**FERRIC CHLORIDE, HEXAHYDRATE**

**FERRIC CHLORIDE, HYDROXIDE**

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MATERIAL SAFETY DATA SHEET

FISHER SCIENTIFIC

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SUBSTANCE IDENTIFICATION

CAS- NUMBER 10025-77-1

SUBSTANCE: **FERRIC CHLORIDE, HEXAHYDRATE**

TRADE NAMES/SYNONYMS:

FERRIC TRICHLOORIDE, HEXAHYDRATE; IRON (III) CHLORIDE, HEXAHYDRATE;

IRON TRICHLORIDE, HEXAHYDRATE; 866, 867, 88; IRON CHLORIDE, HEXAHYDRATE;

IRON(III) CHLORIDE, HEXAHYDRATE; STC 44F1436; UN 1775, ACO09754

CHEMICAL FAMILY:

INORGANIC SALT

MOLECULAR FORMULA: FeCl3·6H2O

MOLECULAR WEIGHT: 270.32

CERCLA RATING (SCALE 0-9): HEALTH-3; FIRE-0; REACTIVITY-0; PERSISTENCE-3

NFPA RATING (SCALE 0-4): HEALTH-3; FIRE-0; REACTIVITY-0

COMPONENTS AND CONTAMINANTS

COMPONENT: FERRIC CHLORIDE, HEXAHYDRATE PERCENT: 100

CAS# 10025-77-1

OTHER CONTAMINANTS: NONE

EXPOSURE LIMITS:

IRON SALTS, SOLUBLE, AS FE:

1 MG/M3 OSHA TWA

1 MG/M3 ACGIH TWA

1 MG/M3 NIOSH RECOMMENDED TWA

**OSHA revoked the final rule limits of January 19, 1989 in response to the

11th Circuit Court of Appeals decision (AFL-CIO V. OSHA) effective


PHYSICAL DATA

DESCRIPTION: BROWNISH-YELLOW OR ORANGE, VERY DELIQUESCENT, MONOCLINIC

CRYSTALS WITH A SLIGHT ODOR OF HYDROGEN CHLORIDE.

BOILING POINT: 536 F (280 C) MELTING POINT: 98 F (37 C)

SPECIFIC GRAVITY: 1.82 PH: 2.0 (0.1 M AQ SOLN)

SOLUBILITY IN WATER: 91.9% @ 20 C

SOLVENT SOLUBILITY: SOLUBLE IN ALCOHOL, ACETONE, ETHER

FIRE AND EXPLOSION DATA

FIRE AND EXPLOSION HAZARD:

NEGLIGENCE FIHRE HAZARD WHEN EXPOSED TO HEAT OR FLAME.

FIREFIGHTING MEDIA:

DRY CHEMICAL, CARBON DIOXIDE, WATER SPRAY OR REGULAR FOAM

FOR LARGER FIRES, USE WATER SPRAY FOG OR REGULAR FOAM

IFIRE: MOVE CONTAINER FROM FIRE AREA IF YOU CAN DO IT WITHOUT RISK. APPLY COOLING
**Hazardous Polymerization**

Hazardous polymerization has not been reported to occur under normal temperatures and pressures.

**Storage and Disposal**

Observe all federal, state, and local regulations when storing or disposing of this substance.

**Disposal**

Dispose of in accordance with standards applicable to generators of hazardous waste, 40 CFR 264. EPA hazardous waste number D002. 100 POUND CERCLA SECTION 103 REPORTABLE QUANTITY.

May burn but does not ignite readily. Flammable. Poisonous gases may accumulate in tanks and hopper cars. May ignite combustibles (wood, paper, oil, etc.).

**Spill and Leaking Procedures**

**Spill**

Dig a pit, pond, lagoon or holding area to contain liquid or solid material. Cover solids with a plastic sheet to prevent dissolving in rain or firefighting water.

**Water Spill**

Neutralize with agricultural lime, slaked lime, crushed limestone or sodium bicarbonate.

Add suitable agent to neutralize spilled material to pH 7.

Use mechanical dredges or lifts to extract immobilized masses of pollution and precipitates.

**Occupational Spill**

Do not touch spilled material. Stop leak if you can do it without risk. For small spills, take up with sand or other absorbent material and place into container. Maintain airway. Blow noxious gas vapor and respirator, treat symptomatically and supportively (Oreschbach, Handbook of Poisoning, 11th ed.).}

**Antidote**

The following antidote has been recommended. However, the decision as to whether the severity of poisoning requires administration of any antidote and actual dose required should be made by qualified medical personnel.

**Iron Salt Poisoning**

Give deferoxamine, 15 mg/KG/hour by continuous intravenous infusion to a maximum of 30 g/day. Monitor K level closely. Single 12-hour period must not exceed 5 g/day. Maximum is 40 g/day to prevent hypocalcemia or renal salt wasting. During administration of deferoxamine and reduce the rate of administration if the BUN or creatinine increases. Single 12-hour period should not exceed 1 g/day and the maximum in 24 hours should not exceed 8 g/day. Deferoxamine is hazardous in patients with metal disease or anuria and dialysis is necessary. Injected deferoxamine is associated with a high risk and should be reserved for serious poisoning. Continue deferoxamine therapy until the patient is free of symptoms and signs for 24 hours (Oreschbach, Handbook of Poisoning, 11th ed.).

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ANY SUPPLIED-AIR RESPIRATOR THAT HAS A FULL FACEPIECE AND IS OPERATED IN A
PRESSURE-DEMAND OR OTHER POSITIVE-PRESSURE MODE IN COMBINATION WITH AN
AUXILIARY SELF-CONTAINED BREATHING APPARATUS OPERATED IN PRESSURE-DEMAND
OR OTHER POSITIVE-PRESSURE MODE.

CLOTHING:
EMPLOYEE MUST WEAR APPROPRIATE PROTECTIVE (IMPERVIOUS) CLOTHING AND EQUIPMENT
TO PREVENT ANY POSSIBILITY OF SKIN CONTACT WITH THIS SUBSTANCE.

GLOVES:
EMPLOYEE MUST WEAR APPROPRIATE PROTECTIVE GLOVES TO PREVENT CONTACT WITH THIS
SUBSTANCE.

EYE PROTECTION:
EMPLOYEE MUST WEAR SPLASH-PROOF OR DUST-RESISTANT SAFETY GOGGLES AND A
FACESHIELD TO PREVENT CONTACT WITH THIS SUBSTANCE.

EMERGENCY WASH FACILITIES:
WHERE THERE IS ANY POSSIBILITY THAT AN EMPLOYEE'S EYES AND/OR SKIN MAY BE
EXPOSED TO THIS SUBSTANCE, THE EMPLOYER SHOULD PROVIDE AN EYE WASH FOUNTAIN
AND QUICK DRENCH SHOWER WITHIN THE IMMEDIATE WORK AREA FOR EMERGENCY USE.

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