

Safety Data Sheet **AMMONIUM FERROUS SULFATE hexahydrate**

SDS no. ZZ4SSSDY • Version 1.0 • Date of issue: 2024-03-07

SECTION 1: Identification

GHS Product identifier

Product name AMMONIUM FERROUS SULFATE hexahydrate

Recommended use of the chemical and restrictions on use

Laboratory reagent, metallurgy, photography, analytical chemistry, polymerisation catalyst, dosimeters.

Additional information: When used for laboratory chemical analysis, it has no poison schedule. If this compound is used in human or animal application then it may acquire a poison schedule of S6, S5, S4 or S2.

Supplier's details

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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

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

Molecular weight: 392.14

Components

| Component | CAS no. | Concentration |
|---|-----------|----------------------|
| Ammonium iron(II) sulfate Hexahydrate | 7783-85-9 | 100 - 100 % (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 | Wash affected areas with copious quantities of water immediately. Remove contaminated clothing and wash before re-use. If persistent irritation occurs, obtain medical attention. |
| In case of eye contact | Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. If rapid recovery does not occur, obtain medical attention |
| 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 any means suitable for extinguishing surrounding fire.

Specific hazards arising from the chemical

Not considered as fire/explosion hazard. Irritating and toxic ammonia gas may form in fires. Sealed containers may rupture when heated.

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. Avoid breathing vapours, mist or gas. For personal protection see section 8.

Methods and materials for containment and cleaning up

Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation. Keep in suitable, closed containers for disposal.

SECTION 7: Handling and storage**Precautions for safe handling**

Avoid generation or accumulation of dusts. Avoid ingestion and inhalation of material. Avoid contact with eyes, skin and clothing. Use with adequate ventilation.

Conditions for safe storage, including any incompatibilities

Avoid generation or accumulation of dusts. Avoid ingestion and inhalation of material. Avoid contact Handling with eyes, skin and clothing. Use with adequate ventilation.

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. If the engineering controls are not sufficient to maintain concentrations of vapours/mists below the exposure standards, suitable respiratory protection must be worn.

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

Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use.

Wear suitable protective clothing to prevent skin contact. 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

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Basic physical and chemical properties

| | |
|--|--|
| Physical state | Solid |
| Appearance | Pale blue-green crystals or crystalline powder. |
| Color | No data available. |
| Odor | Odourless. |
| Odor threshold | No data available. |
| Melting point/freezing point | 100 - 110 °C; decomposes. |
| 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 | 3.0 - 5.0 (50 g/l, H ₂ O, 20 °C) |
| Kinematic viscosity | No data available. |
| Solubility | Solubility in Water: Soluble (269 g/L @ 20 °C) Solubility in Organic Solvents: 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: 1.86 |
| Relative vapor density | >1.0 |
| Particle characteristics | No data available. |

Supplemental information regarding physical hazard classes

No data available.

Further safety characteristics (supplemental)

Other Information: Slowly oxidises and effloresces in air. Avoid light, heat and moisture.
Deliquescent.

SECTION 10: Stability and reactivity

Reactivity

Stable under normal conditions of storage and handling.

Chemical stability

Stable under ordinary conditions of use and storage. Slowly oxidises in moist air. Light and moisture sensitive.

Possibility of hazardous reactions

Hazardous Polymerization: Will not occur.

Conditions to avoid

Avoid storing in direct sunlight and avoid extremes of temperature.

Incompatible materials

Strong oxidizing agents. Strong acids.

Hazardous decomposition products

May emit ammonia, oxides of sulfur, nitrogen and carbon.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

Acute Toxicity - Oral: LD50 (rat): 3250 mg/kg.

Ingestion: Acute poisoning via ingestion may give the following symptoms: Gastrointestinal discomfort, nausea, diarrhoea, lack of appetite and vomiting. Symptoms of the ingestion of large amounts may be delayed for several hours and can include epigastric pain, cyanosis, central nervous system effects (CNS depression, restlessness, confusion, drowsiness, lethargy), hyperventilation, hyperglycemia/hypoglycemia, hypotension, 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, kidney damage may develop and could lead to death due to hepatic coma.

Pink discolouration in urine is a strong indicator of iron poisoning.

Inhalation: Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath, and wheezing. May cause pulmonary edema.

Skin corrosion/irritation

May causes irritation to skin. Symptoms include redness, itching and pain.

Serious eye damage/irritation

May causes irritation to the eyes. Symptoms redness and pain.

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.

SECTION 12: Ecological information

Toxicity

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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

SECTION 16: Other information

Further information/disclaimer

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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)