

MATERIAL SAFETY DATA SHEET

Code Number: 33-31052

Rev.: 06-APR-1999

MSDS Print

SECTION I - PRODUCT AND COMPANY INFORMATION

Product Name: BLUE
Chemical Name: MIXTURE

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

Contact: Dave Malysa
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1-216-641-5324
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Responsible Person: Dave Malysa
Regulatory & Environmental Affairs

Trade Name: BLUE

SECTION II - HAZARDOUS INFORMATION

Ingredient Name	CAS Number	Percentage
Titanium Dioxide	13463-67-7	10 - 15
Pigment Blue 15 (Copper Phthalocyanine Blue)	147-14-8	3 - 5

ALL Ingredients in this product are listed in the T.S.C.A. 1572.

SECTION III - PHYSICAL DATA

Boiling Point: Not Available
Vapor Pressure (mmHg): 1.0 @ 68.°F
Evaporation Rate: Not Available
Relative Density: Not Applicable
Relative Volume: Not Applicable
Specific Gravity: 1.321

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flammability Class: Not Available
Flash Point: 198.°F
Pensky-Martens Closed Cup ASTM D 93
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

Extinguisher Media: ABC Extinguisher, Carbon Dioxide, Foam

Special fire fighting procedures:

Water or foam may cause frothing when applied to liquid

flash points above 100 degrees C. The frothing may be

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

ing of vapors or products of combustion. Wear an appropriate

contained breathing apparatus and protective clothing.

UNUSUAL FIRE & EXPLOSION HAZARDS:**PHTHALOCYANINE BLUE:** When involved in a fire or exposed

temperatures for an extended period of time, organic

material may smolder or burn evolving noxious fumes which can include

nitrogen and carbon, or other toxic compounds.

SECTION V - HEALTH HAZARD DATA**PERMISSIBLE EXPOSURE LEVEL:**

See Section VIII.

EFFECTS OF OVEREXPOSURE:**TITANIUM DIOXIDE:** Results of a Dupont epidemiology study

indicated 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 concluded

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.

Keep individual comfortably warm but not hot. Use oxygen

respiration as required. See a physician if symptoms

are present or persists.

SKIN: 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.

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.

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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

COMPATIBILITY:

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

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

CONDITIONS TO AVOID:

Keep materials with ester polyol from strong oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS:

Combustion will produce carbon dioxide and carbon monoxide.

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 hydrogen cyanide, 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

For small spills: 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 PEL
Vanadium Dioxide	10.00 mg/M3	N/est	N/est	N/est
Pigment Blue 15 (Copper phthalocyanine Blue)	N/est	N/est	N/est	N/est

Respirator not otherwise classified/regulating may be substituted for:

ACGIH/TLV	OSHA/PEL
10 mg/M3 Total	15 mg/M3

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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.

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 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

DISCLAIMER:

The information and recommendations contained in this Material Safety Data Sheet have been compiled from sources believed to be reliable to represent the most reasonable current opinion on the subject at the time 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.