HAZARD MATERIAL IDENTIFICATION SYSTEM

Health Hazard: 1 - Slight
Flammability Hazard: 0 - Minimal
Reactivity Hazard: 1 - Slight
Personal Protection: E - Glasses, Gloves, Dust Resp

SECTION I. MATERIAL IDENTIFICATION

Trade/Material Name: Iron Oxide Brown
Description: Inorganic Metal Oxide
Other Designations: 219-0051 Dark Earth Brown, 219-0064 Black Walnut Brown

Chemical Name: Iron Oxide - III
C.A.S. No: Mixture

SECTION II. INGREDIENTS AND HAZARDS

<table>
<thead>
<tr>
<th>INGREDIENT NAME</th>
<th>CAS NO.</th>
<th>PERCENT</th>
<th>EXPOSURE LIMITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron Oxide</td>
<td>1309-37-1</td>
<td>48-57</td>
<td>ACGIH TLV: 5MG/M³ TWA (Iron Oxide Fume as Fe)</td>
</tr>
<tr>
<td>Aluminum Oxide</td>
<td>1344-28-1</td>
<td>&gt;1-2</td>
<td>ACGIH-TLV: 10MG/M³ TWA</td>
</tr>
<tr>
<td>Silica Quartz</td>
<td>14808-60-7</td>
<td>0.1-3.0</td>
<td>ACGIH TLV: 0.1 mg/M³ TWA (Respirable Dust)</td>
</tr>
<tr>
<td>Carbon</td>
<td>1333-86-4</td>
<td>0.4-15</td>
<td>ACGIH TLV: 3.5mg/M³ TWA (Respirable Dust)</td>
</tr>
</tbody>
</table>

(Ingredients and Hazards continued on next page)
Note: There is an 8-hour TWA OSHA-PEL of 10mg/m³ and an 8-hour TWA ACGIH-TLV of 5mg/m³ for iron oxide Fume. In normally accepted usages, iron oxide pigments would NOT be present in the form of a fume.

This product does contain toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372: Aluminum Oxide.

### SECTION III. PHYSICAL/CHEMICAL CHARACTERISTICS

**Appearance and Odor:** Dry Amphorous Colored Powder, No Odor  
**Solubility in Water (%):** Insoluble  
**Specific Gravity (H₂O=1):** 3.6-5.0

### SECTION IV. FIRE AND EXPLOSION DATA

- **Flash Point (method):** Non-flammable  
- **Limits:** LEL%: N/A  
  UEL%: N/A  
- **Extinguishing Media:** As appropriate for surrounding combustibles, and/or copious water. Does not burn water. Does not burn or support combustion, except in the small amount of carbon.

- **Unusual Fire or Explosion Hazards:** Under fire conditions irritating and/or toxic aerosols or gasses may be present. It may not be obvious carbon black is burning unless stirred and sparks are present.

- **Special Fire fighting Procedures:** Firefighter should wear self-contained breathing apparatus. Normal fog or nozzle jet application and/or exclusion of air.

### SECTION V. REACTIVITY DATA

- **Material is stable - Hazardous polymerization will not occur**
- **Chemical incompatibilities:** None known.
- **Hazardous Decomposition Products:** Carbon monoxide, carbon dioxide and sulfur containing gases when burning.
SECTION VI. HEALTH HAZARD DATA

Summary of Health Risks and Symptoms of Exposure: Skin contact may cause mechanical irritation due to the abrasion. Eye contact will result in no specific effects other than general particulate irritation in the eye. Not absorbed by the body. Excessive exposure above the TLV can give mild pulmonary irritation.

Principal Routes of Entry: Inhalation, ingestion, skin and eye contact.

Acute Effects: Inhalation of the dust may cause mechanical irritation to the respiratory tract. Skin and eye contact may cause a mechanical abrasion irritation.

Chronic Health Effect(s): Long term overexposure to silica causes silicosis, a form of pulmonary fibrosis. Continued exposure to silica can lead to cardiopulmonary impairment.

Emergency and First Aid Procedures:

Eye Contact: Flush thoroughly with plenty of water for at least 15 minutes. Get medical help if irritation persists.

Skin Contact: Wash skin with mild soap and water.

Inhalation: Remove to fresh air. Get medical help for any breathing difficulty.

Ingestion: If conscious, give large quantities of water to induce vomiting. Get medical attention.

Crystalline silica which may be present in quantities greater than 0.1% has been reviewed by IARC. They found limited evidence for carcinogenicity of crystalline silica in humans and sufficient evidence in experimental animal.

SECTION VII. PRECAUTIONS FOR HANDLING, USE OR DISPOSAL

Handling & Storage: Store dry at ambient temperature away from food and beverages. Avoid breathing dust. Avoid contact thoroughly after handling.

Spill/Leak procedures: Those involved in clean-up of spills should use respiratory protection for airborne dust. Vacuum or scoop up spilled material for recovery or disposal, avoiding dusting conditions and using good ventilation. Wetting the spill with a water spray may help to keep airborne dust levels down.

(Precautions for Handling, etc. continued on next page)
Waste Management/ Disposal:
Refer to any local, State or Federal regulations for specific disposal information. Pursuant to 40 CFR part 261 of the Resource Conservation & Recovery Act (RCRA) regulations currently in effect, discarded Iron Oxide would not be classified as a hazardous waste.

SECTION VIII. SPECIAL PROTECTION INFORMATION

Personal Protective Equipment:

Goggles: Safety glasses with side shields or dust tight goggles.

Gloves: Rubber, cloth, or plastic gloves as appropriate.

Respirator: If exposure limits are exceeded, an appropriate NIOSH approved dust respirator should be used.

Workplace Considerations:

Ventilation: Provide adequate exhaust ventilation to meet TLV requirements in the workplace. An exhaust filter system may be required to avoid environmental contamination.

Safety Stations: An eye wash station should be available to the area of use.

Other: Good industrial hygiene practice requires that employee exposure be maintained below the recommended TLV. This is preferably achieved through the provision of adequate ventilation where necessary. Where dust cannot be controlled, personal respiratory protection should be employed.

SECTION IX. SPECIAL PRECAUTIONS

DOT Class: Not regulated

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