

Potassium Ferricyanide, Crystal, ACS

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Potassium Ferricyanide, Crystal, ACS

Synonyms/Generic Names: Potassium hexacyanoferrate (III); Red prussiate

Product Number: 4295

Product Use: Industrial, Manufacturing or Laboratory use

Manufacturer: Columbus Chemical Industries, Inc.
N4335 Temkin Rd.
Columbus, WI. 53925

For More Information: 920-623-2140 (Monday-Friday 8:00-4:30)
www.columbuschemical.com

In Case of Emergency Call: CHEMTREC - 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

Hazard Not Otherwise Classified (HNOC): None

Signal Word: None

Pictograms: None

GHS Classification:

Not a hazardous substance according to GHS.

GHS Label Elements, including precautionary statements:

Hazard Statements:

None

Precautionary Statements:

None

Hazards not otherwise classified by GHS: Contact with acids liberates very toxic gas.

Potential Health Effects

Eyes	May cause eye irritation.
Inhalation	May cause respiratory tract irritation.
Skin	May cause skin irritation.
Ingestion	May be harmful if swallowed.

NFPA Ratings

Health	1
Flammability	0
Reactivity	0
Specific hazard	Not Available

HMIS Ratings

Health	1
Fire	0
Reactivity	0

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Potassium Ferricyanide	>99	13746-66-2	237-323-3	K ₃ Fe(CN) ₆	329.24 g/mol

4. FIRST-AID MEASURES

Eyes	Rinse with plenty of water for at least 15 minutes and seek medical attention if irritation persists.
Inhalation	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention if irritation persists.
Skin	Flush with plenty of water and wash using soap. Get medical attention if irritation persists.
Ingestion	Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention if irritation persists.

5. FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media	Product is not flammable. Use appropriate media for adjacent fire. Cool containers with water.
Special protective equipment and precautions for firefighters	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.
Specific hazards arising from the chemical	Emits toxic fumes (carbon oxides, nitrogen oxides, potassium oxides, iron oxides) under fire conditions. (See also Stability and Reactivity section).

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	See section 8 for recommendations on the use of personal protective equipment.
Environmental precautions	Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.
Methods and materials for containment and cleaning up	Pick up and arrange disposal without creating dust. Sweep up and place in suitable, closed containers for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.

7. HANDLING AND STORAGE**Precautions for safe handling**

See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use. Avoid formation of dusts.

Conditions for safe storage, including any incompatibilities

Store in cool, dry well ventilated area. Keep away from incompatible materials (see section 10 for incompatibilities).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION**Occupational exposure controls:**

Component	Exposure Limits	Basis	Entity
Potassium Ferricyanide	5 mg/m ³	PEL	OSHA
	5 mg/m ³	CEIL	ACGIH
	1 mg/m ³	TLV	ACGIH
	5 mg/m ³	CEIL	NIOSH
	4.7 ppm		
	1 mg/m ³	REL	NIOSH

TWA: Time Weighted Average over 8 hours of work.

TLV: Threshold Limit Value over 8 hours of work.

REL: Recommended Exposure Limit

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit during x minutes.

IDLH: Immediately Dangerous to Life or Health

WEEL: Workplace Environmental Exposure Levels

CEIL: Ceiling

Personal Protection

Eyes	Wear chemical safety glasses or goggles.
Inhalation	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
Skin	Wear nitrile or rubber gloves, apron or lab coat.
Other	Not Available

Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	Red crystalline powder.
Odor	Not Available
Odor threshold	Not Available
pH	6.0 – 9.0 at 329 g/l at 25°C (77°F)
Melting point/freezing point	Not Available
Initial boiling point and boiling range	Not Available
Flash point	Not Flammable
Evaporation rate	Not Available
Flammability (solid, gas)	Not Flammable
Upper/lower flammability or explosive limit	Not Explosive
Vapor pressure	Not Available
Vapor density	Not Available
Density	1.89 g/cm ³
Solubility (ies)	Soluble in cold water.
Partition coefficient: n-octanol/water	Not Available
Auto-ignition temperature	Not Available
Decomposition temperature	Not Available

10. STABILITY AND REACTIVITY

Chemical Stability	Stable
Possibility of Hazardous Reactions	Will not occur.
Conditions to Avoid	Not Available
Incompatible Materials	Strong acids, strong oxidizing agents, ammonia, hydrochloric acid, cyanides.
Hazardous Decomposition Products	Carbon oxides, nitrogen oxides, potassium oxides, iron oxides.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Potassium Ferricyanide

Skin	Not Available
Eyes	Not Available
Respiratory	Not Available
Ingestion	LD50 Oral - mouse - 2,970 mg/kg

Carcinogenicity

IARC	No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP	No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Signs & Symptoms of Exposure

Skin	Irritation, redness, itchiness.
Eyes	Irritation, redness, watering eyes, itchiness.
Respiratory	Irritation, coughing, wheezing.
Ingestion	Irritation, nausea, vomiting, diarrhea.

Chronic Toxicity	Not Available
Teratogenicity	Not Available
Mutagenicity	Mutagenic for bacteria and/or yeast. May affect genetic material.
Embryotoxicity	Not Available
Target Organ(s)	Not Available
Reproductive Toxicity	Not Available
Respiratory/Skin Sensitization	Not Available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Potassium Ferricyanide

Aquatic Vertebrate	LC50 - <i>Oncorhynchus mykiss</i> (rainbow trout) - 869 mg/l - 96 h
Aquatic Invertebrate	EC50 - <i>Daphnia magna</i> (Water flea) - 549 mg/l - 48 h
Terrestrial	Not Available

Persistence and Degradability	Not Available
Bioaccumulative Potential	Not Available
Mobility in Soil	Not Available

PBT and vPvB Assessment	Not Available
Other Adverse Effects	Not Available

13. DISPOSAL CONSIDERATIONS

Waste Product or Residues	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product or residue.
Product Containers	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

14. TRANSPORTATION INFORMATION

US DOT	Not Dangerous Goods
TDG	Not Dangerous Goods
IMDG	Not Dangerous Goods
Marine Pollutant	No
IATA/ICAO	Not Dangerous Goods

15. REGULATORY INFORMATION

TSCA Inventory Status	All ingredients are listed on the TSCA Active inventory.
DSL / NDSL	All ingredients are listed on the DSL inventory.
California Proposition 65	Not Listed
Rhode Island: Hazardous Substance List	Not Listed
Massachusetts: Toxic or Hazardous Substance List, Right to Know	Not Listed
Pennsylvania: Hazardous Substance List	Not Listed
New Jersey: Right to Know Hazardous Substance List	Not Listed
SARA 302	Not Listed
SARA 304	Not Listed
SARA 311	No SARA Hazards
SARA 312	No SARA Hazards
SARA 313	Not Listed
WHMIS Canada	Not Listed

16. OTHER INFORMATION

Revision	Date
Original	08/07/2012
Revision 1	12/10/2015
Revision 2	10/29/2021

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