



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
US OSHA Hazard Communication Standard 2024 (29 CFR 1910.1200)

Issuing Date: 03-Aug-2026

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Version: 3

1. Identification

Product identifier

Product Name Ferric Chloride 35%

Other means of identification

Product Code 806647

UN/ID No UN2582

Synonyms Iron chloride; iron trichloride

Recommended use of the chemical and restrictions on use

Recommended Use Industrial, Manufacturing or Laboratory use.

Restrictions on Use None known

Details of the supplier of the safety data sheet

Manufacturer Address

Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
(612) 331-6910

E-mail

SDS@hawkinsinc.com for SDS questions. All others contact
customer.service@hawkinsinc.com

Emergency Telephone:

CHEMTREC: 1-800-424-9300 (US) / +1 703-741-5970 (International)

2. Hazard(s) identification

Classification of the substance or mixture

Corrosive to metals	Category 1
Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1

Hazards not otherwise classified (HNOC)

Not applicable

Label elements



Danger

Hazard statements

May be corrosive to metals

Harmful if swallowed.
Causes severe skin burns and eye damage.

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Do not breathe dust, fume, gas, mist, vapors and spray.
Keep only in original packaging.
Wear protective gloves, protective clothing, eye protection, face protection, and hearing protection.

Precautionary Statements - Response

Immediately call a POISON CENTER or doctor.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
Wash contaminated clothing before reuse.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Immediately call a POISON CENTER or doctor.
IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
Rinse mouth.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
Absorb spillage to prevent material damage.

Precautionary Statements - Storage

Store locked up.
Store in corrosion resistant container with a resistant inner liner.

Precautionary Statements - Disposal

Dispose of contents and container in accordance with local, regional, national, and international regulations as applicable.

Hazards classified under paragraph (d)(1)(ii) of 1910.1200

Conditions	Chemical hazard classification	Category
Exposure to Metals may lead to hydrogen gas evolution and ignition.	Flammable gases	Category 1

Other Information

Toxic to aquatic life with long lasting effects.

3. Composition/information on ingredients**Substance**

Not applicable.

Mixture

Synonyms Iron chloride; iron trichloride

Chemical name	CAS No.	Weight-%
Ferric chloride	7705-08-0	34-36
Hydrochloric acid	7647-01-0	<1
Water	7732-18-5	Balance

Any concentration shown as a range is due to batch variation.

4. First-aid measures**Description of first aid measures**

General advice Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

Inhalation	Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur.
Eye contact	Use lukewarm water if possible. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get immediate medical attention.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical attention.
Ingestion	Clean mouth with water and drink afterwards plenty of water. Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get immediate medical attention. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.
Self-protection of the first aider	Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8). Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

Most important symptoms and effects, both acute and delayed

Symptoms	Burning sensation. Redness. May cause blindness. Coughing and/ or wheezing. May cause redness and tearing of the eyes.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure.
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5. Fire-fighting measures

Suitable Extinguishing Media	Adding water to caustic solution generates large amounts of heat. Water may be used to cool containers and to knock down vapors in a fire situation. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Dike fire-control water for later disposal.
Large Fire	If insufficient water supply: knock down vapors only. CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors. Thermal decomposition can lead to release of toxic and corrosive gases/vapors.
Hazardous combustion products	Emits toxic hydrogen chloride fumes when heated to decomposition. Hazardous metal fumes and oxides.
Explosion Data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Attention! Corrosive material. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Other information Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so. Keep out of drains, sewers, ditches and waterways.

Methods for cleaning up Dike far ahead of liquid spill for later disposal. Neutralize with soda ash (sodium carbonate) or lime over area of spill. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly. After cleaning, flush away traces with water.

7. Handling and storage**Precautions for safe handling**

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

General hygiene considerations Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing must not be allowed out of the workplace. Wash hands before breaks and immediately after handling the product.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children. Store away from other materials.

Incompatible materials Leather. Bases. Strong oxidizing agents. Strong acids. Steel. Metals.

8. Exposure controls/personal protection**Control Parameters**

Exposure Limits The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Hydrochloric acid 7647-01-0	Ceiling: 2 ppm	Ceiling: 5 ppm Ceiling: 7 mg/m ³ (vacated) Ceiling: 5 ppm (vacated) Ceiling: 7 mg/m ³	Ceiling: 5 ppm Ceiling: 7 mg/m ³ IDLH: 45 ppm IDLH: 67 mg/m ³
Ferric chloride 7705-08-0	TWA: 1 mg/m ³ Fe	(vacated) TWA: 1 mg/m ³ Fe	TWA: 1 mg/m ³ ; Fe

Note

See section 16 for terms and abbreviations.

Other information on limit values

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962

(11th Cir., 1992).

Biological occupational exposure limits This product, as supplied, contains materials that do not have reportable biological exposure limits or are not subject to the reporting requirements of the local jurisdiction.

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Face protection shield. Tight sealing safety goggles.

Hand protection Wear suitable gloves. Impervious gloves.

Skin and body protection Wear suitable protective clothing. Chemical resistant apron.

Respiratory protection Consult with an industrial hygienist to determine the appropriate respiratory protection for your specific use of this material.

Environmental exposure controls Do not allow into any sewer, on the ground or into any body of water. Prevent product from entering drains.

9. Physical and chemical properties**Information on basic physical and chemical properties**

Physical state Liquid
Color: Dark reddish brown
Odor: Acid

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Melting Point/Freezing Point:	< -50 °C / -58 °F	
Boiling point (or initial boiling point or boiling range)	No data available	
Flammability (solid, gas)	No data available	
Flammability Limits in Air:		
Upper Flammability Limit:	No data available	
Lower Flammability Limit:	No data available	
Flash Point:	No data available	
Autoignition Temperature:	No data available	
Decomposition temperature:	No data available	
SADT (°C)	No data available	
pH	< 1	
pH (as aqueous solution)	No data available	
Kinematic Viscosity:	No data available	
Dynamic Viscosity:	No data available	
Solubility	Complete (100%)	
Water solubility	No data available	
Partition coefficient n-octanol/water (log value)	No data available	
Vapor pressure (includes evaporation rate)	No data available	
Evaporation Rate (BuAc=1):	No data available	
Density and/or relative density	1.349 - 1.374	
Bulk Density:	No data available	
Liquid Density	No data available	
Vapor density (Air =1)	No data available	
Particle characteristics		
Particle Size	No data available	
Particle Size Distribution	No data available	

10. Stability and reactivity

Reactivity	Contact with water will generate considerable heat. Contact with metals may evolve flammable hydrogen gas. Temperatures above 200°C and contact with water may cause the product to decompose and release chlorine or hydrogen chloride.
Chemical stability	Decomposes on heating.
Possibility of hazardous reactions	May react violently with alkali metals, allyl chloride, ethylene oxide, styrene and bases and may cause explosion hazard.
Conditions to Avoid:	Exposure to air or moisture over prolonged periods. Extremes of temperature and direct sunlight.
Incompatible materials	Leather. Bases. Strong oxidizing agents. Strong acids. Steel. Metals.
Hazardous decomposition products	Hydrogen chloride (HCl). Chlorine. Metal oxides.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation

Specific test data for the substance or mixture is not available. Corrosive by inhalation. (based on components). Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal.

Eye contact

Specific test data for the substance or mixture is not available. Causes serious eye damage. (based on components). Corrosive to the eyes and may cause severe damage including blindness. May result in permanent damage including blindness.

Skin contact

Specific test data for the substance or mixture is not available. Corrosive. (based on components). Causes burns.

Ingestion

Specific test data for the substance or mixture is not available. Causes burns. (based on components). Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms

Burning sensation. Redness. May cause blindness. Coughing and/ or wheezing. May cause redness and tearing of the eyes.

Acute toxicity

Harmful if swallowed

Numerical measures of toxicity

The following ATE values have been calculated for the mixture

ATE _{mix} (oral)	1,187.60 mg/kg
ATE _{mix} (dermal)	320,640.00 mg/kg
ATE _{mix} (inhalation-dust/mist)	32.10 mg/L

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Ferric chloride 7705-08-0	= 450 mg/kg (Rat)	-	-
Hydrochloric acid 7647-01-0	238 - 277 mg/kg (Rat)	> 5010 mg/kg (Rabbit)	= 1.68 mg/L (Rat) 1 h
Water 7732-18-5	> 90 mL/kg (Rat)	-	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	Classification based on data available for ingredients. Causes severe skin burns and eye damage.
Serious eye damage/eye irritation	Classification based on data available for ingredients. Causes serious eye damage. Causes burns.
Respiratory or skin sensitization	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	Based on available data, the classification criteria are not met. The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Hydrochloric acid 7647-01-0	A4 - Not classifiable as a human carcinogen	Group 3 - Not classifiable as to its carcinogenicity to humans	-	-

Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Aspiration hazard	No information available.
Other Adverse Effects:	No information available.
Interactive effects	No information available.

12. Ecological information

Ecotoxicity Toxic to aquatic life with long lasting effects.

Method EPA method 2000
Species Fathead Minnow
Endpoint type LC50
Exposure time 96 h
Effective dose 173.7 mg/L

Method EPA method 2002
Species Ceriodaphnia dubia
Endpoint type LC50
Exposure time 48 h
Effective dose 170.8 mg/L

Hydrochloric acid (7647-01-0)

Species	Daphnia magna
Endpoint type	EC50
Effective dose	pH level = 4.92
Exposure time	48 h
Results	Results are given only in pH, not mg/L. Given the variability of the makeup of water, a set amount of HCl in waters with varying buffering capacities will produce varying changes in pH.

Method	OECD Test No. 203: Fish, Acute Toxicity Test
Species	Lepomis macrochirus
Endpoint type	LC50
Effective dose	pH level = 3.5
Exposure time	96 h
Results	Results are given only in pH, not mg/L. Given the variability of the makeup of water, a set amount of HCl in waters with varying buffering capacities will produce varying changes in pH.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Ferric chloride 7705-08-0	-	LC50: =20.26mg/L (96h, Lepomis macrochirus) LC50: 20.95 - 22.56mg/L (96h, Pimephales promelas)	-	EC50: =27.9mg/L (48h, Daphnia magna) EC50: =9.6mg/L (48h, Daphnia magna)

Persistence and Degradability: No information available.

Bioaccumulative potential

Component Information

Chemical name	Partition coefficient	Bioconcentration factor (BCF)	Trophic magnification factor (TMF)
Ferric chloride 7705-08-0	-4	9622	-

Other adverse effects No information available.

13. Disposal considerations

Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

US EPA Waste Number (product as supplied) D002.

California Hazardous Waste Status This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. Transport information

DOT

UN/ID No	UN2582
Proper shipping name	FERRIC CHLORIDE, SOLUTION
Hazard Class	8
Packing Group	III
Description	UN2582, FERRIC CHLORIDE, SOLUTION, 8, PG III

15. Regulatory information**International Regulations**

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories

TSCA Complies

Chemical name	CAS No.	Inventory Listing Status	Commercial Activity Designation
Ferric chloride	7705-08-0	Present	Active
Hydrochloric acid	7647-01-0	Present	Active
Water	7732-18-5	Present	Active

DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies
TCSI	Complies

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

TCSI - Taiwan Chemical Substance Inventory

US Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
Hydrochloric acid - 7647-01-0	1.0

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate

classifications.

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Ferric chloride - 7705-08-0	1000 lb	-	-	X
Hydrochloric acid - 7647-01-0	5000 lb	-	-	X

CAA (Clean Air Act)

This product contains the following substances which are regulated pollutants to the Clean Air Act (CAA).

Chemical name	Hazardous air pollutants (HAPs)	Ozone-depleting substances (ODS)
Hydrochloric acid - 7647-01-0	Present	-

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).

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	SARA Extremely Hazardous Substances TPQ
Ferric chloride - 7705-08-0	1000 lb / 454 kg (final RQ)	-	-
Hydrochloric acid - 7647-01-0	5000 lb / 2270 kg (final RQ)	5000 lb	500 lb TPQ

OSHA - Process Safety Management - Highly Hazardous Chemicals

This product contains one or more substances regulated under Process Safety Management (29 CFR 1910.119).

Chemical name	OSHA - Process Safety Management - Highly Hazardous Chemicals
Hydrochloric acid 7647-01-0	5000 lb TQ 5000 lb TQ anhydrous

US State Regulations**California Proposition 65**

This product is not known to contain any Proposition 65 chemicals at or above detection limits

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable.

16. Other information**NSF Certification**

Maximum Use (mg/L unless
otherwise indicated): 250

NFPA Health hazards 3 Flammability 0 Instability 0 Special hazards -

Key or legend to abbreviations and acronyms used in the safety data sheet

ACGIH	American Conference of Governmental Industrial Hygienists
ATE	Acute Toxicity Estimate
Ceiling	Maximum limit value
DOT	Department of Transportation (United States)
ECEL	Existing Chemical Exposure Limit
EPA	U.S. Environmental Protection Agency
IARC	International Agency for Research on Cancer
LC50	Lethal Concentration to 50% of a test population
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program (United States)
OEL	Occupational exposure limits
OSHA	Occupational Safety and Health Administration of the US Department of Labor
PPE	Personal protective equipment
SADT	Self-Accelerating Decomposition Temperature
STEL	Short Term Exposure Limit
TSCA	Toxic Substances Control Act (United States)
TWA	Time-Weighted Average
VOC	Volatile organic compounds

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Disclaimer:

The information provided in 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

End of Safety Data Sheet