

4/17/91 **MATERIAL SAFETY DATA SHEET**

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

SECTION I

PRODUCT NAME: MIZZOU CASTABLE MIZZOU GR R-2003  
 MIZZOU CASTABLE Plus MIZZOU GR Plus R-2003 Plus

PRODUCT TYPE: Castable Refractory

CHEMICAL FAMILY: SiO<sub>2</sub> = 29-36% Al<sub>2</sub>O<sub>3</sub> = 57-63% FORMULA: Not Applicable  
 CaO = 2-4% Fe<sub>2</sub>O<sub>3</sub> = 1-2%

SECTION II

PRODUCT HAZARDOUS INGREDIENTS

<u>CHEMICAL</u>	<u>TLV-TWA</u>	<u>CAS #</u>
Cristobalite (SiO <sub>2</sub> ) (5-15%)	0.05 mg/m <sup>3</sup> * respirable dust	14464-46-1
Quartz (SiO <sub>2</sub> ) (<2%)	0.1 mg/m <sup>3</sup> * respirable dust	14808-60-7
Alumina (Al <sub>2</sub> O <sub>3</sub> ) (<5%)**	10 mg/m <sup>3</sup> * total dust	1344-28-1
Amorphous Silica (<5%)	0.2 mg/m <sup>3</sup> * respirable dust	69012-64-2
Refractory Cement (<15%)	None (See Section V)	12005-57-1

\* Source: American Conference of Governmental Industrial Hygienists, 1990-1991.  
 \*\* MIZZOU GR and MIZZOU GR Plus only.

SECTION III  
PHYSICAL DATA

SOLUBILITY IN WATER: Slight VOLATILES BY VOLUME (%): Nil

SPECIFIC GRAVITY: 2.7 MELTING POINT: Not Applicable

APPEARANCE AND ODOR: Gray, granular mixture; no odor

SECTION IV  
FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: None

EXTINGUISHING MEDIA: Material is non-flammable.

SPECIAL FIRE FIGHTING PROCEDURES: None

UNUSUAL FIRE AND EXPLOSION HAZARDS: None

SECTION V  
HEALTH HAZARD DATA

EFFECT OF OVEREXPOSURE:

EYES: ACUTE: Dust can irritate eyes. Product's cement can cause eye injury.  
 CHRONIC: Unknown

SKIN: ACUTE: Product's cement can cause skin irritation.  
 CHRONIC: Unknown

INHALATION: ACUTE: Dust generated can cause breathing discomfort.  
 CHRONIC: Long-term exposure to dust may cause lung damage.

INGESTION: ACUTE: Unknown  
 CHRONIC: Unknown

**SECTION V (CONTINUED)**  
**EMERGENCY AND FIRST AID PROCEDURES:**

**EYES:** Flush with clean water for 15 minutes. If irritation occurs, consult physician.

**SKIN:** Wash with soap and water. If irritation occurs, consult physician.

**INHALATION:** Remove to fresh air. Seek medical attention.

**INGESTION:** Contact physician immediately. Do not induce vomiting unless instructed to do so by physician. Product is non-toxic as supplied, but its abrasive nature could damage internal organs.

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**SECTION VI**

**REACTIVITY DATA**

**STABILITY:** Stable

**INCOMPATIBILITY:** None known

**HAZARDOUS POLYMERIZATION:** Will not occur

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**SECTION VII**

**SPILL OR LEAK PROCEDURES**

**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:** If dry, predampen and sweep or shovel up. If wet (after mixing with water for use), sweep or shovel up.

**WASTE DISPOSAL METHOD:** In the as-supplied condition, product can be disposed of in an approved landfill, in accordance with local, state, and federal regulations.

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**SECTION VIII**

**SPECIAL PROTECTION INFORMATION**

**RESPIRATORY PROTECTION:** Use NIOSH approved respirator when working around dried material and when removing this product after service.

**VENTILATION:** General mechanical ventilation is usually adequate.

**EYE PROTECTION:** Goggles or safety glasses with side shields should be worn.

**OTHER PROTECTION:** Gloves and long sleeved and long legged clothing should be worn to prevent skin contact. Safety shoes should be worn to prevent foot injury from accidentally dropped bags of castable.

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**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 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.

Prepared By: Ellis J. Smith  
Title: Senior Technical Consultant  
Phone: (314) 473-3392