

Safety Data Sheet

according to 29 CFR 1910.1200(g)

Hematite

Revision date: 06.04.2020

Page 1 of 7

1. Identification

Product identifier

Hematite

Substance name: Iron (III) oxide (hematite)
CAS No: 1309-37-1

Recommended use of the chemical and restrictions on use

Use of the substance/mixture

test dust

Details of the supplier of the safety data sheet

Company name: Powder Technology Inc.
Street: 1300 Grey Fox Road
Place: USA-55112 Arden Hills, MN
Telephone: +1 952 894 -8737
e-mail: sales@powdertechologyinc.com
Internet: http://www.powdertechologyinc.com

Emergency phone number: +1 952 894 -8737

2. Hazard(s) identification

Classification of the chemical

29 CFR Part 1910.1200

This substance is not classified as hazardous in accordance with Regulation 29 CFR 1910.1200(d).

Label elements

Additional advice on labelling

GHS label elements, including precautionary statements: none

Hazards not otherwise classified

No information available.

3. Composition/information on ingredients

Substances

Chemical characterization

Powder

Mineral bound:
Iron (III) oxide (hematite) > 99,4 %
CAS No. 1309-37-1

4. First-aid measures

Description of first aid measures

General information

In all cases of doubt, or when symptoms persist, seek medical advice.

After inhalation

Provide fresh air. In case of irregular breathing or respiratory arrest provide artificial respiration. If experiencing respiratory symptoms: Call a doctor.

After contact with skin

Wash with plenty of water. Take off immediately all contaminated clothing and wash it before reuse. In case of skin reactions, consult a physician.

Safety Data Sheet

according to 29 CFR 1910.1200(g)

Hematite

Revision date: 06.04.2020

Page 2 of 7

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water. Remove contact lenses, if present and easy to do. Continue rinsing. In case of eye irritation consult an ophthalmologist.

After ingestion

Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person or a person with cramps. Call a physician immediately.

Most important symptoms and effects, both acute and delayed

Dust is irritating to the respiratory tract. Inhalation of fumes may cause metal fume fever, which is characterized by flu-like symptoms with metallic taste, fever, chills, cough, weakness, chest pain, muscle pain and increased white blood cell count. Ingestion may cause severe and permanent damage to the digestive tract. May cause liver damage. Causes severe pain, nausea, vomiting, diarrhea and shock. May cause hemorrhaging of the digestive tract.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

Carbon dioxide (CO₂).

Specific hazards arising from the chemical

Non-flammable.

In case of fire: Gases/vapours, irritant; Gases/vapours, toxic.

Special protective equipment and precautions for fire-fighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

Additional information

Knock down dust with water spray jet. Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation. Avoid dust formation. Do not breathe dust. Avoid contact with skin, eyes and clothes. Use personal protection equipment. Remove persons to safety.

Environmental precautions

No special environmental measures are necessary.

Methods and material for containment and cleaning up

Take up mechanically. Treat the recovered material as prescribed in the section on waste disposal. Collect in closed containers for disposal.

Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

7. Handling and storage

Precautions for safe handling

Advice on safe handling

Provide adequate ventilation. Avoid dust formation. Do not breathe dust. Wear personal protection equipment. Avoid contact with skin, eyes and clothes. Avoid: Generation/formation of dust

Safety Data Sheet

according to 29 CFR 1910.1200(g)

Hematite

Revision date: 06.04.2020

Page 3 of 7

Advice on protection against fire and explosion

Usual measures for fire prevention.

Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed.

Hints on joint storage

Do not store together with: Aluminium, Carbon dioxide., BF5, calcium hypochlorite, Cs2C2, ethylene oxide; oxirane, hydrazine, HCOOOH (Methaneperoxoic acid).

Further information on storage conditions

Do not store at temperatures over: 60 °C / 140°F

8. Exposure controls/personal protection

Control parameters

Exposure limits

CAS No.	Substance	ppm	mg/m ³	f/cc	Category	Origin
1309-37-1	Iron oxide (Fe ₂ O ₃) (respirable fraction)		5		TWA (8 h)	ACGIH-2019
1309-37-1	Iron oxide dust and fume (as Fe)	-	5		TWA (8 h)	REL
1309-37-1	Iron oxide fume	-	10		TWA (8 h)	PEL

Exposure controls

Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means.

Protective and hygiene measures

Do not breathe dust. Avoid dust formation. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff. Avoid contact with skin, eyes and clothes.

Eye/face protection

Wear eye protection/face protection.
Suitable eye protection: Dust protection goggles.

Hand protection

Wear suitable gloves.

The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection

Wear suitable protective clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection. Respiratory protection necessary at: exceeding exposure limit values. Suitable respiratory protective equipment: particulates filter device (DIN EN 143). half-mask with filter (DIN EN 149). Filtering device with filter or ventilator filtering device of type: P 2

Environmental exposure controls

No special environmental measures are necessary.

Safety Data Sheet

according to 29 CFR 1910.1200(g)

Hematite

Revision date: 06.04.2020

Page 4 of 7

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state:	Powder	
Color:	red brown - black	
Odor:	odourless	
pH-Value:		not determined

Changes in the physical state

Melting point/freezing point:	not determined
Initial boiling point and boiling range:	not determined
Flash point:	not applicable

Flammability

Solid:	not determined
Gas:	not applicable

Explosive properties

The product is not: Explosive.

Lower explosion limits:	not determined
Upper explosion limits:	not determined
Ignition temperature:	not determined

Auto-ignition temperature

Solid:	not determined
Gas:	not applicable

Decomposition temperature:	not determined
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Oxidizing properties

Not oxidising.

Vapor pressure:	not applicable
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Density:	5,24 g/cm ³
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Water solubility:	Immiscible
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Solubility in other solvents

not determined

Partition coefficient:	not determined
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Viscosity / dynamic:	not applicable
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Viscosity / kinematic:	not applicable
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Vapor density:	not determined
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Evaporation rate:	not determined
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Other information

Odour threshold: not applicable

10. Stability and reactivity

Reactivity

No hazardous reaction when handled and stored according to provisions.

Chemical stability

Stability:	Stable
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The product is stable under storage at normal ambient temperatures.

Safety Data Sheet

according to 29 CFR 1910.1200(g)

Hematite

Revision date: 06.04.2020

Page 5 of 7

Possibility of hazardous reactions

Hazardous reactions: Will not occur
No known hazardous reactions.

Conditions to avoid

heat.

Incompatible materials

Aluminium, Carbon dioxide., BF₅, calcium hypochlorite, Cs₂C₂, ethylene oxide; oxirane, hydrazine, HCOOOH (Methaneperoxoic acid).

Hazardous decomposition products

In case of fire: Gases/vapours, irritant; Gases/vapours, toxic.

11. Toxicological information

Information on toxicological effects

Route(s) of Entry

Inhalation

Acute toxicity

Based on available data, the classification criteria are not met.

Irritation and corrosivity

Based on available data, the classification criteria are not met.

Sensitizing effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

Specific target organ toxicity (STOT) - single exposure

Based on available data, the classification criteria are not met.

Specific target organ toxicity (STOT) - repeated exposure

Based on available data, the classification criteria are not met.

Carcinogenicity (OSHA):

Not listed.

Carcinogenicity (IARC):

Ferric oxide (CAS 1309-37-1) is listed in group 3.

Carcinogenicity (NTP):

Not listed.

Aspiration hazard

Based on available data, the classification criteria are not met.

12. Ecological information

Ecotoxicity

The product is not: Ecotoxic.

Persistence and degradability

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

Bioaccumulative potential

The product has not been tested.

Mobility in soil

The product has not been tested.

Other adverse effects

No information available.

Further information

Avoid release to the environment.

Safety Data Sheet

according to 29 CFR 1910.1200(g)

Hematite

Revision date: 06.04.2020

Page 6 of 7

13. Disposal considerations

Waste treatment methods

Disposal recommendations

Dispose of waste according to applicable legislation.

Contaminated packaging

Wash with plenty of water. Completely emptied packages can be recycled.

14. Transport information

US DOT 49 CFR 172.101

Proper shipping name: No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

UN number: No dangerous good in sense of this transport regulation.

UN proper shipping name: No dangerous good in sense of this transport regulation.

Transport hazard class(es): No dangerous good in sense of this transport regulation.

Packing group: No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

UN number: No dangerous good in sense of this transport regulation.

UN proper shipping name: No dangerous good in sense of this transport regulation.

Transport hazard class(es): No dangerous good in sense of this transport regulation.

Packing group: No dangerous good in sense of this transport regulation.

Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

Special precautions for user

No information available.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

not applicable

15. Regulatory information

U.S. Regulations

National Inventory TSCA

CAS No. 1309-37-1: Yes.

State Regulations

Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65, State of California)

This product can not expose you to chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

16. Other information

Hazardous Materials Information Label (HMIS)

Health: 1

Flammability: 0

Physical Hazard: 0

Safety Data Sheet

according to 29 CFR 1910.1200(g)

Hematite

Revision date: 06.04.2020

Page 7 of 7

NFPA Hazard Ratings

Health:	1
Flammability:	0
Reactivity:	0
Unique Hazard:	
Revision date:	06.04.2020
Revision No:	1,00



Abbreviations and acronyms

ACGIH: American Conference of Governmental Industrial Hygienists
CFR: Code of Federal Regulations
DOT: Department of Transportation
ICAO: International Civil Aviation Organization
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
IARC: International Agency for Research on Cancer
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
CAS: Chemical Abstracts Service
NFPA: National Fire Protection Association
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PEL: permissible exposure limit
REL: recommended exposure limit
SARA: Superfund Amendments and Reauthorization Act
STEL: Short-term exposure limit
TSCA: Toxic Substances Control Act
TWA: time-weighted average
TI: Technical Instructions
DGR: Dangerous Goods Regulations
UN: United Nations
ATE: Acute toxicity estimate
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%
LL50: Lethal loading, 50%
EL50: Effect loading, 50%
EC50: Effective Concentration 50%
ErC50: Effective Concentration 50%, growth rate
NOEC: No Observed Effect Concentration
BCF: Bio-concentration factor
MARPOL: International Convention for the Prevention of Marine Pollution from Ships
IBC: Intermediate Bulk Container
VOC: Volatile Organic Compounds

Other data

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.