

SECTION 1: IDENTIFICATION**Product Identifier****Product Form:** Mixture**Product Name:** Fer+Ion® F5**Intended Use of the Product**

Municipal and industrial water and wastewater treatment for the removal of turbidity, color, suspended solids and phosphorus. Sludge conditioning, compaction and volume reduction. Oily wastewater clarification and dissolved air flotation. Emulsion breaking.

Name, Address, and Telephone of the Responsible Party**Manufacturer**

CHEMTRADE LOGISTICS INC.

155 Gordon Baker Road

Suite 300

Toronto, Ontario M2H 3N5

For SDS Info: (416) 496-5856

www.chemtradelogistics.com**Emergency Telephone Number****Emergency Number :**

Canada: CANUTEC +1-613-996-6666 / US: CHEMTREC +1-800-424-9300

Chemtrade Emergency Contact: (866) 416-4404

For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident, call CHEMTREC – Day or Night

SECTION 2: HAZARDS IDENTIFICATION**Classification of the Substance or Mixture****Classification (GHS-US)**

Met. Corr. 1 H290

Acute Tox. 4 (Oral) H302

Skin Corr. 1A H314

Eye Dam. 1 H318

Label Elements**GHS-US Labeling****Hazard Pictograms (GHS-US)****Signal Word (GHS-US)****Hazard Statements (GHS-US)**

- : Danger
- : H290 - May be corrosive to metals
- : H302 - Harmful if swallowed
- : H314 - Causes severe skin burns and eye damage
- : H318 - Causes serious eye damage

Precautionary Statements (GHS-US)

- : P234 - Keep only in original container.
- : P260 - Do not breathe mist, spray, vapors.
- : P264 - Wash hands, forearms and face thoroughly after handling.
- : P270 - Do not eat, drink or smoke when using this product.
- : P280 - Wear eye protection, face protection, protective clothing, protective gloves.
- : P301+P312 - IF SWALLOWED: Call a POISON CENTER, or doctor if you feel unwell.
- : P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
- : P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- : P304+P340 - IF INHALED: Remove person 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.

Fer+Ion® F5

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

P310 - Immediately call a POISON CENTER, or doctor.
P321 - Specific treatment (see section 4).
P330 - Rinse mouth.
P363 - Wash contaminated clothing before reuse.
P390 - Absorb spillage to prevent material damage.
P405 - Store locked up.
P406 - Store in corrosive resistant container with a resistant inner liner.
P501 - Dispose of contents/container according to local, regional, national, territorial, provincial, and international regulations.

Other Hazards

Other Hazards Not Contributing to the Classification: May be corrosive to respiratory tract. May produce explosive hydrogen gas on contact with incompatibilities or upon thermal decomposition.

Unknown Acute Toxicity (GHS-US) Not available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Name	Product identifier	% (w/w)	Classification (GHS-US)
Water	(CAS No) 7732-18-5	30 - 60	Not classified
Sulfuric acid, iron(3+) salt (3:2)*	(CAS No) 10028-22-5	40 - 70	Met. Corr. 1, H290 Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318
Sulfuric acid**	(CAS No) 7664-93-9	3 - 7	Skin Corr. 1A, H314 Eye Dam. 1, H318 Carc. 1A, H350 Aquatic Acute 3, H402

The specific chemical identity and/or exact percentage of composition has been withheld as a trade secret within the meaning of the OSHA Hazard Communication Standard [29 CFR 1910.1200]. More than one of the ranges of concentration prescribed by Controlled Products Regulations has been used where necessary, due to varying composition.

*As $\text{Fe}_2(\text{SO}_4)_3 \bullet 9\text{H}_2\text{O}$ (Dry Ferric Sulfate)

** Strong inorganic acid aerosols/mists containing this substance are carcinogenic to humans. However, under conditions of normal use this is not a potential route of exposure, and does not warrant a carcinogenicity classification for the mixture.

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

Description of First Aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). IF exposed or concerned: Seek medical advice/attention.

Inhalation: Remove to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 60 minutes. Immediately call a POISON CENTER or doctor/physician. Wash contaminated clothing before reuse.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 60 minutes. Immediately call a POISON CENTER or doctor/physician.

Ingestion: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

Most Important Symptoms and Effects Both Acute and Delayed

General: Harmful if swallowed. Causes severe skin burns and eye damage. Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.

Inhalation: May be corrosive to the respiratory tract.

Skin Contact: Causes severe skin burns.

Eye Contact: Causes serious eye damage.

Ingestion: Swallowing a small quantity of this material will result in serious health hazard.

Chronic Symptoms: None expected under normal conditions of use.

Fer+Ion® F5

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, seek medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: Do not use a heavy water stream. A heavy water stream may spread burning liquid.

Special Hazards Arising From the Substance or Mixture

Fire Hazard: Product is not flammable.

Explosion Hazard: Not explosive, but may release flammable/explosive hydrogen gas on contact with some metals.

Reactivity: Reacts with strong oxidants causing fire and explosion hazard. May react violently with alkalis.

Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Do not allow run-off from fire fighting to enter drains or water sources. Do not breathe fumes from fires or vapors from decomposition.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: None known.

Other Information: May produce explosive hydrogen gas on contact with incompatibilities or upon thermal decomposition.

Reference to Other Sections

Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Avoid all contact with skin, eyes, or clothing. Avoid breathing vapor, mist, or spray.

For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Evacuate unnecessary personnel. Stop leak if safe to do so. Ventilate area.

Environmental Precautions

Prevent entry to sewers and public waters.

Methods and Material for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for Cleaning Up: Clear up spills immediately and dispose of waste safely. Cautiously neutralize spilled liquid. Absorb and/or contain spill with inert material, then place in suitable container. Contact competent authorities after a spill.

Reference to Other Sections

See heading 8, Exposure Controls and Personal Protection.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work. Do not eat, drink or smoke when using this product.

Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Store in orginal container. Keep in corrosion proof place.

Incompatible Materials: Strong acids, strong bases, strong oxidizers. Alkalies. Metals.

Fer+Ion® F5

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Specific End Use(s) Municipal and industrial water and wastewater treatment for the removal of turbidity, color, suspended solids and phosphorus. Sludge conditioning, compaction and volume reduction. Oily wastewater clarification and dissolved air flotation. Emulsion breaking.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Sulfuric acid (7664-93-9)		
Mexico	OEL TWA (mg/m ³)	1 mg/m ³
USA ACGIH	ACGIH TWA (mg/m ³)	0.2 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	1 mg/m ³
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	1 mg/m ³
USA IDLH	US IDLH (mg/m ³)	15 mg/m ³
Alberta	OEL STEL (mg/m ³)	3 mg/m ³
Alberta	OEL TWA (mg/m ³)	1 mg/m ³
British Columbia	OEL TWA (mg/m ³)	0.2 mg/m ³ (Thoracic, contained in strong inorganic acid mists)
Manitoba	OEL TWA (mg/m ³)	0.2 mg/m ³
New Brunswick	OEL STEL (mg/m ³)	3 mg/m ³
New Brunswick	OEL TWA (mg/m ³)	1 mg/m ³
Newfoundland & Labrador	OEL TWA (mg/m ³)	0.2 mg/m ³
Nova Scotia	OEL TWA (mg/m ³)	0.2 mg/m ³
Nunavut	OEL STEL (mg/m ³)	3 mg/m ³
Nunavut	OEL TWA (mg/m ³)	1 mg/m ³
Northwest Territories	OEL STEL (mg/m ³)	3 mg/m ³
Northwest Territories	OEL TWA (mg/m ³)	1 mg/m ³
Ontario	OEL TWA (mg/m ³)	0.2 mg/m ³
Prince Edward Island	OEL TWA (mg/m ³)	0.2 mg/m ³
Québec	VECD (mg/m ³)	3 mg/m ³
Québec	VEMP (mg/m ³)	1 mg/m ³
Saskatchewan	OEL STEL (mg/m ³)	0.6 mg/m ³
Saskatchewan	OEL TWA (mg/m ³)	0.2 mg/m ³
Yukon	OEL STEL (mg/m ³)	1 mg/m ³
Yukon	OEL TWA (mg/m ³)	1 mg/m ³

Exposure Controls

Appropriate Engineering Controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

Personal Protective Equipment: Safety glasses. Face shield. Gloves. Protective clothing. Insufficient ventilation: wear respiratory protection.

Materials for Protective Clothing: Acid-resistant clothing.

Hand Protection: Wear chemically resistant protective gloves.

Eye Protection: Chemical goggles.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

Environmental Exposure Controls: Do not allow the product to be released into the environment.

Consumer Exposure Controls: Do not eat, drink, or smoke during use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State : Liquid

Appearance : Reddish brown

Fer+Ion® F5

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Odor	:	Not available
Odor Threshold	:	Not available
pH	:	< 1
Melting Point	:	Not applicable
Freezing Point	:	< -18° C (< -0.4° F)
Boiling Point	:	Not available
Flash Point	:	Not applicable
Auto-ignition Temperature	:	Not applicable
Decomposition Temperature	:	Not available
Flammability (solid, gas)	:	Not flammable
Lower Flammable Limit	:	Not applicable
Upper Flammable Limit	:	Not applicable
Vapor Pressure	:	Not available
Relative Vapor Density at 20 °C	:	Not available
Specific Gravity	:	1.54 - 1.57
Solubility	:	100%
Partition Coefficient: N-octanol/water	:	Not available
Viscosity	:	Not available
Explosion Data – Sensitivity to Mechanical Impact	:	Not expected to present an explosion hazard due to mechanical impact
Explosion Data – Sensitivity to Static Discharge	:	Not expected to present an explosion hazard due to static discharge

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Reacts with strong oxidants causing fire and explosion hazard. May react violently with alkalis.

Chemical Stability: Stable under normal conditions.

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Direct sunlight. Extremely high or low temperatures. Incompatible materials.

Incompatible Materials: Strong acids, strong bases, strong oxidizers. Alkalies. Metals.

Hazardous Decomposition Products: Thermal decomposition generates : Corrosive vapors. Sulfur oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects - Product

Acute Toxicity: Harmful if swallowed.

LD50 and LC50 Data:

Fer+Ion® F5	
ATE US (oral)	500.00 mg/kg body weight

Skin Corrosion/Irritation: Causes severe skin burns and eye damage. **pH:** < 1

Serious Eye Damage/Irritation: Causes serious eye damage. **pH:** < 1

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Teratogenicity: Not classified

Carcinogenicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: May be corrosive to the respiratory tract.

Symptoms/Injuries After Skin Contact: Causes severe skin burns.

Symptoms/Injuries After Eye Contact: Causes serious eye damage.

Symptoms/Injuries After Ingestion: Swallowing a small quantity of this material will result in serious health hazard.

Chronic Symptoms: None expected under normal conditions of use.

Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

Fer+Ion® F5

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Sulfuric acid, iron(3+) salt (3:2) (10028-22-5)	
LD50 Oral Rat	500 mg/kg
Sulfuric acid (7664-93-9)	
LD50 Oral Rat	2140 mg/kg
LC50 Inhalation Rat (mg/l)	510 mg/m³ (Exposure time: 2 h)
Water (7732-18-5)	
LD50 Oral Rat	> 90000 mg/kg
Sulfuric acid (7664-93-9)	
IARC Group	1

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

Not classified

Sulfuric acid (7664-93-9)	
LC50 Fish 1	500 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
LC 50 Fish 2	42 mg/l (Exposure time: 96 h - Species: Gambusia affinis [static])

Persistence and Degradability

Fer+Ion® F5

Persistence and Degradability	Not established.
-------------------------------	------------------

Bioaccumulative Potential

Fer+Ion® F5

Bioaccumulative Potential	Not established.
---------------------------	------------------

Sulfuric acid (7664-93-9)

BCF Fish 1	(no bioaccumulation)
------------	----------------------

Mobility in Soil

Not available

Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

SECTION 14: TRANSPORT INFORMATION

14.1 In Accordance with DOT

Proper Shipping Name	: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (CONTAINS FERRIC SULFATE, SULFURIC ACID)
Hazard Class	: 8
Identification Number	: UN3264
Label Codes	: 8
Packing Group	: II
ERG Number	: 154



14.2 In Accordance with IMDG

Proper Shipping Name	: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (CONTAINS FERRIC SULFATE, SULFURIC ACID)
Hazard Class	: 8
Identification Number	: UN3264
Packing Group	: II
Label Codes	: 8
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-B
MFAG Number	: 154



14.3 In Accordance with IATA

Proper Shipping Name	: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (CONTAINS FERRIC SULFATE, SULFURIC ACID)
----------------------	--

Fer+Ion® F5

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Packing Group : II
Identification Number : UN3264
Hazard Class : 8
Label Codes : 8
ERG Code (IATA) : 8L



14.4 In Accordance with TDG

Proper Shipping Name : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (CONTAINS FERRIC SULFATE, SULFURIC ACID)
Packing Group : II
Hazard Class : 8
Identification Number : UN3264
Label Codes : 8



SECTION 15: REGULATORY INFORMATION

US Federal Regulations

Fer+Ion® F5	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
Sulfuric acid, iron(3+) salt (3:2) (10028-22-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Sulfuric acid (7664-93-9)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on the United States SARA Section 302	
Listed on United States SARA Section 313	
SARA Section 302 Threshold Planning Quantity (TPQ)	1000
SARA Section 313 - Emission Reporting	1.0 % (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size)
Water (7732-18-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

US State Regulations

Sulfuric acid (7664-93-9)	
U.S. - California - Proposition 65 - Carcinogens List	WARNING: This product contains chemicals known to the State of California to cause cancer.
Sulfuric acid, iron(3+) salt (3:2) (10028-22-5)	
U.S. - Massachusetts - Right To Know List	
U.S. - New Jersey - Right to Know Hazardous Substance List	
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List	
U.S. - Pennsylvania - RTK (Right to Know) List	
Sulfuric acid (7664-93-9)	
U.S. - Massachusetts - Right To Know List	
U.S. - New Jersey - Right to Know Hazardous Substance List	
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List	
U.S. - Pennsylvania - RTK (Right to Know) List	

Canadian Regulations

Fer+Ion® F5	
WHMIS Classification	Class E - Corrosive Material Class D Division 2 Subdivision A - Very toxic material causing other toxic effects Class D Division 2 Subdivision B - Toxic material causing other toxic effects

Fer+Ion® F5

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Sulfuric acid, iron(3+) salt (3:2) (10028-22-5)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects Class D Division 2 Subdivision B - Toxic material causing other toxic effects Class E - Corrosive Material
Sulfuric acid (7664-93-9)	
Listed on the Canadian DSL (Domestic Substances List)	
Listed on the Canadian IDL (Ingredient Disclosure List)	
IDL Concentration 1 %	
WHMIS Classification	Class E - Corrosive Material Class D Division 2 Subdivision A - Very toxic material causing other toxic effects
Water (7732-18-5)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria

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

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision date : 05/10/15
Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Met. Corr. 1	Corrosive to metals Category 1
Skin Corr. 1A	Skin corrosion/irritation Category 1A
Skin Irrit. 2	Skin corrosion/irritation Category 2
H290	May be corrosive to metals
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H318	Causes serious eye damage
H402	Harmful to aquatic life

Party Responsible for the Preparation of This Document

CHEMTRADE LOGISTICS INC.

For SDS Info: (416) 496-5856

Handle product with due care and avoid unnecessary contact. This information is supplied under U.S. OSHA's "Right to Know" (29 CFR 1910.1200) and Canada's WHMIS regulations. Although certain hazards are described herein, we cannot guarantee these are the only hazards that exist. The information contained herein is based on data available to us and is believed to be true and accurate but it is not offered as a product specification. No warranty, expressed or implied, regarding the accuracy of this data, the hazards connected with the use of the product, or the results to be obtained from the use thereof, is made and Chemtrade and its affiliates assume no responsibility. Chemtrade is a member of the CIAC (Chemistry Industry Association of Canada) and adheres to the codes and principles of Responsible Care™.

