


1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product identifier: FERRIC CHLORIDE SOLUTION
Synonyms: Iron Chloride Solution
Intended use: Water and wastewater treatment, metal etching, odor removal
Uses Advised Against: None known.
Company Identification DPC Industries, Inc.
DPC Enterprises, LP
DXI Industries, Inc.
DX Terminals
PO Box 24600
Houston , TX 77229-4600

Emergency
CHEMTREC (USA) (800) 424-9300
24 hour Emergency Telephone No. (281) 457-4888
www.dxgroup.com

2. Hazard identification of the product

Physical hazards	Corrosive to metals.	Category 1
Health hazards	May be harmful if swallowed Harmful if inhaled Causes severe skin burns and eye damage. Causes serious eye damage May cause respiratory irritation	Category 5 Category 4 Category 1B Category 1 Category 3
Environmental hazards	Harmful to the aquatic life.	Category 2
OSHA defined hazards	Not classified.	
Label elements Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.		
		
Signal Word	Danger	
Hazard Statements	May be harmful if swallowed. Harmful if inhaled. Causes severe skin burns and eye damage. May cause respiratory irritation. Corrosive to metals. Avoid release to the environment.	
Precautionary Statements		
Prevention	Do not breathe mist / vapors / spray. Wash hands thoroughly after handling. Use only outdoors or in a well ventilated area. Wear protective gloves / eye protection / face protection.	
Response	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower. Wash contaminated clothing before reuse. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor / physician if you feel unwell. IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing. Immediately call a POISON CENTER or doctor / physician..	
Storage	Store in a well ventilated place. Keep container tightly closed. Store locked up. Store in corrosive resistant container.	
Disposal	Dispose of contents / container in accordance with local / national regulations.	

3. Composition/information on ingredients

Synonyms: Iron Chloride Solution
This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations. Substance classified with a health or environmental hazard.

Ingredient	CAS Number:	Weight %
Ferric chloride	7705-08-0	25 - 50

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4. First Aid Measures

General	Keep victim warm and quiet. Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.
Inhalation	Move victim to fresh air. Call emergency medical care. Apply artificial respiration if victim is not breathing. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Administer oxygen if breathing is difficult.
Eyes	Irrigate copiously with clean fresh water for at least 15 minutes, holding the eyelids apart. Remove contact lenses if present and easy to do - continue rinsing. Seek medical attention.
Skin	Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.
Ingestion	Rinse mouth. Do NOT induce vomiting. If the person is conscious, have them drink water or milk. Contact a physician immediately.
Most important symptoms and effects, both acute and delayed	
Overview	Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.
Indication of immediate medical attention and special treatment needed	Contact may cause eye and skin irritation and possible burns. Swallowing may cause severe burns to mouth, throat, and stomach. May cause damage to upper respiratory tract.

5. Fire-fighting measures

Recommended Extinguishing media	Foam, dry powder, carbon dioxide, water spray.
Unsuitable extinguishing media	Do not use a heavy water stream. Water jet.
Special hazards arising from the substance or mixture	When heated, emits highly toxic and corrosive fumes of hydrogen compounds and hydrogen gas.
Advice for fire-fighters	<p>Wear positive pressure self-contained breathing apparatus (SCBA). Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection. Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible. Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes. Vapors may accumulate in confined areas (basement, tanks, hopper/tank cars etc.). Substance may react with water (some violently), releasing corrosive and/or toxic gases and runoff. Contact with metals may evolve flammable hydrogen gas. Containers may explode when heated or if contaminated with water. Reaction with water may generate much heat that will increase the concentration of fumes in the air. Fire will produce irritating, corrosive and/or toxic gases. Runoff from fire control or dilution water may be corrosive and/or toxic and cause pollution.</p> <p>ERG Guide No. 154</p>

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Stop leak if you can do it without risk. Prevent entry into waterways, sewers, basements or confined areas. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Do not get water inside containers.
Environmental precautions	Do not allow spills to enter drains or watercourses. Contact local authorities in case of spillage to drain/environment.
Methods and material for containment and cleaning up	As an immediate precautionary measure, isolate spill or leak area in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate enclosed areas. Contain, dilute cautiously with water, and neutralize with soda ash or lime. Wash area down with excess water.

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7. Handling and storage

Precautions for safe handling	Avoid skin and eye contact. Do NOT breathe vapors, mists or aerosols.
Conditions for safe storage, including any incompatibilities	Handle containers carefully to prevent damage and spillage. Store in well ventilated area away from incompatible materials. Keep container closed when not in use.

8. Exposure controls and personal protection

Control parameters

Exposure

CAS No.	Material	Source	Value
7705-08-0	Ferric chloride.	OSHA	No Established Limit
		ACGIH	1 mg/m3
		NIOSH	No Established Limit

Individual protection measures, such as personal protective equipment

Respiratory	Use NIOSH/MSHA approved respirator, following manufacturer's recommendations when concentrations exceed permissible exposure limits.
Eyes	Wear safety glasses with side shields or goggles to protect the eyes. An eye wash station is suggested as a good workplace practice.
Skin	Chemical resistant clothing such as coveralls/apron boots should be worn. Chemical impervious gloves. Emergency eyewash station should be in close proximity.
Engineering Controls	Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.
Other Work Practices	Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

9. Physical and chemical properties

Appearance:	Yellow-Orange to red Liquid
Odor:	Acidic
Odor threshold:	Not Measured
pH:	< 2
Melting point / freezing point:	-58 F
Initial boiling point and boiling range:	105 - 110 F
Flash Point:	Not applicable
Evaporation rate (Ether = 1):	1
Flammability (solid, gas):	Not Applicable
Upper/lower flammability or explosive limits:	Lower Explosive Limit: Not Applicable
	Upper Explosive Limit: Not Applicable
Vapor pressure (mmHg):	Negligible
Vapor Density:	Not Measured
Specific Gravity:	1.43
Solubility in Water:	Partial
Partition coefficient n-octanol/water (Log Kow):	Not Measured
Auto-ignition temperature (°C):	Not Measured
Decomposition temperature:	Not Measured
Viscosity (cSt):	Not Measured
VOC %:	Not Measured
Other information:	No other relevant information.

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10. Stability and reactivity

Reactivity	Hazardous polymerization will not occur.
Chemical stability	Stable under normal circumstances.
Possibility of hazardous reactions	Hydrolysis produces hydrogen chloride.
Conditions to avoid	Excessive heat and open flame.
Incompatible materials	Alkalis, oxidizing agents, and metals.
Hazardous decomposition products	When heated, emits highly toxic and corrosive fumes of hydrogen compounds and hydrogen gas.

11. Toxicological information

Acute toxicity

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation LC50, mg/L
Ferric chloride (7705-08-0)	316, Rat	No data available	No data available

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Item	Hazard
Acute Toxicity (mouth)	May be harmful if swallowed.
Acute Toxicity (skin)	Causes severe skin irritation with possible burns.
Acute Toxicity (inhalation)	May cause respiratory tract irritation.
Sensitization (respiratory)	Not Applicable
Sensitization (skin)	Not Applicable
Germ toxicity	Not Applicable
Carcinogenicity	Not considered to be a carcinogen by IARC, ACGIH, NTP or OSHA.
Reproductive Toxicity	Not expected to cause reproductive or developmental effects.
Specific target organ systemic toxicity (single exposure)	Not Applicable
Specific target organ systemic Toxicity (repeated exposure)	Not Applicable
Aspiration hazard	Not Applicable

12. Ecological information

Toxicity

Aquatic Ecotoxicity

No additional information provided for this product. See Section 3 for chemical specific data.

Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	ErC50 algae, mg/l
Ferric chloride (7705-08-0)	Not Available	Not Available	Not Available

Persistence and degradability:	There is no data available on the preparation itself.
Bioaccumulative potential:	Not Measured
Mobility in soil:	No data available.
Results of PBT and vPvB assessment:	This product contains no PBT/vPvB chemicals.
Other adverse effects:	No data available.

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13. Disposal considerations

Waste treatment methods:	Do not allow into drains or water courses. Wastes and emptied containers should be disposed of in accordance with regulations made under the Control of Pollution Act and the Environmental Protection Act. Using information provided in this data sheet, advice should be obtained from the Waste Regulation Authority, whether the special waste regulations apply.
Waste from material:	Test waste material for corrosivity, D002, prior to disposal. Any residues and/or rinse waters from cleaning of tanks, containers, piping systems and accessories may be a hazardous characteristic waste and must be properly disposed of in accordance with Federal, State, Provincial and Local laws.
Container Management:	Empty containers or liners may retain some product residues.

14. Transport information

UN number:	UN2582
UN proper shipping name:	Ferric chloride, solution
Transport hazard class(es)	
DOT (Domestic Surface Transportation)	
DOT Proper Shipping Name:	Ferric chloride, solution
DOT Hazard Class	8
DOT Label:	8
UN / NA Number:	UN2582
DOT Packing Group:	III
CERCLA/DOT RQ:	1000-lbs
Environmental hazards:	IMDG Marine Pollutant: No
Special precautions for user:	Not Applicable

15. Regulatory information

Regulatory Overview:	The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory.			
WHMIS Classification:	E			
OSHA REGULATORY STATUS:	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).			
US EPA Tier II Hazards:	Fire:	No	Immediate (Acute):	Yes
	Sudden Release of Pressure:	No	Delayed (Chronic):	Yes
	Reactive:	No		
SARA 302 Extremely Hazardous Substance / RQs (lbs) :	No			
SARA 311/312 Chemicals and RQs (lbs) (>0.1%) :	Ferric chloride. (1,000.00)			
SARA 313 (TRI)	No			
OSHA PSM (29 cfr 1910.119):	No			
TSCA:	Ferric Chloride			
State Regulations:	N.J. RTK Substances (>1%)	Listed	Penn RTK Substances (>1%)	Listed
			California Prop 65	Not listed

16. Other information

Revision Information: This is the first revision of this SDS format, changes from previous revision not applicable.

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

THE USER IS CAUTIONED TO PERFORM HIS OWN HAZARD EVALUATION AND TO RELY ON HIS OWN DETERMINATIONS.