



EARTH SCIENCE™
GROWTH ESSENTIALS

Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: **Fast Acting Iron**
Formula: Iron Oxide Black + Sulfur + Calcium Sulfate Dihydrate + Guar Gum + Corn Starch + Anionic Polyacrylamide
CAS No.: N/A
Recommended Use: Fertilizer; Soil Amendment

Company Identification: **Encap, LLC**
320 N Broadway, Suite 340
Green Bay, WI 54303
Phone: (877) 405-5050

2. HAZARDS IDENTIFICATION

HMIS Classification

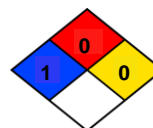
Health Hazard: 1
Chronic Health Hazard: -
Flammability: 0
Physical Hazards: 0
Personal Protection: E

HEALTH	1
FIRE	0
REACTIVITY	0
PPE	E

(Safety glasses, gloves, and dust respirator)

NFPA Rating

Health Hazard: 1
Fire: 0
Reactivity Hazard: 0
Special Hazard: None



Physical Hazards:

Not classified

Health Hazards:

May cause temporary skin (category 2), eye (category 2B), or respiratory irritation
May be harmful if swallowed

GHS Labeling

Symbol: Exclamation mark
Signal Word: Warning



Hazard Statements:

H315 Causes skin irritation
H320 Causes eye irritation
H335 May cause respiratory irritation
H303 May be harmful if swallowed

GHS Hazard Categories

Skin irritation Category 2
Eye irritation Category 2B

Precautionary Statements:

P 261 Avoid breathing dust

Hazards Not Otherwise Classified:

Unknown

OSHA Hazards

No known OSHA hazards

Target Organs

Skin, eyes, and respiratory system.

Potential Immediate Health Effects

Inhalation: May cause respiratory tract irritation. Coughing, sneezing, or shortness of breath may occur following exposures in excess of exposure limits.

Skin: May cause skin irritation.

Eyes: May cause eye irritation.

Ingestion: May be harmful if swallowed. May cause gastrointestinal tract irritation. Intestinal obstruction may occur if the material hardens.

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3. COMPOSITION

Chemical Identity: Calcium Sulfate Dihydrate $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$	88.75%
Common Name: Gypsum	
CAS No.: 10101-41-4	
Chemical Identity: Iron Oxide Fe_2O_3	9.00%
Common Name: Iron Oxide Black	
CAS No.: 1309-38-2	
Chemical Identity: Guar Gum	0.75%
Common Name: Guar Gum	
CAS No.: 9000-30-0	
Chemical Identity: Corn Starch	0.50%
Common Name: Corn Starch	
CAS No.: 9005-25-8	
Chemical Identity: Anionic Polyacrylamide	1.00%
Common Name: Anionic Polyacrylamide	
CAS No.: 9003-05-8	

4. FIRST AID MEASURES

EYE:

Symptoms: May cause eye irritation.

Irrigate immediately. If this product contacts the eyes, immediately wash the eyes with large amounts of water, occasionally lifting the lower and upper lids. Get medical attention if needed.

SKIN:

Symptoms: May cause skin irritation.

Wash skin immediately rinse skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention if needed.

INHALATION:

Symptoms: May cause respiratory tract irritation. Coughing, sneezing, or shortness of breath may occur following exposures in excess of exposure limits.

Fresh air. If a person breathes in large amounts of this product, move to fresh air at once. If not breathing, give artificial respiration. Get medical attention if needed.

INGESTION:

Symptoms: May be harmful if swallowed. May cause gastrointestinal tract irritation. Intestinal obstruction may occur if the material hardens.

Rinse mouth. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if needed.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

A fine water spray, fog, CO_2 or dry chemical.

Unsuitable Extinguishing Media

Hoses and extinguishers with pressure streams should be avoided where solid sulfur is dusty or where it may create a further hazard by raising more dust clouds.

Special Protective Equipment for Fire-Fighters

Self-contained breathing apparatus and full protective clothing. Masks approved for use in acid-gas atmosphere should be used.

Note: Aqueous solutions or powders may render surfaces slippery.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

Use personal protective equipment. Avoid dust formation. Ensure adequate ventilation.

Environmental Precautions

Prevent product from entering drains.

Methods and Materials for Containment and Clean-up

Sweep spilled substance into containers; avoid generating dust. Reuse if not contaminated.

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7. HANDLING AND STORAGE

Precautions for Safe Handling

Eating, drinking, and smoking should be prohibited in areas where this material is handled or stored. Do not ingest and avoid contact with skin and eyes. Avoid breathing in dust. Wear appropriate respirator when ventilation is inadequate.

Recommended Conditions for Storage

Store in a cool, dry, well ventilated location. Do not store near aluminum (at high temperatures), diazomethane, oxidizing agents or other incompatible materials. Keep away from moisture.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits

	CAS No.	ACGIH TLV	OSHA/PEL
Iron Oxide Black	1309-38-2	5 mg/m ₃	10 mg/m ₃ (as Fe ₂ O ₃)
Calcium sulfate dihydrate (gypsum)	10101-41-4	10 mg/m ₃	15 mg/m ₃ (total)
Anionic Polyacrylamide	9003-05-8	none	none
Corn Starch	9005-25-8	10 mg/m ₃	none
Guar Gum	9000-30-0	none	none

Engineering Controls

Local exhaust ventilation recommended. Running water should be available in case material gets in eyes. Wash hands, forearms, and face thoroughly after handling chemical products, before eating, smoking, and using the lavatory and at the end of the working period. Handling equipment must be grounded or bonded to avoid static electricity. Wash clothing before reusing. Sulfur impregnated clothing should not be worn.

Personal Protective Equipment

Respiratory Protection

A NIOSH (US) or CEN (EU) approved particulate respirator is recommended where total dust concentration exceeds 10 mg/m³. Avoid breathing dust.

Hand Protection

Rubber, neoprene, vinyl, or nitrile gloves.

Skin and Body Protection

Long sleeves or lab coat and long pants are recommended.

Eye Protection

NIOSH (US) or CEN (EU) approved safety glasses with side shields, goggles, or face shield are recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Mixture of brown and brownish-black granules
Odor: Mineral
Odor threshold: Unknown
pH: Neutral
Melting Point: Approximately 246° F
Freezing Point: Unknown
Evaporation Rate: 0
Flammability: Not Flammable
Explosion Limits: Unknown
Vapor Pressure: N/A
Vapor Density: N/A
Specific Gravity: 2.6 - 2.75
Solubility in Water: Insoluble
Partition coefficient: Unknown
Auto-ignition temp.: Unknown
Decomposition temp.: Unknown
Viscosity: N/A
Other: Unknown

10. STABILITY AND REACTIVITY

Chemical Stability: Stable under recommended storage conditions. Avoid excess sources of ignition, heat, and incompatible materials.

Conditions to Avoid: Oxidizing agents, aluminum (at high temperatures), and diazomethane.

Hazardous Decomposition Products: Thermal decomposition may produce: calcium oxide, nitrogen oxides, carbon oxides, sulfur oxides, and hydrogen cyanide.

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11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Eyes, skin, ingestion, and inhalation.

Potential Health Effects

Inhalation: May cause respiratory tract irritation. Coughing, sneezing, or shortness of breath may occur following exposures in excess of exposure limits.

Ingestion: May be harmful if swallowed. May cause gastrointestinal tract irritation. Intestinal obstruction may occur if the material hardens.

Skin: May cause skin irritation.

Eyes: May cause eye irritation.

Acute Toxicity

No data available.

Reproductive Toxicity

No data available.

Germ Cell Mutagenicity

No data available.

Specific target organ toxicity - single exposure

Adverse health effects are not expected under normal use.

Specific target organ toxicity - repeated exposure

No data available.

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC.

IARC = International Agency for Research on Cancer

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as carcinogen or potential carcinogen by ACGIH.

ACGIH = American Conference of Industrial Hygienists

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as known or anticipated carcinogen by NTP.

NTP = National Toxicology Program

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as carcinogen or potential carcinogen by OSHA.

OSHA = Occupational Safety and Health Administration

12. ECOLOGICAL INFORMATION

Toxicity

Not applicable

Mobility

Water contaminating.

Persistence and Degradability

No data available.

PBT and vPvB Assessment

Not applicable.

Bioaccumulative Potential

Not applicable.

Other Adverse Effects

No data available.

13. DISPOSAL CONSIDERATIONS

May be disposed of as an inert solid in sanitary landfill or by other procedures in accordance with all federal, state and local regulations.

14. TRANSPORT INFORMATION

DOT (US)

This material is not regulated by the DOT.

IMDG

This material is not regulated by the IMDG.

IATA

This material is not regulated by IATA.

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15. REGULATORY INFORMATION

OSHA Hazards

None of the chemicals in this product are listed as highly hazardous by OSHA.

DSL Status

Iron oxide black and sulfur are on the Canadian Domestic Substance List (DSL) list.

SARA 302 Compounds

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

SARA 313 Compounds

No chemicals in this material are subject to the reporting requirements of Section 313 of SARA.

SARA 311/312 Hazards

No chemicals in this material are subject to Section 311/312 of SARA.

Massachusetts Right To Know

Gypsum is listed by the Massachusetts Right to Know Act.

New Jersey Right To Know

Gypsum is listed by the New Jersey Right to Know Act.

Pennsylvania Right To Know

Gypsum is listed by the Pennsylvania Right to Know Act.

Rhode Island Right To Know

Gypsum is listed by the Rhode Island Right to Know Act.

California Proposition 65

This product contains a known to the State of California to cause cancer: Residual Acrylamide.

16. OTHER INFORMATION

No data is available, per 29 CFR 1910.1200(d)(b); health hazards are based upon all of the components which make up the mixture.

The above information is believed to be correct, but is not purported to be all-inclusive and should only be used as a guide. Because data, safety standards, and regulatory inputs are subject to change, no warranty, guarantee, or representation with respect to the completeness or continuing accuracy of the information contained in this document is made. The user of this product must decide what safety measures are necessary to safely use this product; the conditions of handling and use, or misuse, are beyond the control of Encap, LLC. The user is also responsible to determine its environmental regulatory compliance obligations under any applicable federal or state laws.

MSDS Preparation History**Original Preparer**

Aug-19 Encap LLC staff

Updates or Revisions

Update (U) or Revision (R)	Update or Revision Number	Date	Preparer
R	1	10/25/2019	Encap LLC staff