

SAFETY DATA SHEET

according to the Global Harmonized System (and with all of the information required by the HPR)

Revision Date 06/17/2018

Version 1.6

SECTION 1. Identification**Product identifier**

Product number	FX0235
Product name	Ferric Sulfate, Hydrate GR
CAS-No.	15244-10-7

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

Identified uses	Reagent for analysis
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Details of the supplier of the safety data sheet

Company	Millipore (Canada) Ltd 109 Woodbine Downs Blvd. Unit 5 Etobicoke Ontario M9W 6Y1 Canada General Inquiries: +1 800-645-5476 Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5) MilliporeSigma is a business of Merck KGaA, Darmstadt, Germany.
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Emergency telephone	800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week
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SECTION 2. Hazards identification**GHS-Labeling**

Not a dangerous substance according to GHS.

Other hazards

None known.

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity: 100 %

SECTION 3. Composition/information on ingredients

Formula	$\text{Fe}_2(\text{SO}_4)_3 \cdot x \text{H}_2\text{O}$	$\text{Fe}_2\text{O}_{12}\text{S}_3 \cdot x\text{H}_2\text{O}$ (Hill)
Molar mass	399.88 g/mol	

Remarks	WHMIS hazardous composition: No ingredients are hazardous according to the CPR criteria.
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SECTION 4. First aid measures**Description of first-aid measures**

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Inhalation

After inhalation: fresh air.

Skin contact

In case of skin contact Wash off under running water.

Eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist.

Ingestion

After swallowing (large amounts): consult doctor if feeling unwell.

Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

The following applies to soluble iron compounds: nausea and vomiting after swallowing. The absorption of large quantities is followed by cardiovascular disorders. Toxic effect on liver and kidneys.

Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

Special hazards arising from the substance or mixture

Not combustible., Ambient fire may liberate hazardous vapors., Fire may cause evolution of:
Sulfur oxides

Advice for firefighters

Special protective equipment for fire-fighters

In the event of fire, wear self-contained breathing apparatus.

Further information

Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid generation of dusts; do not inhale dusts. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: Protective equipment see section 8.

Environmental precautions

Do not empty into drains.

Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills.

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Observe possible material restrictions (see sections 7 and 10).

Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

SECTION 7. Handling and storage

Precautions for safe handling

Observe label precautions.

Conditions for safe storage, including any incompatibilities

Tightly closed. Dry.

Store at room temperature.

SECTION 8. Exposure controls/personal protection

Exposure limit(s)

Ingredients

Basis	Value	Threshold limits	Remarks
<i>iron(III) sulfate hydrate (x H2O) 15244-10-7</i>			
CAD AB OEL	Time Weighted Average (TWA):	1 mg/m ³	Expressed as: as Fe
CAD BC OEL	Short Term Exposure Limit (STEL):	2 mg/m ³	Expressed as: as Fe
	Time Weighted Average (TWA):	1 mg/m ³	Expressed as: as Fe
CAD MB OEL	Time Weighted Average (TWA):	1 mg/m ³	Expressed as: as Fe
CAD ON OEL	Time Weighted Average (TWAEV):	1 mg/m ³	Expressed as: as Fe
OEL (QUE)	Time Weighted Average (TWA):	1.0 mg/m ³	Expressed as: as Fe
CAD SK OEL	15 minute average contamination limit:	3 mg/m ³	Expressed as: as Fe
	8 hour average contamination limit:	1 mg/m ³	Expressed as: as Fe

Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

Individual protection measures

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired at the respective supplier.

Hygiene measures

Change contaminated clothing. Preventive skin protection recommended. Wash hands after working with substance.

Eye/face protection

Safety glasses

Hand protection

required

Respiratory protection

required when dusts are generated.

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SECTION 9. Physical and chemical properties

Physical state	powder
Color	tan
Odor	odorless
Odor Threshold	No information available.
pH	ca. 1.5 at 50 g/l 68 °F (20 °C)
Melting point	896 °F (480 °C) (decomposition)
Boiling point/boiling range	Not applicable
Flash point	does not flash
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Vapor pressure	No information available.
Relative vapor density	No information available.
Density	3.097 g/cm ³ at 64 °F (18 °C) (anhydrous substance)
Relative density	No information available.
Solubility(ies)	Solvent: ethanol soluble Solvent: Acetone insoluble
Water solubility	at 68 °F (20 °C) soluble
Partition coefficient: n- octanol/water	Not applicable

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Autoignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	No information available.
Explosive properties	No information available.
Oxidizing properties	No information available.
Ignition temperature	not combustible
Bulk density	ca.200 kg/m ³

SECTION 10. Stability and reactivity

Reactivity

See below

Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

Possibility of hazardous reactions

no information available

Conditions to avoid

no information available

Incompatible materials

no information available

Hazardous decomposition products

in the event of fire: See section 5.

SECTION 11. Toxicological information

Information on toxicological effects

Likely route of exposure

Inhalation, Eye contact, Skin contact, Ingestion

Acute oral toxicity

LD50 Rat: > 2,000 mg/kg (anhydrous substance)

Skin irritation

Rabbit

Result: No irritation

OECD Test Guideline 404

Specific target organ systemic toxicity - single exposure

The substance or mixture is not classified as specific target organ toxicant, single exposure.

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Specific target organ systemic toxicity - repeated exposure

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard

Regarding the available data the classification criteria are not fulfilled.

Carcinogenicity

IARC

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

ACGIH

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

Further information

The following applies to soluble iron compounds: nausea and vomiting after swallowing. The absorption of large quantities is followed by cardiovascular disorders. Toxic effect on liver and kidneys.

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12. Ecological information

Ecotoxicity

Toxicity to fish

LC50 *Gambusia affinis* (Mosquito fish): 37.2 mg/l; 96 h (anhydrous substance)

Toxicity to algae

NOEC *Desmodesmus subspicatus* (green algae): 5.6 mg/l; 7 d (anhydrous substance)

Persistence and degradability

Biodegradability

The methods for determining the biological degradability are not applicable to inorganic substances.

Bioaccumulative potential

Partition coefficient: n-octanol/water

Not applicable

Mobility in soil

No information available.

Additional ecological information

Biological effects:

Further information on ecology

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SECTION 13. Disposal considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

SECTION 14. Transport information

Land transport (DOT)

Not classified as dangerous in the meaning of transport regulations.

Air transport (IATA)

Not classified as dangerous in the meaning of transport regulations.

Sea transport (IMDG)

Not classified as dangerous in the meaning of transport regulations.

SECTION 15. Regulatory information

United States of America

Canada

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

Notification status

TSCA: Listed on TSCA

DSL: All components of this product are on the Canadian DSL

SECTION 16. Other information

Training advice

Provide adequate information, instruction and training for operators.

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

Used abbreviations and acronyms can be looked up at www.wikipedia.org.

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The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to appropriate safety precautions. It does not represent a warranty of any product properties and we assume no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

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