

**MATERIAL SAFETY DATA SHEET
FOR
THORN SMITH LABORATORIES
ANALYZED QUANTITATIVE UNKNOWN**

Iron Ore (natural) for Fe
Catalog Number 80-1275

Manufacturer: Auric Enterprises, Inc.
d/b/a Thorn Smith Laboratories
Address: 7755 Narrow Gauge Road
Beulah, MI 49617
Phone Number: 231-882-4672
MSDS Number: TSL-020
Date Prepared: September 7, 1989
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SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

COMPONENTS - Chemical Name & Common Names
(Hazardous Components 1% or greater; Carcinogens 0.1% or greater)

Magnetite

Formula: Fe₃O₄
CAS No.: 1309-37-1
OSHA PEL: According to our sources, exposure threshold levels have not been established.
(N/E)
ACGIH TLV: TWA 5 mg (Fe)/m³
OTHER LIMITS: N/A

Hematite

Formula: Fe₂O₃
CAS No.: 1317-61-9
OSHA PEL: According to our sources, exposure threshold levels have not been established.
(N/E)
ACGIH TLV: TWA 5 mg (Fe)/m³
OTHER LIMITS: N/A

SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: N/A
Specific Gravity (H₂O=1): N/A
Vapor Pressure (mm Hg and Temperature): N/A
Melting Point: N/A
Vapor Density (Air-1): N/A

Evaporation Rate (-1): N/A
Solubility in water: Not soluble. Soluble in mineral acids.
Water Reactive: No
Appearance and Odor: Red to black powder. Odorless.

SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

Flash Point and Method Used: N/A
Auto-Ignition Temperature: N/A
Flammability Limits in Air (% by Volume): N/A
LEL: N/A UEL: N/A
Extinguisher Media: Fight surrounding fire.
Special Fire Fighting Procedures: Firefighters should wear proper protective equipment and self-contained breathing apparatus with full facepiece operated in positive pressure mode.
Unusual Fire and Explosion Hazards: None identified.

SECTION 4 - REACTIVITY HAZARD DATA

STABILITY: Stable Unstable
Stable in dry air but readily oxidizes in moist air forming rust.
Conditions to Avoid: Stable under ordinary conditions of use and storage.
Incompatibility (Materials to Avoid): None identified.
Hazardous Decomposition Products: None identified.
HAZARDOUS POLYMERIZATION: May Occur Will Not Occur

SECTION 5 - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY:
 Inhalation Ingestion Skin Contact Eye Contact Not Hazardous
CARCINOGEN LISTED IN:
 NTP OSHA IARC Monograph Not Listed
TOXICITY: Oral toxicity is low. LD₅₀ (ipr-rat) 5500 mg/kg. Considered toxic subcutaneous. TLV: TWA 5 mg (Fe)/m. Experimental tumorigen. Cancer review - limited evidence.
HEALTH HAZARDS - Acute:
Inhalation: May cause irritation to mucous membranes.
Skin Contact: May cause irritation.
Eye Contact: May cause irritation.
HEALTH HAZARDS - Chronic: None identified.
Signs and Symptoms of Exposure: No information found.
Medical Conditions Generally Aggravated by Exposure: N/A
EMERGENCY FIRST AID PROCEDURES - Seek medical assistance for further treatment, observation, and support if necessary.
Inhalation: Remove to fresh air. Get medical attention for any breathing difficulty.

Ingestion: Give water or milk to drink, induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Skin Contact: Remove any contaminated clothing. Wipe off excess from skin. Immediately wash exposed area with soap and water for at least 15 minutes. Get medical attention if irritation develops or persists.

Eye Contact: Immediately flush with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention if irritation persists.

SARA/TITLE III HAZARD CATEGORIES AND LISTS

Acute: No Chronic: No Flammability: No Pressure: No Reactivity: No
Extremely Hazardous Substance: No
CERCLA Hazardous Substance: No
SARA 313 Toxic Chemicals: No
TSCA Inventory: No

SECTION 6 - CONTROL AND PROTECTIVE MEASURES

Respiratory Protection (Specify Type): For conditions of use where exposure is apparent, a NIOSH approved dust/mist respirator must be worn. For emergencies, a NIOSH approved self-contained breathing apparatus may be necessary.

Protective Gloves: Wear rubber gloves.

Eye Protection: Wear chemical safety goggles. Contact lenses should not be worn when working with this material. Maintain eye wash fountain and quick-drench facilities in work area.

VENTILATION TO BE USED: A local exhaust system which captures the contaminant at its source is recommended to prevent dispersion of the contaminant in the workroom air.

Local Exhaust Mechanical (General) Special
 Other (Specify)

Other Protective Clothing and Equipment: Wear clean body-covering clothing.

Hygienic Work Practices: Avoid contact with eyes, skin, and clothing. Avoid breathing dust. Keep in a tightly closed container when not in use. Use with adequate ventilation. Wash thoroughly after handling.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE/LEAK PROCEDURES

Steps to be taken if material is spilled or released: Ventilate area of leak or spill. Clean-up personnel may require respiratory protection from dust. Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal.

Waste Disposal Methods: Whatever cannot be saved for reclamation may be delivered to an approved waste disposal facility. Small amounts of residue may be flushed to sewer with plenty of water. Dispose in accordance with all applicable local, state, and federal environmental regulations.

Precautions to be taken in handling and storage: Keep in a tightly closed container, stored in a cool, dry ventilated area. Protect against physical damage. Store in accordance with all applicable local, state, and federal environmental regulations.

Other precautions and/or special hazards:

NFPA Rating: Health: **1** Flammability: **0** Reactivity: **0**.

HMIS Rating: No information available.

SECTION 8 - TRANSPORTATION DATA AND ADDITIONAL INFORMATION

Domestic (D.O.T.)

Proper Shipping Name: Chemicals, n.o.s. (Non-regulated)

International (T.M.O.)

Proper Shipping Name: Chemicals, n.o.s. (Non-regulated)

AIR (I.C.A.O.)

Proper Shipping Name: Chemicals, n.o.s. (Non-regulated)

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