

MATERIAL SAFETY DATA SHEET

FERRO Code Number: 34-78050  
 MSDS Rev.: 05-JAN-2001

MSDS Print Date: 11/10/05

SECTION I - PRODUCT AND COMPANY INFORMATION

Product Name: BROWN  
 CAS Number MIXTURE

Company Identification: Ferro Corporation  
 L. 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 James H. Fisher  
 Data Coordinator

Trade Name BROWN

SECTION II - HAZARDOUS INFORMATION

Ingredient Name	CAS Number	Percent	TSCA Inv
Iron Oxide	1309-37-1	30 - 60	Y

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

SECTION III - PHYSICAL DATA

Boiling Point: Not Available  
 Vapor Pressure (mmHg): Not Available  
 Evaporation Rate:  
 % Volatile Weight Not Available  
 % Volatile Volume Not Available  
 Specific Gravity: 1.7388

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flammability Class  
 Flash Point: 392.°F  
 Pensky-Martens Closed Cup ASTM D 93  
 Explosive Range: Not Available

EXTINGUISHING MEDIA:  
 Use foam, carbon dioxide or dry chemical  
 SPECIAL FIREFIGHTING PROCEDURES

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PREVENT runoff from entering streams, sewers or drinking water supply.  
Extinguish flame from perimeter inward to main body of fire.  
Firefighters should wear self-contained breathing apparatus and protective clothing. Burning can produce oxides of carbon and nitrogen.

#### 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.

Eye Contact: May cause slight eye irritation.

##### 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 will not occur

##### INCOMPATIBILITY:

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

Reacts exothermically with isocyanates. Strong oxidizing agents. Strong alkalies.

##### CONDITIONS TO AVOID:

Ether polyol when heated in the presence of air (oxygen) to temperatures above 212 F (100 C) may result in the formation of aldehydes.

##### HAZARDOUS DECOMPOSITION PRODUCTS:

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Carbon Monoxides, Aldehydes and acids may be formed during combustion.

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED  
 Confine spill. Transfer to secure containers where necessary,  
 Collect using absorbent media. Flush area with hot water and  
 detergent.

WASTE DISPOSAL METHOD:

Dispose of in accordance with Federal, State and Local regulations.

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
Ether Polyol	N/est	N/est	N/est	N/est	N/est

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

RESPIRATORY PROTECTION:

Where dust may be present, an approved NIOSH/MSHA dust respirator is recommended.

VENTILATION:

Mechanical Ventilation Suggested.

PROTECTIVE GLOVES:

Chemical workers gloves is recommended.

EYE PROTECTION:

Chemical goggles as needed to prevent eye contact.

OTHER PROTECTIVE EQUIPMENT:

Practice good hygiene, wash hands and face before eating or smoking. Launder clothing before reuse.

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 area. Do not store near food or feed.

OTHER PRECAUTIONS:

Since emptied containers retain product residues (vapor, liquid or

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solid), all hazard precautions listed in the MSDS should be observed!

SECTION X - REGULATORY INFORMATION

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.