



SAFETY DATA SHEET

1. Identification

Product identifier	POTASSIUM FERRICYANIDE, REAGENT (ACS)	
Other means of identification		
Product code	991	
Synonym(s)	Potassium hexacyanoferrate(III)	
Recommended use	professional, scientific and technical activities: other professional, scientific and technical activities	
Recommended restrictions	None known.	
Manufacturer/Importer/Supplier/Distributor information		
Company name	GFS Chemicals, Inc.	
Address	P.O. Box 245 Powell OH 43065 US	
Telephone	Phone	740-881-5501
	Toll Free	800-858-9682
	Fax	740-881-5989
Website	www.gfschemicals.com	
E-mail	service@gfschemicals.com	
Emergency phone number	Emergency Assistance	Chemtrec 800-424-9300

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Not classified.	
OSHA hazard(s)	Not classified.	
	No hazards resulting from the material as supplied.	
Label elements		
Hazard symbol	No symbol.	
Signal word	Not available.	
Hazard statement	Harmful to aquatic life. Harmful to aquatic life with long lasting effects.	
Precautionary statement		
Prevention	Not available.	
Response	Not available.	
Storage	Not available.	
Disposal	Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.	
Hazard(s) not otherwise classified (HNOC)	Not classified.	
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 3
	Hazardous to the aquatic environment, long-term hazard	Category 3
Supplemental information		
Precautionary statement		
Prevention	Avoid release to the environment.	
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.	

3. Composition/information on ingredients

Substances

Hazardous components	Chemical name	Common name and synonyms	CAS number	%
	POTASSIUM FERRICYANIDE	Potassium hexacyanoferrate(III)	13746-66-2	100

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Move to fresh air. For inhalation of cyanide gas, use amyl nitrite inhaler if breathing. If breathing stops, provide artificial respiration. Call a physician if symptoms develop or persist.
Skin contact	Rinse skin with water/shower. Get medical attention if irritation develops and persists.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Drink 1 or 2 glasses of water. Get medical attention.
Most important symptoms/effects, acute and delayed	Not available.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically.

5. Fire-fighting measures

Suitable extinguishing media	Use extinguishing agent suitable for type of surrounding fire. Water.
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	Irritating and toxic gases or fumes may be released during a fire.
Special protective equipment and precautions for firefighters	Wear suitable protective equipment.
Fire-fighting equipment/instructions	In the event of fire, cool tanks with water spray. Water runoff can cause environmental damage.
Specific methods	Cool containers exposed to flames with water until well after the fire is out.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Wear appropriate personal protective equipment.
Methods and materials for containment and cleaning up	Refer to attached safety data sheets and/or instructions for use. Should not be released into the environment. This product is miscible in water. This material is a water pollutant and should be prevented from contaminating soil or from entering sewage and drainage systems and bodies of water. Stop the flow of material, if this is without risk. Collect spillage. Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation. Following product recovery, flush area with water. Prevent product from entering drains. Small Dry Spills: With clean shovel place material into clean, dry container and cover loosely; move containers from spill area. For waste disposal, see section 13 of the MSDS.
Environmental precautions	Contact local authorities in case of spillage to drain/aquatic environment. Avoid discharge into drains, water courses or onto the ground. Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water.

7. Handling and storage

Precautions for safe handling	Avoid release to the environment. Do not empty into drains.
Conditions for safe storage, including any incompatibilities	Keep container tightly closed. Store in a cool, dry place out of direct sunlight.

8. Exposure controls/personal protection

Occupational exposure limits	No exposure limits noted for ingredient(s).
Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	General ventilation normally adequate.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Safety glasses.

Skin protection	
Hand protection	Wear protective gloves.
Other	Normal work clothing (long sleeved shirts and long pants) is recommended.
Respiratory protection	Respirator must be worn if exposed to dust.
Thermal hazards	Not available.
General hygiene considerations	Wash hands before breaks and immediately after handling the product. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance	Crystalline.
Physical state	Solid.
Form	Solid.
Color	Reddish.
Odor	Odorless.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	Soluble in water.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	1.89 g/cm ³
Molecular formula	K ₃ Fe(CN) ₆
Molecular weight	329.25
Specific gravity	1.89

10. Stability and reactivity

Reactivity	Acidic conditions.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Avoid contact with strong acid as toxic gas (hydrogen cyanide) may be released.
Incompatible materials	Strong acids.
Hazardous decomposition products	Hydrogen cyanide (hydrocyanic acid)

11. Toxicological information

Information on likely routes of exposure

Ingestion	Due to lack of data the classification is not possible.
Inhalation	Due to lack of data the classification is not possible.
Skin contact	Due to lack of data the classification is not possible.
Eye contact	Due to lack of data the classification is not possible.

Symptoms related to the physical, chemical and toxicological characteristics Not available.

Information on toxicological effects

Acute toxicity

Product	Species	Test Results
POTASSIUM FERRICYANIDE (CAS 13746-66-2)		
Acute		
<i>Other</i>		
LD50	Mouse	2970 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Due to lack of data the classification is not possible. May be irritating to the skin.
Serious eye damage/eye irritation	Due to lack of data the classification is not possible. May be irritating to eyes.
Respiratory sensitization	Due to lack of data the classification is not possible.
Skin sensitization	Due to lack of data the classification is not possible.
Germ cell mutagenicity	Due to lack of data the classification is not possible.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
Reproductive toxicity	Due to lack of data the classification is not possible.
Specific target organ toxicity - single exposure	Due to lack of data the classification is not possible.
Specific target organ toxicity - repeated exposure	Due to lack of data the classification is not possible.
Aspiration hazard	Due to lack of data the classification is not possible.

12. Ecological information

Ecotoxicity Harmful to aquatic life with long lasting effects. Accumulation in aquatic organisms is expected. Contains a substance which causes risk of hazardous effects to the environment.

Product	Species	Test Results
POTASSIUM FERRICYANIDE (CAS 13746-66-2)		
Aquatic		
Fish	LC50 Rainbow trout,donaldson trout (Oncorhynchus mykiss)	8.96 - 13.1 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability	None known.
Bioaccumulative potential	Not available.
Mobility in soil	Not available.
Other adverse effects	Not available.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Not available.
Hazardous waste code	Not regulated.

Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

Not regulated as a hazardous material by DOT.

IATA

Not regulated as a dangerous good.

IMDG

Not regulated as a dangerous good.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No information available.

15. Regulatory information

US federal regulations CERCLA/SARA Hazardous Substances - Not applicable.

All components are on the U.S. EPA TSCA Inventory List.

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

Not regulated.

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

Not on regulatory list.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
 Immediate Hazard - No
 Delayed Hazard - No
 Fire Hazard - No
 Pressure Hazard - No
 Reactivity Hazard - No

SARA 302 Extremely hazardous substance No

SARA 311/312 Hazardous chemical No

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

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

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Not listed.

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Not regulated.

DEA Exempt Chemical Mixtures Code Number

Not regulated.

Food and Drug Administration (FDA) Not regulated.

US state regulations California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

US. Massachusetts RTK - Substance List

Not regulated.

US. New Jersey Worker and Community Right-to-Know Act

Not regulated.

US. Pennsylvania RTK - Hazardous Substances

Not regulated.

US. Rhode Island RTK

Not regulated.

US. California Proposition 65**US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance**

Not listed.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s)

16. Other information, including date of preparation or last revision**Issue date** July-18-2014**Version #** 01**Further information** Not available.

Disclaimer The information in the sheet was written based on the best knowledge and experience currently available. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Revision Information Product and Company Identification: Synonyms
 Composition / Information on Ingredients: Disclosure Overrides
 Physical & Chemical Properties: Multiple Properties
 Toxicological Information: Toxicological Data
 Regulatory Information: United States