

HI IRON GRANULES PLUS MATERIAL SAFETY DATA SHEET

Southern Agricultural Insecticides, Inc.
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Product Name: SA-50 Brand Hi Iron Granules

Chemical Family: Mixture of inorganic salts

Synonyms: Minor Element Mixture

I INGREDIENTS

		Cas No	%	OSHA PEL	ACIGH TLV
Ferric Sulfate Nonahydrate	$\text{FeSO}_4 \cdot 9 \text{H}_2\text{O}$	10028-22-5	80.5	1 mg/m ³ as Fe	1 mg/m ³ as Fe
Manganese Sulfate Monohydrate	$\text{MnSO}_4 \cdot \text{H}_2\text{O}$	10034-96-5	10.2	5 mg/m ³ as Mn	N/A
Zinc Sulfate Monohydrate	$\text{ZnSO}_4 \cdot \text{H}_2\text{O}$	7733-02-0	6.5	PNOR 15 mg/m ³ Total dust 5 mg/m ³ Respirable	
Cupric Sulfate Pentahydrate	$\text{CuSO}_4 \cdot 5 \text{H}_2\text{O}$	7758-98-7	2.0	1 mg/m ³ dust/ Cu	1mg/m ³ dust/Cu

II FIRE AND EXPLOSION DATA

Ingredients do not support combustion. Use extinguishing media for surrounding fire, CO₂, dry chemical, or water. Avoid direct water stream on molten metal sulfates. (splattering occurs) Personnel should remain upwind. Firemen should wear self contained breathing apparatus (air-pack) and full protective clothing. Use water spray to cool fire exposed containers. Under fire conditions sulfates decompose evolving sulfur dioxide and metal oxides.. If water is used, contain runoff, because of solubility of ingredients.

Unusual Fire & Explosion Hazards: Material is acidic when dissolved in water. Contact with magnesium metal may evolve hydrogen gas. Anhydrous copper sulfate, formed by water loss, will ignite hydroxylamine.

III FIRST AID

EYE Exposure: Corrosive to eyes. Flush eyes a gentle stream of clean water for at least 15 minutes. Hold eye lids apart to ensure washing underside of lids. Remove contact lenses while rinsing. Get immediate medical attention.

SKIN Exposure: Remove contaminated clothing. Flush or shower exposed skin with large amount of water for at least five minutes. Launder contaminated clothes separately before reuse.

INHALATION: Remove worker from exposure, administer CPR, if required, and get medical assistance.

INGESTION: May cause severe GI tract irritation. Drink promptly large quantities of water or milk. Avoid alcohol. Induce vomiting. Do not leave victim unattended. Vomiting may occur spontaneously. To prevent aspiration of swallowed product, lay victim on side with head lower than waist. If vomiting occurs and the victim is conscious give additional water to further dilute the chemical. Do not attempt to give anything by mouth to an unconscious or convulsing person. Seek immediate medical aid.

IV HEALTH HAZARD DATA

Acute: Ingredients are corrosive to eyes and skin. May cause severe eye irritation. May cause skin sensitization in certain individuals. May cause inflammation of upper respiratory tract. May cause gastrointestinal irritation. May be fatal if swallowed.

Chronic: Reproductive, effects of the component Ferric sulfate have been reported in animals.

This product contains carcinogens NTP (No) IARC (No) OSHA (No)

V PHYSICAL & CHEMICAL DATA

Melting Point: Lowest component 212⁰F

Vapor pressure: Negligible

Vapor Density: NA

Solubility in water: soluble

Appearance: Mixture of crystalline granular materials predominately light brown with white particles evident.

Odor: Pungent

Density: 25.8 lb/gal

HI IRON GRANULES PLUS**VI PHYSICAL HAZARD DATA:**

Flash point:	Not applicable	Flammable limits:	Not applicable
Unusual fire and explosion hazards		Emits toxic fumes at decomposition temperatures	
Incompatibility (materials to avoid)		Acetylene, strong acids, strong reducing agents,	
		Alkalis,	
Hazardous decomposition products		Sulfur oxides, metallic oxides	
Hazardous polymerization:	Not expected, however Ferric sulfate is used as a polymerization catalyst.		
Stability	Stable under normal storage conditions		

VII SPILL & LEAK PROCEDURES

Sweep up spilled material. Avoid creating dust. Use as intended unless sweeping introduced a contaminant injurious to plants. Dispose of waste in accordance with state local and federal regulations. Those involved with clean up should wear protective clothing as indicated in exposure control section.

VIII EXPOSURE CONTROL

Product is made of large crystalline granules however there can be dust formed by normal attrition. Product is intended for use outdoors. Respiratory: Type/Conditions: Do not breathe dust. Wear a NIOSH/MSHA approved respirator with pesticide cartridge if inhalation of dust would occur. Ventilation: Handle with good local ventilation. Do not exceed 8 hour TWA (1 mg/m³) without respiratory protection. Gloves: Wear clean impervious gloves when handling. Eye Protection: Necessary: Chemical goggles preferred, otherwise Safety glasses with side shields. Other Protective Equipment: Clean long sleeved body covering work clothing, hat and shoes and socks. Have eye wash and facility for washing available. Do not wear contaminated clothing. Wash separately from household laundry.

IX SPECIAL PRECAUTIONS

Storing Precautions: Store in original containers. Do not put leaking containers into storage. Store in a safe cool dry place. Do not store near any material intended for use or consumption by humans or animals.. KEEP OUT OF REACH OF CHILDREN. Product is harmful to fish.

X TRANSPORTATION INFORMATION

U.S. Dot Not regulated for surface transportation as packed.

X Regulatory Information

CERCLA	Compound in product	CAS#	% in product	RQ for ingredient
Ferric Sulfate Nonahydrate	FeSO ₄ .9 H ₂ O	.10028-22-5	80.5	1000 lb
Zinc Sulfate Monohydrate	ZnSO . H ₂ O	7733-02-0	6.5	1000 lb
Cupric Sulfate Pentahydrate	CuSO ₄ .8 H ₂ O	7758-98-7	2.0	10 lb
Section 311 Hazard Class	immediate, delayed			
Sara 313 Toxic chemicals	no ingredient listed			

References: Chemical registry cross-reference 1994, Merck Index, 11th Ed. CFR 40 1991 CFR 29 1993

This information relates solely to the designated product and is not inclusive for combinations with other materials. This information is given without warranty or representation. Information is based on data we believe to be correct as of the date hereof. This information is furnished solely for your consideration, investigation, and verification. Before using any product READ THE LABEL