Fire Clay
Material Safety Data Sheet

Section 1.
Production Identification

Manufacturer: The Kopp Clay Company
Address: 3266 Coral Road
          P.O. Box 488
          Malvern, Ohio 44644
Telephone: (330) 863-0111
Fax: (330) 863-2265

Product Type: Fire Clay
Product Name, Sales Name or Trade Name: Fire Clay

Section 2.
Hazardous Ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Common Name</th>
<th>CAS Number</th>
<th>Percent</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>Carcinogen*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Al₂O₃</td>
<td>Alumina</td>
<td>1344-28-1</td>
<td>30.0%</td>
<td>N/A</td>
<td>10 Mg/m³</td>
<td>No</td>
</tr>
<tr>
<td>SiO₂</td>
<td>Cristobalite</td>
<td>14464-46-1</td>
<td>8.0%</td>
<td>.01 Mg/m³</td>
<td>.01 Mg/m³</td>
<td>Yes</td>
</tr>
<tr>
<td>SiO₂</td>
<td>Quartz</td>
<td>14808-60-7</td>
<td>1.0%</td>
<td>.01 Mg/m³</td>
<td>.01 Mg/m³</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*Per NTP and IARC lists and the State of California

Section 3.
Physical Data

Appearance: Dull White to Grey – Powdery to Coarse Granules
Odor: None
Specific Gravity: 1.8 – 2.6
Melting Point: 1500 C
Boiling Point: N/A
Vapor Pressure: NI
Evaporation Rate: N/A
Solubility in H₂O: N/A
Other Solvents: NI
Percent Volatile by Vol: N/A
Vapor Density: NI

Section 4.
Fire and Explosion Hazard Data

Flash Point (Method Used): None
Flammable Limits: LEL None UEL None
Extinguishing Media: N/A
Special Fire Fighting Procedures: Non-Flammable
Unusual Fire and Explosion Hazards: Non-Flammable, Non-Explosive

Section 5.
Health Hazard Data

Primary Routes of Entry
Exposure Symptoms
Emergency Procedures
Inhalation: Respiratory Irritation
Remove to Fresh Air
Ingestion: NE
NE
Skin Contact and Absorption: N/A
N/A
Eyes: Irritation
Flush with Water

Other Potential Health Risks: Dust may aggravate pre-existing conditions and lung diseases. Inhalation of crystalline quartz may cause Silicosis which may progress to cancer and may lead to death. Dust from handling dry fireclay may contain crystalline silica which is a chemical known to the State of California to cause cancer. Silica is listed in IARC Monograph 68 as a known human carcinogen. Inhalation may cause cancer which could lead to death.
Section 6  Potential Exposure

When  Hazard Form
Installation: Dust from handling dry clay
Removal: Dust from tearing-out after service

Section 7  Corrosivity and Reactivity Data

Stability (stable or unstable): Stable
Incompatibility (Materials to avoid): None
Decomposition Products: N/A
Conditions to be Avoided NE

Section 8  Disposal Procedures

Spill or Leak Procedures: Use dustless vacuum or sweep up using dust suppressant
Waste Disposal Method: Approved landfill in accordance with all Federal, State and Local regulations.

Section 9  Personal Protective Equipment/Procedures

Respiratory Protection: Yes  Type: NIOSH or MSHA Approved dust Respirator

Ventilation: Local:
Mechanical (General):
Other:

Protective Gloves: Yes
Eye Protection: Yes
Other Equipment: Safety Shoes

Action to be taken during repair and maintenance of equipment that has been in contact with the product: None

Section 10  Special Precautions

During Storage: None
Other:
A) Work using fireclay must be completely dry before introduction of molten metal to avoid explosion from steam.
B) See ASTM E1132-86. “Standard Practice for Health Requirements Relating to Occupational Exposure to Quartz Dust.”
C) Avoid creating and breathing dust.

Section 11  Preparation/Revision

Date: 2/8/93 Revised 5/1/98

N/A = Not Applicable
NI = No Information or Test Data
NE = Not Established