Material Safety Data Sheet

Iron (II,III) Oxide, Black

Section 1 - Product Description

Product Name: Iron (II,III) Oxide, Black
Product Code(s): 86-2630
Size: 500 g
Chemical Name: Iron (II,III) Oxide
CAS Number: 1317-61-9
Formula: Fe3O4
Synonyms: Magnetite
Distributor: Carolina Biological Supply Company, 2700 York Road, Burlington, NC 27215
Chemical Information: 800-227-1150 (8am-5pm (ET) M-F) Chemtrec 800-424-9300 (Transportation Spill Response 24 hours)

Section 2 - Hazard Identification

Emergency Overview: CAUTION - Harmful by inhalation.
Potential Health Effects:

<table>
<thead>
<tr>
<th>Eyes</th>
<th>May cause irritation.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin</td>
<td>May cause irritation to skin.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>May cause gastrointestinal discomfort.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>May cause irritation to respiratory tract.</td>
</tr>
</tbody>
</table>

Section 3 - Composition / Information on Ingredients

Principal Hazardous Components: Iron (II,III) Oxide, Black (CAS # 1317-61-9) 99%
TLV units: ACGIH: 5 mg/m3 (as Fe) (TWA)
PEL units: N/A

Section 4 - First Aid Measures

Emergency and First Aid Procedures:

- **Eyes**: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- **Skin**: After contact with skin, wash immediately with plenty of water.
- **Ingestion**: If swallowed, rinse mouth with water (only if the person is conscious).
- **Inhalation**: In case of accident by inhalation: remove casualty to fresh air and keep at rest.

Section 5 - Firefighting Procedures

Flash Point (Method Used): N/A
NFPA Rating:
- Health: 1
- Fire: 1
- Reactivity: 0
Extinguisher Media: Use media suitable to extinguish surrounding fire.
Flammable Limits in Air % by Volume: N/A
Autoignition Temperature: N/A
Special Firefighting Procedures: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Unusual Fire and Explosion Hazards: None Known

Section 6 - Spill or Leak Procedures

Steps to Take in Case Material Is Released or Spilled: Ventilate area of spill. Clean-up personnel should wear proper protective equipment. Avoid creating dust. Sweep or scoop up and containerize for disposal.

Section 7 - Special Precautions

Precautions to Take in Handling or Storing: Avoid creating and inhaling dust.
Do not ingest or take internally. Suitable for any general chemical storage.

Section 8 - Protection Information

Respiratory Protection (Specify Type): None needed under normal conditions of use with adequate ventilation. A NIOSH/MSHA chemical cartridge respirator should be worn if PEL or TLV is exceeded.
Ventilation:
Local Exhaust: No
Mechanical(General): Yes
Special: No
Other: No
Protective Gloves: Natural rubber, Neoprene, PVC or equivalent.
Eye Protection: Splash proof chemical safety goggles should be worn.
Other Protective Clothing or Equipment: Lab coat, apron, eye wash, safety shower.

Section 9 - Physical Data

Molecular Weight: 231.55
Boiling Point: N/A
Vapor Density(Air=1): N/A
Percent Volatile by Volume: N/A
Solubility in Water: Practically Insoluble
Melting Point: N/A (Decomposes at 80°C)
Vapor Pressure: N/A
Specific Gravity (H2O=1): N/A
Evaporation Rate (BuAc=1): N/A
Appearance and Odor: Odorless black solid.

Section 10 - Reactivity Data

Stability: Stable
Conditions to Avoid: Avoid excess heat.
Incompatibility (Materials to Avoid): Acids, Oxidizers, Peroxides, Chloroformates,
Hazardous Decomposition Products: None Known
Hazardous Polymerization: Will not occur

Section 11 - Toxicity Data

Toxicity Data: ORL LD50 - Rat: >10000 mg/kg
Effects of Overexposure:
Acute: See Section 2
Chronic: Not listed as a carcinogen by IARC, NTP or OSHA.
Conditions Aggravated by Overexposure: Respiratory disorders
Target Organs: Respiratory system
Primary Route(s) of Entry: Inhalation and ingestion.

Section 12 - Ecological Data

EPA Waste Numbers: N/A
Section 13 - Disposal Information

Waste Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.

Section 14 - Transport Information

DOT Proper Shipping Name: Not Regulated for Transport

Section 15 - Regulatory Information

EPA TSCA Status: On TSCA Inventory
Hazard Category for SARA Section 311/312 Reporting: Acute

<table>
<thead>
<tr>
<th>Name List</th>
<th>Chemical Category</th>
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<td>Iron (II,III) Oxide - No</td>
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CERCLA Section 103 RQ(lb.): Iron (II,III) Oxide - No
RCRA Section 261.33: Iron (II,III) Oxide - No

Section 16 - Additional Information

The information provided in this Material Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the Material Safety Data Sheet. Any employer must carefully assess the applicability of any information contained herein in regards to the particular use to which the employer puts the material.

Glossary
ACGIH American Conference of Governmental Industrial Hygienists
CAS Number Chemical Services Abstract Number
CERCLA Comprehensive Environmental Response, Compensation, and Liability Act
DOT U.S. Department of Transportation
IARC International Agency of Research on Cancer
N/A Not Available
NTP National Toxicology Program
OSHA Occupational Safety and Health Administration
PEL Permissible Exposure Limit
ppm Parts per million
RCRA Resource Conservation and Recovery Act
SARA Superfund Amendments and Reauthorization Act
TLV Threshold Limit Value
TSCA Toxic Substances Control Act