

**Ferric Chloride Anhydrous****SECTION 1. IDENTIFICATION**

<b>Product Identifier</b>	Ferric Chloride Anhydrous
<b>Other Means of Identification</b>	Ferric perchloride, Iron (III) chloride, Iron trichloride
<b>Product Code(s)</b>	FE2410
<b>Product Family</b>	Inorganic Solid
<b>Recommended Use</b>	Laboratory and industrial use.
<b>Restrictions on Use</b>	None known.
<b>Supplier Identifier</b>	Alphachem Limited, 2485 Milltower Court, Mississauga, Ontario, L5N 5Z6, (905) 821-2995
<b>Emergency Phone No.</b>	CANUTEC CANADA, 613-996-6666, 24 Hours
<b>SDS No.</b>	0724

**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

Harmful if swallowed.

Causes skin irritation.

Causes serious eye damage.

**Precautionary Statement(s):****Prevention:**

Wash hands and skin thoroughly after handling.

Wear eye protection/face protection.

Wear protective gloves.

Do not eat, drink or smoke when using this product.

**Response:**

If SWALLOWED: Call a POISON CENTRE/doctor/ if you feel unwell.

IF ON SKIN: Wash with plenty of water.

If skin irritation occurs: Get medical advice/attention.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Immediately call a POISON CENTRE or doctor.

**Storage:**

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Store in a well-ventilated place. Keep container tightly closed.

Disposal:

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

#### Other Hazards

None known.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance:

Chemical Name	CAS No.	%	Other Identifiers
Ferric chloride	7705-08-0	> 99	Ferric perchloride, Iron (III) chloride, Iron trichloride

### SECTION 4. FIRST-AID MEASURES

#### First-aid Measures

##### Inhalation

Remove source of exposure or move to fresh air. Keep at rest in a position comfortable for breathing. 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. 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. Use water to keep non-leaking, fire-exposed containers cool.

##### Unsuitable Extinguishing Media

None known.

#### Specific Hazards Arising from the Product

Heating increases the release of toxic vapour. Closed containers may rupture violently when heated releasing contents.

In a fire, the following hazardous materials may be generated: corrosive chlorine; corrosive hydrogen chloride.

#### Special Protective Equipment and Precautions for Fire-fighters

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Approach fire from upwind to avoid hazardous vapours or gases. Fight fire from a safe distance or a protected location. 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.

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

Evacuate downwind locations. 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.

### Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway.

### Methods and Materials for Containment and Cleaning Up

Stop or reduce leak if safe to do so. Avoid generating dust. 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

Wear personal protective equipment to avoid direct contact with this chemical. Avoid generating dusts. Only use where there is adequate ventilation. Prevent accidental contact with incompatible chemicals. Keep containers tightly closed when not in use or empty.

### Conditions for Safe Storage

Store in an area that is: cool, dry, well-ventilated, separate from incompatible materials (see Section 10: Stability and Reactivity). Store in the original, labelled, shipping 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
Ferric chloride	1 mg/m3		1 mg/m3			

### Appropriate Engineering Controls

Use local exhaust ventilation and enclosure, if necessary, to control amount in the air.

### 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: neoprene rubber, nitrile rubber, Tychem® Responder.

The following materials should NOT be used: polyvinyl alcohol.

#### Respiratory Protection

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

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### Basic Physical and Chemical Properties

<b>Appearance</b>	Brown - black crystals. Absorbs moisture from the air.
<b>Odour</b>	Not available
<b>Odour Threshold</b>	Not available
<b>pH</b>	2 (0.1 M solution)
<b>Melting Point/Freezing Point</b>	~ 304 °C (579 °F) (melting); ~ 304 °C (579 °F) (freezing)

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<b>Initial Boiling Point/Range</b>	~ 316 °C (601 °F)
<b>Flash Point</b>	Not applicable
<b>Evaporation Rate</b>	Not available
<b>Flammability (solid, gas)</b>	Will not burn.
<b>Upper/Lower Flammability or Explosive Limit</b>	Not applicable (upper); Not applicable (lower)
<b>Vapour Pressure</b>	Not available
<b>Vapour Density (air = 1)</b>	Not applicable
<b>Relative Density (water = 1)</b>	2.90 at 25 °C
<b>Solubility</b>	Very soluble in water; Highly soluble in alcohols (e.g. ethanol).
<b>Partition Coefficient, n-Octanol/Water (Log Kow)</b>	0.16 (estimated)
<b>Auto-ignition Temperature</b>	Not applicable
<b>Decomposition Temperature</b>	~ 304 °C (579 °F)
<b>Viscosity</b>	Not available (kinematic); Not applicable (dynamic)
<b>Other Information</b>	
<b>Physical State</b>	Solid

## SECTION 10. STABILITY AND REACTIVITY

### Reactivity

None known.

### Chemical Stability

Normally stable.

### Possibility of Hazardous Reactions

None known.

### Conditions to Avoid

Generation of dust. Incompatible materials. Water, moisture or humidity.

### Incompatible Materials

Strong oxidizing agents (e.g. perchloric acid), metals (e.g. aluminum).

### Hazardous Decomposition Products

Corrosive hydrogen chloride; corrosive chlorine. iron oxides.

## SECTION 11. TOXICOLOGICAL INFORMATION

### Likely Routes of Exposure

Inhalation; skin contact; eye contact; ingestion.

### Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Ferric chloride	Not available	316 mg/kg (rat)	Not available

### Skin Corrosion/Irritation

There is limited evidence of moderate or severe irritation.

### Serious Eye Damage/Irritation

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

### STOT (Specific Target Organ Toxicity) - Single Exposure

#### Inhalation

May cause nose and throat irritation.

#### Ingestion

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Harmful.

**Aspiration Hazard**

No information was located.

**STOT (Specific Target Organ Toxicity) - Repeated Exposure**

No information was located.

**Respiratory and/or Skin Sensitization**

No information was located.

**Carcinogenicity**

Chemical Name	IARC	ACGIH®	NTP	OSHA
Ferric chloride	Not evaluated	Not designated	Not Listed	

Ferric chloride:

**Reproductive Toxicity**

**Development of Offspring**

No information was located.

**Sexual Function and Fertility**

Ferric chloride:

No information was located.

**Effects on or via Lactation**

No information was located.

**Germ Cell Mutagenicity**

No information was located.

**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	UN1773	FERRIC CHLORIDE, ANHYDROUS	8	III
Canadian TDG	UN1773	FERRIC CHLORIDE, ANHYDROUS	8	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)**

Listed on the DSL.

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

Listed on the TSCA Inventory.

**SECTION 16. OTHER INFORMATION**

**SDS Prepared By** Alphachem Limited

**Phone No.** (905)-821-2995

**Date of Preparation** September 27, 2016

**Date of Last Revision** September 27, 2016

**References** CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS).

**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 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.