

Material Safety Data Sheet

Product Name: FeRRROMECC Liquid Iron PLUS MICROS 10-2-4

MSDS No.: 966-6

Version No.: 001

EPA Registration No.: NA

1. Basic Information:

Manufacturer: PBI/Gordon Corporation
Address: 1217 West 12th Street
City, State Zip: Kansas City, MO 64101-1407
Information Contact: Environmental, Health, & Safety Dept.
Information Telephone Number: (816)421-4070
Emergency Contact: Chemtrec
Emergency Telephone Number: (800)424-9300



2	Health
0	Flammability
0	Reactivity
B	Pers. Protection

Last Update: 3/30/2007

Chemical State: Liquid Gas Solid
Chemical Type: Pure Mixture

2. Ingredients:

Trade Secret (ND = Not Disclosed)

CAS No.	Chemical Name	% Range	EHS		IARC		SARA 313 SUB Z	OSHA PEL	ACGIH TLV	Other Limits
			NTP		SUB Z					
7785877	Manganese(II) sulfate	2.5 - 10	N	N	N	N	N	NI	0.2 mg/m3	NI
57136	Urea	20 - 40	N	N	N	N	N	NI	NI	NI
7446200	Zinc sulfate heptahydrate	2.5 - 10	N	N	N	N	N	NI	NI	NI

3. Hazardous Identification:

Hazard Category:

Acute Chronic Fire Pressure Reactive

Hazardous Identification Information:

4. First Aid Measures:

Route(s) of Entry:

Eye, Skin contact, Inhalation, Ingestion.

Health Hazards (Acute and Chronic):

EYES: Causes irritation, redness and tearing.

SKIN: Contact may cause irritation.

INHALATION: Excessive intentional inhalation may cause respiratory tract irritation and central nervous system (CNS) effects [headache, dizziness].

INGESTION: May cause stomach distress, nausea or vomiting.

Signs and Symptoms:

Symptoms may include redness, edema, drying, defatting and cracking of the skin. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

Medical Conditions Generally Aggravated by Exposure:

Prolonged or repeated exposure can cause drying, defatting and cracking of the skin.

Emergency First Aid Procedure:

EYES: Flush eyes with large quantities of clean water for 10-15 minutes, holding lids open. Remove contact lenses, if applicable. If irritation persists, seek medical attention.

SKIN: Bathe and shampoo with soap and water to remove chemical from skin and hair. If irritation persists, seek medical attention. Launder contaminated clothing separately, prior to reuse.

First Aid Measures (Continued)

INHALATION: Remove victim to fresh air. Apply artificial respiration if needed. Seek medical attention.

INGESTION: Do not induce vomiting. Rinse mouth with water, then drink one or two glasses of water. Call a physician or Poison Control Center. Never give anything by mouth if victim is unconscious, or is convulsing.

Other Health Warnings:

If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this Safety Data Sheet to the doctor in attendance.

Note to Physician: Symptoms may be delayed.

5. Fire Fighting Measures:

Flash Point: NI **F.P. Method:** NI

Lower Explosive Limit: NI

Upper Explosive Limit: NI

Fire Extinguishing Media:

Water spray, carbon dioxide or dry chemical.

Special Fire Fighting Procedures:

None

Unusual Fire and Explosion:

None known

6. Accidental Release Measures:

Steps to be Taken in Case Material is Released or Spilled:

Personal precautions Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.

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Accidental Release Measures (Continued)

Methods for containment Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas.

Methods for cleaning up Before attempting clean up, refer to hazard data given above. Small spills may be absorbed with non-reactive absorbent and placed in suitable, covered, labelled containers. Prevent large spills from entering sewers or waterways.

Contact emergency services and supplier for advice, Never return spills in original containers for re-use.

7. Handling and Storage:

Precautions to be Taken:

Store in original container in a locked area inaccessible to children and pets. Avoid storage at temperatures of 110°F or higher. Keep from freezing.

Corrosive to steel, aluminum, brass. Use with stainless steel or PVC fittings.

Product may stain unfinished wood, painted surfaces or concrete.

Do not reuse container; rinse thoroughly before discarding.

Other Precautions:

NI

8. Exposure Controls/Personal Protection:

Ventilation Requirements:

Good local ventilation.

Personal Protective Equipment:

Personal protective equipment

Eye/ face protection Wear safety glasses with side shields,

Hand protection Rubber gloves. Confirm with a reputable supplier first.

Skin and body protection As required by employer code.

Respiratory protection Where exposure guideline levels may be exceeded, use an approved NIOSH respirator

Handle in accordance with good industrial hygiene and safety practice.

When using do not eat or drink. Wash hands before breaks and immediately after handling the product.

9. Physical and Chemical Properties:

Boiling Point: NI

Melting Point: NI

Evaporation Rate (Butyl Acetate = 1) : NI

Vapor Pressure (mm Hg.): NI

Vapor Density (Air = 1): NI

Specific Gravity (H₂O = 1): 1.33000

Solubility in Water: Complete

Appearance and Odor: Brown liquid with slight odor

Other Information:

Density: 11.1 pounds/gallon

pH: 5.5 - 6.0

10. Stability and Reactivity:

Stability:

Stable under recommended storage conditions.

Incompatibility (Materials to Avoid):

Strong oxidizing agents, Strong acids, Strong bases.

Stability and Reactivity (Continued)

Decomposition/By-Products:

May include and are not limited to: Oxides of carbon, Oxides of nitrogen, Oxides of phosphorus, and Oxides of sulphur.

Hazardous Polymerization:

Will not occur.

11. Toxicological Information:

Component analysis - LC50

Ingredient(s)

Manganese (II) sulfate--not available

Urea--not available

Zinc sulphate heptahydrate--not available

Component analysis - Oral LD50

Ingredient(s)

Manganese (11) sulfate--2150 mg/kg rat

Urea--8471 mg/kg rat

Zinc sulphate heptahydrate--2150 mg/kg rat

Effects of acute exposure

Eye--causes irritation, redness and tearing

Skin--may cause irritation

Inhalation--Excessive intentional inhalation may cause respiratory tract

irritation and central

nervous system effects (headache, dizziness).

Ingestion--may cause stomach distress, nausea or vomiting.

Sensitization--Non-hazardous by OSHA criteria.

Chronic effects--Non-hazardous by OSHA criteria.

Carcinogenicity--Non-hazardous by OSHA criteria.

Mutagenicity--Non-hazardous by OSHA criteria.

Reproductive effects--Non-hazardous by OSHA criteria.

Teratogenicity--Non-hazardous by OSHA criteria.

Ecotoxicity--Non-hazardous by OSHA criteria.

12. Ecological Information

Components of this product have been identified as having potential environmental concerns.

Ecotoxicity - Freshwater Fish Species Data

Urea57.13-6 96 Hr LG50 Leuciscus idus: >3810 mg/L

Ecotoxicity - Microtox Data

Urea57-13-6 5 Min E050 Photobaeterium phosphoreum 23914 mg/L

Ecotoxicity - Water Flea Data

Urea57-13-6 24 Hr E050 Daphnia magna straus: >10000 mg/L

Environmental effects

Aquatic toxicity

Persistence 1 degradability

Bioaccumulation 1 accumulation

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Ecological Information (Continued)

Bioaccumulation 1 accumulation

13. Disposal Considerations:

Dispose in accordance with all applicable regulations.

14. Transport Information:

Not regulated as dangerous goods.

15. Regulatory Information:

OSHA STATUS: This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

TSCA STATUS: All the ingredients in this mixture are on the TSCA Chemical Substances Inventory or are exempt.

CERCLA REPORTABLE QUANTITY: None

SARA TITLE III:

SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES: None

SECTION 311/312 HAZARD CATEGORIES: Immediate Health Hazard

SECTION 313 TOXIC CHEMICALS: None

RCRA STATUS: If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24)

16. Other Information:

REASON FOR ISSUE: New MSDS in the ANSI Z400.1-1998 format

NOTE: NI means not indicated.

The information and statements in this Material Safety Data Sheet are believed to accurately reflect the scientific evidence used in making the hazard determination, but is not to be construed as a warranty or representation for which we assume legal responsibility. Additional information may be necessary or desirable depending on particular, exceptional or variable conditions or circumstances of use or storage or because of locally applicable laws or government regulations. Therefore, you should use this information only as a supplement to other information available to you and must make independent determinations of the suitability of the information for your particular circumstances or conditions and of the completeness of the information available from all sources to assure both the proper use of the material described herein and the safety and health of employees.