Part of Thermo Fisher Scientific

Material Safety Data Sheet

Revision Date 20-Jul-2011 **Revision Number** 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name **FERRIC CHLORIDE 10% (PDA) 25ml**

Cat No. **R21218**

Synonyms No information available.

Recommended Use Laboratory chemicals

Company
Remel
12076 Santa Fe Drive
Lenexa, KS 66215 United States
Telephone: 1-800-255-6730
Fax:1-800-621-8251

Emergency Telephone Number
INFOTRAC - 24 Hour Number: 1-800-535-5053
Outside of the United States, call 24 Hour Number: 001-352-323-3500 (Call Collect)

2. HAZARDS IDENTIFICATION

CAUTION!

Emergency Overview

May cause skin, eye, and respiratory tract irritation. Oxidizing agent.

Appearance No information available. **Physical State** Liquid **odor** No information available

Target Organs Eyes, Respiratory system, Skin, Liver, Gastrointestinal tract (GI)

Potential Health Effects

Acute Effects
Principle Routes of Exposure

Eyes May cause irritation
Skin May cause irritation
Inhalation May cause irritation of respiratory tract
Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea

Chronic Effects None known

See Section 11 for additional Toxicological information.

Aggravated Medical Conditions Preexisting eye disorders. Skin disorders. Gastrointestinal tract. Liver disorders.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Haz/Non-haz

Component	CAS-No	Weight %
Iron (III) chloride hexahydrate	10025-77-1	10

Hydrogen chloride	7647-01-0	2.5

4. FIRST AID MEASURES

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists, consult a specialist.

Skin Contact Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. If skin irritation persists, call a physician.

Inhalation Move to fresh air. Consult a physician.

Ingestion Do not induce vomiting. Call a physician or Poison Control Center immediately.

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash Point Not applicable
Method No information available.

Autoignition Temperature No information available.
Explosion Limits
Upper No data available
Lower No data available

Unsuitable Extinguishing Media No information available.

Hazardous Combustion Products No information available.

Sensitivity to mechanical impact No information available.
Sensitivity to static discharge No information available.

Specific Hazards Arising from the Chemical
Keep product and empty container away from heat and sources of ignition

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

NFPA **Health** 2 **Flammability** 0 **Instability** 0 **Physical hazards** N/A

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Ensure adequate ventilation

Environmental Precautions Should not be released into the environment

Methods for Containment and Clean Up No information available

7. HANDLING AND STORAGE

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Handling Ensure adequate ventilation

Storage Keep containers tightly closed in a dry, cool and well-ventilated place

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Measures Ensure adequate ventilation, especially in confined areas

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Iron (III) chloride hexahydrate	TWA: 1 mg/m^3	(Vacated) TWA: 1 mg/m^3	TWA: 1 mg/m^3
Hydrogen chloride	Ceiling: 2 ppm	Ceiling: 5 ppm Ceiling: 7 mg/m^3 (Vacated) Ceiling: 5 ppm (Vacated) Ceiling: 7 mg/m^3	IDLH: 50 ppm Ceiling: 5 ppm Ceiling: 7 mg/m^3

Component	Quebec	Mexico OEL (TWA)	Ontario TWAEV
Iron (III) chloride hexahydrate	TWA: 1.0 mg/m^3	TWA: 1 mg/m^3 STEL: 2 mg/m^3	
Hydrogen chloride	Ceiling: 5 ppm Ceiling: 7.5 mg/m^3	Peak: 5 ppm Peak: 7 mg/m^3	CEV: 2 ppm

NIOSH IDLH: *Immediately Dangerous to Life or Health*

Personal Protective Equipment

Eye/face Protection Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166

Skin and body protection Wear appropriate protective gloves and clothing to prevent skin exposure

Respiratory Protection Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	No information available.
odor	No information available
Odor Threshold	No information available.
pH	< 2
Vapor Pressure	No information available.
Vapor Density	No information available.
Viscosity	No information available.
Boiling Point/Range	Not applicable
Melting Point/Range	No information available.
Decomposition temperature	No information available.
Flash Point	Not applicable
Evaporation Rate	No information available.
Specific Gravity	No information available.
Solubility	No information available.
log Pow	No data available

10. STABILITY AND REACTIVITY

Stability Stable under normal conditions.

Conditions to Avoid Incompatible products

Incompatible Materials Strong oxidizing agents

Hazardous Decomposition Products None under normal use

Hazardous Polymerization Hazardous polymerization does not occur

Hazardous Reactions . None under normal processing.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Hydrogen chloride	700 mg/kg (Rat)	5010 mg/kg (Rabbit)	3124 ppm (Rat) 1 h

Irritation No information available.

Toxicologically Synergistic Products No information available.

Chronic Toxicity

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	ACGIH	IARC	NTP	OSHA	Mexico
Hydrogen chloride	Not listed	group 3	Not listed	Not listed	Not listed

IARC: (International Agency for Research on Cancer)
IARC: (International Agency for Research on Cancer)
Group 1 - Carcinogenic to Humans
Group 2A - Probably Carcinogenic to Humans
Group 2B - Possibly Carcinogenic to Humans

Sensitization No information available.

Mutagenic Effects No information available.

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

Other Adverse Effects The toxicological properties have not been fully investigated.

Endocrine Disruptor Information No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity

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Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Iron (III) chloride hexahydrate	Not listed	22 mg/l 96H (anh subst)	Not listed	9.6 mg/l 48H (anh subst)

Persistence and Degradability No information available

Bioaccumulation/ Accumulation No information available

Mobility .

Component	log Pow
Iron (III) chloride hexahydrate	4

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification

14. TRANSPORT INFORMATION

DOT

UN-No UN3264
Proper Shipping Name CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
Hazard Class 8
Packing Group III

TDG Not regulated

IATA

UN-No UN3264
Proper Shipping Name CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
Hazard Class 8
Packing Group III

IMDG/IMO

UN-No UN3264

14. TRANSPORT INFORMATION

Proper Shipping Name CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
Hazard Class 8
Packing Group III

15. REGULATORY INFORMATION

International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	CHINA	KECL
Iron (III) chloride hexahydrate	-	-	-	-	-		X	X	X	X	-
Hydrogen chloride	T	X	-	231-595-7	-		X	X	X	X	X

Legend:
X - Listed
E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
P - Indicates a commenced PMN substance
R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
S - Indicates a substance that is identified in a proposed or final Significant New Use Rule
T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B).
Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313

Component	CAS-No	Weight %	SARA 313 - Threshold Values %
Hydrogen chloride	7647-01-0	2.5	1.0

SARA 311/312 Hazardous Categorization

Acute Health Hazard No
Chronic Health Hazard No
Fire Hazard No
Sudden Release of Pressure Hazard No
Reactive Hazard No

Clean Water Act

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Hydrogen chloride	X	5000 lb	-	-

Clean Air Act

Component	HAPS Data	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Hydrogen chloride	X		-

OSHA

Component	Specifically Regulated Chemicals	Highly Hazardous Chemicals
Hydrogen chloride	-	TQ: 5000 lb

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Component	Hazardous Substances RQs	CERCLA EHS RQs
Hydrogen chloride	5000 lb	5000 lb

California Proposition 65
This product does not contain any Proposition 65 chemicals.

State Right-to-Know

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Iron (III) chloride hexahydrate	-	-	X	-	X
Hydrogen chloride	X	X	X	X	X

U.S. Department of Transportation

Reportable Quantity (RQ): Y
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security

This product contains the following DHS chemicals:

Component	DHS Chemical Facility Anti-Terrorism Standard
Hydrogen chloride	0 lb STQ (anhydrous); 11250 lb STQ (37% concentration or greater)

Other International Regulations

Mexico - Grade No information available

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class
E Corrosive material

16. OTHER INFORMATION

Prepared By

Regulatory Affairs
Remel
Tel: 1-800-255-6730

Print Date 20-Jul-2011

Revision Summary

Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of MSDS