

FERRO Code Number: 33-41060
 MSDS Rev.: 01-JUN-2001

SECTION I - PRODUCT AND COMPANY INFORMATION

| | |
|----------------------------|--|
| Product Name: | GREY GREEN |
| CAS Number | MIXTURE |
| Company Identification: | Ferro Corporation L. C. & D. Divis 54 Kellogg Court Edison NJ 08817 |
| Contact: | Dave Malysa |
| Telephone/Fax: | 732-287-1930 732 |
| Emergency Phone (24 Hour): | FERRO'S Emergenc 1-216-641-5324 |
| Chemtrec (24 Hour): | 1-800-424-9300 |
| Preparer | Dave Malysa Regulatory & Env |
| Trade Name | GREY GREEN |

SECTION II - HAZARDOUS INFORMATION

| Ingredient Name | CAS |
|---|-----|
| C. I. Pigment Green 7 | 132 |
| Titanium Dioxide | 134 |
| C.I. Pigment Blue 15 (Copper Phthalocyanine Blue) | 147 |
| Carbon Black | 133 |

*** ALL Ingredients in this product are liste

SECTION III - PHYSICAL DATA

| | |
|------------------------|----------------|
| Boiling Point: | Not Available |
| Vapor Pressure (mmHg): | 1.@ 68.°F |
| Evaporation Rate: | |
| % Volatile Weight | Not Applicable |
| % Volatile Volume | Not Applicable |
| Specific Gravity: | 1.22 |

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

| | |
|--------------------|----------------------------|
| Flammability Class | |
| Flash Point: | 198.°F Pensky-Martens C |
| Explosive Range: | Not Available |

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EXTINGUISHING MEDIA:

Use foam, carbon dioxide or dry chemical

SPECIAL FIREFIGHTING PROCEDURES

Extinguish flame from perimeter inward to main body of fire
 Extinguisher Media: ABC Extinguisher, Carbon Dioxide, Foam,
 Special fire fighting procedures:

Water or foam may cause frothing when applied to liquids
 flash points above 100 degrees C. The frothing may be quite
 violent and endanger the life of the firefighter particularly
 when solid streams are directed into the hot burning liquid.
ESTER POLYOL: Firefighters must be equipped to prevent
 the escape of vapors or products of combustion. Wear an approved
 self-contained breathing apparatus and protective clothing.

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
 dust can explode. The following data has been determined: Minimum
 Ignition Energy: >1kJ, Minimum Ignition Temperature (closed vessel)
 Minimum Ignition Temperature (layer): >320 C.

PHTHALOCYANINE BLUE: When involved in a fire or exposed to
 high temperatures for an extended period of time, organic pigments
 may smolder or burn evolving noxious fumes which can include
 nitrogen and carbon, or other toxic compounds.

PHTHALOCYANINE GREEN: When involved in a fire or exposed to
 high temperatures for an extended period of time, organic pigments
 may smolder or burn evolving noxious fumes which can include
 nitrogen & carbon, or other toxic compounds.

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
 irritation 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
 strongly adsorbed on the Carbon Black particles. Evidence
 currently indicates such adsorption (of PNAs) renders the
 dust 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
 products containing Carbon Black can cause dusting, which

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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.

TITANIUM DIOXIDE: Results of a Dupont epidemiology study show that employees who had been exposed to Titanium Dioxide pigments were at no greater risk of developing lung cancer than were employees who had not been exposed to Titanium Dioxide pigments. Based on the results of this study Dupont concludes that TiO₂ pigments will not cause lung cancer or chronic respiratory disease in humans at concentrations experienced at the work place.

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 may be unstable

Hazardous Polymerization: Hazardous polymerization will not occur

INCOMPATIBILITY:

ESTER POLYOL: Strong oxidizers such as hydrogen peroxide, bromine, and chromic acid.

PHTHALOCYANINE BLUE: Avoid strong oxidizing agents such as perchlorates, perchlorates, nitrates, & permanganates. Oxidizing materials may vigorously evolve oxygen in large amounts.

PHTHALOCYANINE GREEN: Avoid strong oxidizing agents such as peroxides, chlorates, perchlorates, nitrates, & permanganates. Oxidizing materials may vigorously evolve oxygen in large amounts.

CONDITIONS TO AVOID:

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

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HAZARDOUS DECOMPOSITION PRODUCTS:

CARBON: Carbon monoxide, carbon dioxide and small amounts of sulfur containing gases when burning.

COPPER COMPOUNDS: When involved in a fire, burning organic pigments may evolve noxious fumes which may include Carbon monoxide, nitrous oxides or other toxic compounds, depending on the pigment type.

PHTHALOCYANINE BLUE: When involved in a fire or exposed to high temperatures for an extended period of time, organic pigments may smolder or burn evolving noxious fumes which can include oxides of nitrogen and carbon, or hydrogen chloride (HCl), depending on the pigment type.

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 |
|---|-------------|-------------|------------|-----------|----------|
| C. I. Pigment Green 7 | N/est | N/est | N/est | N/est | N/est |
| Titanium Dioxide | 10.00 mg/M3 | N/est | N/est | N/est | 10 mg/M3 |
| C.I. Pigment Blue 15 (Copper Phthalocyanine Blue) | N/est | N/est | N/est | N/est | N/est |
| Carbon Black | 3.50 mg/M3 | N/est | N/est | N/est | 3 mg/M3 |

Particulates not otherwise classified/regulated may be subject to:

| ACGIH/TLV | OSHA/PEL |
|-----------|----------------|
| 10 mg/M3 | Total 15 mg/M3 |
| 3 mg/M3 | Resp. 5 mg/M3 |

RESPIRATORY PROTECTION:

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

VENTILATION:

Mechanical Ventilation Suggested.

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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 dust or spray. Use with good ventilation. Wash thoroughly after use. 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 storage area. Do not store near food or feed.

OTHER PRECAUTIONS:

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

SECTION X - REGULATORY INFORMATION**SARA TITLE III SECTION 313:**

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right to Know Act of 1986 and of 40 CFR 372:

| Ingredient Name | CAS Number |
|-----------------------|------------|
| C. I. Pigment Green 7 | 1328-53-6 |

-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 |
|-----------------------|------------|
| C. I. Pigment Green 7 | 1328-53-6 |

May contain traces of Polychlorinated Biphenyls (PCB's).

MASSACHUSETTS SUBSTANCE LIST:

Copper compounds are listed.

Phthalocyanine Pigments may contain traces of Polychlorinated Biphenyls (PCB's).

DISCLAIMER:

The information and recommendations contained in this Material Safety Data Sheet are based on the information available to us at the time of printing.

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onable current opinion on the
warranty, guaranty or repres
or sufficiency of the inform
decide what safety measures a
ither alone or in combination