

6/10/91

MATERIAL SAFETY DATA SHEET

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

LOOSE WOOL INSULATION SECTION I

<u>PRODUCT NAME:</u>	INSWOOL BLANKET	INSWOOL-M BLANKET*	INSWOOL-HP BULK
	INSWOOL-HP BLANKET	INSWOOL-HP-M BLANKET*	INSWOOL-HP-M BULK*
	INSWOOL-HT BLANKET	INSWOOL-HT-M BLANKET*	INSWOOL-HT BULK
	INSWOOL-LT BLANKET	INSWOOL BULK	INSWOOL-HT-M BULK*
	INSWOOL-LT-M BLANKET*	INSWOOL-M BULK*	INSWOOL-LT BULK
			INSWOOL-LT-M BULK*

<u>PRODUCT TYPE:</u>	Refractory Fiber	<u>FORMULA:</u>	Not Applicable
<u>CHEMICAL FAMILY:</u>	Refractory	<u>NFPA RATING:</u>	1-0-0
* Made in the Republic of Mexico.		<u>DOT NO:</u>	Not Regulated

SECTION II PRODUCT HAZARDOUS INGREDIENTS

<u>CHEMICAL</u>	<u>TLV-TWA</u>	<u>CAS #</u>
Refractory Fiber (Al ₂ O ₃ - SiO ₂ Glass)	2 fibers/cc *	65997-17-3

* A. P. Green workplace exposure guideline. See also Section IX.
Note: International Agency for Research on Cancer (IARC) has classified ceramic fiber as 2B - Possibly carcinogenic to humans.

SECTION III PHYSICAL DATA

<u>SOLUBILITY IN WATER:</u>	Nil	<u>VOLATILES BY VOLUME (%):</u>	Nil
<u>SPECIFIC GRAVITY:</u>	2.5-3.0	<u>MELTING POINT:</u>	Not Applicable
<u>APPEARANCE AND ODOR:</u>	White to off-white fiber, no odor, in blanket or bulk form.		

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 known.

SECTION V HEALTH HAZARD DATA

EFFECT OF OVEREXPOSURE:

<u>EYES:</u>	ACUTE: Causes mechanical irritation. CHRONIC: None Known.
<u>SKIN:</u>	ACUTE: May cause skin irritation. CHRONIC: None Known.
<u>INHALATION:</u>	ACUTE: May cause upper respiratory irritation. CHRONIC: May cause lung damage. There have been animal studies that have shown refractory fiber to cause cancer of the pleura in animals.
<u>INGESTION:</u>	ACUTE: Unknown. CHRONIC: Unknown.

EMERGENCY AND FIRST AID PROCEDURES:

<u>EYES:</u>	Immediately flush eyes with water for 15 minutes. If irritation occurs, consult physician.
<u>SKIN:</u>	Wash skin with water followed with soap and water. If irritation occurs, consult physician.
<u>INHALATION:</u>	Remove to fresh air. Seek medical attention.
<u>INGESTION:</u>	Contact physician immediately. Do not induce vomiting unless instructed to do so by a physician.

SECTION VI
REACTIVITY DATA

STABILITY: Stable

INCOMPATIBILITY: Hydrofluoric acid and strong alkalis.

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: Dampen, then scoop up and place in a container for disposal.

WASTE DISPOSAL METHOD: To landfill, in accordance with local, state and federal regulations.

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SECTION VIII
SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: A NIOSH approved respirator for mineral dusts should be used at all times when working with this product. If material has been exposed to elevated temperatures above (1800 °F (982 °C)), a NIOSH approved respirator for use with crystalline silica should be used. (See Section IX.) Employees using a respirator must be fit tested, using OSHA qualitative fit testing requirements.

VENTILATION: General mechanical ventilation is usually adequate.

EYE PROTECTION: Goggles or safety glasses with side shields should be worn. Contact lenses should not be worn while handling this material.

OTHER PROTECTION: Use of leather gloves and long-sleeved and long-legged clothing protects hands, arms, and legs from skin contact. Work clothing should be washed separately. Rinse washing machine thoroughly after use.

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SECTION IX
SPECIAL PRECAUTIONS

WARNING: This product as supplied does not contain cristobalite; however, avoid breathing refractory dust during tear-out of this refractory after it has been in service. When exposed to temperatures above 1800 °F (982 °C), a large percentage of this material turns to cristobalite. A NIOSH approved respirator for use with crystalline silica should be used. See the NIOSH Certified Equipment list for the correct type for the dust level you encounter.

The permissible exposure limits for cristobalite, CAS #14464-46-1, are:

ACGIH	OSHA
TLV-TWA	PEL
0.05 mg/m ³	5 mg/m ³
Respirable Dust	SiO ₂ + 2 Respirable

(Note: OSHA has proposed a new PEL of 0.05 mg/m³ respirable dust, the same as ACGIH.)

WARNING: Cristobalite is 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. Its study concluded that sufficient evidence for carcinogenicity exists in experimental animals and that limited evidence for carcinogenicity exists in humans.

WARNING: Employees should not be allowed to smoke in any area where ceramic fibers are being installed or removed. During removal or repair, the material being removed or the area repaired should be sprayed with water--preferably water containing a wetting agent (detergent)--to suppress dusting. Dust collection apparatus should be used.

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

Recommended health and safety work practices for installation and removal of ceramic fiber refractory products:

INSTALLATION

- Use a half mask, air purifying respirator equipped with high efficiency filters which are NIOSH approved for protection against pneumoconiosis producing dust. We recommend use of a respirator at any level of exposure. Employees using a respirator must be fit tested, using the OSHA qualitative fit testing requirements.

• Wear long sleeved, loose fitting gloves and eye protection.

• Wash all exposed areas gently with soap and warm water after handling or other contact with the product.

• Wash work clothes separately from other clothing and rinse washing machine thoroughly after use. Work clothes should not be worn home, change clothes at the job site.

• Employees should not be allowed to smoke in areas where ceramic fibers are being installed. Employees should be encouraged to stop smoking.

• Each employee should be advised of the location of refractory ceramic fiber information. Company material safety data sheets (MSDS's) or generic MSDS's are acceptable for most applications.

• Dustless methods of cleaning such as wet vacuuming or washing down with water should be used. Cleaning with compressed air or dry sweeping should be prohibited. Light dust may be swept using dust suppressant sweeping compounds.

• Prior to installation of ceramic fibers, each employee should be appraised of the possible hazards, conditions and precautions for safe handling.

REMOVAL

• Ceramic fibers, as supplied, do not contain cristobalite, however, when exposed to temperatures above 1800°F. (982°C.) a large percentage of this material turns to cristobalite. To avoid breathing refractory dust during tear-out, a NIOSH approved respirator should be used.

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- Wear long sleeved, loose fitting clothes, loose fitting gloves and eye protection.
- Wash all exposed areas gently with soap and water after handling or other contact with the product.
- Wash work clothes separately from other clothing and rinse washing machine thoroughly after use. Work clothes should not be worn home, change clothes at the job site.
- Employees should not be permitted to smoke in the area where ceramic fibers are being removed. Employees should be encouraged to stop smoking.
- During removal or repair, the material being removed or the area repaired should be sprayed with water--preferably water containing a wetting agent (detergent)--to suppress dusting.
- Dust collection apparatus should be used.
- Protective clothing designed to minimize significant dust retention should be used and vacuum cleaned prior to removal. Use of cotton and wool clothes which tend to retain dust should be avoided.
- Dustless methods of cleaning such as wet vacuuming or washing down with water should be used. Cleaning with compressed air or dry sweeping should be prohibited. Light dust may be swept using dust suppressing sweeping compounds.
- Prior to removal, each employee should be appraised of the possible hazards, conditions and precautions for safe handling.
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A. P. GREEN INDUSTRIES, INC.

HEALTH AND SAFETY WORK PRACTICES FOR RCF

June, 1991

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