MATERIAL SAFETY DATA SHEET

Lambert Southwest (903)657-4680  Product: Dark Buff
Division of G. W. Holladay Interests Inc.
P O Box 1111, Henderson TX 75653
Chemical Emergency Infotrac 800-535-5053  January 2012

HAZARD MATERIAL IDENTIFICATION SYSTEM

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

SECTION I.  MATERIAL IDENTIFICATION

Trade/Material Name:  OCHRE
Description:  Goethite - inorganic natural iron oxide
Other Designations:  219-0026  Dark Buff
CAS:  1343-81-3
Chemical Name:  Fe₂O₃

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>HFeO₂</td>
<td>1310-14-1</td>
<td>52-63</td>
<td>ACGIH TLV: .01MG/M³ TWA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>OSHA STEL: 10 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(Iron Oxide Fume as Fe)</td>
</tr>
<tr>
<td>SiO₂</td>
<td>14808-60-7</td>
<td>20-29</td>
<td>ACGIH TLV: 0.1 mg/M³ TWA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>OSHA PEL: 10 mg/M³</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(Respirable Dust)</td>
</tr>
</tbody>
</table>

(Ingredients and Hazards continued on next page)
(Ingredients and Hazards continued from previous page)

<table>
<thead>
<tr>
<th>INGREDIENT NAME</th>
<th>CAS NO.</th>
<th>PERCENT</th>
<th>EXPOSURE LIMITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MnO₂</td>
<td>1313-13-9</td>
<td>1.5-4.0</td>
<td>ACGIH TLV: .01 mg/M³ TWA</td>
</tr>
</tbody>
</table>

SARA TITLE III: Section 313 Supplier Notification

This product does not 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. However, due to the presence of up to 5% silica-quartz, natural iron oxides are regulated as mixtures under the reporting requirements of Sections 311 and 312 of SARA.

SECTION III.  PHYSICAL/CHEMICAL CHARACTERISTICS

- **Appearance and Odor:** Solid yellowish/brown powder. No Odor
- **Solubility in Water (%):** <0.5%
- **Specific Gravity (H₂O=1):** 3.5

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. Does not burn or support combustion. No fire or explosion hazard.
- **Unusual Fire or Explosion Hazards:** None
- **Special Fire fighting Procedures:** Respiratory and eye protection required for fire fighters.

SECTION V.  REACTIVITY DATA

- **Material is stable - Hazardous polymerization will not occur**
- **Chemical incompatibilities:** None known.
- **Hazardous Decomposition Products:** None will occur.

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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.

Target Organs: Lungs

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

Acute Effects: Inhalation of the dust may cause mechanical irritation to the respiratory tract. Long term over-exposure to silica causes silicosis.

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. Get medical attention if irritation develops.
- **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 animals.

SECTION VII. PRECAUTIONS FOR HANDLING, USE OR DISPOSAL

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.

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: Leather, cloth, or rubber gloves.

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 in this way, personal respiratory protection should be employed.

SECTION IX. SPECIAL PRECAUTIONS

DOT Class: Not regulated

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