

0392584-001
4-27-03

MATERIAL SAFETY DATA SHEET

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FERRO Code Number: 11-78070
MSDS Rev.: 20-MAR-2003

MSDS Print Date: 04/24/03

SECTION I - PRODUCT AND COMPANY INFORMATION

Product Name: BROWN
CAS Number: MIXTURE

Company Identification: Ferro Corporation
E. C. & D. Division
54 Kellogg Court
Edison NJ 08817

Contact: Dave Malysa
Telephone/Fax: 732-287-1930 732-287-1943
Emergency Phone (24 Hour): FERRO'S Emergency Telephone
1-216-641-5324
Chemtrec (24 Hour): 1-800-424-9300
Preparer: Dave Malysa
Regulatory & Environmental Affairs

Trade Name: BROWN

SECTION II - HAZARDOUS INFORMATION

Ingredient Name	CAS Number	Percent	TSCA Inv
Iron Oxide	1309-37-1	40 - 70	Y
Unsaturated Polyester	68511-26-2	15 - 40	Y

*** ALL Ingredients in this product are listed in the T.S.C.A. Inventory

SECTION III - PHYSICAL DATA

Boiling Point: Unknown Not Available
Vapor Pressure (mmHg): Not Available
Evaporation Rate:
% Volatile Weight: Not Available
% Volatile Volume: Not Available
Specific Gravity: 1.925

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flammability Class:
Flash Point: >100 Deg. C TCC 212.°F
Tag Closed Cup
Explosive Range: Not Available

EXTINGUISHING MEDIA:

Foam, Dry Chemical, CO2

SPECIAL FIREFIGHTING PROCEDURES

PREVENT runoff from entering streams, sewers or drinking water supply.
Keep personnel removed and upwind of fire. Wear self-contained
breathing apparatus. Wear full protective equipment/clothing. Treat
as oil fire. Fight fire from a distance; sealed containers can

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rupture explosively when heated. Water may be used to keep fire-exposed containers cool until fire is out.

UNUSUAL FIRE & EXPLOSION HAZARDS:

Combustion can produce toxic gases.

SECTION V - HEALTH HAZARD DATA

PERMISSIBLE EXPOSURE LEVEL:

See Section VIII.

EFFECTS OF OVEREXPOSURE:

IRON OXIDE:

ACUTE: May cause mechanical skin and eye irritation.

CHRONIC: Repeated and prolonged inhalation of iron oxide dust is known to cause siderosis. On X-rays it appears to be a benign pneumoconiosis and is not associated with pulmonary fibrosis or disability unless there is concurrent exposure to other fibrosis-producing materials such as silica. The TLV is set to protect against siderosis.

UNSATURATED POLYESTER:

If ingested may cause gastrointestinal disturbances. Symptoms may include irritation, nausea, vomiting and diarrhea. Contact with the skin may cause skin irritation. Repeated dermal exposures can result in an eczematous dermatitis caused by primary irritation and/or sensitization. Repeated or prolonged exposure to high vapor concentrations may be irritating to the mucous membranes and upper respiratory tract.

FIRST AID:

INHALATION: If inhaled, move individual to fresh air. Make comfortably warm but not hot. Use oxygen or artificial respiration as required. See a physician if irritation is present or persists.

SKIN: In case of contact, remove contaminated clothing. Wash thoroughly with soap & plenty of water. See a physician if irritation is present or persists. Launder contaminated clothing before reuse.

EYE: Immediately flush eyes with plenty of water for at least 15 minutes and get prompt medical attention.

INGESTION: If swallowed, call a physician immediately. Induce vomiting only at the instructions of a physician. Never give anything by mouth to an unconscious person.

SECTION VI - STABILITY AND REACTIVITY DATA

Stability: This product is stable

Hazardous Polymerization: Hazardous polymerization may occur

Avoid exposure to excessive heat, peroxides and polymerization catalysts.

INCOMPATIBILITY:

Iron Oxides are not compatible with hydrazine, calcium hypochlorite, performic acid, and bromine pentafluoride.

POLYESTER: Strong acids, peroxides, oxidizing agents.

CONDITIONS TO AVOID:

POLYESTER: Avoid exposure to heat, open flame or contamination with oxidizing agents. Dissolution of material with uninhibited unsaturated monomers can result in exothermic autopolymerization.

HAZARDOUS DECOMPOSITION PRODUCTS:

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POLYESTER: Carbon monoxide, carbon dioxide, low molecular weight hydrocarbons, organic acids.

SECTION VII - SPILL OR LEAK PROCEDURES**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED**

Confine spill. Remove all sources of ignition. Ventilate area and maintain ventilation. Use all described protective measures and equipment. Use absorbant material, such as clay or sand, to collect and contain for salvage and disposal. Prevent runoff from entering drains, sewers or waterways.

WASTE DISPOSAL METHOD:

Follow all applicable Federal, Provincial, State and Municipal laws, regulations and by-laws. Package in U.N. approved containers and transport to an approved treatment, storage and disposal (TSD) facility. (Also see Section X.)

SECTION VIII - EXPOSURE CONTROLS/PERSONAL PROTECTION**Occupational Exposure Limits**

	ACGIH TLV	ACGIH TLV-C	ACGIH STEL	OSHA STEL	OSHA PEL
Iron Oxide	5.00 mg/M3	N/est	N/est	N/est	10.00 mg/M3
Unsaturated Polyester	N/est	N/est	N/est	N/est	N/est

Iron Oxide PEL (as fume) and TLV (as dust and fume).

RESPIRATORY PROTECTION:

Use appropriate NIOSH/MSHA approved respiratory protection when exposure to airborne contaminants may exceed acceptable limits. In emergency situations, or when used in confined spaces, use self-contained breathing apparatus or other air supplied full-face respirator.

VENTILATION:

Ventilate to maintain exposure below published exposure limits. Use explosion proof motors and wiring.

PROTECTIVE GLOVES:

Use impervious butyl rubber gloves. Replace as often as needed to maintain protection.

EYE PROTECTION:

Use chemical safety goggles or full-face shield.

OTHER PROTECTIVE EQUIPMENT:

Eye wash stations & safety showers should be easily accessible. Where splash can occur, use protective clothing.

SECTION IX - SPECIAL PRECAUTIONS**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:**

Avoid contact with eyes, skin, clothing. Avoid breathing vapor, mist or spray. Use with good ventilation. Wash thoroughly after handling. Store in cool, dry area in closed containers away from incompatible materials. Store away from sunlight, heat, sparks and open flames. Protect containers against physical damage. Do not smoke in work

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area. Do not store near food or feed.

OTHER PRECAUTIONS:

Since emptied containers retain product residues (vapor, liquid or solid), all hazard precautions listed in the MSDS should be observed!

SECTION X - REGULATORY INFORMATION**-PROP 65 (BOTH CARCINOGEN AND TERATOGEN)**

WARNING: This product may contain a chemical known to the state of California to cause cancer or birth defects or other reproductive harm.

Ingredient Name	CAS Number	Percent
Iron Oxide	1309-37-1	40 - 70

Although Iron Oxides themselves are not listed under Prop. 65, this product may contain trace amounts of chemicals which appear on the State of California's listing of substances known to cause cancer or birth defects or other reproductive harm. (Proposition 65).

MASSACHUSETTS SUBSTANCE LIST:

Trace quantities of substances which are listed on the Massachusetts Hazardous Substance List may be found in this product.

DISCLAIMER:

The information and recommendations contained in this Material Safety Data Sheet have been compiled from sources believed to be reliable and to represent the most reasonable current opinion on the subject when the MSDS was prepared. No warranty, guaranty or representation is made as to the correctness or sufficiency of the information. The user of this product must decide what safety measures are necessary to safely use this product, either alone or in combination with other products, and determine its environmental regulatory compliance obligations under any applicable federal or state laws.