

MATERIAL SAFETY DATA SHEET

FERRO Code Number: 11-88030
 MSDS Rev.: 20-MAR-2003

MSDS Print Date: 02/21/08

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: James H. Fisher
 Telephone/Fax: 732-287-1930 732-287-1943
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 Regulatory & Environmental Affairs

Trade Name BLACK

SECTION II - HAZARDOUS INFORMATION

Ingredient Name	CAS Number	Percent	TSCA Inv
Unsaturated Polyester	Trade Secret	60 - 100	Y
Carbon Black	1333-86-4	10 - 30	Y

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

Contains the following Trade Secret Number:
 NJ TSRN: 800986-5106P

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: 1.068

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flammability Class
 Flash Point: 212.°F
 Tag Closed Cup
 Explosive Range: Not Available

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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 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 from Carbon Black. It may not be obvious that the Carbon Black is burning unless the material is stirred and sparks are apparant. In special test procedures, with high dust concentrations and the 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): >546 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.

UNSATURATED POLYESTER:

If ingested may cause gastrointestinal disturbances. Symptoms may

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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:

POLYESTER: Strong acids, peroxides, oxidizing agents.

CONDITIONS TO AVOID:

Prevent exposure to high temperatures greater than 572 F (>300 C) and open flames. Decomposition: > 572 F (>300 C)

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

CARBON: Excessive heat or flame. May react upon contact with strong oxidizers such as chlorates, bromates and nitrates.

HAZARDOUS DECOMPOSITION PRODUCTS:

Oxides of Carbon & Sulfur; incompletely burned hydrocarbons.

Toxic Fumes.

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:

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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
Unsaturated Polyester	N/est	N/est	N/est	N/est	N/est
Carbon Black	3.50 mg/M3	N/est	N/est	N/est	3.50 mg/M3

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 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

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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.