

Material Safety Data Sheet

Hi-Iron (Iron 16%) Mix

MSDS No. CCI00FE16

Date of Preparation: 31 March, 1998

Revision: April 2010

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: Hi-Iron (Iron 16%) Mix

Chemical Formula: Mixture of Borates, Oxides & Sulphates of Copper, Manganese, Molybdenum, Zinc and Iron

General Use: Ingredient for the manufacture of Bulk Blend Fertilizer

Manufacturer: Cameron Chemicals Inc., Main Office located at No.5 Beechwood Court, Portsmouth, VA 23702, Phone (757)487-0656, Fax(757)487-1280, hours of operation 0900 to 1700 Eastern Time, Manufacturing Facility located at 830 Old Dill Rd., Suffolk, VA 23434, Phone(757)934-2142, Fax(757)934-3701. Emergency phone number use CHEMTREC(USA) 800-424-9300.

Section 2 - Composition / Information on Ingredients

Ingredient Name	CAS Number	% wt
Oxides & Sulfates of Manganese	7439-96-5	8.05
Oxides & Sulfates of Copper	7440-50-8	3.35
Oxides & Sulfates of Zinc	1314-13-2	5.35

Ingredient	OSHA PEL		ACGIH TLV		NIOSH REL		NIOSH IDLH
	TWA	STEL	TWA	STEL	TWA	STEL	
Mn Compounds	5.0 mg/m ³		5.0 mg/m ³				
Zinc Compounds	5.0 mg/m ³		10.0 mg/m ³				
Copper Compounds	1.0 mg/m ³		1.0 mg/m ³				

Section 3 - Hazards Identification

☆☆☆☆☆ Emergency Overview ☆☆☆☆☆

This product is a stable solid. It is gray to black in appearance with no appreciable odor. The product may cause irritation to the skin after prolonged contact. The product should be stored and handled to prevent the possibility of inhalation, eye contact, and prolonged skin contact.

HMIS
H 1
F 0
R 0
PPE†
†Sec. 8

Potential Health Effects

Primary Entry Routes: Inhalation is the most significant route of exposure in occupational and other settings. Prolonged dermal exposure may cause skin irritation. Ingestion may cause stomach upset.

Target Organs: Eyes, Skin, respiratory system.

Acute Effects

Inhalation: Occasional mild irritation effects to the nose and throat may occur from inhalation.

Eye: Irritation may occur.

Skin: Irritation may occur

Ingestion: Stomach upset may occur.

Carcinogenicity: IARC, NTP, and OSHA does not list this mix or any of its components as a carcinogen.

Chronic Effects: Same as acute.

Section 4 - First Aid Measures

Inhalation: Remove source of contamination or move (victim) to fresh air. If breathing stops, begin artificial respiration. If necessary, give oxygen.

Eye Contact: Flush thoroughly with water for at least 15 minutes. If irritation persists consult a physician.

Skin Contact: Wash skin with plenty of water and soap.

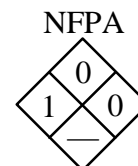
Ingestion: Drink 2 glasses of water (or milk). Seek medical advice. In all cases, summon medical aid IMMEDIATELY, or contact poison control center.

Note to Physicians: None.

Special Precautions/Procedures: None.

Section 5 - Fire-Fighting Measures

Flash Point: NA
Flash Point Method: NA
Burning Rate: NA
Autoignition Temperature: Non-combustible
LEL: NA
UEL: NA
Flammability Classification: Non-combustible
Extinguishing Media: NA
Unusual Fire or Explosion Hazards: None
Hazardous Combustion Products: NA
Fire-Fighting Instructions: NA
Fire-Fighting Equipment: NA



Section 6 - Accidental Release Measures

Spill /Leak Procedures

Small Spills: Sweep up and try to keep dust to a minimum.

Large Spills: Sweep up and try to keep dust to a minimum.

Containment: Do not release into sewers or waterways.

Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120).

Section 7 - Handling and Storage

Handling Precautions: None

Storage Requirements: Store in a dry location.

Regulatory Requirements: None

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: None

Ventilation: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

Administrative Controls: Consider periodic medical exams of exposed workers with emphasis on skin, respiratory, and blood screening.

Respiratory Protection: Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/NIOSH-approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit-testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.

Protective Clothing/Equipment: Wear protective gloves, boots, and aprons to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations (29 CFR 1910.133). Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.

Safety Stations: Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

Contaminated Equipment: Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment.

Comments: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Section 9 - Physical and Chemical Properties

<p>Physical State: Solid</p> <p>Appearance and Odor: Gray to black with no appreciable odor.</p> <p>Odor Threshold: Not determined.</p> <p>Vapor Pressure: NA</p> <p>Vapor Density (Air=1): NA</p> <p>Formula Weight: Variable</p> <p>Density: Not determined.</p> <p>Specific Gravity (H₂O=1, at 4 °C): 1.1-1.5</p> <p>pH: 1/100 dilution 5-6</p>	<p>Water Solubility: Slightly soluble</p> <p>Other Solubilities: NA</p> <p>Boiling Point: NA</p> <p>Freezing/Melting Point: NA</p> <p>Viscosity: NA</p> <p>Refractive Index: NA</p> <p>Surface Tension: NA</p> <p>% Volatile: NA</p> <p>Evaporation Rate: NA</p>
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Section 10 - Stability and Reactivity

Stability: This product is stable at room temperature in closed containers under normal storage and handling conditions.

Polymerization: Hazardous polymerization cannot occur.

Chemical Incompatibilities: None

Conditions to Avoid: Moisture

Hazardous Decomposition Products: None

Section 11- Toxicological Information

<p>Eye Effects: Not determined</p> <p>Skin Effects: Not determined</p>	<p style="text-align: center;">Toxicity Data:*</p> <p>Acute Inhalation Effects: Human, inhalation, TC_{LO}: Not determined</p> <p>Acute Oral Effects: Rat, oral, LD₅₀: 9000 mg/kg Manganese as Manganese Dust 26 mg/kg Iron as Iron Oxide 2.8 mg/kg Zinc as Zinc Oxide</p> <p>Chronic Effects: Not determined</p> <p>Carcinogenicity: Not determined</p> <p>Mutagenicity: Not determined</p> <p>Teratogenicity: Not determined</p>
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* See NIOSH, *RTECS* for additional toxicity data.

Section 12 - Ecological Information

Ecotoxicity: Not determined

Environmental Fate: Not determined

Environmental Degradation: On soil this mix may leach into the groundwater. It is not expected to bioconcentrate in fish.

Soil Absorption/Mobility: Because it is slightly soluble, removal by rain, snow or other precipitation is possible.

Section 13 - Disposal Considerations

Disposal: Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state, and local regulations. This product has been evaluated for RCRA characteristics and should not meet the criteria of a hazardous waste if discarded in its purchased form. Under RCRA, it is the responsibility of the user of the product to determine at the time of disposal, whether the product meets RCRA criteria for hazardous waste. This is because product uses, transformations, mixtures, processes, etc., may render the resulting materials hazardous.

Disposal Regulatory Requirements: Follow applicable Federal, state, and local regulations.

Container Cleaning and Disposal: Wipe containers clean.

Section 14 - Transport Information

DOT Transportation Data (49 CFR 172.101):

Shipping Name: Not regulated

Shipping Symbols: Not regulated

Hazard Class: Not regulated

ID No.: Not regulated

Packing Group: NA

Label: NA

Special Provisions (172.102): NA

Packaging Authorizations

a) **Exceptions:** NA

b) **Non-bulk Packaging:** NA

c) **Bulk Packaging:** NA

Quantity Limitations

a) **Passenger, Aircraft, or Railcar:** NA

b) **Cargo Aircraft Only:** NA

Vessel Stowage Requirements

a) **Vessel Stowage:** NA

b) **Other:** NA

Section 15 - Regulatory Information

EPA Regulations:

RCRA Hazardous Waste Number: Not listed (40 CFR 261.33)

RCRA Hazardous Waste Classification (40 CFR 261.): Not classified

CERCLA Hazardous Substance (40 CFR 302.4) unlisted specific per RCRA, Sec. 3001; CWA, Sec. 311 (b)(4); CWA, Sec. 307(a), CAA, Sec. 112

CERCLA Reportable Quantity (RQ), NA

SARA 311/312 Codes: NA

SARA Toxic Chemical (40 CFR 372.65): Not listed

SARA EHS (Extremely Hazardous Substance) (40 CFR 355): Not listed, Threshold Planning Quantity (TPQ)

OSHA Regulations:

Air Contaminant (29 CFR 1910.1000, Table Z-1, Z-1-A): Not listed

OSHA Specifically Regulated Substance (29CFR 1910.): Not listed

State Regulations: NA

Section 16 - Other Information

Prepared By: William Perry

Revision Notes:

Disclaimer: Cameron Chemicals Inc. recommends that all exposures to this product be minimized by strictly adhering to recommended occupational controls procedures to avoid adverse health effects.

The information contained herein is believed to be accurate. It is provided independently of any sale of the product for the purpose of hazard communication as part of Cameron Chemical's Safety Program. It is not intended to constitute performance information concerning the product. No express warranty, or implied warranty of merchantability or fitness for a particular purpose is made with respect to the information contained herein. You are urged to obtain Data Sheets for all Cameron Chemical Inc.'s products you buy, process, use or distribute and you are encouraged and requested to advise those who may come in contact with such products of the information contained herein.

To determine applicability or effect of any law or regulation with respect to the product, user should consult his legal advisor or the appropriate Government Agency. Cameron Chemicals Inc. does not undertake to furnish advise on such matters.