

Ferric Sulfate

SECTION 1. IDENTIFICATION

Product Identifier	Ferric Sulfate
Other Means of Identification	Iron (III) sulfate; Iron sesquisulfate hydrate; Iron Persulfate, Diiron tris(sulfate)
Product Code(s)	FE5010
Product Family	Inorganic Solid
Recommended Use	Industrial.
Restrictions on Use	None known.
Supplier Identifier	Alphachem Limited, 2485 Milltower Court, Mississauga, Ontario, L5N 5Z6, (905) 821-2995
Emergency Phone No.	CANUTEC CANADA, 613-996-6666, 24 Hours
SDS No.	0485

SECTION 2. HAZARD IDENTIFICATION

Classified according to Canada's Hazardous Products Regulations (WHMIS 2015) and the US Hazard Communication Standard (HCS 2012).

Classification

Acute toxicity (Oral) - Category 4; Skin irritation - Category 2; Serious eye damage - Category 1

Label Elements



Signal Word:
Danger

Hazard Statement(s):
Harmful if swallowed.
Causes skin irritation.
Causes serious eye damage.

Precautionary Statement(s):

Prevention:

Wear protective gloves/protective clothing.
Wear eye protection/face protection.
Wash hands and skin thoroughly after handling.
Avoid breathing dust/fume/gas/mist/vapours/spray.

Response:

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN: Wash with plenty of water.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Product Identifier: Ferric Sulfate
Date of Preparation: April 26, 2016

Continue rinsing.

Immediately call a POISON CENTRE or doctor.

Storage:

Store in a dry place. Store in a closed container.

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

Other Hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture:

Chemical Name	CAS No.	%	Other Identifiers
FERRIC SULFATE	10028-22-5	66 - 74	Iron (III) sulfate; Iron sesquisulfate hydrate; Iron persulfate
Sulfuric acid	7664-93-9	1 - 5	Hydrogen Sulfate
Water	7732-18-5	Balance	Dihydrogen Oxide

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Remove source of exposure or move to fresh air. Move to fresh air. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by Poison Centre or doctor.

Skin Contact

Immediately rinse with lukewarm, gently flowing water for 15-20 minutes. If skin irritation occurs, get medical advice or attention.

Eye Contact

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. If eye irritation persists, get medical advice or attention.

Ingestion

Do not induce vomiting. Rinse mouth with water. Immediately call a Poison Centre or doctor.

First-aid Comments

Some of the first-aid procedures recommended here require advanced first-aid training. Get medical advice or attention if you feel unwell or are concerned.

Most Important Symptoms and Effects, Acute and Delayed

If in eyes: contact causes severe burns with redness, swelling, pain and blurred vision. Permanent damage including blindness can result.

Immediate Medical Attention and Special Treatment

Special Instructions

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Not combustible. Use extinguishing agent suitable for surrounding fire.

Unsuitable Extinguishing Media

None known.

Specific Hazards Arising from the Product

Product Identifier: Ferric Sulfate

Date of Preparation: April 26, 2016

Page 02 of 07

Does not burn.

In a fire, the following hazardous materials may be generated: corrosive sulfur oxides.

Special Protective Equipment and Precautions for Fire-fighters

Fight fire from a safe distance or a protected location. Approach fire from upwind to avoid hazardous vapours or gases. Knock down vapours or gases with water fog or fine water spray. For a massive fire, immediately evacuate the area and use unmanned hose holder or monitor nozzles. Dike and recover contaminated water for appropriate disposal.

Chemical protective clothing (e.g. chemical splash suit) and positive pressure SCBA may be necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Emergency responders: use the personal protective equipment recommended in Section 8 of this safety data sheet. Increase ventilation to area or move leaking container to a well-ventilated and secure area. Remove or isolate incompatible materials as well as other hazardous materials.

Methods and Materials for Containment and Cleaning Up

Collect using shovel/scoop or approved HEPA vacuum and place in a suitable container for disposal.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Do not breathe in this product. Do not get in eyes, on skin or on clothing. Only use where there is adequate ventilation. Wear personal protective equipment to avoid direct contact with this chemical. Prevent accidental contact with incompatible chemicals. Never add water to a corrosive. Always add corrosives slowly to COLD water. Keep containers tightly closed when not in use or empty.

Conditions for Safe Storage

Store in an area that is: dry, ventilated, temperature-controlled, separate from incompatible materials (see Section 10: Stability and Reactivity). Store in a closed container.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Chemical Name	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
Water	Not established		Not established			
FERRIC SULFATE	1 mg/m ³		1 mg/m ³			
Sulfuric acid	0.2 mg/m ³ A2		1 mg/m ³			

Appropriate Engineering Controls

Use local exhaust ventilation and enclosure, if necessary, to control amount in the air. Provide eyewash and safety shower if contact or splash hazard exists.

Individual Protection Measures

Eye/Face Protection

Wear chemical safety goggles and face shield when contact is possible.

Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.
Suitable materials are: natural rubber.

Respiratory Protection

Wear a NIOSH approved air-purifying respirator with an appropriate cartridge.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Product Identifier: Ferric Sulfate
Date of Preparation: April 26, 2016

Appearance	Yellow - brown powder.
Odour	Not available
Odour Threshold	Not available
pH	Not available
Melting Point/Freezing Point	Not available (melting); Not available (freezing)
Initial Boiling Point/Range	Not available
Flash Point	Not applicable
Evaporation Rate	Not available
Flammability (solid, gas)	Will not burn.
Upper/Lower Flammability or Explosive Limit	Not applicable (upper); Not applicable (lower)
Vapour Pressure	Not available
Vapour Density (air = 1)	Not available
Relative Density (water = 1)	1.20 - 1.40
Solubility	Soluble in water; Not available (in other liquids)
Partition Coefficient, n-Octanol/Water (Log Kow)	Not applicable
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Viscosity	Not available (kinematic); Not available (dynamic)
Other Information	
Physical State	Solid

SECTION 10. STABILITY AND REACTIVITY

Reactivity

None known.

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

None known.

Conditions to Avoid

High temperatures.

Incompatible Materials

Metals (e.g. aluminum), strong acids (e.g. hydrochloric acid), strong bases (e.g. sodium hydroxide).

Hazardous Decomposition Products

Corrosive sulfur oxides.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Inhalation; skin contact; ingestion; eye contact.

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Water	Not available	> 89840 mg/kg (rat)	Not available
FERRIC SULFATE	Not available	> 500 mg/kg (rat)	Not available
Sulfuric acid	255 mg/m ³ (rat) (4-hour exposure)	2,140 mg/kg (rat)	

Product Identifier: Ferric Sulfate
Date of Preparation: April 26, 2016

Skin Corrosion/Irritation

FERRIC SULFATE:

May cause moderate or severe irritation based on information for closely related materials.

Sulfuric acid:

Animal tests show skin corrosion.

Water:

No information was located.

Serious Eye Damage/Irritation

FERRIC SULFATE:

May irritate or burn the eyes. Permanent damage including blindness may result.

Sulfuric acid:

Animal tests show serious eye damage.

Water:

No information was located.

STOT (Specific Target Organ Toxicity) - Single Exposure**Inhalation**

FERRIC SULFATE:

May cause nose and throat irritation.

Sulfuric acid:

Harmful severe lung injury.

Water:

No information was located.

Ingestion

FERRIC SULFATE:

May cause irritation of the mouth, throat and stomach. Symptoms may include nausea, vomiting, stomach cramps and diarrhea.

Sulfuric acid:

Harmful severe irritation or burns to the mouth, throat and stomach.

Water:

No information was located.

Aspiration Hazard

FERRIC SULFATE:

No information was located.

Sulfuric acid:

No information was located.

Water:

No information was located.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

FERRIC SULFATE:

No information was located.

Sulfuric acid:

May cause irritation of the respiratory system. May cause respiratory tract injury, dermatitis. Symptoms can include redness, rash, swelling and itching. May cause lung injury. Symptoms may include shortness of breath, chronic cough and weight loss. There may be a decrease in lung function and ability to do some physical activities.

Water:

No information was located.

Respiratory and/or Skin Sensitization

FERRIC SULFATE:

No information was located.

Sulfuric acid:

Not a skin sensitizer.

Water:

No information was located.

Carcinogenicity

Not known to cause cancer. (FERRIC SULFATE)

Reproductive Toxicity

Development of Offspring

Not known to harm the unborn child.

Sexual Function and Fertility

Not known to cause effects on sexual function or fertility.

Effects on or via Lactation

No information was located.

Germ Cell Mutagenicity

Not known to be a mutagen.

Interactive Effects

No information was located.

SECTION 12. ECOLOGICAL INFORMATION

This section is not required by WHMIS. This section is not required by OSHA HCS 2012.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

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

SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
US DOT	UN3077	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Ferric Sulfate)	9	III

Special Precautions Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

Canada

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

All ingredients are listed on the DSL or are not required to be listed.

USA

Toxic Substances Control Act (TSCA) Section 8(b)

All ingredients are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.

SECTION 16. OTHER INFORMATION

SDS Prepared By Alphachem Limited

Phone No. (905)-821-2995

Date of Preparation April 26, 2016

Date of Last Revision April 26, 2016

References CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS). Kemira Water Solutions Canada database.

Disclaimer This document is offered only as a guide in the safe handling of the above product, and has been prepared from the best information currently available. It is not intended to be

Product Identifier: Ferric Sulfate

Date of Preparation: April 26, 2016

all-inclusive and the conditions of use may involve other additional considerations. Since Alphachem Limited cannot anticipate or control the conditions under which the product may be used, it will not be liable for any claims, damages or losses which may result from the use or reliance on any information herein.