



Product Information (203) 740-3471 / Emergency Assistance CHEMTREC 1-800-424-9300

MATERIAL SAFETY DATA SHEETS

SECTION I

PRODUCT AND COMPANY IDENTIFICATION

Product: Ferric ammonium citrate, green
This MSDS is valid for all grades and catalog #'s

Synonyms: Ammonium Ferric Citrate; Ammonium iron (III) citrate; Iron (III) ammonium citrate; 1, 2, 3

Propanetricarboxylic acid, 2-hydroxy, ammonium iron (3+) salt; Ferric ammonium citrate; ammonium ferric citrate;

Formula: This compound is a complex salt of undetermined structure, composed of Iron, Ammonia, and Citric Acid.

Manufacturer: PHARMCO-AAPER
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SECTION II

COMPOSITION / INFORMATION ON INGREDIENTS

% by Material CAS # TLV/PE LC50/LD50
weight L

% by weight	Material	CAS #	TLV/PE L	LC50/LD50
100	Ferric ammonium citrate	1185-57-5	TWA:1 CEIL: 2	Not available

SECTION III

HAZARDS IDENTIFICATION

Potential Acute Health Effects: Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.

Potential Chronic Health Effects: Slightly hazardous in case of skin contact (irritant).

CARCINOGENIC EFFECTS: Not available.

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available.

SECTION IV

FIRST AID

Obtain medical attention for all cases of over-exposure.

Eye Contact: Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention if irritation occurs.

Skin Contact: Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops. Cold water may be used.

Hazardous Skin Contact: Not available.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Hazardous Inhalation: Not available

Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Hazardous Ingestion: Not available.

SECTION V

FIRE FIGHTING MEASURES

Fire:

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition temperature: Not available.

Flash point: Not available.

Flammable limits: Not available.

Products of Combustion: Not available.

Fire Hazards: Slightly flammable to flammable in presence of open flames and sparks, of heat.

Explosion Hazards: Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available. Slightly explosive in presence of heat.

Fire Extinguishing Media: SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Information: Toxic oxides of nitrogen or ammonia gas may be formed in fires. Containers may explode when heated.

SECTION VI

SPILL/ACCIDENTAL RELEASE MEASURES

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by

spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill: Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

SECTION VII

HANDLING AND STORAGE

Precautions: Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not breathe dust.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area. Sensitive to light. Store in light-resistant containers.

SECTION VIII

EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill: Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: TWA: 1 STEL: 2 (mg(Fe)/m³) [United Kingdom (UK)] TWA: 1 (mg(Fe)/m³) from MSHA standard. Consult local authorities for acceptable exposure limits

SECTION IX

PHYSICAL AND CHEMICAL PROPERTIES

Physical State/Appearance: Solid. (Granular Solid. Powdered solid. Deliquescent solid.)

Molecular Weight: Not available.

Odor: Odorless.

Taste: Saline, Mild ferruginous taste

Color: Greenish

pH (1% Solution in Water): Not available.

Boiling Point: Not available.

Melting Point: Not available.

Critical Temperature: Not available.

Specific Gravity: 1.8 (Water = 1)

Vapor Pressure (mm Hg): Not applicable.

Vapor Density (Air=1): Not available.

Volatility: Not available.

Odor Threshold: Not available.

Evaporation Rate: Not available.

Viscosity: Not available.

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Water/Oil Dist. Coefficient: Not available.

Ionicity (in water): Not available.

Dispersion Properties: See solubility in water.

Solubility: Easily soluble in cold water. Solubility in water: 25 g/100 ml @ 20 deg. C. Practically insoluble in alcohol.

SECTION X

STABILITY/REACTIVITY INFORMATION

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Excess heat, incompatible materials, light

Incompatibilities: Not available.

Corrosivity: Not available.

Special Information: Incompatible with iodides, acacia preparations, and tannins. Sensitive to light.

SECTION XI

TOXICOLOGICAL INFORMATION

Routes of Entry: Inhalation. Ingestion.

Toxicity to Animals: LD50: Not available. LD50: Not available.

Chronic Effects on Humans: Not available.

Other Toxic Effects on Humans: Slightly hazardous in case of skin contact (irritant), of ingestion, of inhalation.

Special Information on Toxicity to Animals: Lethal Dose/Conc: LD [Rat] - Route: Oral; Dose: >2000 mg/kg

Special Information on Chronic Effects/Toxicity on Humans: Acute Potential Health Effects: Skin: Contact may cause irritation or rash, particularly with moist skin. Eyes: May cause eye irritation with redness, tearing, and abrasion. Inhalation: Inhalation of high concentrations of dust may cause nasal, throat or lung irritation. Symptoms may include coughing and wheezing. Ingestion: Ingestion can produce gastrointestinal tract irritation with hypermotility, diarrhea. Chronic Potential Health Effects: Eyes: Prolonged eye contact may cause a brownish discoloration of the eyes. Skin: Prolonged skin contact may cause skin irritation.

SECTION XII

ECOLOGICAL INFORMATION

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The product itself and its products of degradation are not toxic.

Special Information on Products of Biodegradation: Not available.

SECTION XIII

DISPOSAL CONSIDERATIONS

Waste Disposal: Recycle to process, if possible. Consult your local or regional authorities.

SECTION XIV

TRANSPORTATION INFORMATION

DOT Classification: DOT Not a DOT controlled material (United States).

UN: Not applicable.

Special Provisions for Transport: Not applicable.

PHARMCO-AAPER assumes not responsibility for the completeness or accuracy of the information contained herein.

**SECTION XV
REGULATORY INFORMATION**

Federal and State Regulations: Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). Components present in this product at a level which could require reporting under the statute are: **NONE**

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual report release of toxic chemicals that appear in 40 CFR 372 (used for SARA 313). This information must be included in all MSDSs that are copied and distributed for this material.

Components present in this product at a level which could require reporting under the statute are: **NONE**

Pennsylvania Right-To-Know, Hazardous substance List, Hazardous Substances and Special hazardous Substances on the list must be identified when present in products.

Components present in this product at a level which could require reporting under the statute are: **Ferric ammonium citrate**

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center of release of quantities of Hazardous Substances equal or greater than the reportable quantities (RQs) in 40 CFR 302.4. Components present in this product at a level which could require reporting under the statute are:

Chemical Name	CAS Number	RQ
<u>Ferric ammonium citrate</u>	1185-57-5	1,000 lb

Other Classifications:

WHMIS (Canada): Not controlled under WHMIS (Canada).

DSCL (EEC): This product is not classified according to the EU regulations.

Protective Equipment: Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Safety glasses.

References: Not available.

Other Special Considerations: Not available.

The information contained herein is based on data considered to be accurate based on the material as packaged. However, no warranty is expressed regarding the accuracy of these data or the results to be obtained from the use thereof. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It is the user's obligation to determine the conditions of safe use of the product. While this MSDS is based on technical data judged to be reliable,