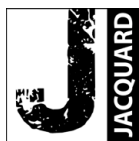


SAFETY DATA SHEET (SDS)



Jacquard Products
Manufactured by Rupert, Gibbon & Spider, Inc.
P.O. Box 425 | Healdsburg, CA 95448
800.442.0455 | Fax: 707.433.4906
www.jacquardproducts.com

Potassium Ferricyanide - Pg 1

Revision Date: 02/13/2018

SECTION 1 - CHEMICAL, PRODUCT & COMPANY INFORMATION

Product Name:	POTASSIUM FERRICYANIDE	
Product Number/Code:	CHM0101, CHM1101, CHM2101, JCY1100	
Recommended Use:	Creating Cyanotype Prints	
Synonym(s)/Generic Name(s):	Potassium hexacyanoferrate(III), Red prussiate	
Restrictions on use:	None known	
Manufacturer:	Rupert, Gibbon & Spider, Inc. 1147 Healdsburg Ave. Healdsburg, CA 95448 1-800-442-0455 / 707-433-9577	
Emergency Number:	ChemTel, Inc. - Contract #MIS9128344	
	North America: 1-800-255-3924	International: 1-813-248-0585

SECTION 2 - HAZARD(S) IDENTIFICATION

Classification of the substance or mixture:	
Hazard Classification	Not a hazardous substance or mixture.
GHS Label Elements, including precautionary statements:	Not a hazardous substance or mixture.
Pictogram:	None.
Signal Word:	None.
Hazards not otherwise classified (HNOC) or not covered by GHS:	Contact with acids liberates very toxic gas.

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

Substances	
Synonyms:	Red prussiate, Potassium ferricyanide, Potassium hexacyanoferrate(III)
Formula:	$C_6FeK_3N_6$
Molecular weight:	329.24 g/mol
CAS-No:	13746-66-2
EC-No.:	237-323-3
Hazardous components	
Component:	Tripotassium hexacyanoferrate
Concentration:	<=100%

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SECTION 4 - FIRST AID MEASURES

Description of first aid measures:	
General advice:	Consult a physician. Show this safety data sheet to the doctor in attendance.
If inhaled:	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact:	Wash off with soap and plenty of water. Consult a physician.
In case of eye contact:	Flush eyes with water as a precaution.
If swallowed:	Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
Most important symptoms and effects, both acute and delayed	The most important known symptoms and effects are described in the labeling (see section 2) and/or in section 11.
Indication of immediate medical attention and special treatment needed:	No data available.

SECTION 5 - FIREFIGHTING MEASURES

Extinguishing media:	
Suitable extinguishing media:	Dry powder.
Specific hazards arising from the chemical:	No data available.
Advice for firefighters:	Wear self-contained breathing apparatus for firefighting if necessary.
Further information:	No data available.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:	Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Avoid breathing dust. For personal protection see section 8.
Environmental precautions:	Do not let product enter drains.
Methods and materials for containment and clean up:	Pick up and arrange disposal without creating dust. Sweep up and shovel. Do not flush with water. Keep in suitable, closed containers for disposal.
Reference to other sections:	For disposal see section 13.

SECTION 7 - HANDLING AND STORAGE

Precautions for safe handling:	Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.
Conditions for safe storage, including any incompatibilities:	Keep container tightly closed in a dry and well-ventilated place. Never allow product to get in contact with water during storage. Do not store near acids.
Specific end use(s):	Apart from the uses mentioned in section 1 no other specific uses are stipulated.

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SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters:				
Component	CAS-No.	Value	Control parameters	Basis
Tripotassium hexacyanoferrate	13746-66-2	C	5.000000 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
Remarks		Upper Respiratory Tract irritation Headache Nausea Thyroid effects Danger of cutaneous absorption varies		
		C	5.000000 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		Upper Respiratory Tract irritation Headache Nausea Thyroid effects Danger of cutaneous absorption varies		
		TWA	1.000000 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		Upper Respiratory Tract irritation Skin irritation varies		
		C	4.700000 ppm 5.000000 mg/m3	USA. NIOSH Recommended Exposure Limits
		10 minute ceiling value		
		TWA	1.000000 mg/m3	USA. NIOSH Recommended Exposure Limits
		TWA	5 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		CAS number varies with compound Skin designation		
		C	5 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		Upper Respiratory Tract irritation Headache Nausea Thyroid effects Danger of cutaneous absorption varies		
		TWA	1 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		Upper Respiratory Tract irritation Skin irritation varies		
		C	4.7 ppm 5 mg/m3	USA. NIOSH Recommended Exposure Limits
		10 minute ceiling value		
		TWA	1 mg/m3	USA. NIOSH Recommended Exposure Limits
		PEL	1 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)

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SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION (CONT'D)

Appropriate engineering controls:	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
Personal protective equipment	
Eye/face protection:	Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Skin protection:	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
Full contact:	Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: 480 min Material tested: Dermatrill® (KCL 740 / Aldrich Z677272, Size M)
Splash contact:	Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: 480 min Material tested: Dermatrill® (KCL 740 / Aldrich Z677272, Size M)
Data source:	KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374 If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.
Body protection:	Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific workplace. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory protection:	Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Control of environmental exposure:	Do not let product enter drains.

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SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Important health, safety and environmental information:	
Appearance and physical state:	Crystalline/Powder
Odor:	No data available.
Odor threshold:	No data available.
pH:	6.0 - 9 at 329 g/l at 25 °C (77 °F)
Melting point/freezing point:	No data available.
Initial boiling point and boiling range:	No data available.
Flash point:	Not applicable.
Evaporation rate:	No data available.
Flammability (solid, gas):	No data available.
Upper/lower flammability or explosive limits:	No data available.
Vapour pressure:	No data available.
Vapour density:	No data available.
Relative density:	1.890 g/cm ³
Water solubility:	329 g/l at 20 °C (68 °F) - completely soluble
Partition coefficient: n-octanol/water:	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.
Explosive properties:	No data available.
Oxidizing properties:	No data available.

SECTION 10 - STABILITY AND REACTIVITY

Reactivity:	Contact with acids liberates very toxic gas.
Chemical stability:	May discolor on exposure to light. Stable under recommended storage conditions.
Possibility of hazardous reactions:	No data available.
Conditions to avoid:	No data available.
Incompatible materials:	Strong acids, strong oxidizing agents, ammonia, hydrochloric acid, cyanides.
Hazardous decomposition products:	Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NO _x), Potassium oxides, Iron oxides
Other decomposition products:	No data available.
In the event of fire:	See section 5.

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SECTION 11 - TOXICOLOGICAL INFORMATION

Information on toxicological effects:	
Acute toxicity (list all possible routes of exposure)	
Oral:	Acute toxicity: LD50 Oral - Mouse - 2,970 mg/kg
Dermal:	No data available.
Inhalation:	No data available.
Repeated dose toxicity:	No data available.
Skin corrosion / irritation:	No data available.
Serious eye damage / eye irritation:	No data available.
Respiratory or skin sensitization:	No data available.
Germ cell mutagenicity:	No data available.
Carcinogenicity:	
IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
US. National Toxicology Program (NTP) Report on Carcinogens	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity:	No data available.
Specific target organ toxicity - single exposure:	No data available.
Specific target organ toxicity - repeated exposure:	No data available.
Aspiration hazard:	No data available.
Other effects:	RTECS: LJ8225000 To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity (Acute hazards to the aquatic environment):	
Fish:	
Toxicity to fish:	LC50 - Oncorhynchus mykiss (rainbow trout) - 869 mg/l - 96 h
Aquatic invertebrates:	
Daphnia and other aquatic invertebrates:	EC50 - Daphnia magna (Water flea) - 549 mg/l - 48 h
Persistence and degradability:	No data available.
Bioaccumulative potential:	No data available.
Mobility in soil:	No data available.
Results of PBT and vPvB assessment:	PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.
Other adverse effects:	No data available.

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SECTION 13 - DISPOSAL CONSIDERATIONS

Waste treatment methods	
Product:	Offer surplus and non-recyclable solutions to a licensed disposal company.
Contaminated packaging:	Dispose of as unused product.

SECTION 14 - TRANSPORT INFORMATION

DOT:	
UN number:	3007
UN proper shipping name:	Environmentally hazardous substances, solid, n.o.s. (Tripotassium hexacyanoferrate)
Transport hazard class(es):	
Class:	9
Reportable Quantity (RQ):	---
Packing group:	III
Poison Inhalation Hazard:	No
IMDG:	Not dangerous goods
IATA:	Not dangerous goods

SECTION 15 - REGULATORY INFORMATION

SARA 302 Components:	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313 Components:	This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
SARA 311/312 Hazards:	No SARA Hazards
Massachusetts Right To Know Components:	No components are subject to the Massachusetts Right to Know Act.

SECTION 16 - OTHER INFORMATION

HMIS Rating:	
Health Hazard:	I
Chronic Health Hazard:	---
Flammability:	0
Physical Hazard:	0
NFPA Rating:	
Health Hazard:	0
Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; *Chronic health effect	

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Disclaimer:

The information contained in this SDS is based on data from sources considered to be reliable but Rupert, Gibbon & Spider, Inc. does not guarantee the accuracy or completeness thereof. Rupert, Gibbon & Spider, Inc. urges each customer or recipient of this SDS to study it carefully to become aware of and understand the hazards associated with this product. The reader should consider consulting reference works or individuals who are experts in ventilation, toxicology or fire and understand the data in this SDS.

Revision Date: 02/13/2018

National Chemical Inventories:	
All components of this product are listed on the following chemical substance inventories: TSCA (USA)	
DSL	(Canada)
EINECS	(Europe)
ENCS	(Japan) ECL
	(Korea)
AICS	(Australia) NZIoC
	(New Zealand)
PICCS	(Philippines)
IECSC	(China)

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Abbreviations:	
ACGIH	American Conference of Governmental Industrial Hygienists
ADR	International carriage of Dangerous goods by Road
AICS	Australian Inventory of Chemical Substances
ATE	Acute Toxicity Estimate
BfR	Bundesinstitut für Risikobewertung recommendations for food contact materials
BCF	Bioconcentration Factor
BOD5	5-day Biochemical Oxygen Demand
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CLP	Classification, Labeling and Packaging regulation
COD	Chemical Oxygen Demand DOT Department of Transportation DSL Domestic Substances List
EINECS	European Inventory of Existing Chemical Substances
ECL	Existing Chemicals List (Korea)
ENCS	Existing and New Chemical Substances Inventory (Japan)
EN 689	Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy.
ERG	Emergency Response Guide
GHS	Globally Harmonized System
HMIS	Hazardous Materials Information System IARC International Agency for Research on Cancer IATA International Air Transport Association
ICAO	International Civil Aviation Organization IDLH Immediately Dangerous to Life and Health IMDG International Maritime Dangerous Goods
LD50	Lethal Dose to 50% of test animal population
MAK	Maximale Arbeitsplatz Konzentration
NTP	National Toxicology Program
OEL	Occupational Exposure Limit
OSHA	Occupational Safety & Health Administration
PBT	Persistent, Bioaccumulative and Toxic vPvB Very Persistent and Very Bioaccumulative PEL Permissible exposure limit
PICCS	Philippine Inventory of Commercial Chemical Substances
PNEC	Predicted No Effect Concentration
REACH	Registration, Evaluation and Authorization of Chemical Substances
RID	International carriage of dangerous goods by Rail SARA Superfund Amendments and Reauthorization Act STEL Short Term Exposure Limit
SVHC	Substance of Very High Concern
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
TWA	Time Weighted Average
VOC	Volatile Organic Compound
WGK	Wassergefährdungsklasse (Water Hazard Class) WHMIS Workplace Hazardous Material Identification System