# Black Iron Oxide

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date: 06/28/2014

## SECTION 1: Identification of the substance/mixture

### 1.1. Product identifier

<table>
<thead>
<tr>
<th>Product form</th>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substance name</td>
<td>Black Iron Oxide</td>
</tr>
<tr>
<td>Formula</td>
<td>FE$_3$O$_4$</td>
</tr>
<tr>
<td>Molecular weight</td>
<td>231.53 g/mol</td>
</tr>
<tr>
<td>CAS No.</td>
<td>1317-61-9</td>
</tr>
<tr>
<td>Product code</td>
<td>LW-FE3O4</td>
</tr>
<tr>
<td>Synonyms</td>
<td>Magnetite</td>
</tr>
</tbody>
</table>

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture: Pigment, Laboratory chemicals, Synthesis of substances

### 1.3. Emergency telephone number

Emergency number:
- 1.800.424.9300 (USA)
- +1.703.527.3887 (INT)

## SECTION 2: Hazards Identification

### 2.1. Classification of the substance or mixture

Not a hazardous substance or mixture.

### 2.2. GHS Label elements, including precautionary statements

None

### 2.3. Hazards not otherwise classified (HNOC) or not covered by GHS

None

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

| Formula | FE$_3$O$_4$ |
| Synonyms | Magnetite |
| Molecular Weight | 231.53 g/mol |
| CAS-NO. | 1317-61-9 |

No ingredients are hazardous according to OSHA criteria.
No components need to be disclosed according to the applicable regulations.

## SECTION 4: Description of first aid measures
4.1. Description of first aid measures

First-aid measures after inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration.

First-aid measures after skin contact: Wash off with soap and plenty of water.

First-aid measures after eye contact: Flush eyes with water as a precaution.

First-aid measures after ingestion: Never give anything by mouth to an unconscious person. Rinse mouth with water.

4.2. Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.

4.3. Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Iron oxides

5.3. Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4. More Information

No data available

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing vapors, mist or gas.

For personal protection see section 8.

6.2. Environmental precautions

Do not let product enter drains.

6.3. Methods and material for containment and cleaning up

Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4. Reference to other sections

For disposal see section 13.
### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling
Provide appropriate exhaust ventilation at places where dust is formed.
For precautions see section 2.2.

#### 7.2. Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place.
Keep in a dry place.

#### 7.3. Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

**Components with workplace control parameters**
Contains no substances with occupational exposure limit values.

#### 8.2. Exposure controls

**Appropriate engineering controls**
General industrial hygiene practice.

**Personal protective equipment**

**Eye protection**
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin Protection**
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Body protection**
Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection**
Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Environmental exposure controls**
Do not let product enter drains.
SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance
- Form: powder
- Color: black

Odor
- Odourless

Odor Threshold
- No data available

pH
- No data available

Melting point/freezing point
- Melting point/range: 1,538 °C (2,800 °F) - lit.

Initial boiling point and boiling range
- No data available

Flash point
- Not applicable

Evaporation rate
- No data available

Flammability (solid, gas)
- No data available

Upper/lower flammability or explosive limits
- No data available

Vapor pressure
- No data available

Vapor density
- No data available

Relative density
- 4.8 - 5.1 g/mL at 25 °C (77 °F)

Water solubility
- No data available

Partition coefficient: n-octanol/water
- No data available

Auto-ignition temperature
- No data available

Decomposition temperature
- No data available

Viscosity
- No data available

Explosive properties
- No data available

Oxidizing properties
- No data available

9.2. Other safety information
No data available

SECTION 10: Stability and reactivity

10.1. Reactivity
No data available

10.2. Chemical stability
Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions
Black Iron Oxide
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

No data available

10.4. Conditions to avoid
Chloroformates, Peroxides, Strong acids

10.5. Incompatible materials
Strong acids, Peroxides, Chloroformates

10.6. Hazardous decomposition products
Other decomposition products - no data available

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : LD50 Oral - rat - male and female - > 5,000 mg/kg
Inhalation: no data available
Dermal: no data available
no data available

Skin corrosion/irritation : Skin - Rabbit
Result: No skin irritation
(OECD Test Guideline 404)

Serious eye damage/irritation : Eyes - Rabbit
Result: No eye irritation
(OECD Test Guideline 405)

Respiratory or skin sensitization : - guinea pig
Result: Did not cause sensitization on laboratory animals.

Germ cell mutagenicity : Hamster
Lungs
Result: negative

Carcinogenicity
IARC: : No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: : No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a by OSHA.

Reproductive toxicity: No data available
Specific target organ toxicity (single exposure): No data available
Specific target organ toxicity (repeated exposure): No data available
Aspiration hazard: No data available
Additional Information: RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: Ecological information

12.1. Toxicity: No data available
12.2. Persistence and degradability: No data available
12.3. Bioaccumulative potential: No data available
12.4. Mobility in soil: No data available
12.5. Results of PBT and vPvB assessment: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
12.6. Other adverse effects: No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Product: Offer surplus and non-recyclable solutions to a licensed disposal company.
Contaminated Packaging: Dispose of as unused product.

SECTION 14: Transport information

DOT (US)
Not dangerous goods

IMDG
Not dangerous goods
**IATA**
Not dangerous goods

**SECTION 15: Regulatory information**

**SARA 302 Components**
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards**
No SARA Hazards

**Massachusetts Right To Know Components**
<table>
<thead>
<tr>
<th>Triiron tetraoxide</th>
<th>CAS-No.</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1317-61-9</td>
<td></td>
</tr>
</tbody>
</table>

**Pennsylvania Right To Know Components**
<table>
<thead>
<tr>
<th>Triiron tetraoxide</th>
<th>CAS-No.</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1317-61-9</td>
<td></td>
</tr>
</tbody>
</table>

**New Jersey Right To Know Components**
<table>
<thead>
<tr>
<th>Triiron tetraoxide</th>
<th>CAS-No.</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1317-61-9</td>
<td></td>
</tr>
</tbody>
</table>

**California Prop. 65 Components**
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

**SECTION 16: Other information**

**HMIS Rating**
- Health Hazard: 0
- Chronic Health Hazard: 
- Flammability: 0
- Physical Hazard: 0

**NFPA Rating**
- Health hazard: 0
- Fire Hazard: 0
Reactivity Hazard : 0

Further Information

Information in this SDS is from available published sources and is believed to be accurate. No warranty, express or implied, is made and Loudwolf Holdings Ltd. assumes no liability resulting from the use of this SDS. The user must determine suitability of this information for his/her application.