns  
Alberton 1454  
Telephone : **011 867 3726 / 2864**

### 2. Hazard Identification

Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator).

### 3. Composition / information on ingredients

**CAS #:** 13746-66-2

**Synonym:** Potassium hexacyanoferrate (III)

**Chemical Name:** potassium ferricyanide

**Chemical Formula:**  $K_3Fe(CN)_6$

### 4. First Aid Measures

**Eye Contact:** Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.

**Skin Contact:** In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

**Serious Skin Contact:** Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

**Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.



**Serious Inhalation:** Not available

**Ingestion:** Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

**Serious Ingestion:** Not available

### **5. Fire-fighting measures**

**Flammability of the Product:** Non-flammable.

**Fire Hazards in Presence of Various Substances:** Not applicable

**Explosion Hazards in Presence of Various Substances:** Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

**Fire Fighting Media and Instructions:** Not applicable

**Special Remarks on Fire Hazards:** Not available

**Special Remarks on Explosion Hazards:** Not available

### **6. Accidental release measures**

**Small Spill:** Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

**Large Spill:** Use a shovel to put the material into a convenient waste disposal container.

### **7. Handling and storage**

**Precautions:** Keep locked up. Do not ingest. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as acids.

**Storage:** Light sensitive, Store in light-resistant containers. Keep container tightly closed. Keep container in a cool, well-ventilated area.

### **8. Exposure controls/personal protection**

**Engineering Controls:** Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

**Personal Protection:** Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

**Personal Protection in Case of a Large Spill:** Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

### **9. Physical and chemical properties**

**Physical state and appearance:** Solid (crystalline powder)

**Odour Threshold:** Not available

**Ionicity (in Water):** Not available.



<p><b>Odour:</b> Not available</p> <p><b>Taste:</b> Not available</p> <p><b>Colour:</b> Red</p> <p><b>Boiling Point:</b> Not available</p> <p><b>Melting Point:</b> Decomposes</p> <p><b>Critical Temperature:</b> Not available</p> <p><b>Specific Gravity:</b> 1.85 (Water = 1)</p> <p><b>Vapour Density:</b> Not available</p> <p><b>Volatility:</b> Not available</p>	<p><b>Dispersion Properties:</b> See solubility in water</p> <p><b>Solubility:</b> Soluble in cold water</p>
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### **10. Stability and reactivity**

**Stability:** The product is stable.

**Instability Temperature:** Not available.

**Conditions of Instability:** Heat, light, incompatible materials

**Incompatibility with various substances:** Reactive with acids

**Corrosivity:** Non-corrosive in presence of glass.

**Special Remarks on Reactivity:** Incompatible with ammonia, chromium trioxide + heat, sodium nitrite + heat, acids, and acid fumes. Sensitive to light. When heated to decomposition or comes in contact with acid or acid fumes, it emits toxic fumes of cyanides. It emits toxic fumes of cyanides, and oxides of nitrogen when heated to decomposition.

**Special Remarks on Corrosivity:** Not available

**Polymerization:** Will not occur.

### **11. Toxicological information**

**Routes of Entry:** Inhalation. Ingestion

**Toxicity to Animals:** Acute oral toxicity (LD50): 2970 mg/kg [Mouse].

**Chronic Effects on Humans:** MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast.

**Other Toxic Effects on Humans:** Hazardous in case of skin contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator).

**Special Remarks on Toxicity to Animals:** Lowest Published Lethal Dose: LDL [Rat] - route: Oral; Dose: 1600 mg/kg

**Special Remarks on Chronic Effects on Humans:** May affect genetic material

**Special Remarks on other Toxic Effects on Humans:** Acute Potential Health Effects: Skin: May cause skin irritation. Eyes: May cause eye irritation. Inhalation: May cause respiratory tract irritation with coughing and shortness of breath. Ingestion: May cause gastrointestinal tract irritation with nausea, vomiting, diarrhoea, and



possible abdominal cramping. Chronic Potential Health: Inhalation: Prolonged or repeated inhalation may affect blood and urinary system. The toxicological properties of this substance have not been fully investigated.

### **12. Ecological information**

**Ecotoxicity:** Not available

**BOD5 and COD:** Not available

**Products of Biodegradation:** Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation:** The product itself and its products of degradation are not toxic

**Special Remarks on the Products of Biodegradation:** Not available

### **13. Disposal considerations**

**Waste Disposal:** Waste must be disposed of in accordance with federal, state and local environmental control regulations.

### **14. Transport information**

**DOT Classification:** CLASS 9: Miscellaneous hazardous material

**Identification:** : Environmentally hazardous substances, solid, N.O.S.(Potassium Ferricyanide) UNNA: 3077  
PG: III

**Special Provisions for Transport:** Marine Pollutant

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