

SAFETY DATA SHEET



LANXESS Corporation

Product Safety & Regulatory Affairs
111 RIDC Park West Drive
Pittsburgh, PA 15275-1112
USA

TRANSPORTATION EMERGENCY

CALL CHEMTREC: (800) 424-9300
INTERNATIONAL: (703) 527-3887

NON-TRANSPORTATION

LANXESS Emergency Phone: (800) 410-3063
LANXESS Information Phone: (800) LANXESS

1. Product and Company Identification

Product Name: BAYFERROX 180M
Material Number: 2306747
Chemical Family: Inorganic Metal Oxide
Color Index Name: Pigment Red 101
Color Index-No.: 77491
Chemical Name: Iron Oxide
Synonyms: Iron (III) Oxide
Formula: Fe₂O₃

2. Hazards Identification

Emergency Overview

Color: Red **Form:** solid Powder **Odor:** Odorless.
Product poses little or no hazard if spilled. May cause mechanical irritation (abrasion).
May cause lung damage.

Potential Health Effects

Primary Routes of Entry: Inhalation, Skin Contact, Eye Contact, Ingestion

Medical Conditions Aggravated by Exposure: Respiratory disorders

HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE

Inhalation

Acute Inhalation

For Component: Iron (III) Oxide

May cause mechanical irritation.

For Component: Amorphous Silica

May cause mechanical irritation.

Chronic Inhalation

For Component: Amorphous Silica

Prolonged inhalation of amorphous silica may produce x-ray changes in the lungs without disability.

Skin

Acute Skin

For Component: Iron (III) Oxide

May cause mechanical irritation.

Eye

Acute Eye

For Component: Iron (III) Oxide

May cause mechanical irritation.

For Component: Amorphous Silica

May cause mechanical irritation.

Other Effects of Exposure

For Component: Iron (III) Oxide

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 where iron oxide fumes are present. To the best of our knowledge, this condition has not been observed after prolonged exposure to iron oxide pigments.

Carcinogenicity:

No Carcinogenic substances as defined by IARC, NTP and/or OSHA.

3. Composition/Information on Ingredients

Hazardous Components

<u>Weight %</u>	<u>Components</u>	<u>CAS-No.</u>
>=95%	Iron (III) Oxide	1309-37-1
4%	Amorphous Silica	7631-86-9

4. First Aid Measures

Eye Contact

In case of contact, flush eyes with plenty of lukewarm water. Get medical attention if irritation develops.

Skin Contact

In case of skin contact, wash affected areas with soap and water.

Inhalation

If inhaled, remove to fresh air. Get medical attention if irritation develops.

Ingestion

If ingested, do not induce vomiting unless directed to do so by medical personnel. Get medical attention.

5. Fire-Fighting Measures

Suitable Extinguishing Media: Material is not combustible. Use extinguishing media suitable for other combustible materials in the area.

Special Fire Fighting Procedures

Firefighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes.

6. Accidental release measures

Spill and Leak Procedures

Spills should be swept up and placed in appropriate containers for disposal. Clean up promptly by scoop or vacuum. Avoid creating dusty conditions.

7. Handling and Storage

Storage Period

If stored under the correct conditions (no climatic influence, kept dry and no extreme fluctuations in temperature) we expect that our products would have a shelf life of 5 years provided, however, the material has been stored correctly and the packaging materials remain unchanged.

Handling/Storage Precautions

Protect against weathering. Store in a dry place and avoid extreme fluctuations in temperature. Special conditions for opened packaging: Close bags after use to prevent the absorption of moisture and contamination.

Further Info on Storage Conditions

Material can be stored safely at ambient temperatures.

8. Exposure Controls / Personal Protection

Iron (III) Oxide (1309-37-1)

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

PEL: 10 mg/m³ (Fume.)

US. ACGIH Threshold Limit Values

Time Weighted Average (TWA): 5 mg/m³ (Respirable fraction.)

US. ACGIH Threshold Limit Values

Hazard Designation: Group A4 Not classifiable as a human carcinogen.

Amorphous Silica (7631-86-9)

US. OSHA Table Z-3 (29 CFR 1910.1000)

Time Weighted Average (TWA): 20 millions of particles per cubic foot of air

US. OSHA Table Z-3 (29 CFR 1910.1000)

Time Weighted Average (TWA): 0.8 mg/m³ The value is calculated from a specified equation using a value of 100%. Lower values of % will give higher exposure limits.

See regulation for specific equation.

Industrial Hygiene/Ventilation Measures

Under normal conditions of use, special ventilation is not required.

Respiratory Protection

The following respirator is recommended if airborne concentrations exceed the appropriate standard/guideline., NIOSH approved, air-purifying particulate respirator with N-95 filters.

Eye Protection

safety glasses.

Skin and body protection

No special skin protection requirements during normal handling and use.

Additional Protective Measures

Employees should wash their hands and face before eating, drinking, or using tobacco products. Educate and train employees in the safe use and handling of this product.

9. Physical and chemical properties

Form:	solid
Appearance:	Powder
Color:	Red
Odor:	Odorless
pH:	4 - 8 @ 50 g/l
Melting Point:	Begins at 1,000 °C (1,832 °F)
Flash Point:	not applicable
Lower Explosion Limit:	Not Established
Upper Explosion Limit:	Not Established
Vapor Pressure:	not applicable
Specific Gravity:	4 - 5 @ 20 °C (68 °F)
Solubility in Water:	Insoluble
Autoignition Temperature:	Not Applicable
Viscosity, Dynamic:	not applicable
Bulk Density:	300 - 1,000 kg/m ³

10. Stability and Reactivity

Hazardous Reactions

Hazardous polymerization does not occur.

Stability

Stable

Materials to avoid

None known.

Hazardous decomposition products

None known.

11. Toxicological Information

Toxicity Data for Iron (III) Oxide

Acute Oral Toxicity

LD50: > 5,000 mg/kg (Rat)

Acute dermal toxicity

LD50: 5,500 mg/kg (Rat)

Skin Irritation

rabbit, Acute Dermal Irritation, Exposure Time: 24 hrs, Non-irritating

Eye Irritation

rabbit, Acute Eye Irritation Study, Non-irritating

Toxicity Data for Amorphous Silica**Acute Oral Toxicity**

LD50: > 5,000 mg/kg (Rat)

Acute Inhalation Toxicity

LC50: > 2.2 mg/l, 1 hrs (Rat)

Acute dermal toxicity

LD50: > 5,000 mg/kg (rabbit)

Skin Irritation

rabbit, Non-irritating

Eye Irritation

rabbit, Non-irritating

Sensitization

dermal: non-sensitizer (Guinea pig, Magnusson/Kligmann (Maximization Test))

Repeated Dose Toxicity

90 Days, inhalation: NOAEL: < 0.001 mg/l, (Rat)

Mutagenicity

Genetic Toxicity in Vitro:

Ames: negative (Salmonella typhimurium, Metabolic Activation: with/without)

Genetic Toxicity in Vivo:

Cytogenetic assay: negative (Rat)

Carcinogenicity

Rat, Male/Female, oral, 2 Years, daily

negative

12. Ecological Information**Ecological Data for Iron (III) Oxide****Acute and Prolonged Toxicity to Fish**

LC0: > 1,000 mg/l (Golden orfe (Leuciscus idus), 48 hrs)

Toxicity to Microorganisms

EC0: > 5,000 mg/l, (Pseudomonas fluorescens, 24 hrs)

Toxicity Other Non-Mammal Terrestrial Species

No Harmful effects

Ecological Data for Amorphous Silica

Biodegradation

The methods for determining the biological degradability are not applicable to inorganic substances.

Bioaccumulation

Not expected to bio-accumulate.

Acute and Prolonged Toxicity to Fish

LC50: 5,000 mg/l (Zebra fish (Brachydanio rerio), 96 hrs)

Calculated value

Acute Toxicity to Aquatic Invertebrates

EC0: 10,000 mg/l (Water flea (Daphnia magna), 24 hrs)

EC50: 7,600 mg/l (Ceriodaphnia sp, 48 hrs)

Calculated value

Toxicity to Aquatic Plants

EC50: 440 mg/l, End Point: growth (Green algae (Selenastrum capricornutum), 72 hrs)

Toxicity to Microorganisms

EC50: 8,700 mg/l, (Photobacterium phosphoreum, 15 min)

13. Disposal considerations

Waste Disposal Method

Waste disposal should be in accordance with existing federal, state, provincial, and/or local environmental control laws.

Empty Container Precautions

Recondition or dispose of empty container in accordance with governmental regulations.

14. Transport information

Land transport (DOT)

Non-Regulated

Sea transport (IMDG)

Non-Regulated

Air transport (ICAO/IATA)

Non-Regulated

15. Regulatory Information

United States Federal Regulations

OSHA Hazcom Standard Rating: Hazardous

US. Toxic Substances Control Act: Listed on the TSCA Inventory.

US. EPA CERCLA Hazardous Substances (40 CFR 302):

Components

None

SARA Section 311/312 Hazard Categories:

Chronic Health Hazard

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A):

Components

None

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required:

Components

None

US. EPA Resource Conservation and Recovery Act (RCRA) Composite List of Hazardous Wastes and Appendix VIII Hazardous Constituents (40 CFR 261):

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)

State Right-To-Know Information

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.

Potential exposure to some or all of the California Proposition 65 chemicals in this product have been determined to be below the No Significant Risk Level (NSRL)., The concentrations reported below in units of parts per million (ppm) or parts per billion (ppb) are maximum values.

Massachusetts, New Jersey or Pennsylvania Right to Know Substance Lists:

<u>Weight %</u>	<u>Components</u>	<u>CAS-No.</u>
>=95%	Iron (III) Oxide	1309-37-1
4%	Amorphous Silica	7631-86-9

New Jersey Environmental Hazardous Substances List and/or New Jersey RTK Special Hazardous Substances Lists:

<u>Weight %</u>	<u>Components</u>	<u>CAS-No.</u>
0.7%	Manganese	7439-96-5
0.29%	Aluminum	7429-90-5

Pennsylvania Right to Know Special Hazard Substance List:

<u>Weight %</u>	<u>Components</u>	<u>CAS-No.</u>
0.075%	Chromium	7440-47-3
0.04%	Nickel (Ni)	7440-02-0

MA Right to Know Extraordinarily Hazardous Substance List:

<u>Weight %</u>	<u>Components</u>	<u>CAS-No.</u>
-----------------	-------------------	----------------

0.075%	Chromium	7440-47-3
0.04%	Nickel (Ni)	7440-02-0
50 ppm	Arsenic	7440-38-2

California Prop. 65:

To the best of our knowledge, this product does not contain any of the listed chemicals, which the state of California has found to cause cancer, birth defects or other reproductive harm.

16. Other Information

NFPA 704M Rating

Health	1
Flammability	0
Reactivity	0
Other	

0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme

HMIS Rating

Health	1*
Flammability	0
Physical Hazard	0

0=Minimal 1=Slight 2=Moderate 3=Serious 4=Severe

* = Chronic Health Hazard

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

Contact Person: Product Safety Department
 Telephone: (800) LANXESS
 MSDS Number: R304533
 Version Date: 06/18/2008
 Report Version: 4.0

This information is furnished without warranty, express or implied. This information is believed to be accurate to the best knowledge of LANXESS Corporation. The information in this MSDS relates only to the specific material designated herein. LANXESS Corporation assumes no legal responsibility for use of or reliance upon the information in this MSDS.

Changes since the last version will be highlighted in the margin. This version replaces all previous versions.