

### 1. IDENTIFICATION

<b>Product Name</b>	<b>Ferric ammonium citrate</b>
<b>Other Names</b>	Ammonium ferric citrate; Ammonium iron(III) citrate; Citric acid, ammonium iron salt, green
<b>Uses</b>	Food additive, Acidity regulator; Water purification; Reducing agent; Medical imaging.
<b>Chemical Family</b>	No Data Available
<b>Chemical Formula</b>	C <sub>6</sub> H <sub>8</sub> O <sub>7</sub> .xFe.xH <sub>3</sub> N
<b>Chemical Name</b>	1,2,3-Propanetricarboxylic acid, 2-hydroxy-, ammonium iron(3+) salt
<b>Product Description</b>	No Data Available

### Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Redox Pty Ltd	2 Swettenham Road Minto NSW 2566 Australia	+61-2-97333000
Redox Pty Ltd	11 Mayo Road Wiri Auckland 2104 New Zealand	+64-9-2506222
Redox Inc.	3960 Paramount Boulevard Suite 107 Lakewood CA 90712 USA	+1-424-675-3200
Redox Chemicals Sdn Bhd	Level 2, No. 8, Jalan Sapir 33/7 Seksyen 33, Shah Alam Premier Industrial Park 40400 Shah Alam Sengalor, Malaysia	+60-3-5614-2111

### Emergency Contact Details

*For emergencies only; DO NOT contact these companies for general product advice.*

Organisation	Location	Telephone
Poisons Information Centre	Westmead NSW	1800-251525 131126
Chemcall	Australia	1800-127406 +64-4-9179888
Chemcall	Malaysia	+64-4-9179888
Chemcall	New Zealand	0800-243622 +64-4-9179888
National Poisons Centre	New Zealand	0800-764766
CHEMTREC	USA & Canada	1-800-424-9300 CN723420 +1-703-527-3887

### 2. HAZARD IDENTIFICATION

**Poisons Schedule (Aust)** Not Scheduled

### Globally Harmonised System

<b>Hazard Classification</b>	NOT hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)		
<b>Hazard Categories</b>	Skin Corrosion/Irritation - Category 3 Serious Eye Damage/Irritation - Category 2B		
<b>Signal Word</b>	Warning		
<b>Hazard Statements</b>	<b>H316</b>	Causes mild skin irritation.	
	<b>H320</b>	Causes eye irritation.	
<b>Precautionary Statements</b>	Prevention	<b>P264</b>	Wash hands thoroughly after handling.
	Response	<b>P332 + P313</b>	If skin irritation occurs: Get medical advice/attention.
		<b>P305 + P351 + P338</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
		<b>P337 + P313</b>	If eye irritation persists: Get medical advice/attention.

### National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

<b>Dangerous Goods Classification</b>	NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)
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### Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

<b>HSNO Classifications</b>	Health Hazards	<b>6.3B</b>	Substances that are mildly irritating to the skin
		<b>6.4A</b>	Substances that are irritating to the eye

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Ferric ammonium citrate	C <sub>6</sub> H <sub>8</sub> O <sub>7</sub> .xFe.xH <sub>3</sub> N	1185-57-5	<=100 %

## 4. FIRST AID MEASURES

### Description of necessary measures according to routes of exposure

<b>Swallowed</b>	IF SWALLOWED: Rinse mouth, then drink plenty of water. Do not induce vomiting unless directed to do so by medical personnel. Get medical advice/attention if you feel unwell. Never give anything by mouth to an unconscious person.
<b>Eye</b>	IF IN EYES: Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. If eye irritation persists, get medical advice/attention.
<b>Skin</b>	IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If skin irritation occurs, get medical advice/attention.
<b>Inhaled</b>	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing until recovered. If respiratory symptoms persist, get medical advice/attention. Apply resuscitation if victim is not breathing. Administer oxygen if breathing is difficult.
<b>Advice to Doctor</b>	Treat symptomatically. No information available.

## Medical Conditions Aggravated by Exposure

### 5. FIRE FIGHTING MEASURES

<b>General Measures</b>	If safe to do so, move undamaged containers from fire area. Cool containers with water spray until well after fire is out.
<b>Flammability Conditions</b>	May be combustible at high temperatures.
<b>Extinguishing Media</b>	Use dry chemical, Carbon dioxide (CO <sub>2</sub> ), foam or water spray for extinction - Do not use water jets.
<b>Fire and Explosion Hazard</b>	Fine dust may form explosive mixtures with air. Containers may explode when heated.
<b>Hazardous Products of Combustion</b>	Fire may produce irritating and/or toxic fumes, including Carbon oxides, Nitrogen oxides (NO <sub>x</sub> ), Iron oxides, ammonia.
<b>Special Fire Fighting Instructions</b>	Contain runoff from fire control or dilution water - Runoff may pollute waterways.
<b>Personal Protective Equipment</b>	Wear self-contained breathing apparatus (SCBA) in combination with normal firefighting clothing (full fire kit).
<b>Flash Point</b>	No Data Available
<b>Lower Explosion Limit</b>	No Data Available
<b>Upper Explosion Limit</b>	No Data Available
<b>Auto Ignition Temperature</b>	No Data Available
<b>Hazchem Code</b>	No Data Available

### 6. ACCIDENTAL RELEASE MEASURES

<b>General Response Procedure</b>	Ensure adequate ventilation. ELIMINATE all ignition sources (no smoking, flares, sparks or flame). Do not touch or walk through spilled material. Avoid dust formation. Avoid breathing dust and contact with eyes, skin and clothing.
<b>Clean Up Procedures</b>	Collect material (sweep up/shovel) and place it in suitable, closed containers for later disposal (see SECTION 13).
<b>Containment</b>	Stop leak if safe to do so – Prevent entry into waterways, drains or confined areas. Prevent dust cloud.
<b>Decontamination</b>	Finish cleaning by spreading water on the contaminated surface and dispose of according to local authority requirements.
<b>Environmental Precautionary Measures</b>	Prevent entry into drains and waterways.
<b>Evacuation Criteria</b>	Spill or leak area should be isolated immediately. Keep unauthorised personnel away; Keep upwind.
<b>Personal Precautionary Measures</b>	Use personal protective equipment as required (see SECTION 8).

### 7. HANDLING AND STORAGE

<b>Handling</b>	Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Avoid dust formation. Avoid breathing dust and contact with eyes, skin and clothing. Use personal protective equipment as required (see SECTION 8). Keep away from heat and sources of ignition - No smoking. Ground/bond container and receiving equipment. Take precautionary measures against static discharge.
<b>Storage</b>	Store in a cool, dry and well-ventilated place, out of direct sunlight (light sensitive). Keep container tightly closed. Protect from moisture (hygroscopic). Keep away from incompatible materials (strong oxidising agents).
<b>Container</b>	Store in the original or light-resistant containers.

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>General</b>	No specific exposure standards are available for this product. For Iron salts, soluble (as Fe): - Safe Work Australia Exposure Standard: TWA = 1 mg/m <sup>3</sup> . - New Zealand WES: TWA = 1 mg/m <sup>3</sup> .
<b>Exposure Limits</b>	No Data Available
<b>Biological Limits</b>	No information available.
<b>Engineering Measures</b>	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.
<b>Personal Protection Equipment</b>	- Respiratory protection: In case of inadequate ventilation, wear respiratory protection. Recommended: Dust mask/respirator. Use respirators and components tested and approved under appropriate government standards. - Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Safety glasses. Use equipment for eye protection tested and approved under appropriate government standards. - Hand protection: Handle with gloves. Recommended (full/splash contact): Nitrile rubber (Min. layer thickness: 0.11 mm; Break through time: 480 min). - Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Choose body protection in relation to its type, to the concentration and amount of hazardous substance(s), and to the specific workplace.
<b>Special Hazards Precautions</b>	No information available.
<b>Work Hygienic Practices</b>	Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Take off contaminated clothing and wash before storage or reuse.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	Solid
<b>Appearance</b>	Powder
<b>Odour</b>	Odourless
<b>Colour</b>	Brownish, yellowish
<b>pH</b>	No Data Available
<b>Vapour Pressure</b>	No Data Available
<b>Relative Vapour Density</b>	No Data Available
<b>Boiling Point</b>	No Data Available
<b>Melting Point</b>	No Data Available
<b>Freezing Point</b>	No Data Available
<b>Solubility</b>	Soluble in water - Practically insoluble in alcohol
<b>Specific Gravity</b>	1.8 (Water = 1)
<b>Flash Point</b>	No Data Available
<b>Auto Ignition Temp</b>	No Data Available
<b>Evaporation Rate</b>	No Data Available
<b>Bulk Density</b>	No Data Available
<b>Corrosion Rate</b>	No Data Available
<b>Decomposition Temperature</b>	No Data Available
<b>Density</b>	No Data Available
<b>Specific Heat</b>	No Data Available
<b>Molecular Weight</b>	No Data Available
<b>Net Propellant Weight</b>	No Data Available
<b>Octanol Water Coefficient</b>	No Data Available
<b>Particle Size</b>	No Data Available
<b>Partition Coefficient</b>	No Data Available
<b>Saturated Vapour Concentration</b>	No Data Available
<b>Vapour Temperature</b>	No Data Available
<b>Viscosity</b>	No Data Available
<b>Volatile Percent</b>	No Data Available
<b>VOC Volume</b>	No Data Available

<b>Additional Characteristics</b>	No information available.
<b>Potential for Dust Explosion</b>	Fine dust may form explosive mixtures with air.
<b>Fast or Intensely Burning Characteristics</b>	No information available.
<b>Flame Propagation or Burning Rate of Solid Materials</b>	No information available.
<b>Non-Flammables That Could Contribute Unusual Hazards to a Fire</b>	No information available.
<b>Properties That May Initiate or Contribute to Fire Intensity</b>	May burn but does not ignite readily.
<b>Reactions That Release Gases or Vapours</b>	Fire/decomposition may produce irritating and/or toxic fumes, including Carbon oxides, Nitrogen oxides (NOx), Iron oxides.
<b>Release of Invisible Flammable Vapours and Gases</b>	No information available.

## 10. STABILITY AND REACTIVITY

<b>General Information</b>	Decomposes on exposure to light.
<b>Chemical Stability</b>	Stable under recommended storage conditions.
<b>Conditions to Avoid</b>	Avoid dust formation. Avoid exposure to light. Keep away from heat and sources of ignition.
<b>Materials to Avoid</b>	Incompatible/reactive with oxidising agents, iodides, Acacia preparations and tannins.
<b>Hazardous Decomposition Products</b>	Fire/decomposition may produce irritating and/or toxic fumes, including Carbon oxides, Nitrogen oxides (NOx), Iron oxides.
<b>Hazardous Polymerisation</b>	Will not occur.

## 11. TOXICOLOGICAL INFORMATION

<b>General Information</b>	Information on possible routes of exposure: - Ingestion: May be harmful if swallowed. Ingestion may cause gastrointestinal tract irritation, hypermotility and diarrhoea. - Eye contact: Causes eye irritation, redness, tearing, abrasion. - Skin contact: May cause skin irritation, particularly with prolonged contact and/or moist skin. - Inhalation: High concentrations of dust may cause nasal, throat or respiratory irritation, coughing and wheezing.
<b>Acute</b>	
<b>Ingestion</b>	Acute toxicity (Oral): - LD50, Rat: >2,000 mg/kg
<b>Carcinogen Category</b>	None

## 12. ECOLOGICAL INFORMATION

<b>Ecotoxicity</b>	The product itself and its products of degradation are not toxic.
<b>Persistence/Degradability</b>	Possibly hazardous short-term degradation products are not likely; However, long-term degradation products may arise.
<b>Mobility</b>	No information available.
<b>Environmental Fate</b>	Prevent entry into drains and waterways.
<b>Bioaccumulation Potential</b>	No information available.
<b>Environmental Impact</b>	No Data Available

## 13. DISPOSAL CONSIDERATIONS

**General Information** Dispose of contents/container in accordance with local/regional/national regulation; Offer to a licensed disposal company.

**Special Precautions for Land Fill** Contaminated packaging: Dispose of as unused product.

## 14. TRANSPORT INFORMATION

### Land Transport (Australia)

ADG Code

<b>Proper Shipping Name</b>	Ferric ammonium citrate
<b>Class</b>	No Data Available
<b>Subsidiary Risk(s)</b>	No Data Available
	No Data Available
<b>UN Number</b>	No Data Available
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	No Data Available
<b>Special Provision</b>	No Data Available

### Land Transport (Malaysia)

ADR Code

<b>Proper Shipping Name</b>	Ferric ammonium citrate
<b>Class</b>	No Data Available
<b>Subsidiary Risk(s)</b>	No Data Available
	No Data Available
<b>UN Number</b>	No Data Available
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	No Data Available
<b>Special Provision</b>	No Data Available

### Land Transport (New Zealand)

NZS5433

<b>Proper Shipping Name</b>	Ferric ammonium citrate
<b>Class</b>	No Data Available
<b>Subsidiary Risk(s)</b>	No Data Available
	No Data Available
<b>UN Number</b>	No Data Available
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	No Data Available
<b>Special Provision</b>	No Data Available

### Land Transport (United States of America)

US DOT

<b>Proper Shipping Name</b>	Ferric ammonium citrate
<b>Class</b>	No Data Available
<b>Subsidiary Risk(s)</b>	No Data Available

	No Data Available
<b>UN Number</b>	No Data Available
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	No Data Available
<b>Special Provision</b>	No Data Available

### Sea Transport

IMDG Code

<b>Proper Shipping Name</b>	Ferric ammonium citrate
<b>Class</b>	No Data Available
<b>Subsidiary Risk(s)</b>	No Data Available
<b>UN Number</b>	No Data Available
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	No Data Available
<b>Special Provision</b>	No Data Available
<b>EMS</b>	No Data Available
<b>Marine Pollutant</b>	No

### Air Transport

IATA DGR

<b>Proper Shipping Name</b>	Ferric ammonium citrate
<b>Class</b>	No Data Available
<b>Subsidiary Risk(s)</b>	No Data Available
<b>UN Number</b>	No Data Available
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	No Data Available
<b>Special Provision</b>	No Data Available

### National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

<b>Dangerous Goods Classification</b>	NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)
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## 15. REGULATORY INFORMATION

<b>General Information</b>	No Data Available
<b>Poisons Schedule (Aust)</b>	Not Scheduled

### Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

<b>Approval Code</b>	HSR004018
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### National/Regional Inventories

<b>Australia (AICS)</b>	Listed
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Canada (DSL)	Not Determined
Canada (NDSL)	Not Determined
China (IECSC)	Not Determined
Europe (EINECS)	Not Determined
Europe (REACH)	Not Determined
Japan (ENCS/METI)	Not Determined
Korea (KECI)	Not Determined
Malaysia (EHS Register)	Not Determined
New Zealand (NZIoC)	Listed
Philippines (PICCS)	Not Determined
Switzerland (Giftliste 1)	Not Determined
Switzerland (Inventory of Notified Substances)	Not Determined
Taiwan (NCSR)	Not Determined
USA (TSCA)	Not Determined

## 16. OTHER INFORMATION

<b>Related Product Codes</b>	FEAMCI1000, FEAMCI1001, FEAMCI1002, FEAMCI1003, FEAMCI1200, FEAMCI1500, FEAMCI2000, FEAMCI2500, FEAMCI2501, FEAMCI3000, FEAMCI3001, FEAMCI3500, FEAMCI4000
<b>Revision</b>	3
<b>Revision Date</b>	21 Oct 2016
<b>Key/Legend</b>	<p>&lt; Less Than &gt; Greater Than  <b>AICS</b> Australian Inventory of Chemical Substances  <b>atm</b> Atmosphere  <b>CAS</b> Chemical Abstracts Service (Registry Number)  <b>cm<sup>2</sup></b> Square Centimetres  <b>CO<sub>2</sub></b> Carbon Dioxide  <b>COD</b> Chemical Oxygen Demand  <b>deg C (°C)</b> Degrees Celcius  <b>EPA (New Zealand)</b> Environmental Protection Authority of New Zealand  <b>deg F (°F)</b> Degrees Farenheit  <b>g</b> Grams  <b>g/cm<sup>3</sup></b> Grams per Cubic Centimetre  <b>g/l</b> Grams per Litre  <b>HSNO</b> Hazardous Substance and New Organism  <b>IDLH</b> Immediately Dangerous to Life and Health  <b>immiscible</b> Liquids are insoluable in each other.  <b>inHg</b> Inch of Mercury  <b>inH<sub>2</sub>O</b> Inch of Water  <b>K</b> Kelvin  <b>kg</b> Kilogram  <b>kg/m<sup>3</sup></b> Kilograms per Cubic Metre  <b>lb</b> Pound  <b>LC50</b> LC stands for lethal concentration. LC50 is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.  <b>LD50</b> LD stands for Lethal Dose. LD50 is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.  <b>ltr</b> or <b>L</b> Litre  <b>m<sup>3</sup></b> Cubic Metre  <b>mbar</b> Millibar</p>



**mg** Milligram  
**mg/24H** Milligrams per 24 Hours  
**mg/kg** Milligrams per Kilogram  
**mg/m<sup>3</sup>** Milligrams per Cubic Metre  
**Misc** or **Miscible** Liquids form one homogeneous liquid phase regardless of the amount of either component present.  
**mm** Millimetre  
**mmH<sub>2</sub>O** Millimetres of Water  
**mPa.s** Millipascals per Second  
**N/A** Not Applicable  
**NIOSH** National Institute for Occupational Safety and Health  
**NOHSC** National Occupational Health and Safety Commission  
**OECD** Organisation for Economic Co-operation and Development  
**Oz** Ounce  
**PEL** Permissible Exposure Limit  
**Pa** Pascal  
**ppb** Parts per Billion  
**ppm** Parts per Million  
**ppm/2h** Parts per Million per 2 Hours  
**ppm/6h** Parts per Million per 6 Hours  
**psi** Pounds per Square Inch  
**R** Rankine  
**RCP** Reciprocal Calculation Procedure  
**STEL** Short Term Exposure Limit  
**TLV** Threshold Limit Value  
**tne** Tonne  
**TWA** Time Weighted Average  
**ug/24H** Micrograms per 24 Hours  
**UN** United Nations  
**wt** Weight