

**Ferric Chloride 42 deg Baume****SECTION 1. IDENTIFICATION**

<b>Product Identifier</b>	Ferric Chloride 42 deg Baume
<b>Other Means of Identification</b>	Ferric trichloride, Iron chloride (FeCl <sub>3</sub> )
<b>Product Code(s)</b>	FE2540
<b>Product Family</b>	Inorganic solution
<b>Recommended Use</b>	Industrial.
<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>	0481

**SECTION 2. HAZARD IDENTIFICATION****Classification**

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

**Label Elements**

Signal Word:  
Danger

**Hazard Statement(s):**

Harmful if swallowed.  
Causes serious eye damage.

**Precautionary Statement(s):**

Do not get in eyes, on skin, or on clothing.  
Wear protective gloves/protective clothing.  
Wear eye protection/face protection.  
Do not breathe dust/fume/gas/mist/vapours/spray.  
Use only outdoors or in a well-ventilated area.  
Wash hands and skin thoroughly after handling.

**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.  
Continue rinsing.  
Immediately call a POISON CENTRE or doctor.

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Storage:

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

Mixture:

Chemical Name	CAS No.	%	Other Identifiers
Ferric chloride	7705-08-0	25 - 45	Ferric trichloride, Iron chloride (FeCl <sub>3</sub> )
Hydrochloric acid	7647-01-0	0 - 3	Hydrogen Chloride
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. 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 or a rash 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. Immediately call a Poison Centre or doctor.

##### Ingestion

Rinse mouth with water. Do not induce vomiting. If vomiting occurs, have person lie on side in the recovery position. Rinse mouth with water again. 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

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

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contents.

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

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

Use extreme caution. 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.

### Environmental Precautions

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

### Methods and Materials for Containment and Cleaning Up

Prevent spread of spill. Neutralize with soda ash or lime and sweep or scoop into suitable disposal container. Flush residues with water.

## SECTION 7. HANDLING AND STORAGE

### Precautions for Safe Handling

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. Wash hands thoroughly after handling this material. Keep containers tightly closed when not in use or empty.

### Conditions for Safe Storage

Store in an area that is: dry, well-ventilated, 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
Ferric chloride	1 mg/m <sup>3</sup>		1 mg/m <sup>3</sup>			
Hydrochloric acid		2 ppm A4		5 ppm		
Water	Not established		Not established			

A4 = Not classifiable as a human carcinogen.

### 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.

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### Basic Physical and Chemical Properties

Appearance	Orange - brown liquid.
Odour	Acidic
Odour Threshold	Not available
pH	< 1
Melting Point/Freezing Point	-12 °C (10 °F) (melting); -12 °C (10 °F) (freezing)
Initial Boiling Point/Range	106 °C (223 °F)
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	40 mm Hg
Vapour Density (air = 1)	1.0
Relative Density (water = 1)	1.2 - 1.5
Solubility	Very soluble in water; Not available (in other liquids)
Partition Coefficient, n-Octanol/Water (Log Kow)	Not available
Auto-ignition Temperature	Not applicable
Decomposition Temperature	Not available
Viscosity	Not available (kinematic); Not available (dynamic)
Other Information	
Physical State	Liquid

## SECTION 10. STABILITY AND REACTIVITY

### Reactivity

None known.

### Chemical Stability

Normally stable.

### Possibility of Hazardous Reactions

None known.

### Conditions to Avoid

Incompatible materials.

### Incompatible Materials

Metals (e.g. aluminum).

### Hazardous Decomposition Products

Corrosive hydrogen chloride.

## 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

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Hydrochloric acid	1405 ppm (male rat) (4-hour exposure)	700 mg/kg (rat)	> 5010 mg/kg (rabbit)
Water	Not available	> 89840 mg/kg (rat)	Not available

**Skin Corrosion/Irritation**

May burn the skin. Permanent scarring may result.

**Serious Eye Damage/Irritation**

Contact causes severe burns with redness, swelling, pain and blurred vision. Permanent damage including blindness can result.

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

**Inhalation**

May cause nose and throat irritation. Symptoms may include coughing, shortness of breath, difficult breathing and tightness in the chest.

**Ingestion**

May cause severe irritation or burns to the mouth, throat and stomach, harmful effects on the liver.

**Aspiration Hazard**

No information was located.

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

If swallowed: large amounts may cause harmful effects on the liver.

**Respiratory and/or Skin Sensitization**

No information was located.

**Carcinogenicity**

Chemical Name	IARC	ACGIH®	NTP	OSHA
Ferric chloride	Not evaluated	Not designated	Not Listed	
Hydrochloric acid	Group 3	A4	Not Listed	
Water	Not Listed	Not Listed	Not Listed	Not Listed

**Key to Abbreviations**

Group 3 = Not classifiable as to its carcinogenicity to humans. A4 = Not classifiable as a human carcinogen.

**Reproductive Toxicity**

**Development of Offspring**

No information was located.

**Sexual Function and Fertility**

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
Canadian TDG	UN2582	Ferric Chloride Solution	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.

**USA**

**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** April 25, 2016

**Date of Last Revision** April 25, 2016

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

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