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according to 1907/2006/EC, Article 31

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

· **1.1 Product identifier**

· **Trade name: Tripotassium hexacyanoferrate**

· **Article number:** 1610
· **CAS Number:**
13746-66-2
· **EC number:**
237-323-3
· **Registration number** 01-2120787462-46-XXXX
· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
· **Sector of Use**
SU24 Scientific research and development
SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
· **Application of the substance / the mixture**
Chemical analytics
Laboratory chemicals
Commercial use

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Th. Geyer GmbH & Co. KG
Dornierstr. 4 – 6
D-71272 Renningen

Tel.: +49(0)7159-1637-0, Fax:+49 (0)7159/18417
www.thgeyer.de
sicherheitsdatenblaetter@thgeyer.de

· **Further information obtainable from:** Product management department

· **1.4 Emergency telephone number:**
National Poisons Information Service
City Hospital
Dudley Road
Birmingham B18 7QH
Tel.:Emergency: (00 44) 87 06 00 62 66
Members of the public seeking specific information on poisons should contact:
In England and Wales: NHS 111 - dial 111
In Scotland: NHS 24 - dial 111

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**
The substance is not classified, according to the GB CLP regulation.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008** Void
· **Hazard pictograms** Void
· **Signal word** Void
· **Hazard statements** Void

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· **2.3 Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

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SECTION 3: Composition/information on ingredients

· **3.1 Substances**
· **CAS No. Description**
CAS: 13746-66-2 tripotassium hexacyanoferrate
· **Identification number(s)**
· **EC number:** 237-323-3

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SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information:**
First aider needs to protect himself.
Immediately remove any clothing soiled by the product.
· **After inhalation:**
Remove person from danger zone.
Supply fresh air.
Seek medical treatment.
· **After skin contact:**
Wash with plenty of soap and water, take off soiled clothes and shoes.
After prolonged contact (accidental/forced) or any signs of skin changes (redness or other signs of inflammation), consult a doctor.
· **After eye contact:**
Spread eyelids, rinse eyes thoroughly with water (15 min.)
Protect unharmed eye.
Seek immediate medical advice.
· **After swallowing:**
Rinse out mouth and then drink plenty of water.
Induce vomiting, if person is conscious. Seek medical help.
A person vomiting while laying on their back should be turned onto their side.
· **Information for doctor:** Please observe safety data sheet/label.
· **4.2 Most important symptoms and effects, both acute and delayed**
Cramp
Gastric or intestinal disorders
Nausea
Vomiting
· **4.3 Indication of any immediate medical attention and special treatment needed**
Monitor circulation.
In case of lung irritation, administer glucocorticoid dose aerosol.
If swallowed, gastric irrigation with added, activated carbon.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
· **For safety reasons unsuitable extinguishing agents:** Water with full jet.
· **5.2 Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
In case of fire, the following can be released:
Hydrogen cyanide (HCN)

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· **5.3 Advice for firefighters**
· **Protective equipment:**
Wear self-contained respiratory protective device.
Do not inhale explosion gases or combustion gases.
· **Additional information**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Safely prevent extinguishing water from entering groundwater or surface water.

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SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation.
Avoid formation of dust.
Use respiratory protective device against the effects of fumes/dust/aerosol.
Do not breathe dust.
Avoid contact with eyes and skin.
Clear the danger zone.
· **6.2 Environmental precautions:** Do not allow to enter sewers/surface or ground water.
· **6.3 Methods and material for containment and cleaning up:**
Cover the sewerage system.
Prevent spreading over an area (e.g. by damming or oil booms).
Dispose of the material collected according to regulations.
Pick up dry.
Avoid dust formation.
· **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
Store in cool, dry place in tightly closed receptacles.
Keep away from heat and direct sunlight.
Apply the general protective and hygienic measures when handling chemicals.
No special measures required.
· **Information about fire - and explosion protection:**
Substance itself does not burn, adapt extinguishing measures to surroundings

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
Prevent any seepage into the ground.
Store only in the original receptacle.
· **Information about storage in one common storage facility:** Store away from water.
· **Further information about storage conditions:**
Store in dry conditions.
Protect from humidity and water.
· **Storage class:** 13
· **7.3 Specific end use(s)** No further relevant information available.

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SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**	
CAS: 13746-66-2 tripotassium hexacyanoferrate	
WEL	Long-term value: 5 mg/m³ as CN; Sk

· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**
· **Appropriate engineering controls** No further data; see section 7.
· **Individual protection measures, such as personal protective equipment**
· **General protective and hygienic measures:**
The usual precautionary measures are to be adhered to when handling chemicals.
· **Respiratory protection:** Not necessary if room is well-ventilated.
· **Hand protection**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
· **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
NBR: Acrylonitrile butadiene rubber
Material thickness > 0.11 mm
· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
Level 6 for applications > 480 min
· **Eye/face protection**

Safety glasses

· **Body protection:**

Protective work clothing (e. g. safety shoes EN ISO 20345, long-sleeved protective working garments).

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SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**
· **General Information**

· **Physical state**	Solid
· **Colour:**	Not determined.
· **Odour:**	Characteristic
· **Melting point/freezing point:**	Undetermined.
· **Boiling point or initial boiling point and boiling range**	Undetermined.

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· **Flammability**	Product is not flammable.
· **Lower and upper explosion limit**	
· **Lower:**	Not determined.
· **Upper:**	Not determined.
· **Flash point:**	Not applicable.
· **Decomposition temperature:**	Not determined.
· **pH**	~6
· **Viscosity:**	
· **Kinematic viscosity**	Not applicable.
· **Dynamic:**	Not applicable.
· **Solubility**	
· **water at 20 °C:**	464 g/l
· **Partition coefficient n-octanol/water (log value)**	Not determined.
· **Vapour pressure:**	Not applicable.
· **Density and/or relative density**	
· **Density at 20 °C:**	1.85 g/cm³
	Not determined.
· **Relative density**	Not determined.
· **Vapour density**	Not applicable.
· **Particle characteristics**	
See section 3.	

· **9.2 Other information**	
· **Appearance:**	
· **Form:**	Solid material
· **Important information on protection of health and environment, and on safety.**	
· **Ignition temperature:**	Not determined.
· **Explosive properties:**	Product does not present an explosion hazard.
· **Molecular weight**	329.26 g/mol
· **Change in condition**	
· **Evaporation rate**	Not applicable.

· **Information with regard to physical hazard classes**	
· **Explosives**	Void
· **Flammable gases**	Void
· **Aerosols**	Void
· **Oxidising gases**	Void
· **Gases under pressure**	Void
· **Flammable liquids**	Void
· **Flammable solids**	Void
· **Self-reactive substances and mixtures**	Void
· **Pyrophoric liquids**	Void
· **Pyrophoric solids**	Void
· **Self-heating substances and mixtures**	Void
· **Substances and mixtures, which emit flammable gases in contact with water**	Void
· **Oxidising liquids**	Void
· **Oxidising solids**	Void
· **Organic peroxides**	Void
· **Corrosive to metals**	Void
· **Desensitised explosives**	Void

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SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.
· **10.2 Chemical stability** Stable when stored and handled properly.
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **10.3 Possibility of hazardous reactions** Reacts with acids.
· **10.4 Conditions to avoid** Protect from moisture.
· **10.5 Incompatible materials:** Avoid contact with other chemicals.
· **10.6 Hazardous decomposition products:**
Hydrogen cyanide (prussic acid)
Carbon monoxide
Poisonous gases/vapours
Carbon monoxide and carbon dioxide

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SECTION 11: Toxicological information

· **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
· **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**		
Oral	LD50	2,970 mg/kg (mouse)

· **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
· **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
· **Carcinogenicity** Based on available data, the classification criteria are not met.
· **Reproductive toxicity** Based on available data, the classification criteria are not met.
· **STOT-single exposure** Based on available data, the classification criteria are not met.
· **STOT-repeated exposure** Based on available data, the classification criteria are not met.
· **Aspiration hazard** Based on available data, the classification criteria are not met.
· **Subacute to chronic toxicity:** -
· **11.2 Information on other hazards**
· **Endocrine disrupting properties** Substance is not listed.

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SECTION 12: Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **12.2 Persistence and degradability** No further relevant information available.
· **12.3 Bioaccumulative potential** No further relevant information available.
· **12.4 Mobility in soil** No further relevant information available.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **12.6 Endocrine disrupting properties**
The product does not contain substances with endocrine disrupting properties.
· **12.7 Other adverse effects**
· **Remark:**
Toxic for fish
Toxic for water fleas
Toxic for algae
· **Additional ecological information:**
· **General notes:**
Water hazard class 2 (German Regulation) (Assessment by list): hazardous for water
Do not allow product to reach ground water, water course or sewage system.

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Danger to drinking water if even small quantities leak into the ground.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods** Observe local (country-specific) regulations and laws.
· **Recommendation**
Smaller quantities can be disposed of with household waste.
Chemicals must be disposed of in accordance with the respective national regulations.

· **European waste catalogue**	
06 00 00	WASTES FROM INORGANIC CHEMICAL PROCESSES
06 13 00	wastes from inorganic chemical processes not otherwise specified
06 13 99	wastes not otherwise specified

· **Uncleaned packaging:**
· **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

· **14.1 UN number or ID number**	
· **ADR, ADN, IMDG, IATA**	not regulated
· **14.2 UN proper shipping name**	
· **ADR, ADN, IMDG, IATA**	not regulated
· **14.3 Transport hazard class(es)**	
· **ADR, ADN, IMDG, IATA**	
· **Class**	not regulated
· **14.4 Packing group**	
· **ADR, IMDG, IATA**	not regulated
· **14.5 Environmental hazards:**	Not applicable.
· **14.6 Special precautions for user**	Not applicable.
· **14.7 Maritime transport in bulk according to IMO instruments**	Not applicable.
· **UN "Model Regulation":**	not regulated

SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **Inventory of Hazardous Chemicals** Substance is not listed.

· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** Substance is not listed.
· **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**
Substance is not listed.
· **REGULATION (EU) 2019/1148**
· **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**
Substance is not listed.
· **Annex II - REPORTABLE EXPLOSIVES PRECURSORS** Substance is not listed.

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· **Regulation (EC) No 273/2004 on drug precursors** Substance is not listed.
· **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**
Substance is not listed.

· **National regulations:**

· **Information about limitation of use:**
Employment restrictions concerning juveniles must be observed.
Employment restrictions concerning pregnant and lactating women must be observed.
· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.
The application, use and processing of our products are beyond our control and are therefore exclusively your responsibility.

· **Department issuing SDS:** Product management
· **Contact:** Product management
· **Version number of previous version:** 5
· **Abbreviations and acronyms:**
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
· *** Data compared to the previous version altered.**