# SAFETY DATA SHEET

**Ilmenite**

## SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>Product Name:</th>
<th>CAS #:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ilmenite</td>
<td>Mixture</td>
</tr>
</tbody>
</table>

**Synonyms/Common Names:**
- Black sand, Ferrous (Iron) Oxide

**Chemical Name:**
- Ilmenite, Iron Titanium Oxide $\text{FeTiO}_3$

**Manufacturer/Contact Info:**
- **General Phone Number:** (916) 484-3011 (8-5, PST, M-F)
- **Emergency Phone Number:** (800) 287-7383

## SECTION 2. HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW
May cause irritation due to abrasion effects. May cause respiratory irritation.

### OSHA REGULATORY STATUS
This product is considered hazardous under Hazard Communication 29 CFR 1910.1200 (OSHA) and 8CCR §5194 (Cal/OSHA)

### POTENTIAL HEALTH EFFECTS

#### Routes of Exposure:
- Inhalation, Skin contact, Eye contact.

#### Eye Contact:
May cause irritation through mechanical abrasion.

#### Skin:
May cause irritation through mechanical abrasion.

#### Inhalation:
Inhalation of high concentrations may result in transient irritation and coughing. Prolonged and repeated exposure to high concentrations of respirable silica (quartz) dust could lead to lung disease including chronic pulmonary obstructive disease and silicosis.

#### Ingestion:
Ingestion may cause gastrointestinal irritation and malaise. However, ingestion is not likely to be a primary route of occupational exposure.

### TARGET ORGANS
- Respiratory system, lungs.

### CHRONIC EFFECTS
Chronic inhalation of high concentrations of iron oxide fumes or dust may lead to benign pneumoconiosis (siderosis). Prolonged and repeated exposure to high concentrations of respirable silica quartz could lead to lung disease including chronic pulmonary obstructive disease and silicosis.

### SIGNS AND SYMPTOMS
- Eye, skin and respiratory irritation

### GHS label elements

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**Hazard Statements:**
- May cause irritation of eyes and skin
- May cause respiratory irritation

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POTENTIAL ENVIRONMENT EFFECTS

The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

OTHER HEALTH HAZARDS

Pre-existing respiratory conditions, such as bronchitis, may be aggravated by inhalation exposure.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous Components</th>
<th>CAS No.</th>
<th>% by Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ilmenite</td>
<td>12168-52-4</td>
<td>&lt;90</td>
</tr>
<tr>
<td>Quartz (Silica Crystalline) (1)</td>
<td>14808-60-7</td>
<td>&lt;10</td>
</tr>
</tbody>
</table>

Comments: (1) Quartz is a naturally occurring form of crystalline silica. Composition varies naturally.

SECTION 4. FIRST AID MEASURES

Eyes: Flush thoroughly with water. If irritation occurs, get medical assistance.

Skin: Wash area with soap and water. Get medical attention if irritation develops or persists.

Inhalation: Remove to fresh air. Get medical attention if any discomfort continues.

Ingestion: Seek medical advice. If ingestion of a large amount does occur, call a poison control center immediately. However, ingestion of small amounts of the material is not expected to pose a significant health hazard. Small amounts not expected to pose a health hazard.

Notes to Physician: Keep victim under observation. Symptoms may be delayed. Pre-existing respiratory conditions, such as bronchitis may be aggravated by inhalation exposure.

General Advice: Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

SECTION 5. FIRE FIGHTING MEASURES

Flammable Properties: Concentrated suspensions of fine particles in air may be ignitable/explosive.

Flashpoint (method used): Product: NE Not available


Protection of Firefighters: Cool containers with flooding quantities of water until well after fire is out.

Specific Methods: Containers close to fire should be removed or cooled with water.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Avoid inhalation of dust.
Acute: Airborne particles can cause eye irritation. Inhalation of very high levels of airborne dust may produce respiratory irritation and coughing.
Chronic: None unknown

Environmental Precautions: Do not contaminate water sources or sewer.

Methods for Clean Up: Sweep up or gather material and place in appropriate container for disposal. Avoid dust formation.

SECTION 7. HANDLING AND STORAGE
Handling:
Avoid inhalation of dust and contact with skin and eyes. Use with adequate ventilation. Wash thoroughly after handling. Avoid release to the environment.

Storage:
Use care in handling/storage. Store in accordance with local, state and federal regulations.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<table>
<thead>
<tr>
<th>Component</th>
<th>OSHA/MSHA Permissible Exposure Limit (PEL)</th>
<th>Cal/OSHA Permissible Exposure Limit (PEL)</th>
<th>ACGIH Threshold Limit Valve (TLV)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particulates (dust)</td>
<td>5 mg/m³ (respirable) as particulate NOR</td>
<td>5 mg/m³ (respirable) as particulate NOR</td>
<td>3 mg/m³ (respirable)</td>
</tr>
<tr>
<td></td>
<td>15 mg/m³ (total dust) as particulate NOR</td>
<td>10 mg/m³ (total dust) as particulate NOR</td>
<td>10 mg/m³ (inhalable)</td>
</tr>
<tr>
<td>Crystalline Silica (Quartz, Cristobalite, Tridymite) (respirable dust containing silica)</td>
<td>10 mg/m³/ (%SiO₂+2) (respirable particulate containing silica) OSHA PEL for cristobalite and tridymite is 1/2 of the calculated value for quartz.</td>
<td>0.1 mg/m³ (respirable quartz) 0.05 mg/m³ (respirable cristobalite and tridymite)</td>
<td>0.025 mg/m³ (respirable quartz and cristobalite)</td>
</tr>
<tr>
<td>Total dust containing silica</td>
<td>OSHA: 30 mg/m³/ (%SiO₂+2) (total particulate containing silica) MSHA: 30 mg/m³/ (%SiO₂+3)</td>
<td>0.3 mg/m³ (total dust, quartz)</td>
<td>NE</td>
</tr>
</tbody>
</table>

Engineering Controls:
Provide adequate ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of dust.

PERSONAL PROTECTIVE EQUIPMENT:

Eye / Face Protection:
Wear approved safety goggles.

Skin Protection:
Wear suitable protective clothing and gloves. Leather work gloves are appropriate.

Respiratory Protection:
In case of inadequate ventilation or risk of inhalation of vapors, use suitable respiratory equipment.

General Hygiene Considerations:
Keep away from food, drink and animal feeding stuffs. Observe good industrial hygiene practices. As need wear coveralls and/or work clothing that minimize skin contact use work practices that minimize routine respiratory, skin and eye contact.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance & Odor:
Fine, black particulate with metallic luster, Odorless

pH: Not available
Melting Point: Not available
Boiling Point: Not available
Evaporation Rate: Not available
Vapor Pressure: Not available
Vapor Density: Not available
Specific Gravity: 4.5 – 5
Solubility (water): 0

SECTION 10. CHEMICAL STABILITY & REACTIVITY INFORMATION

Chemical Stability:
Stable at normal conditions

Conditions to Avoid:
None known
### Incompatible Materials:
Hydrogen peroxide, aluminum, or magnesium powders.

### Hazardous Decomposition Products:
Metal oxides

### Hazardous Polymerization:
Hazardous polymerization does not occur

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**SECTION 11. TOXICOLOGY INFORMATION**

#### Sensitization:
Not available

#### Local Effects:
Airborne particles can cause eye and/or skin irritation. Inhalation of high levels of airborne dust may produce coughing and respiratory irritation.

#### Chronic Effects:
Chronic inhalation of high concentrations of iron oxide fumes or dust may lead to benign pneumoconiosis (siderosis).

#### Carcinogenicity:
Not expected to be hazardous by OSHA criteria.

- **IARC Monographs on Occupational Exposures to Chemical Agents: Overall evaluation**
  - Quartz [Silica Crystalline] (14808-60-7) 1 Human carcinogen
  - US ACGIH Threshold Limit Values: A2 carcinogen
  - Quartz [Silica Crystalline] (14808-60-7) Group A2 Suspected human carcinogen

- **US NTP Report on Carcinogens: Known carcinogen**
  - Quartz [Silica Crystalline] (14808-60-7) Known carcinogen

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**SECTION 12. ECOLOGICAL INFORMATION**

#### Environmental Effects:
Not available

#### Other:
Not available

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**SECTION 13. DISPOSAL CONSIDERATIONS**

#### Disposal Instructions:
Do not allow this material to drain into sewers/water supplies. This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste.

#### Waste from Residues / Unused Products:
Dispose of waste and residues in accordance with local authority requirements.

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**SECTION 14. TRANSPORT INFORMATION [NOTE: NOT INTENDED TO BE ALL-INCLUSIVE]**

#### DOT Proper Shipping Name:
Not regulated

#### DOT Hazard Classification:
Not applicable

#### US/NA Number:
Not regulated

#### DOT Packing Group:
Not applicable

#### Labeling Requirements:
## SECTION 15. REGULATORY INFORMATION [NOTE: NOT INTENDED TO BE ALL-INCLUSIVE]

<table>
<thead>
<tr>
<th>US Federal Regulations:</th>
<th></th>
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<tbody>
<tr>
<td></td>
<td>This product is a &quot;Hazardous Chemical&quot; as defined by the OSHA Hazard Communication Standard 29 CFR 1910.1200 (OSHA) and 8 CCR § 5194 (Cal/OSHA).</td>
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<table>
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<tr>
<th>Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):</th>
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<tbody>
<tr>
<td></td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

### Superfund Amendments and Reauthorization Act of 1986 (SARA), Title III:

**Hazardous Categories:**
- Immediate Hazard – Yes
- Delayed Hazard – Yes?
- Fire Hazard – No
- Pressure Hazard – No
- Reactivity Hazard – No

**Section 302 Extremely Hazardous Substance:**
- No

**Section 311 Hazardous Chemical:**
- Yes

### California Proposition 65:

**WARNING:** THIS PRODUCT CONTAINS CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

### State Regulatory Lists:

The following materials/components are specifically listed by individual states. For details on regulatory requirements, you should contact the appropriate agency in your state:

- **US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance**
  - Quartz [Silica crystalline] (14808-60-7) Listed
- **US - California Proposition 65 - CRT: Listed date/Carcinogenic substance**
  - Quartz [Silica crystalline] (14808-60-7) Listed: October 1, 1988 Carcinogenic

## SECTION 16. OTHER INFORMATION

### Disclaimer of Liability:

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