



SAFETY DATA SHEET

1. IDENTIFICATION OF THE PREPARATION AND OF THE COMPANY

Catalogue No. : P 12929
Product Name : POTASSIUM FERROCYANIDE L.R.

Manufacturer/supplier identification
Company : NICE Chemicals (P) Ltd., Cochin, India
Tel - 0484 2800212, 2802755

Contact for information : Tel. No.- 0484 2802536 Fax : 0484 2802483
Emergency Telephone No. : 0484 2801583 Tele fax No. : 0484 2802483

2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : POTASSIUM FERROCYANIDE

CAS-No : 14459-95-1 Ec-Index No. :
Molar Mass : 422.39 EC-No. : 237-722-2
Molecular formula : $C_6FeK_4N_6 \cdot 3H_2O$

3. HAZARDS INDEX

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

4. FIRST AID MEASURES

After inhalation : Fresh air. Consult doctor if feeling unwell.

After skin contact : wash off with plenty of water. Remove contaminated clothing.

After eye contact : Rinse out with plenty of water with the eyelid held wide open.

After swallowing : make victim drink plenty of water- better still- physiological saline solution. Induce vomiting. Summon doctor. Subsequently administer; activated charcoal (20-40 g in 10% slurry).

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : In adaption to materials stored in the immediate neighbourhood.

Special risks: Development of hazardous combustion gases/vapours possible in the event of fire. The following may develop in event of fire : Hydrogen cyanide, nitrous gases.



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Special protective equipment for fire fighting : Do not stay in dangerous zone without suitable chemical protection clothing and self-contained breathing apparatus.

Other information : Non-combustible. Contain escaping vapours with water. Prevent fire-fighting water from entering surface water/groundwater

6. ACCIDENTAL RELEASE MEASURES

Person-related precautionary measures : Avoid generation of dusts; do not inhale dusts.

Procedures for cleaning/absorption : Take up dry. Forward for disposal. Clean up affected area.

Environmental-protection measures :

Do not allow to enter sewerage system.

7. HANDLING AND STORAGE

Handling - No further requirements.

Storage - Tightly closed. Dry. Protected from light.
In a well-ventilated place.

Storage temperature : No restrictions.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

Respiratory protection : Required when dusts are generated.

Eye Protection : Required

Hand Protection : Required

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Industrial hygiene : Change contaminated clothing. Wash hands after working with substance.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	:	Solid
Colour	:	Light yellow
Odour	:	Odourless
pH value at 100g/l H ₂ O (20 °C)	:	~ 9.5 (anhydrous substance)
Melting temperature	:	~ 70° C (release of crystalline water)
Boiling temperature	:	(decomposition)
Ignition temperature	:	Not available
Flash Point	:	Not flammable
Explosion limit lower	:	Not applicable



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upper	:	Not applicable
Relative vapour density	:	Not available
Density (20 ° C)	:	1.85 gm/cm ³ (anhydrous substances)
Bulk density	:	~ 950 - 1050 Kg/m ³
Solubility in Water (20 ° C)	:	289 gm/lt. (for the trihydrate)
Water (96 ° C)	:	~ 900 gm/lt.
Water (0 ° C)	:	150 gm/lt. (for the trihydrate)
Thermal decomposition	:	> 70 ° C

10. STABILITY AND REACTIVITY

Conditions to be avoided : Heating.
Substances to be avoided : Acids, oxidizing agent, hydrochloric acid, nitrites.

Hazardous decomposition products : in the event of fire :
hydrogen cyanide, nitrous gases.

Further information : Light-sensitive

11. TOXICOLOGICAL INFORMATION

Acute Toxicity : LD₅₀ (oral, rat) : 3613 mg/kg (anhydrous substance);
Sub acute to chronic toxicity :
Sensitization test (guinea pig) : Negative
Non carcinogenic in animal experiments.
Bacterial mutagenicity : Bacillus subtilis; negative
The data available on teratogenicity are inadequate for any assessment.

Further toxicological Information :
Skin irritation test (rabbit) : No irritation.
Eye irritation test (rabbit) ; Slight irritations.

Lower toxicity in comparison with similar substances due to greater
stability of product.

After inhalation ; Slight irritations.
After skin contact : Slight irritations.

After swallowing : slight mucosal irritations,
Symptoms in : gastrointestinal tract.
After hydrolysis : Highly toxic.

Other notes : The following applies to cyanogen compounds/nitriles in
general ; utmost caution!

Release of hydro cyanic acid is possible - blockade of cellular respiration.
Cardiovascular disorders, dyspnoea, unconsciousness.

Further data : Further hazardous properties cannot be excluded.
This substance should be handled with particular care.



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12. ECOLOGICAL INFORMATION

Biologic degradation : Slightly biodegradable.
Ecotoxic effects :
Biological effects: Harmful effect on aquatic organisms.
Hazard for drinking water supplies.
Fish toxicity : *P.reticulatus* LC₅₀: 19 mg/l./96 h(for the trihydrate).
Daphnia toxicity : *Daphnia magna* EC₅₀: 32 mg/l./96 h
(unhydrous substance).
Algeal toxicity :
Ankistrodesmus falcatus IC₅₀: 10.8 mg/l./10 d (for the trihydrate).
Bacterial toxicity : *Pseudomonas fluorescens* EC₁₀ : >1000 mg/l./24 h
(unhydrous substance)
Further ecologic data :
Do not allow to enter waters, waste water, or soil !

13. DISPOSAL METHOD

There are no uniform EC regulations for the disposal of chemicals or residues. Chemical residues generally count as special waste. The disposal of the latter is regulated in the EC member countries through corresponding laws and regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose of special waste.

Disposal in compliance with official regulations. Handle contaminated packaging in the same way as the substance itself. If not officially specified differently, non-contaminated packaging may be treated like household waste or recycled.

14. TRANSPORT INFORMATION

Transport over land
ADR/RID and GGVS/GGVE : GGVS/GGVE class : 9 Number and letter : 12c
ADR/RID class : 9 Number and letter : 12c
Name of material : POTASSIUM FERROCYANIDE

Sea Transport IMDG : IMDG class : 9 UN No. : Packing group :
Ems : MFAG :
Correct Technical Name : POTASSIUM FERROCYANIDE

Air Transport ICAO-TI
and IATA-DGR : ICAO/IATA class : 9 UN No. : 3077
Packaging group : III
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15. REGULATORY INFORMATION

Labeling according to EC Directives

Symbol : ---
R-phrases : 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S-phrases : 50-60 Do not mix with acids. Avoid release to the environment. Refer to special instructions/Safety Data sheets.

Water pollution class : 2 (polluting substance)

16. OTHER INFORMATION

Reason for alteration
Change in labeling.
Change in the chapter on Ecology.

The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.