



SAFETY DATA SHEET

according to 29 CFR 1910.1200 and GHS

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Ferric Ammonium Citrate (F.A.C.)

Revision 1
Revision date 2020-09-29

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name	Ferric Ammonium Citrate (F.A.C.)
Product code	NCM4009

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

Product Use	[SU3] Industrial uses: Uses of substances as such or in preparations at industrial sites; [PC21] Laboratory chemicals;
Description	Intended for laboratory use only. For in vitro use only.

1.3. Details of the supplier of the safety data sheet

Company	Neogen Corporation
Address	620 Leshler Place Lansing MI 48912 USA
Web	www.neogen.com
Telephone	517-372-9200/800-234-5333
Email	SDS@neogen.com

1.4. Emergency telephone number

24 hours:
Medical: 1-800-498-5743 (U.S. and Canada) or 1-651-523-0318 (international)
Spill/CHEMTREC: 1-800-424-9300 (U.S. and Canada) or 1-703-527-3887 (international)

Further information

Manufactured By:
Neogen Corporation
1 Quest Park-Moss Hall Road
Heywood Lancashire BL97JJ UK.

Neogen Corporation
Unit 7 Brookfield Business Park
Muir Road
Liverpool, L9 7AR, UK.

Neogen Corporation
740 East Shiawassee
Lansing, MI 48912 U.S.A.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture


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2.1. Classification of the substance or mixture

2.1.2. Classification - GHS Skin Irrit. 2: H315; Eye Irrit. 2: H319;

2.2. Label elements

Hazard pictograms	
Signal Word	Warning
Hazard Statement	Skin Irrit. 2: H315 - Causes skin irritation. Eye Irrit. 2: H319 - Causes serious eye irritation.
Precautionary Statement: Prevention	P264 - Wash thoroughly after handling. P280 - Wear protective gloves/protective clothing/eye protection/face protection.
Precautionary Statement: Response	P302+P352 - IF ON SKIN: Wash with plenty of water/ . P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P332+P313 - If skin irritation occurs: Get medical advice/attention. P337+P313 - If eye irritation persists: Get medical advice/attention.

2.3. Other hazards

Other hazards Contains material(s) which may be harmful to aquatic organisms, including fish and invertebrates.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

EC 1272/2008

Chemical Name	Index No.	CAS No.	EC No.	REACH Registration Number	Conc. (%w/w)	Classification
Ferric ammonium citrate		1185-57-5	214-686-6		10 - 20%	Skin Irrit. 2: H315; Eye Irrit. 2: H319;

Description

Concentrations listed are not product specifications.

Further information

Full text of Hazard Statements listed in this Section is provided in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Move the exposed person to fresh air. If breathing is difficult give oxygen. If breathing stops, provide artificial respiration. Seek medical attention if irritation or symptoms persist.
Eye contact	Rinse immediately with plenty of water. Contact lenses should be removed. Seek medical attention if irritation or symptoms persist.
Skin contact	Remove contaminated clothing. Wash with soap and water. Seek medical attention if irritation or symptoms persist.
Ingestion	Do not induce vomiting unless told to do so by the poison control center or doctor. Rinse mouth thoroughly. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Inhalation May cause irritation to respiratory system.

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4.2. Most important symptoms and effects, both acute and delayed

Eye contact	Causes eye irritation.
Skin contact	Causes skin irritation.
Ingestion	Ingestion may cause nausea and vomiting. May cause oral mucosal irritation.

4.3. Indication of any immediate medical attention and special treatment needed

	Remove the affected person from the source of contamination immediately. Transfer to hospital if there are burns or symptoms of poisoning. Seek medical attention if irritation or symptoms persist. If medical advice is needed, have product container or label at hand.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

	Use extinguishing media appropriate to the surrounding fire conditions.
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5.2. Special hazards arising from the substance or mixture

	Irritant. Do not breathe vapor or spray mist. Do not allow undiluted product to be released to ground water, water course or sewage system.
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5.3. Advice for firefighters

	Do not breathe vapor or spray mist. Wear self-contained breathing apparatus and chemical-protective clothing.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

	Use as appropriate: Protective equipment, Protective clothing. Ensure adequate ventilation of the working area. Avoid prolonged or repeated exposure.
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6.2. Environmental precautions

	Prevent further spillage if safe. Clean spillage area thoroughly with plenty of water. Do not flush into surface water. Do not let product contaminate subsoil.
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6.3. Methods and material for containment and cleaning up

	Prevent further spillage if safe. Absorb spillage to prevent material damage. Clean spillage area thoroughly with plenty of water. Do not contaminate water by cleaning of equipment or disposal of wastes.
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6.4. Reference to other sections

	See Section(s) 2, 8, and 13 for further information.
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SECTION 7: Handling and storage

7.1. Precautions for safe handling

	Adopt best Manual Handling considerations when handling, carrying and dispensing. Avoid contact with eyes. Do not eat, drink or smoke in areas where this product is used or stored. Ensure adequate ventilation of the working area. Do not contaminate water by cleaning of equipment or disposal of wastes. Use as appropriate: Protective clothing. Read the entire label and follow all use directions, restrictions, and precautions.
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7.2. Conditions for safe storage, including any incompatibilities

	Store at temperatures between 2 °C and 8 °C. Store in correctly labelled containers. Keep container tightly closed. Do not contaminate water, food, or feed by storage or disposal. Follow label instructions.
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7.3. Specific end use(s)

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7.3. Specific end use(s)

See Section(s) 1.2 for further information.

Further information

Refer to product label and/or package insert for additional information. Follow label instructions.

SECTION 8: Exposure controls/personal protection

8.2. Exposure controls



Appropriate engineering controls

Ensure adequate ventilation of the working area.

Individual protection measures

Use as appropriate: Protective equipment.

Eye / face protection

Wear eye/face protection.

Skin protection - Hand protection

Wear suitable gloves. Wash the outside of gloves before removing them. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

Skin protection - Other

Use as appropriate: Protective clothing.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

Occupational exposure controls

Exposure above the recommended occupational exposure limit (OEL) may cause adverse health effects. Protect clothing from contact with the product. Provide chemical shower. Provide eye wash station.

Further information

Refer to product label for additional PPE requirements and recommendations. Follow label instructions.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

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9.1. Information on basic physical and chemical properties

State	Liquid
Color	Green
Odor	Characteristic
Odor threshold	No data available
pH	No data available
Melting point	No data available
Freezing Point	No data available
Boiling point	No data available
Flash point	No data available
Evaporation rate	No data available
Flammability limits	Not applicable.
Vapor pressure	No data available
Vapor density	No data available
Relative density	No data available
Partition coefficient	No data available
Autoignition temperature	Not applicable.
Viscosity	No data available
Explosive properties	Not applicable.
Oxidizing properties	No data available
Solubility	Soluble in water

9.2. Other information

Conductivity	No data available
Surface tension	No data available
Gas group	Not applicable.
Benzene Content	Not applicable.
Lead content	Not applicable.
VOC (Volatile organic compounds)	Not applicable.

SECTION 10: Stability and reactivity

10.1. Reactivity

	Stable under normal conditions.
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10.2. Chemical stability

	Stable under normal conditions.
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10.3. Possibility of hazardous reactions

	Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.
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10.4. Conditions to avoid

	Keep away from extreme temperatures.
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10.5. Incompatible materials

	No data available.
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10.6. Hazardous decomposition products

	Carbon oxides.
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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	Based on available data, the classification criteria are not met. However, this product does contain substance(s) that are classified as hazardous. For more information, see Section 3.
Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/irritation	Causes serious eye irritation.
Respiratory or skin sensitization	May cause allergic reactions in susceptible people.
Germ cell mutagenicity	No mutagenic effects reported.
Carcinogenicity	No components at >0.01% are listed in the American Conference of Governmental Industrial Hygienists (ACGIH) Guide to Occupational Exposure Values. No components at >0.01% are listed in the International Agency for Research on Cancer (IARC) Monographs. No components at >0.01% are listed in the National Toxicology Program (NTP) Report on Carcinogens. Not listed in the OSHA standard 1910.1003 Carcinogens.
Reproductive toxicity	No teratogenic effects reported.
STOT-single exposure	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
STOT-repeated exposure	No Significant Hazard.
Aspiration hazard	No Significant Hazard.
Repeated or prolonged exposure	Avoid prolonged or repeated exposure. Exposure above the recommended occupational exposure limit (OEL) may cause adverse health effects. Delayed appearance of the complaints and development of hypersensitivity (difficult breathing, coughing, asthma) are possible.

11.1.2. Mixtures

	See Section(s) 3 for further information.
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11.1.3. Hazard Information

	See Section(s) 2 and 3 for further information.
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11.1.4. Toxicological information

	No data available
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11.1.5. Hazard Class

	See Section(s) 2 and 14 for further information.
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11.1.6. Classification Criteria

	Based on the Globally Harmonized System (GHS) considerations for the classification of mixtures. See Section 15 for regulatory citations.
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11.1.7. Information on likely routes of exposure

	Eye contact. Skin contact. Inhalation. Ingestion.
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11.1.8. Symptoms related to the physical, chemical and toxicological characteristics

	See Section(s) 4.2 for further information.
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11.1.9. Delayed and immediate effects as well as chronic effects from short and long-term exposure

	See Section(s) 4.2 for further information.
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11.1.10. Interactive effects

	No data available.
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11.1.11. Absence of specific data

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11.1.11. Absence of specific data

<1% of this mixture consists of ingredients of unknown acute toxicity.

11.1.12. Mixture versus substance information

See Section(s) 3 for further information.

11.1.13. Other information

No data available.

SECTION 12: Ecological information

12.1. Toxicity

No data available

12.2. Persistence and degradability

No data is available on this product.

12.3. Bioaccumulative potential

No data is available on this product.

Partition coefficient

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12.4. Mobility in soil

No data is available on this product.

12.5. Results of PBT and vPvB assessment

No data is available on this product.

12.6. Other adverse effects

Specific test data for the substance or mixture is not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Dispose of in compliance with all local and national regulations. Follow label instructions.

Disposal methods

Do not contaminate water by cleaning of equipment or disposal of wastes. Do not flush into surface water. Dispose of in compliance with all local and national regulations.

Disposal of packaging

Nonrefillable container. Do not reuse or refill this container.
If empty: Do not reuse this container. Place in trash or offer for recycling, if available.
If partly filled: Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.

Further information

Refer to product label and/or package insert for additional information. Follow label instructions.

SECTION 14: Transport information

14.1. UN number

The product is not classified as dangerous for carriage.

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14.2. UN proper shipping name

The product is not classified as dangerous for carriage.

14.3. Transport hazard class(es)

The product is not classified as dangerous for carriage.

14.4. Packing group

The product is not classified as dangerous for carriage.

14.5. Environmental hazards

The product is not classified as dangerous for carriage.

14.6. Special precautions for user

The product is not classified as dangerous for carriage.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

The product is not classified as dangerous for carriage.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Regulations	Hazard Communication Standard: 29 Code of Federal Regulations 1910.1200: Occupational Safety and Health Standards: Z: Toxic and Hazardous Substances: Hazard Communication.
Chemical Inventories/Right-to-Know Lists:	<p>--International--</p> <p>Basel Convention (Hazardous Waste): Not applicable. Chemical Weapons Convention (OPCW): This material contains no reportable components. Kyoto Protocol Greenhouse Gases: This material contains no reportable components. Mercosur Agreement: Applicable. Montreal Protocol: This material contains no reportable components. The Rotterdam Convention: This material contains no reportable components. The Stockholm Convention: This material contains no reportable components.</p> <p>--Asia and the ASEAN Nations--</p> <p>Catalog of Hazardous Chemicals (China): This material contains no reportable components. Regulation of Minister of Trade of the Republic of Indonesia, Number 75, Year 2014, regarding The Second Amendment of Minister of Trade, Number 44, Year 2009, Regarding Provision, Distribution, and Control of Hazardous Substances: This material contains no reportable components. Air Pollution Control Law (Japan): This material contains no reportable components. Chemical Substances Control Law (Japan): This material contains no reportable components. Industrial Safety and Health Act, Dangerous Substances (Japan): Labeling/Notification required, [Iron(II) ammonium citrate, CAS No. 1185-57-5]. Poisonous and Deleterious Substances Act (Japan): This material contains no reportable components. Soil Contamination Countermeasures Act (Japan): This material contains no reportable components. Water Pollution Control Law (Japan): [Iron(II) ammonium citrate (ammonium compounds), CAS No. 1185-57-5]. Chemical Substances Subject to Permission (Korea): This material contains no reportable components. Restricted or Prohibited Substances (Korea): This material contains no reportable components. Use and Standards of Exposure of Chemicals Hazardous to Health (USECHH), Regulation 2000 (Malaysia): This material contains no reportable components. Philippine Inventory of Chemicals and Chemical Substances (PICCS): All ingredients listed or exempt.</p>

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15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Taiwan Toxic and Concerned Chemical Substances Control Act (TCCSCA): This material contains no reportable components.
Hazardous Substances Act (Thailand): This material contains no reportable components.
Law on Chemicals (Vietnam): This material contains no reportable components.

--Australia and New Zealand--.
Australian Dangerous Goods Code: Not applicable.
Australian Inventory of Chemical Substances (AICS): All ingredients listed or exempt.
New Zealand Inventory of Chemicals (NZIoC): All ingredients listed or exempt.

--European Union (EU) and the United Kingdom (UK)--.
Authorization List (Annex XIV of REACH): This material contains no reportable components.
Annex XVII for REACH: This material contains no reportable components.
Article 95 of the Biocidal Products Regulation (BPR): Not applicable.

--North America--.
Domestic/Non-Domestic Substances Lists (DSL/NDSL): All ingredients listed or exempt.
Toxic Substances Control Act (TSCA): All ingredients listed or exempt.
Massachusetts Right-to-Know Hazardous Substance List: Ferric ammonium citrate.
New Jersey Worker and Community Right to Know Act: Iron(II) ammonium citrate.
Pennsylvania Right to Know Law: 1,2,3-Propanetricarboxylic acid, 2-hydroxy-diammonium salt.
Rhode Island Right-to-Know General Law: This material contains no reportable components.

California Prop 65: This material contains no reportable components.

Inventories

Ingredient	TSCA	MA	SARA313	CALPROP65	CWA307	CAA112	CWA311	SARA302	SARA304
Ferric ammonium citrate (1,2,3-Propanetricarboxylic acid, 2-hydroxy-, ammonium iron(3+) salt)	Y	N	N	N	N	N	Y	N	N

SECTION 16: Other information

Other information

Revision	This document differs from the previous version in the following areas: 2 - Precautionary Statement: Response. 9 - 9.2. Other information (Conductivity). 9 - 9.2. Other information (Surface tension).
Acronyms	ADR/RID: European Agreements Concerning the International Carriage of Dangerous Goods by Rail (RID) and by Road (ADR). CAS No.: Chemical Abstracts Service. CLASS: Classification, Labeling, and Safety Data Sheet of Hazardous Chemicals Regulation 2013 (Malaysia). FIFRA: U.S. Federal Insecticide, Fungicide, and Rodenticide Act. GHS: Globally Harmonized System. HCS 2012: Hazard Communication Standard (2012 revision). IATA: International Air Transport Association. ICAO: International Civil Aviation Organization. IMDG: International Maritime Dangerous Goods. LD: Lethal dose. OEL: Occupational exposure limit. OSHA: U.S. Occupational Safety and Health Administration. PEL: Permissible Exposure Limit.

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Other information

	<p>REACH: Registration, Evaluation, Authorization, and Restriction of Chemicals. SVHC: Substance of very high concern. US DOT: United States Department of Transportation. VOC: Volatile Organic Compound. WEL: Workplace Exposure Limit.</p>
<p>Text of Hazard Statements in Section 3</p>	<p>Skin Irrit. 2: H315 - Causes skin irritation. Eye Irrit. 2: H319 - Causes serious eye irritation.</p>

Further information

	<p>DISCLAIMER: The information and recommendations set forth herein ("Information") are presented in good faith and believed to be correct as of the date issued. No representation is made regarding the completeness or accuracy of the Information. Further, because of the many factors that affect the use of this product, the Information is supplied upon the condition that the person(s) receiving it will make their own determination regarding its suitability for their own unique purpose(s), prior to use.</p> <p>Except as expressly stated herein, NO WARRANTIES, GUARANTEES, OR REPRESENTATIONS OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, COURSE OF PERFORMANCE, USAGE OF TRADE, OR RESULTS TO BE OBTAINED BY USE OF THIS PRODUCT are made with respect to this product or use of this product. The product covered is furnished "as is" and only subject to the warranties herein provided, no liability is assumed resulting from the use of this product.</p>
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