

Safety Data Sheet Iron (III) Sulphate, hydrated

SDS no. X1TF91MU • Version 1.0 • Date of issue: 2022-07-06

SECTION 1: Identification

GHS Product identifier

Product name	Iron (III) Sulphate, hydrated
Product number	FL027
Brand	ChemSupply

Other Names and Product Codes

RON(III) SULFATE Hydrated LR
Iron (III) sulfate hydrate
Iron persulfate Hydrated
Iron trisulfate Hydrated
Ferric trisulfate Hydrated
Iron sulfate Hydrated

Recommended use of the chemical and restrictions on use

Laboratory and Analytical Reagent

Supplier's details

Name	ChemSupply Australia Pty Ltd
Address	38-50 Bedford Street 5013 Gillman South Australia Australia
Telephone	08 8440 2000

Emergency phone number

CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)

SECTION 2: Hazard identification

General hazard statement

Classified as dangerous goods according to the Australian Dangerous Goods Code (ADG).

Classified as Hazardous according to the Globally Harmonised System of classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

Classification of the substance or mixture

GHS classification in accordance with: UN GHS revision 7

- Acute toxicity, oral, Cat. 4
- Serious eye damage/eye irritation, Cat. 1
- Skin corrosion/irritation, Cat. 2

GHS label elements, including precautionary statements

Pictograms



Signal word

Danger

Hazard statement(s)

H302

Harmful if swallowed

H315

Causes skin irritation

H318

Causes serious eye damage

Precautionary statement(s)

P264

Wash ... thoroughly after handling.

P270

Do not eat, drink or smoke when using this product.

P280

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

P301+P312

IF SWALLOWED: Call a POISON CENTER/doctor/physician if you feel unwell,

P302+P352

IF ON SKIN: Wash with plenty of water/soap

P305+P351+P338

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/doctor/physician.

P330

Rinse mouth.

P332+P313

If skin irritation occurs: Get medical advice/attention.

P362+P364

Take off contaminated clothing and wash it before reuse.

P501

Dispose of contents/container to approved waste disposal facility

SECTION 3: Composition/information on ingredients

Substances

Formula: $\text{Fe}_2(\text{SO}_4)_3 \cdot x\text{H}_2\text{O}$; Molecular weight: 399.88

Hazardous components

Component	Concentration
Iron (III) Sulphate, Hydrated (CAS no.: 15244-10-7; EC no.: 604-849-3)	100 % (weight)

SECTION 4: First-aid measures

Description of necessary first-aid measures

General advice

For advice, contact a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor (at once).

If inhaled

If inhaled, remove from contaminated area. Apply artificial respiration if not breathing.

In case of skin contact

If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water.

In case of eye contact

If in eyes, hold eyelids apart and flush eye continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor, or for at least 15 minutes.

If swallowed

If swallowed, do NOT induce vomiting. Seek medical advice

Most important symptoms/effects, acute and delayed

Symptoms of LARGE amounts may be delayed for several hours and can include epigastric pain, haematemesis and possible circulatory failure. Hours or days after apparent recovery, metabolic acidosis, convulsions and coma may occur. If the patient survives, symptoms of acute liver necrosis may develop and could lead to death due to hepatic coma.

Indication of immediate medical attention and special treatment needed, if necessary

For advice in an emergency, contact a Poisons Information Centre (Phone Australia 131 126) or a doctor at once.

SECTION 5: Fire-fighting measures

Suitable extinguishing media

Use fire extinguishing media appropriate for surrounding environment. Use water spray, dry chemical, carbon dioxide, or appropriate foam. This material is substantially water.

Specific hazards arising from the chemical

Emits toxic fumes of oxides of sulfur under fire conditions.

Special protective actions for fire-fighters

Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) operated in positive pressure mode. Fight fire from safe location.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of in accordance with local and national regulations. Keep in suitable, closed containers for disposal.

SECTION 7: Handling and storage

Precautions for safe handling

Do not breathe dust. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure. Avoid generation or accumulation of dusts. Wash hands and face thoroughly after working with material. Only use in well-ventilated areas.

Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well-ventilated area, out of direct sunlight. Store in suitable, labelled containers. Keep containers tightly closed. Store away from incompatible materials. Ensure that storage conditions comply with applicable local and national regulations.

SECTION 8: Exposure controls/personal protection

Control parameters

1. Iron salts, soluble (as Fe)

TWA (Inhalation): 1; Australia (AU/SWA)

WORKPLACE EXPOSURE STANDARDS FOR AIRBORNE CONTAMINANTS, SafeWork Australia, December 2019

Appropriate engineering controls

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Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, gas, etc.) below recommended exposure limits.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.

Skin protection

Clean impervious clothing should be worn. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Body protection

Suitable protective workwear, e.g. cotton overalls buttoned at neck and wrist is recommended. Chemical resistant apron is recommended where large quantities are handled.

Respiratory protection

If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable vapor/ mist filter should be used. Refer to relevant regulations for further information concerning respiratory protective requirements. Reference should be made to Australian Standards AS/ NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

Environmental exposure controls

Do not let product enter drains.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state	Solid
Appearance	Brownish-yellow powder or yellowish crystals or grayish-white powder.
Color	No data available.
Odor	Nil
Odor threshold	n/a
Melting point/freezing point	No data available.
Boiling point or initial boiling point and boiling range	No data available.
Flammability	Product is not flammable
Lower and upper explosion limit/flammability limit	No data available.
Flash point	n/a
Explosive properties	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
Oxidizing properties	No data available.
pH	Acidic
Kinematic viscosity	No data available.
Solubility	No data available.
Partition coefficient n-octanol/water (log value)	No data available.
Vapor pressure	No data available.
Evaporation rate	No data available.
Density and/or relative density	No data available.
Relative vapor density	No data available.

Particle characteristics

No data available.

Supplemental information regarding physical hazard classes

No data available.

Further safety characteristics (supplemental)

No data available.

SECTION 10: Stability and reactivity

Reactivity

Stable under normal conditions of storage and handling. Hygroscopic. Sensitive to light

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

Hazardous catalytic reactions involving iron compounds have been reported.

Conditions to avoid

Moisture, light, heat, incompatible materials

Incompatible materials

Strong oxidising materials

Hazardous decomposition products

Emits toxic fumes of oxides of sulfur under fire conditions.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

Harmful if swallowed. May cause nausea, vomiting, diarrhea, abdominal pain and black stool. Pink urine discolouration is a strong indicator of iron poisoning. Liver damage, coma and death from iron poisoning has been recorded.

Skin corrosion/irritation

Irritating to the skin. Symptoms include redness, itching and pain. May cause skin discolouration. May be harmful if absorbed through the skin.

Serious eye damage/irritation

Irritating to eyes. The symptoms may include redness, itching and tearing.

Respiratory or skin sensitization

Irritating to the skin. Symptoms include redness, itching and pain. May cause skin discolouration. May be harmful if absorbed through the skin.

Germ cell mutagenicity

Not considered to be a mutagenic hazard.

Carcinogenicity

Not considered to be a carcinogenic hazard.

Reproductive toxicity

Not considered to be toxic to reproduction.

Specific target organ toxicity (STOT) - single exposure

Not expected to cause toxicity to a specific target organ.

Specific target organ toxicity (STOT) - repeated exposure

Not expected to cause toxicity to a specific target organ.

Aspiration hazard

Not expected to be an aspiration hazard.

Additional information

Prolonged exposure of the eyes may cause discolouration. Repeated high exposure could cause too much iron build up in the body. Symptoms of upset stomach, nausea, constipation and black bowel movements may occur. Chronic exposure may cause liver effects. Overdoes of iron compounds may produce an corrosive effect on the mucous lining of the gastrointestinal tract, followed by necrosis and perforation.

SECTION 12: Ecological information

Toxicity

Toxicity to Fish

LC50: >28 mg Fe/l

Exposure time: 96 h

Species: Oncorhynchus mykiss (rainbow trout)

Toxicity to daphnia and other : aquatic invertebrates

EC50: >11 mg Fe/l

Exposure time: 48 h

Species: Daphnia longispina (water flea)

Persistence and degradability

Note: The methods for determining biodegradability are not applicable to inorganic substances.

Bioaccumulative potential

No data available.

Mobility in soil

No data available.

Results of PBT and vPvB assessment

No data available.

Endocrine disrupting properties

No data available.

Other adverse effects

No data available.

SECTION 13: Disposal considerations

Disposal methods

Product disposal

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers.

Other disposal recommendations

Do not discharge this material into waterways, drains and sewers.

SECTION 14: Transport information

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ADG (Road and Rail)

UN Number: 3260

Class: 8

Packing Group: III

Proper Shipping Name: CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. - (Iron(III) sulfate hydrate)

Marine pollutant: No

IERG No: 37

Hazchem emergency action code (EAC)

2X

IMDG

UN Number: 3260

Class: 8

Packing Group: III

EMS Number: F-A, S-B

Proper Shipping Name: CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. - (Iron(III) sulfate hydrate)

Special Provisions: 223,274

Marine Pollutant: No

IATA

UN Number: 3260

Class: 8

Packing Group: III

Proper Shipping Name: CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. - (Iron(III) sulfate hydrate)

Pax/Cargo Pkg Inst: 860

Max Net Qty/Pkg: 25kg

Cargo Aircraft Only Pkg Inst: 864

Max Net Qty/Pkg: 100kg

Special Provisions: A3, A803

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question

Australian Industrial Chemicals Inventory

Listed

Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)

Not Scheduled

HSNO Approval Number:

HSR002596 Laboratory Chemicals and Reagent Kits Group Standard 2020

SECTION 16: Other information

Further information/disclaimer

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Preparation information

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Standard for the Uniform Scheduling of Medicines and Poisons, Commonwealth of Australia
National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.'

Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals', July 2020.

Safe Work Australia, 'National Guide for Classifying Hazardous Chemicals', July 2020.

Safe Work Australia, Workplace Exposure Standards for Airborne Contaminants, December 2019

Safe Work Australia, Hazardous Chemical Information System (HCIS), hcis.safeworkaustralia.gov.au

IATA, Dangerous Goods Regulations (DGR)

IMO, International Maritime Dangerous Goods Code (IMDG)