

# SAFETY DATA SHEET



Revision date: 15-Jun-2021

Revision Number 1

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

### Product identifier

**Product Name** FERRIC SULFATE SOLUTION 35% W/V

**Product Code(s)** 000000054055

### Other means of identification

**UN number** 3264

**Pure substance/mixture** Mixture

### Recommended use of the chemical and restrictions on use

**Recommended use** Flocculation in municipal water supplies. Phosphate removal in sewage treatment.

**Uses advised against** No information available.

### Supplier

Ixom Operations Pty Ltd  
ABN: 51 600 546 512  
Level 8, 1 Nicholson Street  
Melbourne 3000  
Australia

Telephone Number: +61 3 9906 3000

### Emergency telephone number

Emergency telephone number **1 800 033 111 (ALL HOURS)**

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the "Other Information" section at the end of this Data Sheet.

## 2. HAZARDS IDENTIFICATION

### GHS Classification

Classified as dangerous goods in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG).

Classified as a hazardous chemical in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS).

|                                          |                           |
|------------------------------------------|---------------------------|
| <b>Corrosive to metals</b>               | Category 1                |
| <b>Skin corrosion/irritation</b>         | Category 1 Sub-category B |
| <b>Serious eye damage/eye irritation</b> | Category 1                |

### **SIGNAL WORD**

Danger

### Label elements

Corrosion

**Hazard statements**

H290 - May be corrosive to metals

H314 - Causes severe skin burns and eye damage

**Precautionary Statements - Prevention**

Keep only in original container

Do not breathe fume, gas, mist, vapours, spray

Wash face, hands and any exposed skin thoroughly after handling

Wear protective gloves / protective clothing / eye protection / face protection

**Precautionary Statements - Response**

Specific treatment (see First aid on this SDS)

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 CENTER or doctor/physician

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

Wash contaminated clothing before reuse

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

Call a POISON CENTER or doctor/physician if you feel unwell

IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

Absorb spillage to prevent material damage

**Precautionary Statements - Storage**

Store locked up

Store in corrosion resistant container with a resistant inner liner

**Precautionary Statements - Disposal**

Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

**Other hazards which do not result in classification****General Hazards**

Poisons Schedule (SUSMP)

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**3. COMPOSITION/INFORMATION ON INGREDIENTS****Mixture**

| Chemical name                  | CAS No.    | Weight-%               |
|--------------------------------|------------|------------------------|
| Ferric sulphate                | 10028-22-5 | 35% w/v (20-22.5% w/w) |
| Sulfuric acid                  | 7664-93-9  | <2.5%                  |
| Other non-hazardous components | -          | to 100%                |

**4. FIRST AID MEASURES****Description of first aid measures****General advice**

Show this safety data sheet to the doctor in attendance.

**Emergency telephone number**

Poisons Information Center, Australia: 13 11 26

Poisons Information Center, New Zealand: 0800 764 766

**Inhalation**

Remove to fresh air. Call a physician if symptoms occur.

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|                     |                                                                                                                                                                  |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Eye contact</b>  | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.                                             |
| <b>Skin contact</b> | IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician. |
| <b>Ingestion</b>    | Rinse mouth thoroughly with water. Do NOT induce vomiting. Drink 1 or 2 glasses of water. Get immediate medical advice/attention.                                |

**Most important symptoms and effects, both acute and delayed**

**Symptoms** Irritation/Corrosion.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Treat symptomatically. Can cause corneal burns.

**5. FIRE FIGHTING MEASURES****Suitable Extinguishing Media**

**Suitable Extinguishing Media** Dry chemical, CO<sub>2</sub>, water spray or regular foam.

**Unsuitable extinguishing media** No information available.

**Specific hazards arising from the chemical**

**Specific hazards arising from the chemical** Corrosive hazard. Wear protective gloves/clothing and eye/face protection.

**Special protective actions for fire-fighters**

**Special protective equipment for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

**Hazchem code** 2X

**6. ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Avoid contact with skin, eyes and inhalation of vapors. Ensure adequate ventilation. Evacuate personnel to safe areas. Stop leak if you can do it without risk. Do not touch or walk through spilled material. Use personal protective equipment as required. Wash thoroughly after handling.

**For emergency responders** Use personal protection recommended in Section 8.

**Environmental precautions**

**Environmental precautions** Local authorities should be advised if significant spillages cannot be contained.

**Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Soak up with inert absorbent material. Pick up and transfer to properly labelled containers. Neutralise residues with lime or soda ash. After cleaning, flush away traces with water.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

**Advice on safe handling** Avoid contact with skin, eyes, and clothing. Do not breathe vapor or mist. Keep out of reach of children. Use personal protection equipment. Wash thoroughly after handling.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Store away from foodstuffs. Keep container closed when not in use.

This material is a Scheduled Poison and must be stored, maintained and used in accordance with the relevant regulations.

**Packaging materials** Do not store in aluminium containers. Do not store in copper or copper alloy containers. Do not store in mild steel containers.

**Incompatible materials** Alkalis. Metals. Concrete.

**Poisons Schedule (SUSMP)** 6

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

**Exposure Limits** No value assigned for this specific material by Safe Work Australia. However, Workplace Exposure Standard(s) for constituent(s):

Iron salts, soluble (as Fe): 8hr TWA = 1 mg/m<sup>3</sup>  
Sulfuric acid: 8hr TWA = 1 mg/m<sup>3</sup>, 15 min STEL = 3 mg/m<sup>3</sup>

As published by Safe Work Australia Workplace Exposure Standards for Airborne Contaminants.

TWA - The time-weighted average airborne concentration of a particular substance when calculated over an eight-hour working day, for a five-day working week.

STEL (Short Term Exposure Limit) - the airborne concentration of a particular substance calculated as a time-weighted average over 15 minutes, which should not be exceeded at any time during a normal eight hour work day. According to current knowledge this concentration should neither impair the health of, nor cause undue discomfort to, nearly all workers.

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

### Appropriate engineering controls

**Engineering controls** Ensure that eyewash stations and safety showers are close to the workstation location. Apply technical measures to comply with the occupational exposure limits.

If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and

the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.

#### Individual protection measures, such as personal protective equipment

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, CHEMICAL GOGGLES, FACE SHIELD, GLOVES (Long), APRON, RUBBER BOOTS.



#### Eye/face protection

Tight sealing safety goggles. Face protection shield.

#### Skin and body protection

Rubber boots. Apron. Overalls.

#### Hand protection

Impervious gloves.

#### Respiratory protection

If determined by a risk assessment an inhalation risk exists, wear a suitable mist respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

#### Environmental exposure controls

No information available.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

#### Information on basic physical and chemical properties

|                |                           |
|----------------|---------------------------|
| Physical state | Liquid                    |
| Appearance     | No information available. |
| Color          | Dark Red - Brown - Black  |
| Odor           | Odourless                 |
| Odor threshold | No information available. |

| <u>Property</u>                        | <u>Values</u>     | <u>Remarks • Method</u> |
|----------------------------------------|-------------------|-------------------------|
| pH                                     | <1                | None known              |
| pH (as aqueous solution)               | No data available | None known              |
| Melting point / freezing point         | -18°C             | None known              |
| Boiling point / boiling range          | No data available | None known              |
| Flash point                            | Not applicable    | None known              |
| Evaporation rate                       | No data available | None known              |
| Flammability (solid, gas)              | No data available | None known              |
| Flammability Limit in Air              |                   | None known              |
| Upper flammability or explosive limits | Not applicable    |                         |
| Lower flammability or explosive limits | Not applicable    |                         |
| Vapor pressure                         | No data available | None known              |
| Vapor density                          | No data available | None known              |
| Relative density                       | 1.29-1.32         | None known              |
| Water solubility                       | Miscible in water | None known              |
| Solubility(ies)                        | No data available | None known              |
| Partition coefficient                  | No data available | None known              |
| Autoignition temperature               | Not applicable    | None known              |

|                           |                   |            |
|---------------------------|-------------------|------------|
| Decomposition temperature | No data available | None known |
| Kinematic viscosity       | No data available | None known |
| Dynamic viscosity         | No data available | None known |

Other information**10. STABILITY AND REACTIVITY**Reactivity

**Reactivity** Reacts with strong alkalis. Corrosive to metals.

Chemical stability

**Stability** Stable under normal conditions.

Explosion data

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** None.

Possibility of hazardous reactions

**Possibility of hazardous reactions** Corrosive to metals.

Conditions to avoid

**Conditions to avoid** Do not contaminate food or feed stuffs.

Incompatible materials

**Incompatible materials** Alkalis. Metals. Concrete.

Hazardous decomposition products

**Hazardous decomposition products** Iron oxides. Oxides of sulfur.

**11. TOXICOLOGICAL INFORMATION**Acute toxicityInformation on likely routes of exposure

**Product Information** No adverse health effects expected if the chemical is handled in accordance with this Safety Data Sheet and the chemical label. Symptoms or effects that may arise if the chemical is mishandled and overexposure occurs are:

**Inhalation** May cause irritation.

**Eye contact** Corrosive to the eyes and may cause severe damage including blindness.

**Skin contact** Contact causes severe skin irritation and possible burns.

**Ingestion** Can burn mouth, throat, and stomach.

**Symptoms** Irritation/Corrosion.

Numerical measures of toxicity - Product Information

No information available.

**Numerical measures of toxicity - Component Information****Component Information**

| Chemical name   | Oral LD50                | Dermal LD50 | Inhalation LC50                        |
|-----------------|--------------------------|-------------|----------------------------------------|
| Ferric sulphate | 500 - 2000 mg/kg ( Rat ) | -           | -                                      |
| Sulfuric acid   | = 2140 mg/kg ( Rat )     | -           | 85 - 103 mg/m <sup>3</sup> ( Rat ) 1 h |

See section 16 for terms and abbreviations

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

|                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Skin corrosion/irritation</b>         | Causes burns.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Serious eye damage/eye irritation</b> | Causes serious eye damage.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Respiratory or skin sensitization</b> | No information available.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Germ cell mutagenicity</b>            | No information available.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Carcinogenicity</b>                   | No information available.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Reproductive toxicity</b>             | No information available.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>STOT - single exposure</b>            | No information available.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>STOT - repeated exposure</b>          | No information available.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Aspiration hazard</b>                 | No information available.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Chronic effects:</b>                  | For the component Sulfuric acid: Repeated overexposure may lead to chronic conjunctivitis, lung damage and dental erosion. The International Agency for Research on Cancer (IARC) have concluded that occupational exposure to strong inorganic acid mists containing sulfuric acid is carcinogenic to humans, causing cancer of the larynx and to a lesser extent, the lung. No direct link has been established with sulfuric acid, itself, and cancer in humans. Exposure to any mist or aerosol during the use of this product should be avoided and exposure should not exceed the exposure standard. |

**12. ECOLOGICAL INFORMATION****Ecotoxicity**

**Ecotoxicity** Keep out of waterways.

| Chemical name | Algae/aquatic plants | Fish                                    | Toxicity to microorganisms | Crustacea                          |
|---------------|----------------------|-----------------------------------------|----------------------------|------------------------------------|
| Sulfuric acid | -                    | LC50: >500mg/L (96h, Brachydanio rerio) | -                          | EC50: =29mg/L (24h, Daphnia magna) |

**Persistence and degradability**

**Persistence and degradability** No information available.

**Bioaccumulative potential**

**Bioaccumulation** No information available.

**Mobility**

**Mobility in soil** No information available.

**Other adverse effects****13. DISPOSAL CONSIDERATIONS****Waste treatment methods**

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Empty containers should be taken to an approved waste handling site for recycling or disposal.

**14. TRANSPORT INFORMATION****ADG**

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

|                             |                                                                        |
|-----------------------------|------------------------------------------------------------------------|
| <b>UN number</b>            | 3264                                                                   |
| <b>Proper shipping name</b> | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (CONTAINS FERRIC SULPHATE) |
| <b>Hazard class</b>         | 8                                                                      |
| <b>Packing group</b>        | II                                                                     |
| <b>Hazchem code</b>         | 2X                                                                     |

**IATA**

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

|                                   |                                                                        |
|-----------------------------------|------------------------------------------------------------------------|
| <b>UN number</b>                  | 3264                                                                   |
| <b>UN proper shipping name</b>    | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (CONTAINS FERRIC SULPHATE) |
| <b>Transport hazard class(es)</b> | 8                                                                      |
| <b>Packing group</b>              | II                                                                     |

**IMDG**

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

|                                   |                                                                        |
|-----------------------------------|------------------------------------------------------------------------|
| <b>UN number</b>                  | 3264                                                                   |
| <b>UN proper shipping name</b>    | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (CONTAINS FERRIC SULPHATE) |
| <b>Transport hazard class(es)</b> | 8                                                                      |
| <b>Packing group</b>              | II                                                                     |
| <b>IMDG EMS Fire</b>              | F-A                                                                    |
| <b>IMDG EMS Spill</b>             | S-B                                                                    |

**15. REGULATORY INFORMATION****Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations****Australia**



Classified as dangerous goods in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG).

Classified as a hazardous chemical in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS).

See section 8 for national exposure control parameters

**Poisons Schedule (SUSMP)** 6

**National pollutant inventory**

Subject to reporting requirement

| Chemical name             | National pollutant inventory     |
|---------------------------|----------------------------------|
| Sulfuric acid - 7664-93-9 | 10 tonne/yr Threshold category 1 |

**International Inventories**

**AICS**

All the constituents of this material are listed on the Australian Inventory of Industrial Chemicals.

**NZIoC**

All the constituents of this material are listed on the New Zealand Inventory of Chemicals.

**Legend:**

- Australian Inventory of Industrial Chemicals

**International Regulations**

**The Montreal Protocol on Substances that Deplete the Ozone Layer** Not applicable

**The Stockholm Convention on Persistent Organic Pollutants** Not applicable

**The Rotterdam Convention** Not applicable

## 16. OTHER INFORMATION

**Reason(s) For Issue:** First Issue Primary SDS

**Issuing Date:** 15-Jun-2021

This Safety Data Sheet has been prepared by Ixom Operations Pty Ltd (Toxicology and SDS Services).

**Revision Note:**

The symbol (\*) in the margin of this SDS indicates that this line has been revised.

**Key or legend to abbreviations and acronyms used in the safety data sheet**

**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

|         |                             |      |                                  |
|---------|-----------------------------|------|----------------------------------|
| TWA     | TWA (time-weighted average) | STEL | STEL (Short Term Exposure Limit) |
| Ceiling | Maximum limit value         | *    | Skin designation                 |
| C       | Carcinogen                  |      |                                  |

**Key literature references and sources for data used to compile the SDS**

EPA (Environmental Protection Agency)

Acute Exposure Guideline Level(s) (AEGL(s))

U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

U.S. Environmental Protection Agency High Production Volume Chemicals

Food Research Journal

Hazardous Substance Database

International Uniform Chemical Information Database (IUCLID)

Japan GHS Classification  
Australian Industrial Chemicals Introduction Scheme (AICIS)  
NIOSH (National Institute for Occupational Safety and Health)  
National Library of Medicine's ChemID Plus (NLM CIP)  
National Library of Medicine's PubMed database (NLM PUBMED)  
National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
Organization for Economic Co-operation and Development Screening Information Data Set  
RTECS (Registry of Toxic Effects of Chemical Substances)  
World Health Organization

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Ixom Operations Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact their Ixom representative or Ixom Operations Pty Ltd at the contact details on page 1.

Ixom Operations Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.

**End of Safety Data Sheet**