

BLACK IRON OXIDE

Black Iron Oxide

SAFETY DATA SHEET

1. IDENTIFICATION

Product identifier**Product Name** Black Iron Oxide**Other means of identification****Product Code** BLACK IRON OXIDE**Synonyms** Synthetic Iron Oxide, Iron Oxide, Triiron Tetraoxide**Recommended use of the chemical and restrictions on use****Recommended Use** Coloring agent for Concrete.**Uses advised against** Consumer use**Details of the supplier of the safety data sheet****Supplier Address**Solomon Colors, Inc.
4050 Color Plant Road
Springfield, IL
62702**Manufacturer Address**Solomon Colors, Inc.
4050 Color Plant Road
Springfield, IL
62702**Company Phone Number** 800-624-0261 (US & Canada); 217-522-3112 (Outside North America)**24 Hour Emergency Phone Number** 800-373-7542

2. HAZARDS IDENTIFICATION

Classification**OSHA Regulatory Status**

This product is NOT classified as hazardous according to the criteria contained in the Hazard Communication Standard 29 CFR 1910.1200 (known as HCS 2012) or the Hazardous Products Regulations SOR/2015-17 (known as WHMIS 2015).

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Label elements**Emergency Overview**

Health injuries are not known or expected under normal use.

Appearance Black Powder**Physical state** Powder**Odor** Odorless**Hazards not otherwise classified (HNOC)****Other Information**

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms

Synthetic Iron Oxide, Iron Oxide, Triiron Tetraoxide.

Chemical Name	CAS No.	Weight-%	Trade Secret
Black Iron Oxide	1317-61-9	> 90	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES**Description of first aid measures**

General advice	No hazards which require special first aid measures. If symptoms persist, call a physician.
Eye contact	Rinse thoroughly with plenty of water, also under the eyelids.
Skin Contact	Wash off immediately with plenty of water.
Inhalation	Remove to fresh air. If symptoms persist, call a physician.
Ingestion	Clean mouth with water and drink afterwards plenty of water.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES**Suitable extinguishing media**

Dry chemical, Carbon Dioxide, Foam, Sand. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media Caution: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical

No information available.

Hazardous combustion products Thermal decomposition can lead to the release of irritating gases and vapors. Carbon monoxide. Carbon dioxide (CO₂).

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

Personal precautions Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Avoid creating dust.

Environmental precautions

Environmental precautions See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods for containment Vacuum or sweep up material and place in a designated labeled waste container. Prevent further leakage or spillage if safe to do so. Prevent dust cloud.

Methods for cleaning up With clean shovel place material into clean, dry container and cover loosely; move containers from spill area. Take up with sand, earth or other non-combustible absorbent material. Use personal protective equipment as required.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible materials Strong oxidizing agents. Strong acids.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

NIOSH IDLH Immediately Dangerous to Life or Health

Other Information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering Controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Avoid contact with eyes. Wear safety glasses with side shields (or goggles).

Skin and body protection Wear protective gloves and protective clothing. Protective shoes or boots.

Respiratory protection In case of inadequate ventilation wear respiratory protection.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Regular cleaning of equipment, work area and clothing is recommended. Wash face, hands and any exposed skin thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Powder	Odor	Odorless
Appearance	Black Powder	Odor threshold	Not applicable
Color	Black		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	5.0-8.0	
Melting point/freezing point	>1000°C (1832°F)	
Boiling point / boiling range	No information available	
Flash point	No information available	
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Specific Gravity	4.0 - 4.5	
Water solubility	Insoluble	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	80°C (176°F)	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	
<u>Other Information</u>		
Softening point	No information available	
Molecular weight	No information available	
VOC Content (%)	No information available	
Density	No information available	
Bulk density	No information available	

10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical stability

Stable under normal conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous polymerization	None under normal processing.
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Conditions to avoid

Extremes of temperature and direct sunlight.

Incompatible materials

Strong oxidizing agents. Strong acids.

Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating and toxic gases and vapors. Carbon monoxide. Carbon dioxide (CO₂).

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	May cause irritation of respiratory tract.
Eye contact	May cause mechanical irritation (abrasion).
Skin Contact	May cause mechanical irritation (abrasion).
Ingestion	Not for human consumption. May be harmful if swallowed.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Black Iron Oxide 1317-61-9	> 10000 mg/kg (Rat)	-	-

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	Not classified. (Based on mixture components.).
Serious eye damage/eye irritation	Not classified. (Based on mixture components).
Sensitization	Not Classified. This product does not contain known sensitizers at levels > or equal to 0.1%.
Germ cell mutagenicity	Not classified. (Based on mixture components).
Carcinogenicity	Not classified. (Based on mixture components).
Reproductive toxicity	Not classified. (Based on mixture components).
STOT - single exposure	Not classified. (Based on mixture components).
STOT - repeated exposure	Not classified. (Based on mixture components).
Aspiration hazard	Not applicable.

Numerical measures of toxicity - Product Information

ATEmix (oral) > 5000 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity

This product has not been fully evaluated on the product level.

Persistence and degradability

No information available.

Bioaccumulation

No information available.

Other adverse effects

No known significant effects or critical hazards.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes

This material, as supplied, is not a hazardous waste according to state and federal regulations (40 CFR 261). Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging

Do not reuse container.

14. TRANSPORT INFORMATION

<u>DOT</u>	Not regulated
<u>TDG</u>	Not regulated
<u>MEX</u>	Not regulated
<u>ICAO (air)</u>	Not regulated
<u>IATA</u>	Not regulated
<u>IMDG</u>	Not regulated
<u>RID</u>	Not regulated
<u>ADR</u>	Not regulated
<u>ADN</u>	Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Does not comply
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

See section 2 for more information

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

This product does not contain any substances regulated by state right-to-know regulations

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

<u>NFPA</u>	Health hazards 0	Flammability 1	Reactivity 0	Physical and Chemical Properties -
<u>HMIS</u>	Health hazards 0	Flammability 1	Physical hazards 0	Personal protection X

Prepared By Solomon Colors - Lab Technical Services
Issue Date 22-May-2015
Revision Date 10-Aug-2021
Revision Note
Periodic Review

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet