

KEMIRA

MATERIAL SAFETY DATA SHEET

FERIX-3

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

	<u>USA</u>	<u>CANADA</u>
Supplier:	Kemira Water Solutions, Inc. 316 Bartow Municipal Airport Bartow, Florida 33830	Kemira Water Solutions Canada Inc. 3405 Blvd. Marie Victorin Varenes, Québec J3X 1T6
Customer Service Telephones:	(800) 879-6353 (785) 842-7424	(800) 465-6171 (450) 652-0665
	(800) 450-7352 - Polymers	

Emergency Contacts (24 hr.)

FOR EMERGENCIES INVOLVING CHEMICAL SPILL OR RELEASE, CALL

CHEMTREC (800) 424-9300

USA (TOLL FREE)

CANUTEC (613) 996-6666

CANADA (CALL COLLECT)

Product Name:	FERIX-3
Chemical Family:	Inorganic Salts
Formula:	Fe ₂ (SO ₄) ₃ ·9H ₂ O
Synonym:	Iron (III) Sulfate
Acceptable Product Uses:	Water treatment chemical

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Component</u>	<u>CAS Number #</u>	<u>Concentration</u>	<u>ACGIH TWA</u>
Ferric Sulfate	010028-22-5	70-78%	1 mg/m ³ (as Fe) (iron salts, soluble)

WHMIS Classification: Class E, D-2-B

3. HAZARDS IDENTIFICATION

Emergency Overview: TOXIC! Irritating to skin, eyes, and mucous membranes. Harmful or fatal if swallowed.

Potential Effects on Health: Acute.

Carcinogenicity: Does not contain any known carcinogens or potential carcinogens.

4. FIRST AID MEASURES

General: If you feel unwell, seek medical attention (show the label or this MSDS if possible). Effects of exposure (inhalation, ingestion, or skin contact) to substance may be delayed. Ensure that medical personnel are

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aware of the material(s) involved, and take precautions to protect themselves.

- Skin Contact:** Remove all contaminated clothing, jewelry, and shoes. Wash affected area with soap or mild detergent and running water for at least 15 minutes. If irritation persists, seek medical attention.
- Eye Contact:** Flush immediately with water for at least 15 minutes, occasionally lifting upper and lower lids. Obtain medical attention immediately.
- Inhalation:** Move to fresh air. Give artificial respiration ONLY if breathing has stopped. Do not use mouth-to-mouth method if victim has 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. Obtain medical attention immediately.
- Ingestion:** *If conscious*, give two (2) glasses of water. **DO NOT INDUCE VOMITING.** Do not give anything by mouth to an unconscious person. Obtain immediate medical attention.

5. FIRE FIGHTING MEASURES

Flash point	Not applicable. Will not burn
Flammable Limits (Lower)	Not applicable
Flammable Limits (Upper)	Not applicable
Auto Ignition Temperature	Not applicable
Combustion and Thermal Decomposition Products	Oxides of sulfur.
Rate of Burning	Does not burn
Explosive Power	Not applicable
Sensitivity to Static Discharge	Not available

Fire and Explosion Hazards: During a fire, oxides of sulfur may be evolved.

Extinguishing Media: The substance is not combustible. Use extinguishing media appropriate to the surrounding fire.

NOTE: Also see "Section 10 – Stability and Reactivity"

6. ACCIDENTAL RELEASE MEASURES

Spills, Leaks, or Release:

Restrict access until clean-up operations are complete. Wear appropriate Personal Protective Equipment per Section 8. Ensure trained personnel conduct clean up and wear Personal Protective Equipment per Section 8.

Stop leak if possible. Avoid personal risk.

Notify Authorities if release exceeds reportable quantity per Section 15

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Small Spills – Absorb spill with clay or dry material or neutralize with lime, limestone or soda ash and collect in appropriate container for disposal. Neutralization with soda ash can generate carbon dioxide so additional ventilation may be necessary.

Large Spills – Prevent entry into sewers and confined areas. Dike, if possible. Keep unnecessary people away, isolate area and deny entry. Pump liquid material into appropriate vessels as possible or absorb spill with clay absorbents or non-reactive dry materials and collect in appropriate container for disposal.

Neutralize spill residuals carefully with lime, limestone, or soda ash and collect in suitable container for disposal. Flush area with water. This could generate carbon dioxide so additional ventilation may be necessary. Notify the appropriate environmental authorities.

7. HANDLING AND STORAGE

Handling: Handle all chemicals with respect. Review the label, this MSDS and any other applicable information before use. Keep separated from incompatible substances. Use appropriate Personal Protective Equipment per Section 8. Handle only with equipment, materials and supplies specified by their manufacturer as being compatible and appropriate for use with this product.

Storage Requirements:

Ensure that all storage containers are labeled. Avoid skin and eye contact. Wear appropriate protective clothing. Storage facilities should have secondary containment as required by law or regulation. **Storage tanks, piping and offloading points should be labeled with appropriate signage to avoid accidents.**

Containers of this material may be hazardous when empty, since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Preventive Measures:

Engineering Controls: A ventilation system of local/general exhaust is recommended to keep employee exposure below the Airborne Exposure Limits. Ensure that eyewash station and safety showers are proximal to the workstation location.

Personal Protection Equipment:

Eye Protection: Wear splash resistant chemical goggles and, where dust exposure is possible, a full face shield. Maintain eye wash fountain and quick-drench facilities in work area.

Skin Protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to avoid skin contact.

Recommended Protective Material: Neoprene, rubber or PVC.

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Respiratory Protection: Under conditions of dusting or contact with head gases, respiratory protection may be needed. Consider respirator warning properties before use.

- With limited contact use an appropriate chemical cartridge respirator with acid gas cartridge(s)
- When cleaning, decontaminating or performing maintenance on tanks, containers, piping systems and accessories, and in any other situations where airborne contaminants and/or dust could be generated, use protective equipment to protect against ingestion or inhalation. HEPA or air supplied respirator, full protective coveralls with head cover, gloves and boots or chemical suits, and boots are suggested.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Yellowish granules
Odor:	Slight
Form:	Yellowish granules
pH as is:	1 (10% in water)
Vapor Pressure (mm Hg):	N/A
Boiling Point:	N/A
Specific Gravity (20°C):	3.1
Solubility (water):	soluble
Vapor Density (Air=1):	N/A
Percent Volatile by Vol.:	N/A
Freezing Point:	N/A

10. STABILITY AND REACTIVITY

Hazardous Decomposition Products: Thermal decomposition will yield oxides of sulfur.

Chemical Stability: Stable at normal temperatures and pressure.

Conditions to Avoid: Heat, flame and other sources of ignition. Avoid contact with mineral acids, excessive heat and bases/alkalis

Incompatibility with other Substances: Corrosive to copper, copper alloys, mild steel, and galvanized steel. Avoid contact with strong oxidizing agents.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Toxicological Data: Ferric Sulfate: LD₅₀ (intraperitoneal mouse): 168 mg/kg

Mutagenicity: Other mutation test systems: Escherichia coli - 250 nmol/tube

Reproductive Effects: Not available

Teratogenicity and Fetotoxicity: Not available

Synergistic Materials: Not available.

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12. ECOLOGICAL INFORMATION

Not available.

13. DISPOSAL CONSIDERATIONS

Review Federal, State, Provincial, and Local government regulations prior to disposal. This material exhibits the characteristic of corrosivity to metals and other building materials and any disposal must comply with hazardous waste disposal requirements. 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.

RCRA: Test waste material for corrosivity, D002, prior to disposal

14. TRANSPORT INFORMATION

	Canada (TDG)	U.S. (DOT)
Shipping Name	Ferric sulfate, Environmentally Hazardous Substance, solid NOS	Ferric Sulfate, Environmentally Hazardous Substance, solid NOS
Hazard Class/Division	9	9
Identification No. Packing Group:	UN 3077 III	UN 3077 III

TDG Regulated Limit – Schedule Transportation Emergency Telephone Numbers:
 1-800-424-9300 CHEMTREC (USA)
 1-613-996-6666 CANUTEC (CANADA) (CALL COLLECT)

IATA/ICAO Class: N/A

15. REGULATORY INFORMATION

USA CLASSIFICATION:

OSHA Classification: Hazardous by definition of Hazard Communication Standard (29 CFR 1920.1200)

CERCLA: Hazardous substance/reportable quantity (RQ): final RQ = 1000 lb. (454 kg) Based on anhydrous Ferric Sulfate (divide by solution concentration to obtain solution weight)

SARA Regulations sections 313 and 40 CFR 372: No

SARA Hazard Categories, SARA SECTIONS 311/312 (40CFR370.21):

Acute	Yes
Chronic	No
Fire	No
Reactive	No
Sudden Release	No
OSHA Process Safety (29CFR1910.119)	No

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Clean Water Act Requirements: Designated as a hazardous substance under section 311(b)(2)(A) of the Federal Water Pollution Control Act and further regulated by the Clean Water Act Amendments of 1977 and 1978. These regulations apply to discharges of this substance.

TSCA: This substance or all ingredients of this product are listed on the Chemical Substances Inventory of the TSCA. Does not require reporting.

Other Regulations/Legislation which apply to this product:

California Proposition 65: No

Right-To-Know Lists: Massachusetts, New Jersey, Pennsylvania, California

This product does not contain, nor is it manufactured with, ozone-depleting substances.

CANADIAN CLASSIFICATION

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

Controlled Products Regulation (WHMIS) Classification: E:Corrosive D2B:Toxic Material

CEPA / Canadian Domestic Substances List (DSL): The substances in this product are on the Canadian Domestic Substances List (CEPA DSL).

EEC CLASSIFICATION

EINECS: 233-072-9

16. OTHER INFORMATION

National Fire Protection Association (NFPA) and Hazardous Materials Identification System (HMIS) Ratings:

	NFPA	HMIS
HEALTH	2	2
FIRE	0	0
REACTIVITY	0	0
CORROSIVE	YES	YES

4 = Extreme/Severe
3 = High/Serious
2 = Moderate
1 = Slight
0 = Minimum

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MSDS Revised on January 3, 2007 by Kemira Water Solutions HSE group

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