MATERIAL SAFETY DATA SHEET

GENIUM PUBLISHING CORPORATION
1145 CATALYN ST., SCHENECTADY, NY 12303 USA (518) 377-8854

MSDS # 140
POTASSIUM FERRICYANIDE

Issued: September, 1985
Revised:

From Genium's MSDS Collection, to be used as a reference.

SECTION 1. MATERIAL IDENTIFICATION

17

MATERIAL NAME: POTASSIUM FERRICYANIDE
OTHER DESIGNATIONS: Tripotassium hexacyanoferrate(3-); Potassium hexacyanoferrate(III); Red prussiate of potash; $K_3Fe(CN)_6$; CAS #13746-66-2.
SUPPLIER: Available from many suppliers, including:

J.T. Baker Chemical Co.
222 Red School Lane
Phillipsburg, NJ 08865
Phone: (201) 867-2151

Conroy Chemicals Inc.
Box 848
Rockville Centre, NY 11571; Phone: (516) 536-5533

SECTION 2. INGREDIENTS AND HAZARDS	%	HAZARD DATA
POTASSIUM FERRICYANIDE, $K_3Fe(CN)_6$ * Current (1985-86) ACGIH TLV and OSHA PEL for cyanides, as CN	>98%	8 HR TWA: 5 mg/m^3* --- Oral, Rat: LDLo: 1600 mg/kg

SECTION 3. PHYSICAL DATA

Melting point ..... decomposes
Specific gravity @ 25°C ... 1.85
Molecular weight 329.26

Solubility in water, g/100cc
@ 4°C 33
@ 100°C ... 77.5

APPEARANCE & ODOR: Ruby red crystals or powder. No odor.

SECTION 4. FIRE AND EXPLOSION DATA

Flash Point and Method	Autoignition Temp.	Flammability Limits in Air	Lower	Upper
N/A	N/A	N/A	—	—

EXTINGUISHING AGENTS: Use extinguishing agents suitable to the surrounding fire.

Firefighters must exercise caution. Toxic and flammable hydrogen cyanide gas may be evolved under fire conditions. Use a self-contained breathing apparatus and full protective gear.

SECTION 5. REACTIVITY DATA

This material is stable at room temperature under normal storage and handling conditions. Aqueous solutions of this material may slowly decompose on exposure to light.

Highly toxic cyanide gas/fume is evolved on thermal decomposition. Hydrogen cyanide is also generated on contact with acids or acid fumes.
An explosive reaction may occur on contact with ammonia. Mixtures of potassium ferricyanide and chromium trioxide (chromic anhydride) explode when ignited or heated above 196°C. Mixtures of nitrites and this material also explode on heating.

SECTION 6. HEALTH HAZARD INFORMATION

TLV 5 mg/m^3, as CN

In contrast to the simple cyanides, this material is considered to be only slightly toxic.* A serious toxicological hazard exists from potentially lethal hydrogen cyanide gas generated during thermal or chemical decomposition of this material. Symptoms of cyanide poisoning include weakness, headache, confusion, nausea, vomiting. At higher levels of exposure, unconsciousness and death may occur rapidly.

* Ref: Data Source #14, page 4896.

FIRST AID: EYE CONTACT: Flush eyes thoroughly, including under the eyelids, with large amounts of running water. Seek medical attention if irritation occurs.

SKIN CONTACT: Remove contaminated clothing. Promptly wash affected skin with soap and water. Seek medical attention (Inplant, paramedic, community).*

INHALATION: Remove person to fresh air (NOTE: If HCN gas is involved or suspected, rescue workers must wear self-contained breathing apparatus). Restore/aid breathing as necessary. Get medical attention immediately!*

INGESTION: Give person large quantities of water to drink. Induce vomiting. Never give anything by mouth or induce vomiting if victim is unconscious. Keep person warm and at rest. Get prompt medical assistance.*

NOTE: When the possibility of cyanide gas generation exists, first aid kits designed for treatment of cyanide poisoning should be readily available to trained personnel.

*Get medical attention = Paramedic, community, inplant.

SECTION 7. SPILL, LEAK AND DISPOSAL PROCEDURES

Ventilate spill area. Clean-up personnel should wear personal protective equipment. Carefully pick up spilled material in a manner that minimizes dust generation. Prevent contact with acidic materials.

DISPOSAL: Properly treated and packaged waste may be disposed of in an approved landfill. Contact supplier or a licensed chemical waste disposal contractor for treatment and disposal procedures. Follow Local, State and Federal regulations.

SECTION 8. SPECIAL PROTECTION INFORMATION

Provide general and/or local exhaust ventilation to meet the TLV requirement. NIOSH-approved respiratory protection should be used where concentrations exceed the TLV. Protective clothing (gloves, aprons) and chemical safety goggles should be worn where the possibility of skin or eye contact exist. Launder contaminated clothing before reuse. Where the possibility of HCN gas generation exists, employees should be trained in emergency and rescue procedures. Self-contained breathing apparatus should be readily available for emergency use. Confined spaces that have contained this material should be monitored for the presence of HCN and adequate O_2 levels before entry is permitted.

Eyewash stations and washing facilities should be readily accessible to employees handling this material

Contact lenses pose a special hazard; soft lenses may absorb and all lenses concentrate irritants.

SECTION 9. SPECIAL PRECAUTIONS AND COMMENTS

Store in closed containers away from sources of heat, acids, ammonia, and other incompatibles. Protect containers from physical damage. Process equipment should be designed to prevent inadvertent contact with acids.

Maintain good housekeeping procedures to avoid accumulation of dust. Clean up spills promptly. Avoid dust generation. Follow good hygiene practice. Wash thoroughly after handling and before eating, drinking and smoking.

DO NOT INGEST! AVOID DUST INHALATION AND EYE/SKIN CONTACT.

DOT CLASSIFICATION: Not listed in 49CFR 172.101 or 172.102.

DATA SOURCE(S) CODE (See Glossary) 2, 4, 5, 6, 9, 12, 14, 25, 27, 55, 58, V.

APPROVALS JO Acciocco, 11/85

INDUST. HYGIENE/SAFETY 11-85

MEDICAL REVIEW: Dec 85

