



MATERIAL SAFETY DATA SHEET

LF only

BAYER CORPORATION
PRODUCT SAFETY & REGULATORY AFFAIRS
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TRANSPORTATION EMERGENCY
CALL CHEMTREC: 800-424-9300
DISTRICT OF COLUMBIA: 202-483-7616

NON-TRANSPORTATION
BAYER EMERGENCY PHONE...: (412) 923-1800
BAYER INFORMATION PHONE...: (800) 662-2927

1. CHEMICAL PRODUCT IDENTIFICATION:

PRODUCT NAME.....: Bayferrox 180M Pigment
PRODUCT CODE.....: AB80
CHEMICAL FAMILY.....: Inorganic Metal Oxide
COLOR INDEX NAME....: Pigment Red 101
COLOR INDEX NUMBER..: 77491
DCMA NUMBER.....: 3-06-7
CHEMICAL NAME.....: Iron Oxide
SYNONYMS.....: Iron (III) Oxide
FORMULA.....: Fe2O3

2. COMPOSITION/INFORMATION ON INGREDIENTS:

INGREDIENT NAME
/CAS NUMBER EXPOSURE LIMITS CONCENTRATION (%)

***** HAZARDOUS INGREDIENTS *****

Iron (III) Oxide {C.I. Pigment Red 101} - from Bayferrox 110
1309-37-1 OSHA : 15.00 mg/m3 *TWA-total dust Proprietary %
5.00 mg/m3 *TWA-respirable dust
ACGIH: 5.00 mg/m3 TWA (dusts & fume)

* This PEL applies to Nuisance Particulates. Fe2O3 is considered to be a Nuisance Particulate by OSHA.

Silicon Dioxide (Amorphous)
7631-86-9 OSHA : 80.00 mg/m3 *TWA Approx. 1 %
ACGIH: 10.00 mg/m3 TWA

divide 80 mg/m3 by % SiO2 found in the air sample to obtain the PEL

3. HAZARDS IDENTIFICATION:

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*                               EMERGENCY OVERVIEW                               *
*                                                                           *
* CAUTION! Color: Red; Form: Solid; Powder; Odor: Odorless; *
* May cause mechanical irritation to the eyes and respiratory *
* tract; Irritating gases/fumes may be given off during *
* burning or thermal decomposition. *
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POTENTIAL HEALTH EFFECTS:

ROUTE(S) OF ENTRY.....: Skin Contact; Eye Contact; Inhalation

HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE:

ACUTE EFFECTS OF EXPOSURE.....: On the basis of Animal Toxicity Data (see Section 11), we would expect this product to be non-irritating to the eyes and skin and to be essentially non-toxic by ingestion. However, exposure to airborne dust may reduce visibility and may cause mechanical irritation to the eyes and respiratory tract. Rigorous skin cleaning necessary for removal of dust can cause irritation.

CHRONIC EFFECTS OF EXPOSURE...: Prolonged inhalation (6 to 10 years) of iron oxide fume has been reported to produce changes in lung x-rays of exposed individuals. This condition, siderosis, is considered to be a benign pneumoconiosis that exhibits no adverse health effects. Siderosis has been observed among occupations such as arc welders exposed to iron oxide fumes. In addition to iron oxide fume, iron oxide dust has also been reported as being able to cause a benign pneumoconiosis. However, no studies were reported that would permit a correlation between exposure level and the occurrence of x-ray changes in the lung. To the best of our knowledge, this condition has not been observed after prolonged exposure to synthetically produced iron oxide pigments. The SARA 311/312 category selected in Section 15 reflects the prolonged inhalation symptoms of Siderosis that is the basis for the ACGIH TLV. This effect, based on available information, has not been seen among workers making or using synthetic iron oxide pigments. Prolonged inhalation of amorphous silica may produce x-ray changes in the lungs without disability.

CARCINOGENICITY

NTP.....: Not listed
IARC.....: Not listed
OSHA.....: Not regulated

MEDICAL CONDITIONS

AGGRAVATED BY EXPOSURE.....: Persons with preexisting eye or skin conditions or impaired pulmonary function may be more susceptible to the effects of this product.

4. FIRST AID MEASURES:

FIRST AID FOR EYES.....: In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician if irritation persists.

FIRST AID FOR SKIN.....: In case of skin contact, immediately flush skin with water. Wash clothing before reuse. Call a physician if irritation occurs.

FIRST AID FOR INHALATION: Remove from dusty area to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

FIRST AID FOR INGESTION.: Immediately contact a physician.

5. FIRE FIGHTING MEASURES:

FLASH POINT.....: Not Applicable.

AUTO-IGNITION TEMPERATURE.....: Not Applicable.

EXTINGUISHING MEDIA.....: Material is not combustible. Use extinguishing media suitable for other combustible materials in the area.

SPECIAL FIRE FIGHTING PROCEDURES: None.

6. ACCIDENTAL RELEASE MEASURES:

SPILL OR LEAK PROCEDURES.....: Vacuum or scoop material into an appropriately marked container for reclamation or disposal. Avoid excessive generation of dust. If dust is generated, use appropriate respiratory protection.

7. HANDLING AND STORAGE:

STORAGE TEMPERATURE (MIN/MAX): Ambient/Ambient.

SHELF LIFE.....: Unlimited in tightly closed containers.

SPECIAL SENSITIVITY.....: None known.

HANDLING/STORAGE PRECAUTIONS: Store dry at ambient temperatures away from food and beverages. Avoid breathing dust. Avoid contact with eyes and skin. Wash thoroughly after handling.

8. PERSONAL PROTECTION:

EYE PROTECTION REQUIREMENTS.....: Safety glasses are recommended.
SKIN PROTECTION REQUIREMENTS.....: Rubber, cloth, or plastic gloves are recommended to reduce skin contact where appropriate for job conditions.
VENTILATION REQUIREMENTS.....: Use local exhaust ventilation to maintain air levels below the exposure limits shown in Section 2 if dusting is a problem.
RESPIRATOR REQUIREMENTS.....: Work ambient concentrations should be monitored and if the exposure limits shown in Section 2 are exceeded, a NIOSH approved respirator for dusts should be worn.
ADDITIONAL PROTECTIVE MEASURES.....: Eye wash stations and washing facilities should be available. Employees should wash their hands and face before eating, drinking or using tobacco products.

9. PHYSICAL AND CHEMICAL PROPERTIES:

PHYSICAL FORM.....: Solid; Powder
COLOR.....: Red
ODOR.....: Odorless
pH: 4 to 8 @ 50 g/L H₂O in aqueous suspension
BOILING POINT.....: Not Established
MELTING/FREEZING POINT....: Greater than 1832 F (1000 C)
VISCOSITY.....: Not Applicable
SOLUBILITY IN WATER: Essentially Insoluble
SPECIFIC GRAVITY: Greater than 1
BULK DENSITY.....: 500 to 1000 kg/m³ @ 68 F (20 C)
VAPOR PRESSURE: Not Applicable

10. STABILITY AND REACTIVITY:

STABILITY.....: This is a stable material.
HAZARDOUS POLYMERIZATION...: Will not occur.
INCOMPATIBILITIES.....: None known.
INSTABILITY CONDITIONS....: None known.
DECOMPOSITION TEMPERATURE..: Greater than 248 F (120 C)
DECOMPOSITION PRODUCTS.....: None known.

11. TOXICOLOGICAL INFORMATION:

TOXICITY DATA FOR: Iron Oxide

ACUTE TOXICITY

ORAL LD50.....: Greater than 5000 mg/kg (Rat). (1)
EYE EFFECTS.....: Non-irritating to rabbit eyes. (1)
SKIN EFFECTS.....: Non-irritating to rabbit skin (24 hrs.). (1)

1 Based on results from a similar product.

12. ECOLOGICAL INFORMATION:

ECOLOGY DATA FOR: Iron Oxide

AQUATIC TOXICITY.....: LCo: Greater than 1000 mg/l Golden orfe
(Leuciscus idus). (1) 1 Based on results from a similar product.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD.....: Material which cannot be recycled into your
process should be landfilled in accordance with federal, state and local
environmental control regulations.

14. TRANSPORTATION INFORMATION:

TECHNICAL SHIPPING NAME.....: Inorganic Oxide
FREIGHT CLASS BULK.....: Iron Oxide, NOI
FREIGHT CLASS PACKAGE.....: Iron Oxide, NOI
PRODUCT LABEL.....: General Purpose Label #339

DOT (DOMESTIC SURFACE)

HAZARD CLASS OR DIVISION: Non-Regulated

IMO / IMDG CODE (OCEAN)

HAZARD CLASS DIVISION NUMBER...: Non-Regulated

IMO / IMDG CODE (continued)

ICAO / IATA (AIR)

HAZARD CLASS DIVISION NUMBER...: Non-Regulated

15. REGULATORY INFORMATION:

OSHA STATUS.....: This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

TSCA STATUS.....: On TSCA Inventory

CERCLA REPORTABLE QUANTITY...: None.

SARA TITLE III:

SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES...: None.

SECTION 311/312 HAZARD CATEGORIES.....: Delayed Health Hazard

SECTION 313 TOXIC CHEMICALS.....: None.

RCRA STATUS.....: If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24)

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

COMPONENT NAME /CAS NUMBER	CONCENTRATION	STATE CODE
Iron (III) Oxide {C.I. Pigment Red 101} - from Bayferrox 110 1309-37-1	Proprietary %	PA1, MA, NJ4
Silicon Dioxide (Amorphous) 7631-86-9	Approx. 1 %	PA1, MA, NJ1
Arsenic 7440-38-2	Max 50 ppm*	CA3, MA
Nickel 7440-02-0	Max 250 ppm	CA1, MA
Lead 7439-92-1	Max 10 ppm	CA3

- CA1 = Warning! This chemical is known to the State of California to cause cancer.
 CA3 = Warning! This chemical is known to the State of California to cause cancer and birth defects or other reproductive harm.
 MA = Massachusetts Hazardous Substance List
 NJ1 = New Jersey Hazardous Substance List
 NJ4 = New Jersey Other - included in 5 predominant ingredients > 1%
 PA1 = Pennsylvania Hazardous Substance List

* Please note that these were random sample analyses and content may vary from batch to batch. ** Based upon random TCLP analyses.

 16. OTHER INFORMATION:

HMIS RATINGS: Health Flammability Reactivity
 1 0 0
 0=Minimal 1=Slight 2=Moderate 3=Serious 4=Severe

Bayer's method of hazard communication is comprised of Product Labels and Material Safety Data Sheets. HMIS ratings are provided by Bayer as a customer service.

REASON FOR ISSUE.....: Update to 16 Chapter
 PREPARED BY.....: R. Ruppel-Kerr
 APPROVED BY.....: J. M. Mostowy
 APPROVAL DATE.....: 01/12/1998
 SUPERSEDES DATE.....: 01/15/1996
 MSDS NUMBER.....: 09046

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Product Code: AB80
 Approval date: 01/12/1998

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