

# Material Safety Data Sheet

Issue Date: June 2010

Product Name: **Ferric Chloride 10-40% Solution**

Classified as hazardous

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## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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Product name: Ferric Chloride 10-40% Solution

Product Code: I872037

Company Name :Beumaris Pharmacy (ABN 20 020 277 951)

Address: 1A East Concourse

Beumaris

3193

Phone: 03 9589 2676

Fax: 03 9589 2014

Other Names: Iron (III) Chloride Solution (Ferric Chloride Solution)

Other information: Beumaris Pharmacy has taken care in compiling this information. No liability is accepted whether direct or indirect from its application since the conditions of final use are outside Beumaris Pharmacy's control.

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## 2. COMPOSITION, INFORMATION ON INGREDIENTS

Ingredients	Name:	CAS	Proportion
	Iron (III) Chloride,	7705-08-0	10-40%
	Water to make total of 100%		

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## 3. HAZARDS IDENTIFICATION

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Harmful if swallowed. Causes severe digestive and respiratory tract burns

Causes severe eye and skin burns.

Other information: Short term exposure by all routes is considered harmful

Eyes: Vapors are irritating to the eye, liquid contact may result in clouding of the cornea, erosion up to total corneal opacification and loss of the eye

Skin: May cause severe burns and ulcerations. Skin may turn brown-yellow. Deep burns are slow to heal and scarring may occur.

Ingestion: Causes severe digestive tract burns with abdominal pain, vomiting and possible death. May cause corrosion and permanent tissue destruction of the oesophagus and digestive tract. Ingestion can result in abdominal pain, vomiting with blood and diarrhea, dehydration, shock pallor, cyanosis, hypothermia, acidosis

Coagulation defects, respiratory and cardiac involvement, vasomotor instability leading to coma and death. Survivors may develop reversible liver damage, gastric scarring and pyloric obstruction

Inhalation: May cause irritation of the respiratory tract with burning pain in the nose and throat, coughing, wheezing, shortness of breath and pulmonary oedema. May cause severe irritation of the respiratory tract with sore throat, coughing, sore throat, coughing, shortness of breath and pulmonary oedema. May cause severe irritation of the respiratory tract with sore throat, coughing, shortness of breath and delayed lung oedema. Palpitation, inflammation, oedema of the larynx and bronchi, chemical pneumonitis and pulmonary oedema may result from inhalation exposure.

Chronic exposure: may result in dental erosion, jaw necrosis, respiratory disease, dermatitis, conjunctivitis, corneal scarring and fever.

Repeated ingestion may cause hemosiderosis, possible liver and pancreatic damage.

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## 4. FIRST AID MEASURES

**Inhalation:** Seek medical advice if effects persist. Move victim to fresh air immediately

**Skin:** Decontaminate clothing before re-use or discard

**Eye:** Seek immediate medical assistance

**Advice to doctor:** Consult Poisons Information Centre

Treat symptomatically as for acidic material and iron salts

Treat symptomatically and supportively.

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## 5. FIRE FIGHTING MEASURES

**General:** Negligible fire and explosion hazard when exposed to heat or flame. Move container if possible, avoid breathing vapours or dust. Avoid corrosive vapours or hydrogen chloride formed by thermal decomposition

**Extinguishing media:** For small fires, use dry chemical, carbon dioxide, water spray or alcohol resistant foam. For large fires, use water spray, fog, or alcohol resistant foam

**Auto ignition temperature:** No information

### Unusual Fire &

**Explosion Hazards:** Can liberate (flammable) hydrogen gas upon contact with most metals. When heated, emits toxic fumes. If safe to do so, remove containers from the path of the fire. Fire fighters to wear self contained breathing apparatus if risk of exposure to vapour or products of decomposition.

## 6. ACCIDENTAL RELEASE MEASURES

**Other Information:** Evacuate unprotected personnel from danger area. Increase ventilation. Wear protective equipment to prevent skin and eye contamination and inhalation of vapours. For disposal refer to State Waste Management Authority

## 7. HANDLING AND STORAGE

**Precautions to be taken in storage:** Store away from cyanides, metals and foodstuffs, UN No 2582, packaging group III, classified As a class 8 (CORROSIVE) Dangerous substance for the purpose of transport. Refer to relevant regulations for storage and transport regulations. Class 8 products are not to be loaded with class 1,4,3,5,6 (when class 6 is cyanide and class 8 is an acid, 7 or foodstuffs or foodstuff empties

## 8. EXPOSURE CONTROLS, PERSONAL PROTECTION

**Other Exposure Information:** No value assigned for this specific product. Soluble Iron salts as Fe, TLV/TWA: 1mg/m<sup>3</sup> Worksafe Aust. Hydrogen Chloride (hydrolysis product), TLV/TWA: 5ppm, 7mg/m<sup>3</sup> peak limitation Worksafe Aust. Peak limitation is that concentration that should not be exceeded even instantaneously.

TLV is the time weighted average concentration of the work atmosphere over a normal 8-hour work day and a 40-hour work week. Nearly all workers may be repeatedly exposed to this level, day after day, without adverse effect. These TLVs are issued as guidelines for good practice. All atmospheric contamination should be kept to as low a level as is practically possible. These TLVs should not be used as fine lines between safe and dangerous concentrations

**Personal Protective Equipment:** Safety glasses, goggles or face shield as appropriate. Do not wear contact lenses when working with chemicals

Chemically resistant gloves.

Safety shoes needed.

If inhalation risk exists, wear acid mist respirator. If using a respirator, ensure that the cartridges are correct for the potential air contamination and are in good working order.

Wear appropriate clothing to prevent skin exposure

**Eng. Controls:** Maintain concentration below recommended exposure limit.

Avoid generating and inhaling mists.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Reddish liquid with faint odour of hydrogen chloride
<b>Boiling Point:</b>	No data
<b>Specific Gravity:</b>	no data
<b>pH value:</b>	acidic
<b>Vapour pressure:</b>	no data
<b>Flash point:</b>	No data
<b>Flammability:</b>	Non combustible material

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Flammable limits: No data

Solubility in water: Soluble

## 10. STABILITY AND REACTIVITY

**Hazardous Reaction:** Stable under normal temperatures and pressures

Highly corrosive to most metals liberating (flammable) hydrogen gas.

Hydrogen chloride is produced upon hydrolysis.

**Avoid incompatible materials:** Metals, acids (organic eg acetic acid, formic acid, methanoic acid, oxalic acid), Alcohols and glycols (eg. Butyl alcohol, ethanol, methanol, ethylene glycol) aldehydes (eg acetaldehyde, acrolein, chloral hydrate, formaldehyde), amides (eg butyramide, diethyltoluamide, dimethylformamide) amines (aliphatic and aromatic eg dimethyl amine, propylamine, pyridine, triethylamine) azo, diazo and hydrazines (eg dimethyl hydrazine, hydrazine, methyl hydrazine) carbamates (eg carbanolate, carbofuran,) caustics (eg ammonia, ammonium hydroxide, calcium hydroxide, potassium hydroxide, sodium hydroxide) cyanides (eg potassium cyanide, sodium cyanide) dithiocarbamates (eg ferbam, maneb, metham, thiram) esters (eg butyl acetate, ethylacetate, propyl formate) ethers (eg dioxane, furfuran, tetrahydrofuran (THF) fluorides (inorganic, eg ammonium fluoride, calcium fluoride, cesium fluoride), hydrocarbons (aromatic eg benzene, chrysene, cumene, toluene), halo

**Hazardous decomposition products:** Hydrogen chloride

## 11. TOXICOLOGICAL INFORMATION

**Toxicological Information:** For solid Ferric chloride: Oral LD50 (rat): 1872mg/m<sup>3</sup>. Oral LD50 (mouse): 895mg/m<sup>3</sup>.

Skin: severe irritant

Eyes: may cause permanent damage

**Inhalation:** Inhalation of mists or aerosols can produce respiratory irritation

**Ingestion:** Ingestion can result in vomiting, diarrhoea, abdominal pain and circulatory collapse. Can cause corrosive damage to stomach and small intestine

**Skin:** Repeated or prolonged skin contact may lead to dermatitis like effects

**Eye:** A severe eye irritant

## 12. ECOLOGICAL INFORMATION

**Environmental:** Substance will neutralise soil carbonate based components

## 13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with federal, state and local regulations

## 14. TRANSPORT INFORMATION

U.N. Number: 2582

Proper Shipping name: Ferric chloride solution

DG Class: 8

Hazchem Code: ZZ

Packaging method: 5.9.8

PG Number: 8A1

Packing Group: III

ERG Number: 37

## 15. REGULATORY INFORMATION

Risk Phrase: R22 Harmful if swallowed

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Safety Phrase:	R34 Causes burns S22/25 Avoid contact with skin and eyes S28 After contact with skin, wash immediately with plenty of water S36/37/39 Wear suitable protective clothing, gloves and eye/face protection. S7/8 Keep container tightly closed and dry S45 In case of accident or if you feel unwell seek medical advice immediately
Hazard Category:	Harmful, corrosive
Poison Schedule	As required by the ADG Code

## 16. OTHER INFORMATION

Contact Person/Point: Beaumaris Pharmacy  
1a East Concourse  
Beaumaris, 3193  
Tel. 03 9589 2676  
Fax. 03 9589 2014

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Poisons schedule: Not scheduled.

End of MSDS