ESSENTIAL CHEMISTRY. INNOVATIVE SOLUTIONS.

SAFETY DATA SHEET

Print Date: July 30, 2025

Section 1: Product & Company Information

Product Identifier: **Ferric Chloride 37–42% Solution NSF**

Other Means of Identification
Product Number: 120007

Recommended Use and Restrictions on Use
Recommended Use: Wastewater treatment, purifying factory effluents and deodorizing sewage, mordant in dyeing and printing textiles; pigments and inks; photoengraving.
Restrictions on Use: No data available.

Manufacturer / Importer / Supplier / Distributor Information
Company Name: CORECHEM Inc.
Address: 4320 Greenway Drive
Knoxville, TN 37918
USA

Information Telephone Number: 1-865-524-4239
Fax Number: 1-865-524-3375
Website: www.corecheminc.com
Contact Person: Regulatory Manager
E-mail: regulatory@corecheminc.com

Emergency Phone Number: Chemtrec® 1-800-424-9300 / Outside USA 1-703-527-3887 *(monitored 24 hours/day)*

Section 2: Hazards Identification

GHS Hazard Classification(s)
In accordance with OSHA Hazard Communication Standard 29 CFR 1910.1200 (HazCom 2012).

Physical Hazard(s)
Corrosive to Metals - 1

Health Hazard(s)
Acute Toxicity, Oral - 4
Corrosion/Irritation, Skin – 1B
(Corrosion)Damage/Irritation, Eye - 1
Carcinogenicity - 1

Environmental Hazard(s)
No data available.

Label Elements
Signal Word
DANGER

Hazard Symbol(s)

Hazard Statement(s)
H290: May be corrosive to metals.
H302: Harmful if swallowed.
H314: Causes severe skin burns and eye damage.
H318: Causes serious eye damage.
H350: May cause cancer.

Precautionary Statements
General
Not applicable.

Prevention
P234: Keep only in original container.
P260: Do not breathe dust/fume/gas/mist/vapors/spray.
P264: Wash face, hands and any exposed skin thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response
P301 + P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P301 + P330 + P331: IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340: IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310: Immediately call a POISON CENTER or doctor/physician.
P321: Specific treatment (see supplemental first aid instructions on this label).
P330: Rinse mouth.
P363: Wash contaminated clothing before reuse.
P390: Absorb spillage to prevent material damage.

Storage

P405: Store locked up.
P406: Store in corrosive resistant container with a resistant inner liner.

Disposal

P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazard(s) not otherwise classified (HNOC)

May be corrosive to respiratory tract. May be corrosive to metals.

Section 3: Composition/Information on Ingredients

Mixture

Chemical Identity [2]	Common Name/Synonym(s)	CAS # [3]	Weight %	Impurity or Stabilizing Additive
Water	-	7732-18-5	55 – 69%	No
Iron Trichloride	-	7705-08-0	31 – 45%	No
Hydrogen Chloride	-	7647-01-0	<1%	No
Ferrous chloride	-	7758-94-3	<1%	No

1. Information regarding the composition and the percentage ranges of the mixtures ingredients are not presented as it Confidential Business Information (CBI). Where a medical emergency exists (as determined by medical professional), timely disclosure of CBI is assured. The information omitted pertains to only the names of the substances and the concentration in the mixture (product) and can only be requested by a doctor/physician or Local/State/Provincial or Federal Authority.
2. Non-hazardous ingredients are not presented as to protect the proprietary formula of the product.
3. "— "Indicates ingredient is a mixture and contains multiple ingredients or may have no identifying CAS number.

Section 4: First-Aid Measures

General Information

Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Wash contaminated clothing before reuse.

Inhalation

Remove source of exposure or move person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor. If breathing has stopped, trained personnel should begin rescue breathing or if the heart has stopped, immediately start cardiopulmonary resuscitation (CPR) or automated external defibrillation (AED). Avoid mouth to mouth contact by using a barrier device.

Skin Contact

Avoid direct contact. Wear chemical protective clothing, if necessary. Take off immediately contaminated clothing, shoes and leather goods. Rinse skin with lukewarm, gently flowing water / shower for 30 minutes. Immediately call a POISON CENTER or doctor. Wash contaminated clothing before re-use, or discard.

Eye Contact

Avoid direct contact. Wear chemical protective gloves, if necessary. Remove source of exposure or move person to fresh air. Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing for 30 minutes. Take care not to rinse contaminated water into the unaffected eye or onto the face. Immediately call a POISON CENTER or doctor.

Ingestion

Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor. If vomiting occurs naturally, lie on your side, in the recovery position.

Most important symptoms/effects, acute and delayed

Symptoms

No data available.

Indication of immediate medical attention and special treatment needed

Hazards

No data available.

Treatment

If exposed or concerned, get medical advice and attention. Symptoms may be delayed.

Section 5: Fire-Fighting Measures

General Fire Hazards

No data available.

Suitable (and Unsuitable) Extinguishing Media

Suitable Extinguishing Media

If material is involved in a fire use water fog) or if unavailable fine water spray), foam, dry agent (carbon dioxide, dry chemical powder.

Unsuitable Extinguishing Media

Water jets are not recommended in fires involving chemicals.

Specific Hazards Arising from the Chemical

Reacts with many metals to liberate hydrogen gas that can form explosive mixtures. Heat may liberate corrosive and toxic hydrogen chloride gas. Hydrogen chloride is denser than air and will accumulate in low lying areas.

Special Protective Equipment and Precautions for Firefighters

Special Fire-Fighting Equipment Procedures

Do not allow run-off from firefighting to enter drains or water sources. Do not breathe fumes from fires or vapors from decomposition.

Special Protective Equipment for Fire-Fighters

As in any fire, wear self-contained breathing apparatus pressure-demand (OSHA/NIOSH approved or equivalent) and full protective gear.

Section 6: Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures

Wear appropriate personal protective equipment (See Section 08 Exposure Controls and Personal Protection). Stay upwind, ventilate area. Do not breathe vapor, fumes, or mist. Do not use material handling equipment with exposed metal surfaces.

Methods and Materials for Containment and Clean-Up

SMALL SPILLS: Stop or reduce leak if safe to do so. Clean up spill with non-reactive absorbent and place in suitable, covered, labeled containers. Flush area with water. Contaminated absorbent material may pose the same hazards as the spilled product.
LARGE SPILLS: Contact fire and emergency services and supplier for advice.

Notification Procedures

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Environmental Precautions

Prevent material from entering waterways, sewers or confined spaces. Notify local health and wildlife officials. Notify operators of nearby water intakes

Section 7: Handling and Storage

Precautions for Safe Handling

Use proper equipment for lifting and transporting all containers. Use sensible industrial hygiene and housekeeping practices. Wash thoroughly after handling. Avoid all situations that could lead to harmful exposure. Prevent the release of vapors, fumes, or mists into the workplace air. Inspect containers for damage or leaks before handling. If the original label is damaged or missing replace it with a workplace label. Have suitable emergency equipment for fires, spills and leaks readily available. Never return contaminated material to its original container.

Conditions for Safe Storage, including any Incompatibilities

Store in a cool, dry, well-ventilated area, away from heat sources and incompatible materials. Always store in original labeled container. Keep containers tightly closed when not in use and when empty. Empty containers may contain hazardous residues. Protect label and keep it visible. Do not transfer to metal containers

Section 8: Exposure Controls/Personal Protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Value	Source
Hydrogen Chloride	TWA	5 ppm 7.5 mg/m^3	US. ACGIH
Iron salts - soluble, as Fe	TWA	1 mg/m^3	US. ACGIH
Iron salts - soluble, as Fe	STEL	1 mg/m^3	US. ACGIH

Biological Limit Values

The product does not contain any relevant quantities of hazardous materials with assigned biological limit values.

Appropriate Engineering Controls

Mechanical ventilation (dilution or local exhaust), process or personnel enclosure and control of process conditions should be provided in accordance with all fire codes and regulatory requirements. Supply sufficient replacement air to make up for air removed by exhaust systems. An emergency shower and eyewash station should be available, tested, and be near the product being handled in accordance with provincial regulations.

Individual protection measures, such as personal protective equipment (PPE)

General Information

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Eye/Face Protection

Where there is potential eye or face exposure, tightly fitting safety goggles and a face shield or a full-face respirator or similar protective equipment which protects the wearer's face and eyes are recommended. Contact lenses are not recommended; they may contribute to severe eye injury.

Skin Protection

Hand Protection

Wear appropriate chemical resistant gloves.

Other

Wear appropriate chemical resistant clothing.

Respiratory Protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information

Hygiene Measures

When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated footwear that cannot be cleaned. Wash hands before breaks and immediately after handling the product. Wash contaminated clothing before reuse. Avoid contact with eyes, skin, and clothing.

Section 9: Physical and Chemical Properties

Appearance:

Physical State:	Liquid
Color:	Clear to slightly hazy
Odor:	Slight iron acidic
Odor Threshold:	No data available.
pH:	<2
Melting Point/Freezing Point:	-26 °C
Initial Boiling Point and Boiling Range:	110 °C
Flash Point:	No data available.
Evaporation Rate (butyl acetate=1)**:**	<1
Flammability (solid, gas):	No data available.
Upper/Lower Limit on Flammability or Explosive Limits	
Flammability Limit – Upper:	No data available.
Flammability Limit – Lower:	No data available.
Explosive Limit – Upper:	No data available.
Explosive Limit – Lower:	No data available.
Vapor Pressure:	0 Pa @ 20 °C
Vapor Density (air =1)**:**	>1
Relative Density (water=1)**:**	≥1.400 g/mL @ 25 °C
Solubility(ies):	
Solubility in water:	Soluble
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-Ignition Temperature:	No data available.
Decomposition Temperature:	No data available.
Viscosity:	13

Other Information:

Molecular Weight:	162.204 g/mol
Formula:	$FeCl_3$

Section 10: Stability and Reactivity

Reactivity

May be corrosive to metals. Reacts with many metals to liberate hydrogen gas that can form explosive mixtures. Reacts violently with bases.

Chemical Stability

Material is stable under normal conditions.

Possibility of Hazardous Reactions

Hazardous polymerization does not occur.

Conditions to Avoid

Exposure to air or moisture over prolonged periods.

Incompatible Materials

Bases, such as potassium hydroxide, sodium hydroxide, calcium hydroxide (slaked lime), ammonia, carbonates. Metals, such as aluminum, steel, and brass.

Hazardous Decomposition Products

Thermal decomposition generates: Hydrogen chloride.

Section 11: Toxicological Information

Information on routes of exposure

Ingestion: Swallowing a small quantity of this material will result in serious health hazard. May cause adverse kidney effects. May cause adverse liver effects.

Inhalation: May be corrosive to the mucous membranes and respiratory tract. Avoid breathing vapors or mists.

Skin Contact: Causes severe skin irritation and burns.

Eye Contact: Causes serious eye damage including blindness.

Information on Toxicological Effects

Acute Toxicity (List all possible routes of exposure)

Oral

Iron (III) chloride: LD50 (Rat): 450 mg/kg bw

Hydrogen chloride: LD50 (Rat): 238-277 mg/kg
Ferrous chloride: LD50 (Rat): 450 mg/kg (Rat)

Dermal
Iron (III) chloride: LD50 (Rat): >2000 mg/kg bw
Hydrogen chloride: LD50 (Rabbit): >5010 mg/kg

Inhalation
Hydrogen chloride: LD50 (Rat): 1.68 mg/L (1 hour)

Repeated Dose Toxicity
No data available.

Skin Corrosion/Irritation
Causes severe skin burns.

Serious Eye Damage/Eye Irritation
Causes serious eye damage.

Respiratory/Skin Sensitization
This product and its components at their listed concentration have no known sensitizing effects.

Carcinogenicity
IARC Monographs on the Evaluation of Carcinogenic Risks to Humans
Hydrogen Chloride: Group 3, Not classifiable as to its carcinogenicity to humans.
US. National Toxicology Program (NTP) Report on Carcinogens
No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)
No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Germ Cell Mutagenicity
In Vitro
No data available.
In Vivo
No data available.

Reproductive Toxicity
No data available.

Specific Target Organ Toxicity – Single Exposure
No data available.

Specific Target Organ Toxicity – Repeated Exposure
No data available.

Aspiration Hazard
Not classified.

Other Effects
Chronic: Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen. Avoid repeated exposure. Possible risk of irreversible effects. May cause adverse liver effects.

Section 12: Ecological Information

Ecotoxicity
Acute Hazards to the Aquatic Environment
Fish
No data available.

Aquatic Invertebrates
No data available.

Toxicity to Aquatic Plants
Toxic to aquatic life with long lasting effects.

Chronic Hazards to the Aquatic Environment
Fish
No data available.

Aquatic Invertebrates
No data available.

Toxicity to Aquatic Plants
No data available.

Persistence and Degradability
Biodegradation

There are no data on the degradability of this product.

BOD/COD Ratio

No data available.

Bioaccumulative Potential

Bioconcentration Factor (BCF)

No data available.

Partition Coefficient n-octanol / water (log Kow)

No data available

Mobility in Soil

This product is water soluble, but is expected to adsorb to soil and is not expected to contaminate ground water

Other Adverse Effects

Avoid release into the environment.

Section 13: Disposal Considerations

Disposal Instructions

Dispose in accordance with all federal, provincial, and local regulations including the Canadian Environmental Protection Act.

Contaminated Packaging

Do not remove label, follow label warnings even after the container is empty. Empty containers should be recycled or disposed of at an approved waste handling facility.

Section 14: Transportation Information

US Department of Transportation (DOT)

UN Number:	UN2582
UN Proper Shipping Name:	Corrosive Liquid, Acidic, Inorganic, n.o.s.
Technical Name:	(Contains ferric chloride, hydrochloric acid)
Hazard Class:	8
Subsidiary Hazard Risk:	-
Packing Group:	III
DOT Label/Placard Exemptions:	Not determined
Special Provisions:	B15, IB3, T4, TP1
Packaging Exceptions:	49CFR 173.154
Packaging Non-Bulk:	49CFR 173.203
Packaging Bulk:	49CFR 173.241
Reportable Quantity (RQ):	1,000lb (454kg)
Marine Pollutant:	No
Poison Inhalation Hazard:	No
Special precautions for user:	Transport within the user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
Emergency Response Guidebook (ERG) #:	154

Important Note: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult your company's Hazardous Materials/Dangerous Goods expert for information specific to your situation.

Section 15: Regulatory Information

US Federal Regulations

Toxic Substance Control Act (TSCA), Chemical Substance Inventory, Section 8(b)

This product or ingredient(s) are listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substance List (40 CFR 302.4)

The following chemical(s) in this material are subject to reporting levels established by CERCLA:

Iron Trichloride (CAS# 7705-08-0) = 1000lb
Ferric Chloride (CAS# 7758-94-8) = 100lb
Hydrogen Chloride (CAS# 7647-01-0) = 5000lb

Clean Air Act (CAA), Section 112(r)

No chemical(s) in this material are subject to the reporting requirements of CAA.

Emergency Planning and Community Right-To-Know Act (EPCRA)

EPCRA 302 Extremely Hazardous Substance

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 302.

EPCRA 304 Emergency Response Notification

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 304.

EPCRA 311/312 Emergency and Hazardous Materials Reporting

Fire Hazard:	No
Sudden Release of Pressure:	No
Reactive:	No
Acute (Immediate) Health Hazard:	Yes
Chronic (Delayed) Health Hazard:	Yes

EPCRA 313 Toxic Chemical Release Inventory (TRI) Reporting

This material does not contain any chemical(s) with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

Important Note: Due to the changing nature of regulatory requirements, the information in this document should NOT be considered all-inclusive or authoritative. Users should make their own investigations to determine the suitability of the information for their particular purposes. International, Federal, State and Local regulations should be consulted to determine compliance with all required reporting requirements.

Section 16: Other Information

Hazardous Materials Identification System (HMIS®) Classification

Health Hazard: 3
Chronic Health Hazard: *
Flammability: 0
Physical Hazard: 0
Personal Protection: D
(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

National Fire Protection Association (NFPA 704) Rating

Health Hazard: 3
Fire Hazard: 0
Reactivity Hazard: 0
Special: N/A
(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

Prepared By:	Regulatory Manager
Version #:	001
Issue Date:	August 20, 2015
Last Revised By:	Regulatory Assistant C
Last Revision Date:	5/20/2020
Current Revision:	03
Sections Revised:	Changes were made to sections

Key to Abbreviations and Acronyms

ATE - Acute Toxicity Estimate
BCF - Bioconcentration Factor
EC50 - Effective concentration, 50%
IDHL – Immediately Dangerous to Life and Health
Kg – Kilogram
l – Liter
lb – Pound
LC50 - Lethal Concentration, 50%
LD50 - Lethal Dose, 50%
mg - milligram
ml – milliliter
N/A – Not Applicable
N/D – Not Determined
PEL – Permissible Exposure Limit
REL – Recommended Exposure Limit
STEL – Short-term Exposure Limit
TWA - Time weighted average
ACGIH - American Conference of Industrial Hygienists
AIHA – American Industrial Hygiene Association
BEI - Biological Exposure Indices
CAS – Chemical Abstracts Service
DOT – US Department of Transportation
EPA – US Environmental Protection Agency
GHS - Globally Harmonized System of Classification and Labelling of Chemicals
IARC - International Agency for Research on Cancer
IATA - International Air Transport Association
IBC - Intermediate Bulk Container
IMDG - International Maritime Dangerous Goods
NIOSH – National Institute for Occupational Safety and Health
NTP – National Toxicology Program
OSHA – US Occupational Health and Safety Administration
SARA – US EPA Superfund Amendments and Reauthorization Act
TSCA – US EPA Toxic Substances Control Act
UN - United Nations

References

HSDB® - Hazardous Substances Data Bank

Disclaimer

The information in this SDS was obtained from sources which we believe are reliable. HOWEVER, THE INFORMATION IS PROVIDED WITHOUT ANY WARRANTY, EXPRESS OR IMPLIED, REGARDING ITS CORRECTNESS. The conditions or methods of handling, storage, use, and disposal of the product are beyond our control and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THE PRODUCT. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.