

Issue Date 15-Apr-2015

Revision Date 01-Sep-2015

Version 2

1. IDENTIFICATION

Product identifier

Product Name Ferrous Ammonium Sulfate, Hexahydrate, ACS

Other means of identification

Product Code 2800
UN/ID no. Not Regulated
Synonyms Ammonium iron (II) sulfate (2:1:2); Ammonium ferrous sulfate

Recommended use of the chemical and restrictions on use

Recommended Use Laboratory chemicals.
Uses advised against No information available

Details of the supplier of the safety data sheet

Manufacturer Address
 Harrell Industries, Inc.
 2495 Commerce Drive
 Rock Hill, SC 29730

www.harrellindustries.com

Emergency telephone number

Company Phone Number 803-327-6335
Fax Number 803-327-7808
24 Hour Emergency Phone Number 800 633-8253 (PERS)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Label elements

Emergency Overview

Warning

Hazard statements

Causes skin irritation
 Causes serious eye irritation
 May cause respiratory irritation
 Harmful if swallowed
 Harmful in contact with skin
 Harmful if inhaled



Warning! Causes irritation to skin, eyes, and respiratory tract. Harmful if swallowed or inhaled.

Appearance Pale blue-green crystals	Physical state Solid	Odor Odorless
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Precautionary Statements - Prevention

Avoid breathing dust/fume/gas/mist/vapors/spray

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

Causes irritation, redness and pain.

Causes irritation to skin. Symptoms include redness, itching and pain.

Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath.

Large oral doses may cause irritation to the gastrointestinal tract. Low toxicity in small quantities but larger dosages may cause nausea, vomiting, diarrhea and black stool. Pink urine discoloration is a strong indicator of iron poisoning. Liver damage, coma, and death from iron poisoning has been recorded.

Hazards not otherwise classified (HNOC)

Not applicable

Other Information

May be harmful if swallowed

3. COMPOSITION/INFORMATION ON INGREDIENTS**Substance****Synonyms**

Ammonium iron (II) sulfate (2:1:2); Ammonium ferrous sulfate.

FormulaFe(NH₄)₂(SO₄)₂·6H₂O

Chemical Name	CAS No.	Weight-%
Ferrous Ammonium Sulfate	7783-85-9	100.0

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

Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention.
Skin contact	Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean shoes before reuse.
Inhalation	Remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Ingestion	Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

Most important symptoms and effects, both acute and delayed**Symptoms** No information available.**Indication of any immediate medical attention and special treatment needed****Note to physicians** Treat symptomatically.**5. FIRE-FIGHTING MEASURES****Suitable extinguishing media**

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

Unsuitable extinguishing media Caution: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical

No information available.

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation, especially in confined areas. Use personal protective equipment as required.

Environmental precautions

Environmental precautions See Section 12 for additional ecological information.

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 Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal. Small amounts of residue may be flushed into sewer with plenty of water.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from incompatible materials. Containers of this material may be hazardous when empty since they retain product residues (dust, solids).

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible materials Sulfuric acids.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ferrous Ammonium Sulfate 7783-85-9	TWA: 1 mg/m ³ Fe	(vacated) TWA: 1 mg/m ³ Fe	TWA: 1 mg/m ³ Fe

Appropriate engineering controls

Engineering Controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection	Use chemical safety goggles and/or full face shield. Maintain eye wash fountain and quick-drench facilities in work area.
Skin and body protection	Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.
Respiratory protection	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
General Hygiene Considerations	Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Solid	Odor	Odorless
Appearance	Pale blue-green crystals	Odor threshold	No information available
Color	Pale blue-green		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No information available	
Melting point / freezing point	100-110 °C / 212-230 °F	
Boiling point / boiling range	No information available	
Flash point	No information available	
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	>1.0	
Relative density	1.86	
Water solubility	26.9g/100cc water @ 20C (68F)	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	

Other Information

Softening point	No information available
Molecular weight	392.14
VOC Content (%)	No information available
Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical stability

Stable under ordinary conditions of use and storage.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous polymerization

Will not occur.

Conditions to avoid

Heat, light and moisture.

Incompatible materials

Sulfuric acids.

Hazardous Decomposition Products

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

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure**Inhalation**

Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath.

Eye contact

Causes irritation, redness, and pain.

Skin contact

Causes skin irritation. Redness, itching and pain.

Ingestion

Causes irritation to the gastrointestinal tract. Symptoms may include nausea, vomiting, and diarrhea. Low toxicity in small quantities but larger dosages may cause nausea, vomiting, diarrhea, and black stool. Pink urine discoloration is a strong indicator of iron poisoning. Liver damage, coma, and death from iron poisoning has been recorded.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Ferrous Ammonium Sulfate 7783-85-9	= 3250 mg/kg (Rat)	-	-

Information on toxicological effects**Symptoms**

No information available.

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

This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

12. ECOLOGICAL INFORMATION

Ecotoxicity**Persistence and degradability****Bioaccumulation****Other adverse effects**

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods**Disposal of wastes**

Disposal should be in accordance with applicable regional, national and local laws and

regulations. Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility.

Contaminated packaging Do not reuse container.

14. TRANSPORT INFORMATION

DOT	Not regulated
UN/ID no.	Not Regulated
Proper shipping name	Ferrous sulfate has an RQ of 1000 lbs, if less than 1000 lbs is in a single container the material is not regulated by D.O.T. as a hazardous material. Bulk Bag and Bulk DOT Description (>1000 lbs in container): Environmentally hazardous substances, Solid, N.O.S. (Ferrous Sulfate) UN3077 Haz. Class 9, Pack. group: III
Reportable Quantity (RQ)	1000 lbs (454kgs)

15. REGULATORY INFORMATION

International Inventories

TSCA	Does not comply
DSL/NDSL	Does not comply
EINECS/ELINCS	Does not comply
ENCS	Complies
IECSC	Complies
KECL	Does not comply
PICCS	Complies
AICS	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level

pertaining to releases of this material

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

This product does not contain any substances regulated by state right-to-know regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Ferrous Ammonium Sulfate 7783-85-9	-	-	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

<u>NFPA</u>	Health hazards 1	Flammability 0	Instability 0	Physical and Chemical Properties -
<u>HMIS</u>	Health hazards 1	Flammability 0	Physical hazards 0	Personal protection X

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Revision Date 01-Sep-2015

Revision Note

No information available

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.

End of Safety Data Sheet