



SAFETY DATA SHEET
FERRIC CHLORIDE SOLUTION 40 %

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Compilation date: 15/02/11

Revision No: 3

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name: FERRIC CHLORIDE SOLUTION 40 %

REACH registered number(s): 01-2119497994-05-XXXX

CAS number: 7705-08-0

EINECS number: 231-729-4

Product code: 1440001

Synonyms: * IRON (III) CHLORIDE SOLUTION 40 %

IRON TRICHLORIDE SOLUTION

FLORES MARTIS

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of substance / mixture: * Effluent Treatment. Water Treatment. Metal Treatment. Industrial Water Treatment
Additive Pulp & paper applications

1.3. Details of the supplier of the safety data sheet

Company name: Monarch Chemicals Limited

New Road

Sheerness

Kent

ME12 1LZ

United Kingdom

Tel: 01795 583333 (09:00 - 17:00 Mon-Fri)

Fax: 01795 583300

Email: sales@monarchchemicals.co.uk

1.4. Emergency telephone number

Emergency tel: 07711 009064 (Out of Hours)

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CHIP: Xn: R22; C: R34; Xi: R37

Classification under CLP: Met. Corr. 1: H290; Skin Corr. 1A: H314; STOT SE 3: H335

Most important adverse effects: Harmful if swallowed. Causes burns. Irritating to respiratory system.

2.2. Label elements

Label elements under CLP:

Hazard statements: * H290: May be corrosive to metals.

[cont...]

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H314: Causes severe skin burns and eye damage.

H335: May cause respiratory irritation.

Signal words: * Danger

Hazard pictograms: * GHS05: Corrosion

GHS07: Exclamation mark



Precautionary statements: * P280: Wear protective gloves/protective clothing/eye protection/face protection.

P301+312: IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.

P302+352: IF ON SKIN: Wash with plenty of soap and water.

P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310: Immediately call a POISON CENTER or doctor.

P501: Dispose of contents/container to : An approved recycle or waste disposal facility.

Label elements under CHIP:

Hazard symbols: Corrosive.



Risk phrases: R22: Harmful if swallowed.

R34: Causes burns.

R37: Irritating to respiratory system.

Safety phrases: S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36/37/39: Wear suitable protective clothing, gloves and eye / face protection.

S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

2.3. Other hazards

PBT: This substance is not identified as a PBT substance.

Section 3: Composition/information on ingredients

3.2. Mixtures

Hazardous ingredients:

IRON (III) CHLORIDE

[cont...]

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EINECS	CAS	CHIP Classification	CLP Classification	Percent
231-729-4	7705-08-0	Xn: R22; Xi: R36/37/38; Xi: R41	Skin Corr. 1A: H314; Met. Corr. 1: H290; Eye Dam. 1: H318; STOT SE 3: H335	30-50%

Section 4: First aid measures

4.1. Description of first aid measures

- Skin contact:** Remove all contaminated clothes and footwear immediately unless stuck to skin. Drench the affected skin with running water for 10 minutes or longer if substance is still on skin. Transfer to hospital if there are burns or symptoms of poisoning.
- Eye contact:** Bathe the eye with running water for 15 minutes. Transfer to hospital for specialist examination.
- Ingestion:** Wash out mouth with water. Do not induce vomiting. If conscious, give half a litre of water to drink immediately. Consult a doctor.
- Inhalation:** Not applicable under normal conditions of use. Remove casualty from exposure ensuring one's own safety whilst doing so. If conscious, ensure the casualty sits or lies down. If unconscious and breathing is OK, place in the recovery position. If unconscious, check for breathing and apply artificial respiration if necessary. If symptoms develop seek medical attention.

4.2. Most important symptoms and effects, both acute and delayed

- Skin contact:** * Causes burns. Blistering may occur.
- Eye contact:** Risk of serious damage to eyes. Corneal burns may occur.
- Ingestion:** Corrosive burns may appear around the lips. May cause throat burns. Nausea and stomach pain may occur. Moderately toxic, although there is very low risk during normal industrial use.
- Inhalation:** Not applicable under normal conditions of use. May cause irritation of the mucous membranes and respiratory system. High concentrations are irritant to the respiratory tract. Prolonged or repeated exposure may cause ulceration and perforation of the nasal septum.
- Delayed / immediate effects:** * Immediate effects can be expected after short-term exposure.

4.3. Indication of any immediate medical attention and special treatment needed

Immediate / special treatment: Eye bathing equipment should be available on the premises.

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Suitable extinguishing media for the surrounding fire should be used. Use water spray to cool containers.

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5.2. Special hazards arising from the substance or mixture

Exposure hazards: The product does not support combustion. May liberate toxic and corrosive Hydrogen Chloride gas.

5.3. Advice for fire-fighters

Advice for fire-fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Wear suitable protective clothing. Do not attempt to take action without suitable protective clothing - see section 8 of SDS. Remove all incompatible materials as outlined in section 10 of SDS.

6.2. Environmental precautions

Environmental precautions: Do not discharge into drains or rivers. Contain the spillage using bunding.

6.3. Methods and material for containment and cleaning up

Clean-up procedures: Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method. Wash the spillage site with large amounts of water.

6.4. Reference to other sections

Reference to other sections: Refer to section 8 of SDS. Refer to section 13 of SDS.

Section 7: Handling and storage

7.1. Precautions for safe handling

Handling requirements: Wear suitable protective clothing. Avoid the formation or spread of mists in the air. Avoid contact with the material.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in cool, well ventilated area. Keep container tightly closed. Avoid incompatible materials and conditions - see section 10 of SDS. Do not store near foodstuffs.

Suitable packaging: Must only be kept in original packaging. Do not use steel containers. Plastic. Plastic-lined.

7.3. Specific end use(s)

Section 8: Exposure controls/personal protection

8.1. Control parameters

Workplace exposure limits: Not applicable.

8.2. Exposure controls

Engineering measures: Ensure there is sufficient ventilation of the area. Ensure all engineering measures mentioned in section 7 of SDS are in place.

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Respiratory protection: Not normally required under normal conditions of use. Wear suitable respiratory protection when aerosols or mist are present. Gas/vapour filter, type B: inorganic vapours excl. CO (EN141). Gas/vapour filter, type E: sulphur dioxide and other acid gases (EN141).

Hand protection: Gloves (acid resistant).

Eye protection: Safety goggles. Face-shield. Ensure eye bath is to hand.

Skin protection: Protective clothing. Wear full chemical suit. Wear wellingtons. Ensure safety shower is to hand.

Environmental: No special requirement.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Liquid

Colour: Red-brown

Odour: Characteristic odour

Evaporation rate: Negligible

Oxidising: Non-oxidising (by EC criteria)

Solubility in water: Miscible

Viscosity: Non-viscous

Boiling point/range°C: * ~ 106 (Decomp ~ 70)

Melting point/range°C: - 12

Flash point°C: >93

Relative density: ~ 1.42 g/ml @ 40 %

pH: < 1

9.2. Other information

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: Stable under recommended transport or storage conditions.

10.2. Chemical stability

Chemical stability: Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions: Hazardous reactions will not occur under normal transport or storage conditions.

10.4. Conditions to avoid

Conditions to avoid: * Heat. Flames. Low temperatures and frost.

10.5. Incompatible materials

Materials to avoid: * Alkalies. May react with certain metals to liberate flammable Hydrogen gas. Strong acids.

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10.6. Hazardous decomposition products

Haz. decomp. products: May liberate toxic and corrosive Hydrogen Chloride gas.

Section 11: Toxicological information

11.1. Information on toxicological effects

Toxicity values:

Route	Species	Test	Value	Units
ORAL	RAT	LD50	450	mg/kg
ORAL	MUS	LD50	895	mg/kg
DERMAL	MUS	LD50	> 2000	mg/kg

Relevant effects for mixture:

Effect	Route	Basis
Acute toxicity (harmful)	ING	Hazardous: calculated
Irritation	INH	Hazardous: calculated
Corrosivity	OPT INH DRM	Hazardous: calculated

Symptoms / routes of exposure

Skin contact: * Causes burns. Blistering may occur.

Eye contact: Risk of serious damage to eyes. Corneal burns may occur.

Ingestion: Corrosive burns may appear around the lips. May cause throat burns. Nausea and stomach pain may occur. Moderately toxic, although there is very low risk during normal industrial use.

Inhalation: Not applicable under normal conditions of use. May cause irritation of the mucous membranes and respiratory system. High concentrations are irritant to the respiratory tract. Prolonged or repeated exposure may cause ulceration and perforation of the nasal septum.

Delayed / immediate effects: * Immediate effects can be expected after short-term exposure.

Other information: * Not applicable.

Section 12: Ecological information

12.1. Toxicity

Ecotoxicity values:

Species	Test	Value	Units
BLUEGILL (Lepomis macrochirus)	96H LC50	20	mg/l

[cont...]

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Daphnia magna	48H EC50	9.6	mg/l
Anabaena doliolum	72H ErC50	920	mg/l

12.2. Persistence and degradability

Persistence and degradability: There is no data available at present.

12.3. Bioaccumulative potential

Bioaccumulative potential: There is no data available at present.

12.4. Mobility in soil

Mobility: Non-volatile. Soluble in water.

12.5. Results of PBT and vPvB assessment

PBT identification: This substance is not identified as a PBT substance.

12.6. Other adverse effects

Other adverse effects: There is no data available at present. Do not allow to enter watercourses or soils.
Spillage in sewers or waterways must be avoided. Large doses causes high/low pH which may affect effluent and sewage treatment processes. Discharge of large quantities may kill fish and other aquatic life due to increase/decrease in pH.

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal operations: Transfer to a suitable container and arrange for collection by specialised disposal company.

Disposal of packaging: Contaminated containers must not be treated as household waste. Where practical, containers and packaging should be recycled by a licenced contactor.

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

Section 14: Transport information

14.1. UN number

UN number: UN2582

14.2. UN proper shipping name

Shipping name: FERRIC CHLORIDE SOLUTION

14.3. Transport hazard class(es)

Transport class: 8

14.4. Packing group

Packing group: III

[cont...]

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14.5. Environmental hazards

Environmentally hazardous: No

Marine pollutant: No

14.6. Special precautions for user

Tunnel code: E

Transport category: 3

Section 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Specific regulations: * Not applicable.

15.2. Chemical Safety Assessment

Chemical safety assessment: A chemical safety assessment has been carried out for the substance or the mixture by the supplier.

Section 16: Other information

Other information

Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 453/2010.

* indicates text in the SDS which has changed since the last revision.

WARNING: For professional use only.

Phrases used in s.2 and 3: H290: May be corrosive to metals.
H314: Causes severe skin burns and eye damage.
H318: Causes serious eye damage.
H335: May cause respiratory irritation.
R22: Harmful if swallowed.
R34: Causes burns.
R36/37/38: Irritating to eyes, respiratory system and skin.
R37: Irritating to respiratory system.
R41: Risk of serious damage to eyes.

Legal disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.