

# FLINN SCIENTIFIC, INC.

## Material Safety Data Sheet (MSDS)

MSDS #: 631.00

Revision Date: January 20, 2011

---

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

---

#### Potassium Ferrocyanide

Flinn Scientific, Inc. P.O. Box 219 Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

---

### SECTION 2 — COMPOSITION, INFORMATION ON INGREDIENTS

---

Potassium Ferrocyanide, trihydrate

Synonym: potassium hexacyanoferrate (II), yellow prussiate of potash

CAS#: 14459-95-1

---

### SECTION 3 — HAZARDS IDENTIFICATION

---

Lemon-yellow crystals or powder. Odorless.

Slightly toxic by ingestion, mild body tissue irritant.

When heated to decomposition or on contact with acids it emits very toxic fumes of HCN.

#### FLINN AT-A-GLANCE

Health-1

Flammability-0

Reactivity-2

Exposure-1

Storage-1

0 is low hazard, 3 is high hazard

---

### SECTION 4 — FIRST AID MEASURES

---

Call a physician, seek medical attention for further treatment, observation and support after first aid.

Inhalation: Remove to fresh air at once. If breathing has stopped give artificial respiration immediately.

Eye: Immediately flush with fresh water for 15 minutes.

External: Wash continuously with fresh water for 15 minutes.

Internal: Give large quantities of water. Call a physician or poison control at once.

---

### SECTION 5 — FIRE FIGHTING MEASURES

---

Nonflammable solid.

When heated to decomposition, or on contact with acids it emits very toxic fumes of HCN.

**Fire Fighting Instructions:** Use triclass, dry chemical fire extinguisher. Firefighters should wear PPE and SCBA with full facepiece operated in positive mode.

#### NFPA CODE

None

established

---

### SECTION 6 — ACCIDENTAL RELEASE MEASURES

---

Restrict unprotected personnel from area. Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

---

### SECTION 7 — HANDLING AND STORAGE

---

Flinn Suggested Chemical Storage Pattern: Inorganic #7. Store with arsenates, cyanides and cyanates.

Store in a cool dry place; material effloresces on exposure to air.

Keep tightly closed and store in a Flinn Chem-Saf bag.

---

### SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

---

Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron.

**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

Lemon-yellow crystals or powder. Odorless.  
Solubility: Soluble in water; insoluble in alcohol.  
Formula:  $K_4Fe(CN)_6 \cdot 3H_2O$   
Formula Weight: 422.41

Boiling Point: 400 °C (decomposes)  
Melting Point: ~70 °C  
Specific Gravity: 1.853

**SECTION 10 — STABILITY AND REACTIVITY**

Effloresces on exposure to air. Avoid strongly heating. If heated or in contact with concentrated acids, substance emits poisonous HCN gas. Avoid contact with strong acids, strong oxidizers, nitrate and nitrite salts, ammonia or sodium chromate.  
Shelf life: Fair to poor; effloresces on exposure to air.

**SECTION 11 — TOXICOLOGICAL INFORMATION**

Acute effects: N.A.  
Chronic effects: N.A.  
Target organs: N.A.

ORL-RAT LD<sub>50</sub>: 6400 mg/kg  
IHL-RAT LC<sub>50</sub>: N.A.  
SKN-RBT LD<sub>50</sub>: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

**SECTION 12 — ECOLOGICAL INFORMATION**

Data not yet available.

**SECTION 13 — DISPOSAL CONSIDERATIONS**

Please consult with state and local regulations.  
Flinn Suggested Disposal Method #14 is one option.

**SECTION 14 — TRANSPORT INFORMATION**

Shipping Name: Not regulated  
Hazard Class: N/A  
UN Number: N/A  
N/A = Not applicable

**SECTION 15 — REGULATORY INFORMATION**

TSCA-listed, EINECS-listed (237-722-2).

**SECTION 16 — OTHER INFORMATION**

This Material Safety Data Sheet (MSDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

**Consult your copy of the *Flinn Science Catalog/Reference Manual*  
for additional information about laboratory chemicals.**