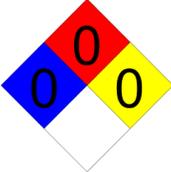


Material Safety Data Sheet

Section 1 – Identification	
1.1 Product Name	<i>Demi- Fraser w/ Ferric Ammonium Citrate broth</i>
1.2 Catalog Number	<i>68-C00030 (5L), 68-C00031 (10L), 68-C00032 (20L)</i>
1.3 Manufacturer	Microbiology International
Address	5350 Partners Court Frederick, MD 21703
1.4 Phone	301-662-6835
1.5 Fax	301-662-8096
1.6 Emergency Phone	1-800-396-4276
1.7 Recommended Use	
Section 2 – Hazard(s) Identification	
2.1 Classification of the substance or mixture	
<ul style="list-style-type: none"> - Classification (REGULATION (EC) No 1272/2008) [CLP/GHS] - Classification (67/548/EEC, 1999/45/EC) (OSHA 29 CFR 1910.1200) - Additional information: For full text of R-phrases and Hazard- and EU Hazard-statements: see section 16 	
2.2 Label Elements:	
NFPA ratings (scale 0-4)	
Health = 0 Fire = 0 Reactivity = 0 - Symbols: <i>none</i>	
	Signal Word: None
Hazard phrases	
<i>None</i>	
Precautionary Phrases	
Keep container tightly closed. Do not get in eyes, on skin, or on clothing.	
Other Hazards	
Mildly irritating to skin and eyes. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician. If exposed or concerned: Get medical advice/attention.	
Section 3 – Composition/ Information on Ingredients	
3.1 Substances	
Formula : <chem>FeC6H11NO7</chem>	
Molecular weight : 265.0 g/mol	
CAS-No. : 1185-57-5	
EC-No. : 214-686-6	
Hazardous components	
<ul style="list-style-type: none"> - Ammonium iron (111) citrate (Concentration 90 – 100%) 	

Section 4 – First Aid Measures

4.1 General Information:	In case of doubt, or when symptoms persist, seek medical attention. In general, this product is not hazardous to humans or animals, but like any other chemical, it should be treated with care, respect, and common sense.
Inhalation:	If breathing is difficult, remove victim to fresh air and keep comfortable for breathing.
Skin Contact:	Remove contaminated clothing. Wash affected area with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Contaminated clothing should be laundered before reuse.
Ingestion:	Rinse mouth with water (do not swallow). Never make an unconscious person vomit or drink fluids. If medical advice is needed, have product container or label at hand.
Eye Contact:	If substance has gotten into eyes, immediately wash out with plenty of water for at least 15 minutes. Irrigate eyes thoroughly while lifting eyelids Seek medical advice if necessary.
Doctor Information:	Show this sheet.
4.2 Most Important Symptoms Both Acute And delayed	The most important known symptoms are described in the labeling (see Section 2.2) and/or in Section 11.
4.3 Indication of any Immediate Medical Attention and special Treatment needed	Treat symptomatically.

Section 5 – Fire Fighting Measures

5.1 Suitable Extinguishing Media	In case of fire: use foam, Carbon Dioxide- CO ₂ , or dry agent for extinction.
5.2 Protective Equipment	Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Emits toxic fumes under fire conditions. Firefighters should wear protective equipment and self-contained breathing apparatus. Smoke from fires is toxic. Take precautions to protect personnel from exposure - Decomposition products may include carbon oxides.
5.3 Advice for Firefighters	Keep container(s) exposed to fire cool, by spraying with water - Wear chemical protection suit and positive-pressure breathing apparatus. Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit) in accordance with Directive 89/654/EC.
5.4 Additional Provisions	Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Destroy any source of ignition. In case of fire, refrigerate the storage containers and tanks for products susceptible to inflammation, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

Section 6 – Accidental Release Measures

- | | |
|--|--|
| 6.1 Personal Precautions | <ul style="list-style-type: none"> - Shut off all ignition sources. - Use non-sparking hand tools. - Remove contaminated clothing. - Wear protective clothing as per Section 8. - Wash thoroughly after dealing with spillage. |
| 6.2 Environmental Precautions | <ul style="list-style-type: none"> - Do not allow to enter public watercourses or public sewers. - Avoid scattering in the environment. |
| 6.3 Methods for Clean Up | <ul style="list-style-type: none"> - Absorb spillage in inert material and shovel up. - Place in sealable containers and label them. - Ventilate the area and wash spill site after material pick-up is complete. - Dispose of contaminated materials and wastes in accordance with local/national/international regulation. |
| 6.4 Reference to Other Sections | See Section 7 for storage. |

Section 7 – Handling and Storage

- | | |
|---|--|
| 7.1 Safe Handling | <ul style="list-style-type: none"> - Avoid contact with skin and eyes. - Do not eat, drink, or smoke when using this product. - Ensure adequate ventilation. - Eyewash bottles should be available. - Wash hands thoroughly after using this substance. |
| 7.2 Conditions for safe storage, including any incompatibilities | <ul style="list-style-type: none"> - Store in a well-ventilated place. Keep container tightly closed. - Store in a dry place. - Keep away from oxidizing substances. - Store in a cool, dry condition in well-sealed receptacle, not exceeding 30°C/ 86°F. |
| 7.4 Class according to regulations on flammable liquids: | Store at temperatures not exceeding 30°C/86°F. Keep cool. Store in a well-ventilated place. Keep container tightly closed. Store in a dry place. Keep away from oxidizing substances. Keep away from acid |

Section 8 – Exposure Controls/ Personal Protection

8.1 Control Parameters

Components with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
Ammonium iron(III) citrate	1185-57-5	TWA	1.000000 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Upper Respiratory Tract irritation Skin irritation varies		
		TWA	1.000000 mg/m3	USA. NIOSH Recommended Exposure Limits
		TWA	1 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		Upper Respiratory Tract irritation Skin irritation varies		
		TWA	1 mg/m3	USA. NIOSH Recommended Exposure Limits
		PEL	1 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)

8.2 Exposure Controls

- Eyewash bottles should be available
- Engineering controls should be provided to prevent the need for ventilation
- No respiratory protection is needed if ventilation/extraction is adequate, otherwise wear approved dust mask, N95 (US) or type FFP1 (EN143) dust masks. The use of protection equipment will be necessary if a mist forms or if the professional exposure limits are exceeded.
- Wear protective gloves. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and standard EN 374.
- In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container.
- Wear safety glasses approved to standard for NIOSH (US) or EN 166.
- Wear suitable protective clothing.
- Gloves, Safety Glasses, Lab Coat.

8.3 Respiratory Protection

Recommended Filter type: Filter P 1 (acc. to DIN 3181) for solid particles of inert substances. The facility manager has to ensure that maintenance, cleaning and testing of respiratory protective devices are performed according to the instructions of the producer. These measures have to be properly documented.

Section 9 – Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

- **Appearance:** Amber with an amber opalescence
 - **Physical State at 20°C:** Liquid
 - **Odor:** No information available
 - **pH:** 7.2 ± 0.2
 - **Melting Point/Range:** No information available
 - **Boiling Point/Range:** Not determined.
 - **Flashpoint:** No information available
 - **Evaporation Rate:** No information available
 - **Flammability:** No information available
 - **Density:** No information available
 - **Vapor Pressure:** No information available
 - **Vapor Density:** No information available
 - **Specific Gravity:** No information available
 - **Solubility in water:** No information available
 - **Partition Coefficient (n-Octanol/Water):** No information available
 - **Autoignition Temperature:** No information available
 - **Viscosity:** No information available
 - **Explosive Properties:** No information available
 - **Oxidizing Properties:** No information available
- 9.2 Other information - No information available.

Section 10 – Stability and Reactivity

10.1 Reactivity

No information available

10.2 Chemical Stability

Considered stable under normal conditions of storage, handling and use.

10.3 Possibility of Hazardous Reactions

No hazardous reactions known if used for its intended purpose.

10.4 Conditions to Avoid

Avoid contact with moisture. Keep away from heat and sources of ignition.

10.5 Incompatible Materials

Incompatible with oxidizing substances.

10.6 Hazardous Decomposition Products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NO_x), Iron oxides

Other decomposition products - No data available

In the event of fire: see section 5

Section 11 – Toxicological Information

11.1 Information on Toxicological Effects

Contact with skin May cause redness and irritation in sensitive individuals.

Contact with eyes May cause redness and irritation in sensitive individuals.

Ingestion May cause irritation of the throat

Inhalation May cause coughing

Carcinogenicity No evidence of carcinogenic effects

Mutagenicity No evidence of mutagenic effects.

Teratogenicity No information available.

Other Information: Overdose of iron compounds may have a corrosive effect on the gastrointestinal mucosa and be followed by necrosis, perforation, and stricture formation. Several hours may elapse before symptoms that can include epigastric pain, diarrhea, vomiting, nausea, and hematemesis occur. After apparent recovery a person may experience metabolic acidosis, convulsions, and coma hours or days later. Further complications may develop leading to acute liver necrosis that can result in death due to hepatic coma., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Section 12 – Ecological Information

12.1 Toxicity

Sodium Chloride

Toxicity to fish

LC50 – Lepomis macrochirus (bluegill) – 5840 mg/L-96h

Toxicity to daphnia and other aquatic invertebrates

LC50 – Daphnia magna (water flea) – 1661 mg/L-48h

Toxicity to fish

LC0 - Fundulus heteroclitus - 200 mg/l - 7 d

12.2 Persistence and Degradability

No Information Available

12.3 Bioaccumulation Potential

No Information Available

12.4 Mobility in Soil

No Information Available

12.5 Results of PBT & vPvB assessment

Not a PBT according to REACH Annex XIII

PBT/vPvB assessment not available.

12.6 Additional Toxicological Information

To the best of our knowledge, the properties of this material have not been fully evaluated - On available data; substance is not harmful to the environment.

Section 13 – Disposal Considerations

13.1 Waste Disposal

Dispose in accordance with all applicable federal, state, and local environmental regulations. If any questions arise, contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Relatively unreactive organic reagents should be collected in container A. If halogenated, they should be collected in container B. For solid residues use container C.

13.2 Classification (REACH)

Waste Codes in accordance with the European Waste Catalogue (EWC) are origin-defined. Since this product is used in several industries, no Waste Code can be provided by the supplier. The Waste Code should be determined in arrangement with your waste disposal partner or the responsible authority.

Section 14 – Transport Information

14.1 Ocean/Sea (IMO/IMDG)

- Proper Shipping Name: Not applicable
- IMDG UN No.: Not applicable
- IMDG Hazard Class: Not applicable
- IMDG Packing Group: Not applicable

14.2 Air (ICAO/IATA)

- Proper Shipping Name: Not applicable
- ICAO UN No.: Not applicable
- ICAO Hazard Class: Not applicable
- ICAO Packing Group: Not applicable

14.3 DOT (US)

UN number: 3077

Class: 9

Packing group: III

Proper shipping name: Environmentally hazardous substances, solid, n.o.s. (Ammonium iron(III) citrate)

Reportable Quantity (RQ): 1000 lbs

Poison Inhalation Hazard: No

IMDG

Not dangerous goods

IATA

Not dangerous goods

14.4 TDG (Canada)

- Proper Shipping Name: Not applicable
- ICAO UN No.: Not applicable
- ICAO Hazard Class: Not applicable
- ICAO Packing Group: Not applicable

Section 15 – Regulatory Information

15.1 EU Regulations Hazard Symbol(s):

- Regulation (EC) No. 1272/2008 on the classification, labelling and packaging of substances and mixtures (CLP Regulation) applies in Europe.

15.2 Risk Phrases

No OSHA Hazards- This information is based on 29 CFR 1910.1200 criteria prior to adoption of the GHS, and may deviate from the GHS information on the label and in section 2.

Chemical Safety Assessment – No information available.

15.3 United States Regulatory Information

SARA 313

The material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 302

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

Clean Water Act

Section 311, Table 116.4A. 66-81-9 Clean Water Act This product does not contain any Hazardous Substances listed under the U.S. Clean Water Act, Section 311, and Table 117.3.

DEA List I Not listed

DEA List II Not listed

15.4 US State Regulations

Massachusetts Right to Know *No components are subject to the MA Right to Know Act.*

Pennsylvania Right to Know Ingredients – *Water*

New Jersey Right to Know Ingredients – *Water*

California Prop 65 Components *This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.*

15.5 Canadian Regulatory Information

Inventory Status

Domestic Substances List (DSL)

Not listed

Non-Domestic Substances List (NDSL)

Not listed

Section 16 – Other Information

Date of Preparation: 05December2018

Revision: Rev. (1-10)

This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) N° 1907/2006 (Regulation (EU) N° 453/2010, Regulation (EC) N° 2015/830).

This document is believed to be correct, and shall be used only as a guide. These suggestions should not be confused with state, municipal or insurance requirements, and constitute No Warranty. Microbiology International shall not be held liable for any damage resulting from handling or from contact with the above product. Minimal training is recommended to prevent industrial risks for staff using this product, in order to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Manufactured by:



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REV	Description of Change	Approved by	Effective Date