

Safety Data Sheet FERRIC AMMONIUM CITRATE

SDS no. PVF7T5BK • Version 1.0 • Date of issue: 2024-02-06

SECTION 1: Identification

GHS Product identifier

Product name FERRIC AMMONIUM CITRATE

Other means of identification

Ammonium iron (III) citrate

Iron (III) ammonium citrate

Ammonium ferric citrate

AMMONIUM IRON(III) CITRATE Brown LR FL041

AMMONIUM IRON(III) CITRATE Green LR FL024

Citric acid ammonium iron (III) salt, Iron ammonium citrate

Recommended use of the chemical and restrictions on use

Medicine, blueprint photography, feed additive and laboratory reagent.

Supplier's details

Name ChemSupply Australia Pty Ltd
Address 38-50 Bedford Street
5013 Gillman South Australia
Australia

Telephone 08 8440 2000
email www.chemsupply.com.au

Emergency phone number

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

SECTION 2: Hazard identification

General hazard statement

Not classified as dangerous goods according to the Australian Dangerous Goods Code (ADG).

Classified as non-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

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Not a hazardous substance or mixture.

GHS label elements, including precautionary statements

Not a hazardous substance or mixture.

Other hazards which do not result in classification

Not a hazardous substance or mixture.

SECTION 3: Composition/information on ingredients

Mixtures

Compounds of ammonia, iron and citric acid of undetermined structure.; Brown - Contains about 9% ammonia, 16.5-22.5% iron and about 65% hydrated citric acid.; Green - Contains about 7.5% ammonia, 14-16% iron and about 75% hydrated citric acid.

Components

| Component | CAS no. | Concentration |
|---|-----------|----------------------|
| Iron (III) Ammonium Citrate (EC no.: 214-686-6) | 1185-57-5 | 14 - 22.5 % (weight) |
| CLASSIFICATIONS: No data available. HAZARDS: No data available. | | |

SECTION 4: First-aid measures

Description of necessary first-aid measures

| | |
|-------------------------|---|
| General advice | First Aid Facilities: Maintain eyewash fountain in work area. |
| If inhaled | If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear. |
| In case of skin contact | Remove contaminated clothing and wash affected skin with soap and water. Seek medical advice if effects persist. |
| In case of eye contact | Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. Seek medical advice if effects persist. |
| If swallowed | Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek medical advice if effects persist. |

Most important symptoms/effects, acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

For advice, contact the National Poisons Information Centre (Phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

SECTION 5: Fire-fighting measures

Suitable extinguishing media

Use measures suitable for extinguishing surrounding fire.

Specific hazards arising from the chemical

Toxic oxides of nitrogen, oxides of carbon or ammonia gas may be formed in fires.

Material does not burn. Fire or heat may produce irritating, poisonous and/or corrosive gases. Containers may explode when heated. Runoff may pollute waterways.

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

Avoid dust formation and avoid breathing dust. Avoid inhalation, contact with skin, eyes and clothing.

Wear protective clothing specified for normal operations (see Section 8)

Methods and materials for containment and cleaning up

Sweep up (avoid generating dust) and remove to a suitable, clearly labelled container for disposal in accordance with local regulations.

SECTION 7: Handling and storage

Precautions for safe handling

Keep away from incompatibles. Do not breathe dust. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure. Wear suitable protective clothing. Only use in well-ventilated areas.

Conditions for safe storage, including any incompatibilities

Store in cool place and out of direct sunlight. Store in well ventilated area. Keep containers closed at all times.

Light sensitive.

SECTION 8: Exposure controls/personal protection

Appropriate engineering controls

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

Hand protection should comply with AS 2161, Occupational protective gloves - Selection, use and maintenance.

Body protection

Clean clothing or protective clothing should be worn, preferably with an apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Respiratory protection

Where ventilation is not adequate, respiratory protection may be required. Avoid breathing dust, vapours or mists. Respiratory protection should comply with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

| | |
|--|--|
| Physical state | Solid |
| Appearance | Brown - Thin, transparent, garnet-red scales, reddish-brown granules or brownish-yellow powder. Green - Green transparent scales, pearls, granules or powder. |
| Color | No data available. |
| Odor | Odourless or slight ammonia odour. |
| Odor threshold | No data available. |
| Melting point/freezing point | No data available. |
| Boiling point or initial boiling point and boiling range | No data available. |
| Flammability | No data available. |
| Lower and upper explosion limit/flammability limit | No data available. |
| Flash point | No data available. |
| Explosive properties | No data available. |
| Auto-ignition temperature | No data available. |
| Decomposition temperature | No data available. |
| Oxidizing properties | No data available. |
| pH | 6 - 8 (10 g/L, H ₂ O, 20 °C) |
| Kinematic viscosity | No data available. |
| Solubility | Solubility in Water: Easily soluble (25 g/100ml @ 20 °C). Solubility in Organic Solvents: Practically insoluble in alcohol. |
| 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 | Specific Gravity: 1.8 |
| Relative vapor density | No data available. |
| Particle characteristics | No data available. |

Supplemental information regarding physical hazard classes

No data available.

Further safety characteristics (supplemental)

Other Information: Saline, mildly ferruginous taste.

Deliquescent, affected by light.

SECTION 10: Stability and reactivity

Reactivity

Stable under normal conditions of storage and handling.

Chemical stability

Brown - Reduced to ferrous salt by light.

Green - More readily reduced to ferrous salt by light than brown form.

Very deliquescent; forms a solution on prolonged exposure to air.

Possibility of hazardous reactions

Hazardous catalytic reactions involving iron compounds have been reported.

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Conditions to avoid

Exposure to moisture.

Avoid storing in direct sunlight and avoid extremes of temperature.

Incompatible materials

Strong oxidising agents, iodides, acacia preparations and tannins.

Hazardous decomposition products

Carbon monoxide, carbon dioxide, nitrogen oxides, ammonia iron and iron salts.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

Acute Toxicity - Oral: LD50 (rat): > 2000 mg/kg

Ingestion: Ingestion can result in nausea, vomiting, abdominal pains, convulsions, diarrhea and black stool. Pink urine discolouration is a strong indicator of iron poisoning. Liver damage, coma and death may occur.

Inhalation: Inhalation of dust may cause irritation to the upper respiratory tract (mouth, nose, throat, lungs). Symptoms may include of coughing, nausea, vomiting and wheezing.

Skin corrosion/irritation

Mild irritant to skin due to acidic nature of ferric salts.

Serious eye damage/irritation

Mild irritant due to acidic nature of ferric salts. Prolonged or repeated exposure may cause a brownish discoloration of the eyes.

Respiratory or skin sensitization

No data available.

Germ cell mutagenicity

No data available.

Carcinogenicity

No data available.

Reproductive toxicity

No data available.

Summary of evaluation of the CMR properties

No data available.

Specific target organ toxicity (STOT) - single exposure

No data available.

Specific target organ toxicity (STOT) - repeated exposure

No data available.

Aspiration hazard

No data available.

Additional information

Chronic Effects: Uptake in large quantities of this material may cause a drop in blood pressure, collapse, CNS disorders, spasms, narcotic conditions, respiratory paralysis and haemolysis.

Iron (III) Ammonium Citrate: dog LD oral > 2gm/kg (2000mg/kg) GASTROINTESTINAL: "HYPERMOTILITY, DIARRHEA" Gekkan Yakuji.

Pharmaceuticals Monthly. Vol. 35, Pg. 2927, 1993.

rat LD oral > 2gm/kg (2000mg/kg) GASTROINTESTINAL: "HYPERMOTILITY, DIARRHEA" Gekkan Yakuji. Pharmaceuticals Monthly. Vol. 35, Pg. 2927, 1993.

SECTION 12: Ecological information

Toxicity

No data available.

Persistence and degradability

No data available.

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

ADG (Road and Rail)

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

SECTION 15: Regulatory information

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

Australia SUSMP

Poison Schedule: NS

Canadian Domestic Substances List (DSL)

Chemical name: 1,2,3-Propanetricarboxylic acid, 2-hydroxy-, ammonium iron(3++) salt

CAS: 1185-57-5

Massachusetts Right To Know Components

Chemical name: Ferric ammonium citrate

CAS number: 1185-57-5

New Jersey Right To Know Components

Common name: FERRIC AMMONIUM CITRATE

CAS number: 1185-57-5

Pennsylvania Right To Know Components

Chemical name: 1,2,3-Propanetricarboxylic Acid, 2-hydroxy-, Ammonium Iron(3+) Salt

CAS number: 1185-57-5

SECTION 16: Other information

Further information/disclaimer

ChemSupply Australia Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon ChemSupply Australia Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of ChemSupply Australia Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

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

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

IATA, Dangerous Goods Regulations (DGR)

IMO, International Maritime Dangerous Goods Code (IMDG)