

**Potassium hexacyanoferrate(III)**

31253-250G

Version 2.2

Revision Date 19.09.2022

Supersedes 1

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

**1.1. Product identifier**

Product name : Potassium hexacyanoferrate(III)  
SDS-number : 000000020692  
Type of product : Substance  
Remarks : SDS according to Art. 31 of Regulation (EC) 1907/2006.  
  
Chemical name : Tripotassium hexacyanoferrate  
CAS-No. : 13746-66-2  
REACH Registration Number : no data available

**1.2. Relevant identified uses of the substance or mixture and uses advised against**

Use of the Substance/Mixture : Laboratory chemicals  
Uses advised against : none

**1.3. Details of the supplier of the safety data sheet**

Company	: Honeywell International Inc. 115 Tabor Road 07950-2546 Morris Plains USA	Honeywell International, Inc. 115 Tabor Road Morris Plains, NJ 07950-2546 USA
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Telephone :  
For further information, please contact: : SafetyDataSheet@Honeywell.com

**1.4. Emergency telephone number**

Emergency telephone number : +1-703-527-3887 (ChemTrec-Transport)  
+1-303-389-1414 (Medical)  
Country based Poison : see chapter 15.1

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Control Center

**SECTION 2: Hazards identification**


**2.1. Classification of the substance or mixture**

**REGULATION (EC) No 1272/2008**

Eye irritation Category 2  
H319 Causes serious eye irritation.  
Long-term (chronic) aquatic hazard Category 2  
H411 Toxic to aquatic life with long lasting effects.

**2.2. Label elements**

**REGULATION (EC) No 1272/2008**

Hazard pictograms	:	
Signal word	:	Warning
Hazard statements	:	H319 Causes serious eye irritation. H411 Toxic to aquatic life with long lasting effects. EUH032 Contact with acids liberates very toxic gas.
Precautionary statements	:	P264 Wash skin thoroughly after handling. P273 Avoid release to the environment. P280 Wear eye protection/ face protection. P337 + P313 If eye irritation persists: Get medical advice/ attention. P391 Collect spillage. P501 Dispose of contents/ container to an approved waste disposal plant.

**2.3. Other hazards**

Contact with acids liberates very toxic gas. Results of PBT and vPvB assessment, see chapter 12.5.

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**SECTION 3: Composition/information on ingredients**

**3.1. Substance**

Chemical name	CAS-No. Index-No. REACH Registration Number EC-No.	Classification 1272/2008	Concentration	Remarks
Tripotassium hexacyanoferrate	13746-66-2 237-323-3	Eye Irrit. 2; H319 Aquatic Chronic 2; H411	100 %	

**3.2. Mixture**

Not applicable

Occupational Exposure Limit(s), if available, are listed in Section 8.  
For the full text of the H-Statements mentioned in this Section, see Section 16.

**SECTION 4: First aid measures**

**4.1 Description of first aid measures**

*General advice:*

First aider needs to protect himself. Move out of dangerous area. Take off all contaminated clothing immediately.

*Inhalation:*

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Use oxygen as required, provided a qualified operator is present. Call a physician.

*Skin contact:*

Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Call a physician if irritation develops or persists.

*Eye contact:*

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Protect unharmed eye. Call a physician if irritation develops or persists.

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### *Ingestion:*

Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. If victim is fully conscious, give a cupful of water. Call a physician.

### **4.2. Most important symptoms and effects, both acute and delayed**

No data available

### **4.3. Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

See Section 11 for more detailed information on health effects and symptoms. :

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## **SECTION 5: Firefighting measures**

### **5.1. Extinguishing media**

#### *Suitable extinguishing media:*

Water spray  
Foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry powder

#### *Extinguishing media which shall not be used for safety reasons:*

Do not use a solid water stream as it may scatter and spread fire.

### **5.2. Special hazards arising from the substance or mixture**

Some risk may be expected of corrosive and toxic decomposition products.

Heating or fire can release toxic gas.  
carbon oxides (CO, CO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>).  
Hydrogen cyanide (hydrocyanic acid)  
The product itself does not burn.

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### 5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit.  
No unprotected exposed skin areas.  
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Do not use a solid water stream as it may scatter and spread fire.

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## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protective equipment. Unprotected persons must be kept away. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Do not breathe dust.

### 6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Discharge into the environment must be avoided. Do not flush into surface water or sanitary sewer system.

### 6.3. Methods and materials for containment and cleaning up

Use mechanical handling equipment.  
Pick for disposal in tightly closed containers

### 6.4. Reference to other sections

For personal protection see section 8.

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## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

*Advice on safe handling:*

Exhaust ventilation at the object is necessary. Wear personal protective equipment. Never return unused material to storage receptacle. Protect against light.

*Advice on protection against fire and explosion:*

Normal measures for preventive fire protection.

*Hygiene measures:*

When using do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product. Keep working clothes separately. Remove and wash contaminated clothing before re-use.

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**7.2. Conditions for safe storage, including any incompatibilities**

*Requirements for storage areas and containers:*

Keep only in the original container, tightly closed, in a well ventilated place.

*Further information on storage conditions:*

Do not leave vessels/containers open Avoid product residues in/on containers. Protect against light.

**7.3. Specific end use(s)**

no additional data available

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

**Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

**DNEL/ PNEC-Values**

No DNEL-data available.

Tripotassium hexacyanoferrate					No data available
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No PNEC data available.

Tripotassium hexacyanoferrate	:				No data available
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**8.2. Exposure controls**

**Occupational exposure controls**

The Personal Protective Equipment must be in accordance with EN standards:respirator EN 136, 140, 149; safety glasses EN 166; protective suit: EN 340, 463, 468, 943-1, 943-2; gloves EN 374, 511; safety shoes EN-ISO 20345.

Do not breathe dust.

**Engineering measures**

Use with local exhaust ventilation.

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### Personal protective equipment

#### *Respiratory protection:*

In the case of dust or aerosol formation use respirator with an approved filter.

#### *Hand protection:*

Glove material: Natural Latex

Break through time: > 480 min

Glove thickness: 0,6 mm

Lapren®706

Gloves must be inspected prior to use.

Replace when worn.

Remarks:Supplementary note: The specifications are based on information and tests from similar substances by analogy.

Due to varying conditions ( e.g.temperature or other strains) it must be considered that the usage of a chemical protective glove in practice may be much shorter than the permeation time determined in accordance with EN 374.

Since actual conditions of practical use often deviate from standardised conditions according EN 374 the glove manufacturer recommends to use the chemical protective glove in practice not longer than 50% of the recommended permeation time.

Manufacturer's directions for use should be observed because of great diversity of types .

Suitable gloves tested according EN 374 are supplied e.g. from KCL GmbH, D-36124 Eichenzell, Vertrieb@kcl.de

#### *Eye protection:*

Tightly fitting safety goggles

#### *Skin and body protection:*

Wear suitable protective equipment.

Work uniform or laboratory coat.

Wear as appropriate:

Protective suit

### Environmental exposure controls

Handle in accordance with local environmental regulations and good industrial practices.

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## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : solid

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Colour	:	red
Odour	:	odourless
molecular weight	:	329,26 g/mol
Melting point/range	:	Decomposes without melting.
Boiling point/boiling range	:	Not applicable Decomposes on heating.
Flammability	:	The product is not flammable.
Upper explosion limit	:	Not applicable
Lower explosion limit	:	Not applicable
Flash point	:	Not applicable
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	> 300 °C Decomposition temperature
pH	:	6 Concentration: 50 g/l at 20 °C
Auto-ignition temperature	:	not auto-flammable
Viscosity, kinematic	:	No data available
Water solubility	:	464 g/l at 20 °C
Partition coefficient: n-octanol/water	:	No data available
Vapour pressure	:	negligible
Density	:	ca. 1,85 g/cm <sup>3</sup> at 20 °C



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Bulk density : ca. 1.050 kg/m<sup>3</sup>

Relative vapour density : No data available

**9.2 Other Information**

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Evaporation rate : No data available

Viscosity, dynamic : No data available

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**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

Stable under recommended storage conditions.

**10.2. Chemical stability**

> 300 °C  
Decomposition temperature

**10.3. Possibility of hazardous reactions**

Hazardous polymerisation does not occur.  
Decomposes on heating.  
Contact with acids liberates toxic gas.

**10.4. Conditions to avoid**

Avoid dust formation.  
Protect from heat/overheating.

**10.5. Incompatible materials**

Strong oxidizing agents

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Acids

**10.6. Hazardous decomposition products**

Hydrogen cyanide (hydrocyanic acid)  
carbon oxides (CO, CO<sub>2</sub> ).  
Nitrogen oxides (NO<sub>x</sub>)

**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

*Acute oral toxicity:*  
No data available

*Acute dermal toxicity:*  
No data available

*Acute inhalation toxicity:*  
No data available

*Skin irritation:*  
No data available

*Eye irritation:*  
Species: Rabbit  
Result: Eye irritation  
Method: OECD Test Guideline 405

*Respiratory or skin sensitisation:*  
No data available

*Aspiration hazard:*  
No data available

**11.2. Information on other hazards**

Endocrine disrupting properties  
No data available

*Other information:*  
Does not require a hazard warning label, but the normal safety precautions for handling of chemicals must be observed.

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**SECTION 12: Ecological information**

**12.1. Toxicity**

*Toxicity to fish:*

LC50

Species: Cyprinus carpio (Carp)

Value: 100 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

*Toxicity to aquatic plants:*

EC50

Species: Pseudokirchneriella subcapitata (microalgae)

Value: 1,7 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

*Toxicity to aquatic invertebrates:*

EC50

Species: Daphnia magna (Water flea)

Value: 59 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

**12.2. Persistence and degradability**

No data available

**12.3. Bioaccumulative potential**

No data available

**12.4. Mobility in soil**

No data available

**12.5. Results of PBT and vPvB assessment**

No data available

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**12.6. Endocrine disrupting properties**

No data available

**12.7. Other adverse effects**

Do not flush into surface water or sanitary sewer system.  
We have no quantitative data concerning the ecological effects of this product.

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

*Product:*

Dispose according to legal requirements.

*Packaging:*

Legal requirements are to be considered in regard of reuse or disposal of used packaging materials

*Further information:*

Provisions relating to waste:  
EC Directive 2006/12/EC; 2008/98/EEC  
Regulation No. 1013/2006

For personal protection see section 8.

**SECTION 14: Transport information**

**14.1 UN number**

ADR/RID:3077

IMDG:3077

IATA:3077

**14.2 UN proper shipping name**

ADR/RID:ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(TRIPOTASSIUM  
HEXACYANOFERRATE)

IMDG:ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(TRIPOTASSIUM  
HEXACYANOFERRATE)

IATA:Environmentally hazardous substance, solid, n.o.s.(Tripotassium hexacyanoferrate)

**14.3 Transport hazard class(es)**

ADR/RID: 9

IMDG: 9

IATA: 9

**14.4 Packaging group**

ADR/RID: III

IMDG: III

IATA: III

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**14.5 Environmental hazards**

ADR/RID: yes

Marine pollutant: yes

**14.6 Special precautions for user**

Not regulated for transport when single and combination packagings are <5L for liquids or <5kg for solids per ADR 2.2.9.2.10, IMDG 2.10.3 and IATA SP A197).

**14.7 Maritime transport in bulk according to IMO instruments**

No data available

**SECTION 15: Regulatory information**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

Basis	Value	Remarks
Substances of very high concern (SVHC)		This product does not contain substances of very high concern according to Regulation (EC) No Article 57 above the respective regulatory 1907/2006 (REACH), concentration limit of $\geq 0.1\%$ (w/w).

**Poison Control Center**

Country	Phone Number
Austria	+4314064343
Belgium	070 245245
Bulgaria	(+35929154233
Croatia	(+3851)23-48-342
Cyprus	+357 2240 5611
Czech Republic	+420224919293; +420224915402
Denmark	82121212
Estonia	16662; (+372)6269390

Country	Phone Number
Liechtenstein	+41 442515151
Lithuania	+370532362052
Luxembourg	070245245; (+352)80002-5500
Malta	+356 2395 2000
Netherlands	030-2748888
Norway	22591300
Poland	+48 42 25 38 400
Portugal	800250250

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Finland	9471977
France	+33(0)145425959
Greece	+30 210 779 3777
Hungary	(+36-80)201-199
Iceland	5432222
Ireland	+353(1)8092166
Italy	0382 24444
Germany	Berlin : 030/19240
	Bonn : 0228/19240
	Erfurt : 0361/730730
	Freiburg : 0761/19240
	Göttingen : 0551/19240
	Homburg : 06841/19240
	Mainz : 06131/19240
Munich : 089/19240	
Latvia	+37167042473

Romania	+40 21 318 3606
Slovakia (NTIC)	+421 2 54 774 166
Slovenia	+386 1 400 6051
Spain	+34915620420
Sweden	112 (begär Giftinformation);+46104566786
Switzerland	145
United Kingdom	(+44) 844 892 0111

**Other inventory information**

US. Toxic Substances Control Act  
On TSCA Inventory

Australia. Inventory of Industrial Chemicals (AIIC), as amended  
On the inventory, or in compliance with the inventory

Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL)  
All components of this product are on the Canadian DSL

Japan. Kashin-Hou Law List  
On the inventory, or in compliance with the inventory

Korea. Existing Chemicals Inventory (KECI)  
On the inventory, or in compliance with the inventory

Philippines. Inventory of Chemicals and Chemical Substances (PICCS)

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On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances (IECSC)  
On the inventory, or in compliance with the inventory

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand  
On the inventory, or in compliance with the inventory

Taiwan Chemical Substance Inventory (TCSI)  
On the inventory, or in compliance with the inventory

**15.2 Chemical safety assessment**

A Chemical Safety Assessment has not been carried out.

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**SECTION 16: Other information**

**Text of H-statements referred to under heading 3**

Tripotassium : H319 Causes serious eye irritation.  
hexacyanoferrate H411 Toxic to aquatic life with long lasting effects.

**Further information**

All directives and regulations refer to amended versions.  
Vertical lines in the left hand margin indicate a relevant amendment from the previous version.

Abbreviations:

EC European Community  
CAS Chemical Abstracts Service  
DNEL Derived no effect level  
PNEC Predicted no effect level  
vPvB Very persistent and very bioaccumulative substance  
PBT Persistent, bioaccumulative und toxic substance

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. 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

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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. Final determination of suitability of any material is the sole responsibility of the user.  
This information should not constitute a guarantee for any specific product properties.

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