

MATERIAL SAFETY DATA SHEET

LANXESS

Energizing Chemistry

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 Product Safety & Regulatory Affairs
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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: 181
Material Number: 2469913
Chemical Family: Inorganic Metal Oxide
Color Index Name: C.I. Pigment Red 101
Color Index-No.: 77491
Chemical Name: Iron Oxide
Synonyms: Natural red iron (III) oxide
CAS-No.: 1309-37-1
Formula: Mixture of Fe₂O₃, SiO₂ and Al₂O₃.SiO₂.xH₂O

2. Hazards Identification**Emergency Overview**

WARNING! Color: Red **Form:** solid Powder **Odor:** Odorless.
 May cause respiratory tract irritation. May cause skin irritation. May cause eye irritation. May cause lung damage. May cause nervous system damage. Contains material which can cause cancer.

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: Kaolin

May cause respiratory tract irritation with symptoms of coughing, sore throat and runny nose.

For Component: Crystalline Quartz Silica

May be harmful by inhalation. May cause mechanical irritation.

Chronic Inhalation

For Component: Kaolin

Prolonged inhalation of excessive levels of dust may cause pneumoconiosis.

Skin

Acute Skin

For Component: Kaolin

May cause mechanical irritation.

For Component: Crystalline Quartz Silica

May cause mechanical irritation.

Eye

Acute Eye

For Component: Kaolin

May cause mechanical irritation.

For Component: Crystalline Quartz Silica

May cause mechanical irritation.

Ingestion

Acute Ingestion

For Component: Kaolin

Not expected to be harmful if swallowed.

For Component: Crystalline Quartz Silica

Not expected to be harmful if swallowed.

General Effects of Exposure

Acute Effects of Exposure

For Component: Crystalline Quartz Silica

Exposure to Silica, Quartz can cause a very serious lung disease called Silicosis with cough, shortness of breath, and changes in chest x-ray. The earliest symptoms of silicosis may include: Shortness of breath, coughing, wheezing, fatigue, chest pain, loss of appetite and fever.

Chronic Effects of Exposure

For Component: Crystalline Quartz Silica

Excessive exposure to airborne crystalline silica can cause fibrotic lung damage, with scarring of the lungs with cough and shortness of breath. This is called "Silicosis". This is generally a slowly developing fibrotic disease as symptoms are usually delayed for 10 years or more. Symptoms are dyspnea, chest pain, breathlessness, and cough. The chronic lung scarring developed from the silica dust causes a progressive massive fibrosis. This may lead to increased susceptibility to tuberculosis.

Carcinogenicity:

Crystalline Quartz Silica

NTP - Hazard Designation: Known carcinogen.

IARC - Overall evaluation: 1 Carcinogen. Human carcinogen.

3. Composition/Information on Ingredients

Hazardous Components

<u>Weight %</u>	<u>Components</u>	<u>CAS-No.</u>
3 - 7%	Kaolin	1332-58-7
1 - 5%	Crystalline Quartz Silica	14808-60-7
1 - 5%	Aluminum	7429-90-5
1 - 5%	Manganese	7439-96-5

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

Unlimited in tightly closed containers.

Handling/Storage Precautions

Handle in accordance with good industrial hygiene and safety practices. Wash thoroughly after handling. Keep container closed when not in use. Avoid breathing dust.

Further Info on Storage Conditions

Material can be stored safely at ambient temperatures.

8. Exposure Controls / Personal Protection

Kaolin (1332-58-7)

- US. ACGIH Threshold Limit Values
Time Weighted Average (TWA): 2 mg/m³ (Respirable fraction.)The value is for particulate matter containing no asbestos and <1% crystalline silica.
- US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
PEL: 5 mg/m³ (Respirable fraction.)
- US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
PEL: 15 mg/m³ (Total dust.)
- US. ACGIH Threshold Limit Values
Hazard Designation: Group A4 Not classifiable as a human carcinogen.

Crystalline Quartz Silica (14808-60-7)

- US. ACGIH Threshold Limit Values
Time Weighted Average (TWA): 0.05 mg/m³ (Respirable fraction.)
- US. OSHA Table Z-2 (29 CFR 1910.1000)
Time Weighted Average (TWA): 10 mg/m³ (Respirable., Divide 10 mg/m³ by % SiO₂ + 2 determined from air sample analysis.)
- US. OSHA Table Z-2 (29 CFR 1910.1000)
Time Weighted Average (TWA): 30 mg/m³ (Total dust., Divide 30 mg/m³ by % SiO₂ + 2 determined from air sample analysis.)
- US. ACGIH Threshold Limit Values
Hazard Designation: Group A2 Suspected human carcinogen.

Aluminum (7429-90-5)

- US. ACGIH Threshold Limit Values
Time Weighted Average (TWA): 10 mg/m³ (Dust.)
- US. ACGIH Threshold Limit Values
Time Weighted Average (TWA): 5 mg/m³ as Al (Pyrophoric powder.)
- US. ACGIH Threshold Limit Values
Time Weighted Average (TWA): 5 mg/m³ as Al (Welding fume.)
- US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
PEL: 15 mg/m³ as Al (Total dust.)
- US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
PEL: 5 mg/m³ as Al (Respirable dust.)

Manganese (7439-96-5)

- US. ACGIH Threshold Limit Values
Time Weighted Average (TWA): 0.2 mg/m³ as Mn
- US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
Ceiling Limit Value: 5 mg/m³ as Mn (Fume.)

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)
Boiling Point/Range:	Not Applicable
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:	Less than 1%
Autoignition Temperature:	Not Applicable
Decomposition Temperature:	Not established
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 Hematite

Acute Oral Toxicity

> 5,000 mg/kg

Toxicity Data for Kaolin

Acute Oral Toxicity

LD50: 15 g/kg (Human)

Estimated Value

Toxicity Data for Crystalline Quartz Silica

Mutagenicity

Genetic Toxicity in Vitro:

Ames: Negative results were reported in various in vitro studies. (Salmonella typhimurium, Metabolic Activation: with/without)

Genetic Toxicity in Vivo:

Sister Chromatid Exchange: ambiguous (hamster)

Carcinogenicity

rat, Male/Female, inhalation, 2 years, 6 hrs/day 5 days/week
positive

12. Ecological Information

No information available.

13. Disposal considerations

Waste Disposal Method

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

Empty Container Precautions

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

14. Transportation 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: This material is included in the TSCA Inventory as a naturally occurring chemical substance as described in 40 CFR 710.4 (b).

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

Components

Manganese Included in the regulation but with no data values. See regulation for further details

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

Aluminum

Manganese

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.

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

<u>Weight %</u>	<u>Components</u>	<u>CAS-No.</u>
>=1%	Hematite	1317-60-8
3 - 7%	Kaolin	1332-58-7
1 - 5%	Crystalline Quartz Silica	14808-60-7
1 - 5%	Aluminum	7429-90-5
1 - 5%	Manganese	7439-96-5

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>
1 - 5%	Aluminum	7429-90-5
1 - 5%	Manganese	7439-96-5
<1%	Phosphorus	7723-14-0
<1%	Magnesium	7439-95-4
<1%	Barium	7440-39-3

Pennsylvania Right to Know Special Hazard Substance List:

<u>Weight %</u>	<u>Components</u>	<u>CAS-No.</u>
<0.1%	Nickel (Ni)	7440-02-0

California Prop. 65:

Warning! This product contains chemical(s) known to the State of California to be Carcinogenic. - Developmental toxin. - Female reproductive toxin. - Male reproductive toxin.

<u>Weight %</u>	<u>Components</u>	<u>CAS-No.</u>
1 - 5%	Crystalline Quartz Silica	14808-60-7
<0.1%	Lead	7439-92-1
<0.1%	Nickel (Ni)	7440-02-0
1 - 5 ppm	Mercury	7439-97-6
10 - 100 ppm	Arsenic	7440-38-2
1 - 10 ppm	Beryllium	7440-41-7

16. Other Information**NEPA 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: R305102
Version Date: 11/18/2004
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