Material Safety Data Sheet

Ferroxyl Test Kit for free IRON passivation (RXSOL-62-5527-001)

1. Product and Company Identifaction

Product Name	Ferroxyl Test Kit
Part Number	RXSOL-62-5527-001

Company Details:
RX MARINE INTERNATIONAL
105, A wing , BSEL , TECH PARK.
VASHI ,NEW BOMBAY 400703 INDIA

Stock Point : Kandla, Mumbai, Chennai, Kolkata, Visakhapatnam, Fujairah

Phone	+91 22 27815540 / 41 / 42
Fax	+91 22 2781 1318 :::AOH :0091 9821214367
Email	123@rxmarine.com
Website	www.rxmarine.com

2. Composition / informationon ingredients

Component	CAS-No	Weight %
D.I.Water	7732-18-5	20-40 %
Nitric Acid	7697-37-2	20-400 %
Potassium Ferricyanide	13746-66-2	40-60 %

3. Hazards Identification

Signal Word	Hazardous , Harmful
Hazard Statements	Causes severe skin burns and eye damage.May cause an allergic skin reaction. Harmful if inhaled.Toxic to aquatic life with long lasting effects.
Label Elements	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.Avoid release to the environment. Wear protective gloves/ protective clothing/ eye protection/ face protection.
Environmental hazards	Environmental effects Dangerous for the environment Very toxic to aquatic organisms; may cause long term adverse effects in the aquatic environment.

4. First Aid Measures

Eye Contact :	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.
Skin Contact:	In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used.Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
Serious Skin Contact:	Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation:	Not available.
Ingestion:	Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear. Serious Ingestion: Not available.

5. Fire-fighting Measures

Flammability of the Product: Non-flammable.
Auto-Ignition Temperature: Not applicable.
Flash Points: Not applicable.
Flammable Limits: Not applicable.
Products of Combustion: Not available.
Fire Hazards in Presence of Various Substances: Not applicable.
Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available.
Risks of explosion of the product in presence of static discharge: Not available.
Fire Fighting Media and Instructions: Not applicable.
Special Remarks on Fire Hazards: Not available.
Special Remarks on Explosion Hazards: Reacts exlposively with metallic powders, carbides, cyanides, sulfides, alkalies and turpentine. Can react explosively with many reducing agents. Arsine, phosphine, tetraborane all oxidized explosively in presence of nitric acid. Cesium and rubidium acetylides explode in contact with nitric acid. Explosive reaction with Nitric Acid + Nitrobenzene + water. Detonation with Nitric Acid + 4-Methylcyclohexane. (Nitric acid, fuming).

6. Accidental Release Measures

Small Spill:
Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. If necessary: Neutralize the residue with a dilute solution of sodium carbonate.
Large Spill:
Corrosive liquid. Oxidizing material. Poisonous liquid. Stop leak if without risk. Absorb with DRY earth, sand or other noncombustible material. Do not get water inside container. Avoid contact with a combustible material (wood, paper, oil, clothing...). Keep substance damp using water spray. Do not touch spilled material. Use water spray curtain to divert vapor drift. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Neutralize the residue with a dilute solution of sodium carbonate. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

7. Handling and Storage

Small Spill:
Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. If necessary: Neutralize the residue with a dilute solution of sodium carbonate.
Large Spill:
Corrosive liquid. Oxidizing material. Poisonous liquid. Stop leak if without risk. Absorb with DRY earth, sand or other noncombustible material. Do not get water inside container. Avoid contact with a combustible material (wood, paper, oil, clothing...). Keep substance damp using water spray. Do not touch spilled material. Use water spray curtain to divert vapor drift. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Neutralize the residue with a dilute solution of sodium carbonate. Be careful that the product is not present at a c oncentration level above TLV. Check TLV on the MSDS and with local authorities.

8. Exposure controls and personal protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection:
Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/ certified respirator or equivalent. Gloves. Personal Protection in Case of a Large Spill: Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus

should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.



Gloves



Suit

9. Physical and chemical properties

Physical State	:	Liquid
Appearance	:	Clear Liquid
Odor	:	NA
Odor Threshold	:	No information available.
PH	:	Acidic
Melting / Freezing Point	:	-41.6°C (-42.9°F)
Boiling Point/Range	:	121°C (249.8°F)
Flash Point	:	NA
Evaporation Rate	:	No information available.
Lower Explosion Limit	:	No data available.
Vapor Pressure	:	No data available.
Vapor Density		No data available.
Relative Density	:	1.0 - 1.25
Solubility in Water	:	Complete
Pour point	:	No data available
Partition coefficient n octanol/water	:	Not available.
Viscosity	:	No data available
Explosive Properties	:	Not applicable
Oxidizing Properties	:	Not applicable

10. Stability and reactivity

Stability: The product is stable.
Instability Temperature: Not available.
Conditions of Instability: Incompatible materials
Incompatibility with various substances:
Highly reactive with alkalis. Reactive with reducing agents, combustible materials, organic materials, metals, acids.
Corrosivity:
Extremely corrosive in presence of aluminum, of copper. Non-corrosive in presence of glass, of stainless steel(304), of stainless steel (316), of brass.
Special Remarks on Reactivity:

A strong oxidizer. Reacts violently with alcohol, organic material, turpene, charcoal. Violent reaction with Nitric acid + Acetone and Sulfuric acid. Nitric Acid will react with water or steam to produce heat and toxic, corrosive and flammable vapors. (Nitric acid, fuming)
Special Remarks on Corrosivity:
In presence of traces of oxides, it attacks all base metals except aluminum and special chromium steels. It will attack some forms of plastics, rubber, and coatings. No corrosive effect on bronze. No corrosivity data for zinc, and steel
Polymerization: Will not occur.

11. Toxicological information

Routes of Entry: Inhalation. Ingestion.
Toxicity to Animals: Acute oral toxicity (LD50): 2970 mg/kg [Mouse].
Chronic Effects on Humans: MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast.
Other Toxic Effects on Humans:
Hazardous in case of skin contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator).
Special Remarks on Toxicity to Animals:
Lowest Published Lethal Dose: LDL [Rat] - route: Oral; Dose: 1600 mg/kg
Special Remarks on Chronic Effects on Humans: May affect genetic material.
Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects: Skin: May cause skin irritation. Eyes: May cause eye irritaiton. Inhalation: May cause respiratory tract irritation with coughing and shortness of breath. Ingestion: May cause gastrointestinal tract irritation with nausea, vomiting, diarrhea, and possible abdominal cramping. Chronic Potential Health: Inhalation: Prolonged or repeated inhalation may affect blood and urinary system. The toxicological properties of this substance have not been fully investigated.

12. Ecological information

Ecotoxicity: Not available.
BOD5 and COD: Not available.
Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise. Toxicity of the Products of Biodegradation: The product itself and its products of degradation are not toxic. Special Remarks on the Products of Biodeg radation: Not available.

13. Disposal considerations

Waste Disposal: Waste must be disposed of in accordance with federal, state and local environmental control regulations

14. Transport information

DOT Classification: CLASS 9: Miscellaneous hazardous material.
Identification: : Environmentally hazardous substances, solid, N.O.S.(Potassium Ferricyanide) UNNA: 3077 PG: III
Special Provisions for Transport: Marine Pollutant

15. Regulatory information

Federal and State Regulations: TSCA 8(b) inventory: Potassium ferricyanide and Nitric Acid
Other Regulations: EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.
Other Classifications:
WHMIS (Canada): Not controlled under WHMIS (Canada).
DSCL (EEC):
R36/38- Irritating to eyes and skin. S2- Keep out of the reach of children. S46- If swallowed, seek medical advice immediately and show this container or label.
HMIS (U.S.A.):
Health Hazard: 2
Fire Hazard: 0
Reactivity: 0
Personal Protection: E

National Fire Protection Association (U.S.A.):
Health: 2
Flammability: 0
Reactivity: 0
Specific hazard:

Protective Equipment:
Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Splash goggles.

16. Other information

Full text of R-Phrases

R22 :Harmful if swallowed.
R23/24/25 :Toxic by inhalation, in contact with skin and if swallowed.
R34 :Causes burns.
R35 :Causes severe burns.
R38 :Irritating to skin.
R41 :Risk of serious damage to eyes.
R43 :May cause sensitization by skin contact.

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Rx Marine International has been advised of the possibility of such damages.