MATERIAL SAFETY DATA SHEET

Date: 04/18/95

A. P. GREEN INDUSTRIES, INC.
GREEN BOULEVARD, MEXICO, MO 65265
EMERGENCY TELEPHONE NUMBER — 314-473-3626

SECTION I

PRODUCT NAME: DRY MILLED FIRECLAY

PRODUCT TYPE: Raw Fireclay

CHEMICAL FAMILY:

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>SiO₂</td>
<td>56%</td>
</tr>
<tr>
<td>Al₂O₃</td>
<td>40%</td>
</tr>
<tr>
<td>Fe₂O₃</td>
<td>1%</td>
</tr>
<tr>
<td>TiO₂</td>
<td>2%</td>
</tr>
<tr>
<td>K₂O</td>
<td>1% (calcined basis)</td>
</tr>
</tbody>
</table>

FORMULA: Not Applicable

SECTION II

PRODUCT HAZARDOUS INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical</th>
<th>TLV-TWA</th>
<th>CAS #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz (SiO₂) (&lt;2%)</td>
<td>0.1 mg/m³* Respirable Dust</td>
<td>14808-60-7</td>
</tr>
</tbody>
</table>

*Source: American Conference of Governmental Industrial Hygienists, 1994-1995.

SECTION III

PHYSICAL DATA

SOLUBILITY IN WATER: Slight

SPECIFIC GRAVITY: Not Applicable

APPEARANCE AND ODOR: Gray, granular; no odor

SECTION IV

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: None

EXTINGUISHING MEDIA: Not Combustible

SPECIAL FIRE FIGHTING PROCEDURES: None

UNUSUAL FIRE AND EXPLOSION HAZARDS: None

SECTION V

HEALTH HAZARD DATA

EFFECT OF OVEREXPOSURE:

EYES: ACUTE: Dust can cause mechanical irritation.
      CHRONIC: None Known
SKIN: ACUTE: None Known
      CHRONIC: None Known

INHALATION: ACUTE: Dust, if present, may cause upper respiratory irritation.
         CHRONIC: Long-term exposure to dust may cause lung damage.

INGESTION: ACUTE: Unknown
           CHRONIC: Unknown

EYES: Immediately flush with clean water for 15 minutes. If irritation occurs, consult physician.

SKIN: Not Applicable

INHALATION: Remove to fresh air. Seek medical attention.

INGESTION: Contact physician immediately. Do not induce vomiting unless instructed to do so by physician.

SECTION VI
REACTIVITY DATA

STABILITY: Stable

INCOMPATIBILITY: None Known

HAZARDOUS POLYMERIZATION: Will not occur

SECTION VII
SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Sweep or shovel up.

WASTE DISPOSAL METHOD: May be disposed of in an approved landfill, in accordance with local, state, and federal regulations.

SECTION VIII
SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: Use NIOSH approved respirator when working with dry clay or fired clay.

VENTILATION: General mechanical ventilation is adequate.

EYE PROTECTION: Optional

OTHER PROTECTION: None

SECTION IX
SPECIAL PRECAUTIONS

Warning: This product contains crystalline silica. Prolonged exposure to dust may cause silicosis, a progressive pneumoconiosis, or other respiratory diseases. International Agency for Research on Cancer (IARC) has classified crystalline silica as a Class 2A carcinogen. Their study concluded that sufficient evidence for carcinogenicity exists in experimental animals and that limited evidence for carcinogenicity exists in humans.
NIOSH approved respirators should be worn any time that refractories are torn out after service. While some respiratory hazard and/or nuisance dust may exist from the product itself, other foreign substances may warrant additional precautions during tearout and disposal.

This MSDS provides the toxic chemical "SUPPLIER INFORMATION" required under Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and 40 CFR 372. Toxic chemical information, if applicable to the product(s) named, is located in Section II - HAZARDOUS INGREDIENTS section of the MSDS. This information is subject to the toxic chemical reporting requirements of Section 313 and must be included in all MSDSs that are copied and distributed for this product.

This material safety data sheet contains confidential proprietary information and is not to be disclosed to the general public or to competition except as required by law. The information accumulated herein is believed to be accurate but is not warranted to be, whether originating with A. P. Green Industries, Inc. or not. This information is offered solely for use in your evaluation of this product in respect to safety, health, and environmental hazards.

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Phone: (314) 473-3392

JH:MSDS\CURRENT\DMFC.045