

MATERIAL SAFETY DATA SHEET

FERRO Code Number: 22-88320

MSDS Rev.: 06-APR-1999

SECTION I - PRODUCT AND COMPANY INFORMATION

Product Name: BLACK  
 CAS Number MIXTURE

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

Contact: Dave Malysa  
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 Preparer: James H. Fisher  
 Data Coordinator

Trade Name BLACK

SECTION II - HAZARDOUS INFORMATION

Ingredient Name	CAS Number
Epoxy Resin	25068-38-6
Carbon Black	1333-86-4

\*\*\* ALL Ingredients in this product are listed in the

Additional Ingredient Information:

This material contains Bisphenol A Diglycidyl Ether ( which is subject to TOSCA 12(b) export notification (

SECTION III - PHYSICAL DATA

Boiling Point: 392. F  
 Vapor Pressure (mmHg): 0.@ 0. F  
 Evaporation Rate:  
 % Volatile Weight Not Available  
 % Volatile Volume Not Available  
 Specific Gravity: 1.202

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flammability Class

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MSDS Print

Explosive Range: Not Available

## EXTINGUISHING MEDIA:

Foam, Dry Chemical, CO2

## SPECIAL FIREFIGHTING PROCEDURES

Keep personnel removed and upwind of fire. Wear self-contained breathing apparatus. Wear full protective equipment/clothing. as oil fire. Fight fire from a distance; sealed containers can rupture explosively when heated. Water may be used to keep fire exposed containers cool until fire is out.

## UNUSUAL FIRE & EXPLOSION HAZARDS:

Carbon monoxide and carbon dioxide are products of combustion: Carbon Black. It may not be obvious that the Carbon Black is flammable unless the material is stirred and sparks are apparent.

In special test procedures, with high dust concentrations and application of a significant energy source, a Carbon Black/air mixture can explode. The following data has been determined: Minimum Ignition Energy: >1kJ, Minimum Ignition Temperature (cloud): >300 C, Minimum Ignition Temperature (layer): >320 C.

## SECTION V - HEALTH HAZARD DATA

### PERMISSIBLE EXPOSURE LEVEL:

See Section VIII.

### EFFECTS OF OVEREXPOSURE:

#### CARBON BLACK (DRY):

ACUTE: If the TLV of Carbon dust is exceeded, mechanical overloading of respiratory passages and eye irritation is possible.

CHRONIC: Nuisance dust effects only--although Carbon Black can contain traces of polynuclear aromatic compounds (PNAs), some of which in isolation may be carcinogenic, these are very strongly adsorbed on the Carbon Black particles. Evidence currently indicates such adsorption (of PNAs) renders them biologically inactive.

#### CARBON BLACK (LIQUID SYSTEMS):

The acute/chronic effects listed above are minimized in liquid systems due to the vehicle on the carbon black. Sanding cured products containing Carbon Black can cause dusting, which can result in exposure and hazards as listed above.

Carbon Black is now considered a potential carcinogen by IARC (reclassified as a group 2B carcinogen); known animal carcinogen, potential human carcinogen. This reclassification was approved by IARC on April 12, 1996.

Carbon Black has not been listed by the National Toxicology Program (NTP) or the Occupational Safety & Health Administration (OSHA). The National Institute of Occupational Safety & Health (NIOSH) criteria document on Carbon Black recommends that only Carbon Blacks with PNA levels greater than 0.1% be considered suspect carcinogens.

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## RESINS:

cause slight transient (temporary) eye irritation prolonged or repeated exposure may cause skin irritation and allergic skin reaction/sensitization.

Low dose oral toxicity is low; Oral LD50 (rat) > 4 g/kg. At room temperature, exposure to vapors are unlikely. At higher temperatures, higher temperatures may generate vapor which may cause irritation.

## AID:

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

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

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

**INGESTION:** If swallowed, call a physician immediately. 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 may be unstable under certain conditions.  
**Hazardous Polymerization:** Hazardous polymerization conditions may exist.

## COMPATIBILITY:

These resins are incompatible with Acids, Bases and Ammonia.

## CONDITIONS TO AVOID:

Avoid exposure to high temperatures greater than 572 F (300 C). Do not flame. Decomposition: > 572 F ( >300 C)

Avoid elevated temperatures when using epoxy materials.  
**Reactions:** Excessive heat or flame. May react upon contact with oxidizers such as chlorates, bromates and nitrates.

## HAZARDOUS DECOMPOSITION PRODUCTS:

Carbon monoxide, carbon dioxide and small amounts of other containing gases when burning.

## SECTION VII - SPILL OR LEAK PROCEDURES

**PRECAUTIONS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:** In case of a spill. Remove all sources of ignition. Ventilate area. Use all described protective measures. Use absorbent material, such as clay or sawdust to contain for salvage and disposal. Prevent runoff from drains, sewers or waterways.

## DISPOSAL METHOD:

Follow all applicable Federal, Provincial, State and Municipal regulations and by-laws. Package in U.N. approved containers.

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transport to an approved treatment, storage and disposal facility. (Also see Section X.)

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

	ACGIH TLV	ACGIH TLV-C	ACGIH STEL
Epoxy Resin	N/est	N/est	N/est
Carbon Black	3.50 mg/M3	N/est	N/est

**RESPIRATORY PROTECTION:**

Use appropriate NIOSH/MSHA approved respiratory protection. 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 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 necessary 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. Use of barrier cream recommended.

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

Avoid contact with eyes, skin, clothing. Avoid breathing dust or spray. Use with good ventilation. Wash thoroughly after use. Store in cool, dry area in closed containers away from flammable materials. Store away from sunlight, heat, sparks and open flames. Protect containers against physical damage. Do not store in high traffic area. Do not store near food or feed.

**OTHER PRECAUTIONS:**

Since emptied containers retain product residues (volatile solid), all hazard precautions listed in the MSDS should be followed.

**SECTION X - REGULATORY INFORMATION**

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MSDS 1

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may contain a chemical known to  
cause cancer or birth defects or other reprod

CAS Number

25068-38-6

are registered for TSCA 12B

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25068-38-6

Trace amounts of residual  
(39-8).

Recommendations contained in this Material Safety Data Sheet are based on information obtained from sources believed to be reliable. It is not intended to be a substitute for a reasonable current opinion on the suitability of the use of this material. No warranty, guaranty or representation is made as to the accuracy or sufficiency of the information. It is the user's responsibility to decide what safety measures are necessary. These measures may be either alone or in combination with other safety measures and environmental regulatory compliance.