

SAFETY DATA SHEET

FERRIC SULPHATE 40%

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Compilation date: 08/09/2011

Revision date: 03/08/2016

Revision No: 3

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

1.1. Product identifier

Product name: FERRIC SULPHATE 40%

REACH registered number(s): 01-2119513202-59-XXXX

CAS number: 10028-22-5

EINECS number: 233-072-9

Synonyms: IRON (III) SULPHATE 40%

DIIRON TRIS(SULPHATE) 40%

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

Use of substance / mixture: Water and effluent treatment.

1.3. Details of the supplier of the safety data sheet

Company name: Tan International Ltd

Tayview Industrial Estate

Perth

PH2 8DG

UK

Tel: +44 (0)1738 632 909

Fax: +44 (0)1738 632 901

Email: qa@taninternational.com

1.4. Emergency telephone number

Emergency tel: +44 (0)1270 502 891

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CLP: Met. Corr. 1: H290; Acute Tox. 4: H302; Eye Dam. 1: H318; Skin Irrit. 2: H315

Most important adverse effects: May be corrosive to metals. Harmful if swallowed. Causes skin irritation. Causes serious eye damage.

2.2. Label elements

Label elements:

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

H302: Harmful if swallowed.

H315: Causes skin irritation.

H318: Causes serious eye damage.

Signal words: Danger

[cont...]

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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/doctor/ if you feel unwell.

P303+361+353: IF ON SKIN (or hair): Take off immediately all contaminated clothing.

Rinse skin with water/shower.

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

P363: Wash contaminated clothing before reuse.

P501: Dispose of contents/container to an authorised waste contractor.

2.3. Other hazards

PBT: This product is not identified as a PBT/vPvB substance.

Section 3: Composition/information on ingredients

3.2. Mixtures

Hazardous ingredients:

FERRIC SULPHATE AQUEOUS SOLUTION - REACH registered number(s): 01-2119513202-59

EINECS	CAS	PBT / WEL	CLP Classification	Percent
233-072-9	10028-22-5	-	Met. Corr. 1: H290; Acute Tox. 4: H302; Skin Irrit. 2: H315; Eye Dam. 1: H318	35-75%

SULPHURIC ACID - REACH registered number(s): 01-2119458838-20-XXXX

231-639-5	7664-93-9	-	Skin Corr. 1A: H314	<1%
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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. If irritation persists, seek medical advice/ attention. Launder contaminated clothing thoroughly before re-use.

Eye contact: Seek immediate medical attention. Rinse immediately with plenty of water. Remove any contact lenses and keep eye-lids wide apart. Continue rinsing for at least 10 minutes or until trained medical assistance arrives.

Ingestion: Seek immediate medical attention. Never give anything by mouth to an unconscious person. Do not induce vomiting. Wash out mouth with water. Give plenty of water to drink.

Inhalation: Move to fresh air in case of accidental inhalation of vapours. Rinse nose and mouth with water. Seek medical attention if any discomfort persists.

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

Skin contact: * There may be irritation and redness at the site of contact.

Eye contact: There may be irritation and pain. Corneal burns may occur. May cause permanent damage.

Ingestion: * Corrosive burns may appear around the lips. May cause burns to the digestive system. Ingesting large quantities may cause damage to liver and kidneys. May prove fatal if ingested in large quantities.

Inhalation: There may be irritation to the respiratory system.

Delayed / immediate effects: * Immediate effects can be expected after short-term exposure. Prolonged and repeated exposure can cause sensitisation/dermatitis and/ or other skin damage. Not expected to cause cancer. Not expected to be a reproductive toxicant. Not expected to be a mutagenic toxicant.

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

Immediate / special treatment: Show this safety data sheet to the doctor in attendance. Eye bathing equipment should be available on the premises. A decontamination shower 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.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: * Non-flammable. Corrosive. Reacts with many metals to form the flammable gas hydrogen. In combustion emits toxic fumes of sulphur oxides.

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: Refer to section 8 of SDS for personal protection details. Mark out the contaminated area with signs and prevent access to unauthorised personnel. Turn leaking containers leak-side up to prevent the escape of liquid. Provide adequate ventilation. Avoid contact with eyes and skin.

6.2. Environmental precautions

Environmental precautions: Do not discharge into drains or rivers. Contain the spillage using bunding. Spillages or uncontrolled discharges into watercourses must be immediately alerted to the appropriate environmental agency.

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6.3. Methods and material for containment and cleaning up

Clean-up procedures: * If permitted, small volumes may be neutralised with soda ash solution and washed to sewer with copious amounts of water. OR - Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method. For larger spills, use a suction pump to transfer the spilled material to a salvage container. 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.

Section 7: Handling and storage

7.1. Precautions for safe handling

Handling requirements: * Ensure there is sufficient ventilation of the area. Avoid the formation or spread of mists in the air. Do not wear contact lens when handling this material. Avoid contact with eyes and skin. Use normal safe handling techniques.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in a cool, well ventilated area. Keep container tightly closed. Separate from incompatible material - see Section 10.

Suitable packaging: It is recommended that this product is only kept in its original packaging. Use non-metallic containers.

7.3. Specific end use(s)

Specific end use(s): Water and effluent treatment.

Section 8: Exposure controls/personal protection

8.1. Control parameters

Workplace exposure limits:

State	Respirable dust			
	8 hour TWA	15 min. STEL	8 hour TWA	15 min. STEL
UK	1mg/m ³	2mg/m ³	-	-

Hazardous ingredients:

FERRIC SULPHATE AQUEOUS SOLUTION

Workplace exposure limits:

State	Respirable dust			
	8 hour TWA	15 min. STEL	8 hour TWA	15 min. STEL
UK	1mg/m ³	2mg/m ³	-	-

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SULPHURIC ACID...100%

UK	1 mg/m3	-	-	-
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DNEL/PNEC Values

FERRIC SULPHATE 40%

Type	Exposure	Value	Population	Effect
DNEL	Dermal (long term)	2mg/kg/day	Workers	Systemic
DNEL	Inhalation (long term)	7.2mg/m3	Workers	Systemic
PNEC	Sewage Treatment Plant	500mg/l	-	-

8.2. Exposure controls

Engineering measures: Ensure there is sufficient ventilation of the area. Ensure eyewash stations and safety showers are provided in the storage and working areas.

Respiratory protection: Respiratory protective device is not required in normal working conditions but may be required in areas of poor ventilation. Gas/vapour filter, type E: sulphur dioxide and other acid gases (EN141).

Hand protection: * Gloves (acid resistant). The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material. Recommended types include:- PVC gloves. Neoprene gloves.

Eye protection: Tightly fitting safety goggles. Face-shield. Ensure eye bath is to hand.

Skin protection: Acid-resistant protective clothing. Boots. Ensure safety shower is to hand.

Environmental: Storage should be placed inside a fully bunded area of sufficient size to contain the volume plus 10%.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Liquid

Colour: Orange-brown

Odour: Not significant.

Oxidising: Non-oxidising (by EC criteria)

Solubility in water: Miscible in all proportions

Boiling point/range°C: 100 - 105

upper: Not applicable.

Autoflammability°C: Not applicable.

Flammability limits %: lower: Not applicable.

Flash point°C: Not applicable.

pH: <1

9.2. Other information

Other information: Decomposition Temperature 315C

Section 10: Stability and reactivity

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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.

Decomposition may occur on exposure to conditions or materials listed below. Reacts with many metals which may cause the flammable gas Hydrogen to be released.

10.4. Conditions to avoid

Conditions to avoid: Heat.

10.5. Incompatible materials

Materials to avoid: * Bases. Metals. Oxidising agents. Hypochlorites.

10.6. Hazardous decomposition products

Haz. decomp. products: In combustion emits toxic fumes of sulphur oxides.

Section 11: Toxicological information

11.1. Information on toxicological effects

* Toxicity values:

Route	Species	Test	Value	Units
ORAL	RAT	LD50	>500	mg/kg
DERMAL	RAT	LD50	>800	mg/kg

Hazardous ingredients:

SULPHURIC ACID...100%

ORL	RAT	LD50	2140	mg/kg
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Relevant hazards for substance:

Hazard	Route	Basis
Acute toxicity (ac. tox. 4)	ING	Hazardous: calculated
Skin corrosion/irritation	DRM	Hazardous: calculated
Serious eye damage/irritation	OPT	Hazardous: calculated

Symptoms / routes of exposure

Skin contact: * There may be irritation and redness at the site of contact.

Eye contact: There may be irritation and pain. Corneal burns may occur. May cause permanent damage.

Ingestion: * Corrosive burns may appear around the lips. May cause burns to the digestive system.

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Ingesting large quantities may cause damage to liver and kidneys. May prove fatal if ingested in large quantities.

Inhalation: There may be irritation to the respiratory system.

Delayed / immediate effects: * Immediate effects can be expected after short-term exposure. Prolonged and repeated exposure can cause sensitisation/dermatitis and/ or other skin damage. Not expected to cause cancer. Not expected to be a reproductive toxicant. Not expected to be a mutagenic toxicant.

Other information: Symptoms from inhaling combustion fumes may not be readily apparent. Keep under medical supervision for at least 24 hours.

Section 12: Ecological information

12.1. Toxicity

Ecotoxicity values:

Species	Test	Value	Units
RAINBOW TROUT (<i>Oncorhynchus mykiss</i>)	96H LC50	>100	mg/l
Daphnia magna	48H EC50	80	mg/l

12.2. Persistence and degradability

Persistence and degradability: The methods for determining biological degradability are not applicable to inorganic substances. This product is a flocculating agent. It should react with suspended material in an aquatic system and be neutralised.

12.3. Bioaccumulative potential

Bioaccumulative potential: * The methods for determining bioaccumulative potential are not applicable to inorganic substances.

12.4. Mobility in soil

Mobility: Soluble in water.

12.5. Results of PBT and vPvB assessment

PBT identification: This product is not identified as a PBT/vPvB substance.

12.6. Other adverse effects

Other adverse effects: * The low pH may have a temporary adverse effect on the aquatic environment. This product is not expected to have a long term adverse effect on the aquatic environment.

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal operations: Dispose of waste and residues in accordance with local and national requirements. Transfer to a suitable container and arrange for collection by specialised disposal company.

Disposal of packaging: Dispose of packaging in accordance with local and national requirements. Dispose of in a regulated landfill site or other method for hazardous or toxic wastes.

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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: * UN1760

14.2. UN proper shipping name

Shipping name: CORROSIVE LIQUID, N.O.S. (Ferric Sulphate)

14.3. Transport hazard class(es)

Transport class: 8

14.4. Packing group

Packing group: III

14.5. Environmental hazards

Environmentally hazardous: No

Marine pollutant: No

14.6. Special precautions for user

Special precautions: No special precautions.

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.

Phrases used in s.2 and s.3: H290: May be corrosive to metals.

H302: Harmful if swallowed.

H314: Causes severe skin burns and eye damage.

H315: Causes skin irritation.

H318: Causes serious eye damage.

Legal disclaimer: The above information is believed to be correct but does not purport to be all inclusive

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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.