


SAFETY DATA SHEET	1907/2006 EC 1272/2008 EC	
	TETRAPOTASSIUM HEXACYANOFERRATE	

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY

1.1. Product identifier

Name: Tetrapotassium hexacyanoferrate.
Synonyms : Potassium ferrocyanide trihydrate
CLP Annex VI, part 3, index nr. --
EC/EINECS No. : 237-722-2 (anhydrous)
CAS No. 13943-58-3 (anhydrous), 14459-95-1 (trihydrate)
Registration nr : n.a.

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

1.2.1 Intended use : Anti-caking agent (E536), production in pigments, metal treatment.
1.2.2 Uses advised against no additional information

1.3 Details of the supplier of the safety datasheet

Supplier : GENTROCHEMA BV
Esdoornlaan 19a, NL-4254 AT Sleeuwijk, Nederland
Tel. : +31.183.304422 Fax : +31.183.304069
E-mail : gentrochema@pms.nl Website : www.gentrochema.nl

Emergency telephone nr : during office hours (08:30 - 17:00) : +31.183.304422
After office hours (*only for health professionals*) : +44.870.600.6266

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance

2.1.1. Classification according to Regulation 1272/2008 EC

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2.1.2. Classification according to Regulation 67/548/EC

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2.2 Label elements

2.2.1. Labelling according to Regulation 1272/2008 EC

EUH032: Contact with acids liberates very toxic gas

Precautionary statement(s)

P261: Avoid breathing dust.


P262: Do not get in eyes, on skin, or on clothing

2.2.1. Labelling according to Regulation 67/548/EC

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Risk phrases :

R32 Contact with acids liberates very toxic gas.

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Safety Phrases :

S22 Do not breathe dust.
S24/25 Avoid contact with skin and eyes.

2.3. Other hazards

No additional information

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Chemical characterization: Tetrapotassium hexacyanoferrate, min. 99 % $K_4(FeCN)_6$, with non hazardous additions

Composition/information on ingredients :
EINECS nr : 237-722-2 (anhydrous)
CAS nr : 13943-58-3 (anhydrous), 14459-95-1 (trihydrate)
Index No. ----

EUH032: Contact with acids liberates very toxic gas

4. FIRST AID MEASURES

4.1 Description of first aid measures

- **General information :** No typical symptoms and effects are known.
- **After inhalation :** Remove to fresh air.
If not breathing give artificial respiration.
If breathing is difficult, give oxygen.
Call a physician.
- **After skin contact :** Immediately flush skin with copious amounts of water.
- **After eye contact :** Immediately flush eyes with copious amounts of water, keeping eyelids open.
- **After swallowing :** Drink plenty of water, provided person is conscious and induce vomiting.
Call a physician.

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

To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.


4.3 Indication of any immediate medical attention and special treatment needed

No additional information

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide
Non-suitable extinguishing media : Not known

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5.2 Special hazards arising from the substance

development of toxic and irritating decomposition products.

5.3 Advice for fire-fighters

Wear self contained breathing apparatus if necessary.
Contact with acids liberates very toxic gas (Hydrogen Cyanide)

5.4 Further information

Product is not combustible.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Avoid causing dust. Ensure adequate ventilation.

6.2 Environmental precautions

No special protections required.

6.3 Methods and materials for containment and cleaning up

Pick up spilled product, keep in a closed container and hold for waste disposal.

6.4 Reference to other sections

For safe use : refer to section 7
For personal protection : refer to section 8.
For disposal : refer to section 13

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid causing dust. Do not breathe dust.
Avoid contact with skin and eyes.

7.2 Conditions for safe storage, including any incompatibilities

Avoid exposure to sun light.
Other information: For quality reasons; Store in a cool dry place.

7.3 Specific end uses


No additional information

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Exposure limits for this substance are not known
(Chemical Safety Report NOT available)

8.2 Exposure controls

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Do not breathe dust.
Avoid contact with skin or eyes.
Wash thoroughly after handling.
Only use in a well-ventilated place.

Personal protection :

Observe usual precautions during handling of this substance.

Other information :

No additional information

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 information on basic physical and chemical properties

Appearance:	Solid, odourless, (light) yellow crystals.
Odour:	odourless
Odour threshold:	Not available
PH-value :	approx. 10 (10 % solution)
Alkalinity or acidity :	Not available.
Boiling point :	Not available.
Melting point :	70 °C (trihydrate)
Flash point:	Not available.
Evaporation rate:	Not relevant
Flammability :	Not available.
Vapour pressure :	Not available.
Vapour density:	Not available
Specific gravity/Density :	1.85 g/cm ³
Solubility in water :	25.2 vol% at 20 °C, 36.7 vol% at 50 °C
Solubility in other solvents :	Alcohol- Ethanol : insoluble.
Partition coefficient n-octanol/water:	Not available.
Auto ignition temperature:	Not available
Decomposition temperature :	> 60 °C the trihydrate form will lose its crystalwater
Viscosity :	Not available.
Explosive properties:	None.
Oxidising properties :	None.

9.2. other information

No additional information.

10. STABILITY AND REACTIVITY

10.1 Reactivity


Hazardous reaction with acids.
Stable under circumstances as advised in section 7.

10.2 Chemical stability

Avoid exposure to sun light.

10.3 Possibility of hazardous reactions

Do not mix with acids, oxidisers, nitrite and nitrate salts.
Reacts violently with ammonia and sodium chromate

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10.4 Conditions to avoid

Avoid exposure to sun light.

10.5 Incompatible materials

Do not mix with acids, oxidisers, nitrite and nitrate salts.
Reacts violently with ammonia and sodium chromate.

10.6. Hazardous decomposition products

Hydrogen Cyanide (HCN)

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity :	Oral LD50, rat :	3613-6400 mg/kg
	Oral LD50,mouse:	3427-5000 mg/kg

Acute effects:	Experience with human exposure shows poisoning after eating of 30 g of potassium ferrocyanide. Damage of the kidney. Albuminuria.
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Chronicle effects:	no information available
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Other information:	-
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12. ECOLOGICAL INFORMATION

12.1 Toxicity

Fish.	
Poecilia reticulata	test condition: <i>light/dark</i> , fresh water

24h-LC10 = 200 mg/l CN ion
24h-LC50 = 350 mg/l CN ion
96h-LC50 = 19 mg/l CN ion
96h-LC10 = 8 mg/l CN ion

test condition: *diffused daylight*, fresh water

24h-LC10 = 350 mg/l CN ion
24h-LC50 = 760 mg/l CN ion
96h-LC50 = 350 mg/l CN ion
96h-LC10 = 210 mg/l CN ion

12.2 Persistence and degradability


No additional information

12.3 Bio accumulative potential

No additional information

12.4 Mobility in soil

No additional information

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12.5 Results of PBT and vPvB assessment

Not relevant

No data available.

13. DISPOSAL CONSIDERATIONS

Product/packing : Observe all federal, state and local environmental regulations.
See directives 75/442/EEC and 2006/12/EC.

14. TRANSPORT INFORMATION

Not classified as hazardous goods.

15. REGULATORY INFORMATION

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

State regulations

Observe all federal, state and local regulations.

Water hazard class :

No additional information

additional regulations and restrictions:

REACH regulation

15.2 Chemical Safety report

No additional information

16. OTHER INFORMATION

relevant H& R Phrases

EUH032: Contact with acids liberates very toxic gas

R32 Contact with acids liberates very toxic gas.

Consulted literature:

Version : -
Nr. 2.00 of 05.09.2012. (Replaces all preceding versions.)


Changes per section compared to last version : according to latest standard (GHS/CLP)

Name of composer and manager in charge : Mr W. van Loon.

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Used abbreviations

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

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IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 IATA : International Air Transport Association
 ICAO: International Civil Aviation Organization
 GHS: Globally Harmonized 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