

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

Steel "A" and "H"
Catalog Number 80-1680 and 80-1700

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-029
Date Prepared: November 18, 1990
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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)

Steel

CAS No.: 7439-89-6
Synonyms: Iron filings, iron shavings, iron powdered, iron reduced.
OSHA PEL: According to our sources, exposure threshold levels have not been established.
(N/E)
ACGIH TLV: N/E
OTHER LIMITS: N/A

SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: 3000° C (5432° F)
Specific Gravity (H₂O=1): 7.88
Vapor Pressure (mm Hg and Temperature): No information found.
Melting Point: 1535° C (2795° F)
Vapor Density (Air-1): N/A
Evaporation Rate (-1): N/A
Solubility in water: Insoluble, can react with water.
Water Reactive: Yes
Appearance and Odor: Gray-black powder, metal granules. 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: DO NOT USE WATER OR CARBON DIOXIDE. Dry chemical, powdered graphite, dolomite, or sodium chloride.

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: Can react with water to liberate flammable hydrogen gas. Moderate fire hazard in form of dust when exposed to heat or flame.

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): Strong oxidizers. Water (including humid atmosphere); halogens, acids, hydrogen peroxide, nitrogen dioxide, and polystyrene.

Hazardous Decomposition Products: Reaction with water can produce hydrogen. Iron oxide fume may be formed in welding operations.

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 rat LD50; 30 mg/kg investigated as a tumorigen.

HEALTH HAZARDS - Acute:

Inhalation: Granules or shavings are not expected to have adverse effects. Excessive inhalation of dust may be irritating to the respiratory tract.

Ingestion: Extremely large oral dosages may produce gastrointestinal disturbances.

Skin Contact: No adverse health effects expected.

Eye Contact: No adverse effects expected but dust may cause mechanical irritation. If dust particles remain in eye, it may product "rust ring" of yellow-brown staining with irritation.

HEALTH HAZARDS - Chronic: Long term inhalation exposure to iron has resulted in mottling of the lungs a condition referred to as siderosis. This is considered a benign pneumoconiosis and does not ordinarily cause significant physiological impairment.

Signs and Symptoms of Exposure: No information found.

Medical Conditions Generally Aggravated by Exposure: No information found.

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: Not expected to require first aid measures.

Skin Contact: Wash exposed area with soap and water. Get medical advice if irritation develops.

Eye Contact: Immediately flush with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Call a physician.

SARA/TITLE III HAZARD CATEGORIES AND LISTS

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

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.

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: In general, dilution ventilation is a satisfactory health hazard control for this substance. However, if conditions of use create discomfort to the worker, 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: Keep in a tightly closed container. Store away from sources of heat, moisture and incompatibilities.

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

Steps to be taken if material is spilled or released: Sweep, scoop or pick up spilled material. Package unreclaimable material for disposal in a RCRA-approved waste facility.

Waste Disposal Methods: Whatever cannot be saved for reclamation may be delivered to an approved waste disposal facility. 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 away from sources of heat, moisture and incompatibilities. 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: **0** 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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