MATERIAL SAFETY DATA SHEET

A. MANUFACTURER/DISTRIBUTOR

Company: Pacific Clay Products. Inc.
14741 Lake Street
Lake Elsinore, CA. 92530
Phone: 951-674-2131

Date Revised: November 2006

B. PRODUCT IDENTIFICATION;

FIRED CLAY PRODUCTS CONTAINING NO ADDITIVES: Firebacks (dry pressed).

FIRED CLAY PRODUCTS CONTAINNING BARIUM CARBONATE: Sunset Red, Red Flash, Royal Saltillo, Rose Tan, Imperial Peach, Used, Mojave Gold, Segundo, Pacific Rose, Light Ironspot, La Paz, Medium Iron spot, Dark Heritage Red, Black Hills, Madera, Cheyenne, Summer Glacier, Mesa, Merlot, Mt. Whitney, Frisco, Napa, Brownville, Extruded Fire Backs, Pots, Grand Canyon, architectural blends including UCR Blend and others listed in sales literature.

FIRED CLAY PRODUCTS CONTAINING MANGANESE DOXIDE: Light Ironspot, Dark Ironspot, Pacific Rose, Pueblo, Brown and others listed in sales literature.

FIRED CLAY PRODUCTS CONTAINNING IRON CHROMITE: Sterling Grey.

FIRED CLAY PRODUCTS CONTAINNING IRON OXIDE: Dark Ironspot.

NOTE: All products contain crystalline silica.

C-1 Products Components

	CAS	% by Wt	ACGIH TIV	CSHA PEL
1. Aluminum Silicates	Var	50-70	10 mg/m³	15 mg/m³
2. Mineral Compounds of Iron, Calcium Magnesium	Var	7-9	10-15 mg/m³	10 mg/m³

C-2 Hazardous Components

3. Quartz (crystalline silica)	14808-60-7	29-40	0.1 mg/m³	10 mg/m³
4. Barium Carbonate	513-77-9	.02	0.5 mg/m³	0.5 mg/m³
5. Iron Chromate	1308-38-9	2 ½ %		
6. Manganese Dioxide	1313-13-9	2-7 ½	5 mg/m³	5.0 mg/m³

C-3 PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling point vapor pressure, vapor density, melting point, evaporation rate: NA. Solubility in H^2O:O. Specific gravity: 2.6. Appearance and odor: Vitrified, solid odorless, wide color range.

C-4 FIRE AND EXPLOSION HAZARD DATA:

Flash point, extinguishing media, flammable limits, U.L.*:NA. Unusual fire and explosion hazards: none. Special fire fighting procedures: none.

C-5 REACTICITY DATA

Stable. Incompatibility: none known. Conditions to avoid: none. Hazardous decomposition or byproducts: not known. Hazardous polymerization: will not occur.

D. HEALTH HAZARD DATA;

Exposure limits (see C-1). Acute Effects of over exposure Eye: dust or chips may cause mild to severe irritation or abrasion Skin: dust or chips may cause mild allergic reactions. Excessive exposure may result in abrasions. Inhalation and Carcinogenicity: 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 Group 1. The agency states that there is sufficient evidence of carcinogenicity in humans when crystalline silica is inhaled in the form of quartz or cristobalite from occupational sources. (IARC Monograph 68.) Dust from product at any state of its use or during tear-out after service may, especially on long exposure, lead to lung disease unless respiratory protection in employed. NIOSH approved respirators should be worn any time that the refractories are torn out after service. While a respiratory hazard and/or nuisance dust may exist from the product itself, other foreign substances may warrant additional precautions during tearout disposal. Chromium has been classified as a carcinogen in humans, Inhalation of dust and chips may also cause congestion and irritation in nasal and respiratory passages. Ingestion: none known Subchronic and chronic effects of overexposure: excessive exposure to dust over an extended period of time may result in the development of pulmonary diseases. California Proposition 65 law prohibits release of crystalline silica to the air in the work place or to waters of the state without proper warning.

Note: Percentages of hazardous chemicals as shown in C-2 above are prior to the verification process, during brick manufacturing. Some or all of the hazardous compounds will be mechanically bound in the glassy phase formed. The probability of the release of individually separate grains at respirable diameter is relatively low. Saw-cutting products with water reduces this hazard to virtually nil.

E. FIRST AID & EMERGENCY PROCEDURES:

Eye: Flush eye with running water. Obtain medical assistance if irritation continues.

Inhalation: Remove from exposure to airborne particulate. Consult a physician if breathing does not return to normal.

Ingestion: NA

Skin: Wash with soap and water. If an allergic reaction causes a rash that does not heal in an appropriate time, consult a physician. Treat abrasions as any other scrape or cut, with disinfectants and bandages.

Medical conditions Aggravated by Exposure:

Excessive dust exposure may aggravate any existing respiratory disorders of diseases. Possible complications of allergies resulting in irritation to the skin, eyes and respiratory passages may occur from excessive exposure to dust.

F. PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be taken In Case Materials are Released or Spilled:

Use dustless system for handling, storage, and clean up so that airborne dust does not exceed the PEL. Use adequate ventilation and dust equipment. Practice good housekeeping. Do not permit dust to collect on the walls, floors, sills, ledges, machinery, or equipment. Maintain, clean, and fit test respirators in accordance with OSHA regulations. Maintain and test ventilation and dust collection equipment. Wash or vacuum clothing which has become dusty. See also control measures in Section F.

Waste Disposal Method:

This material is classified as a non-hazardous solid waste for disposal.

Precautions to be Take in Handling and Storing: None

Other Precautions:

See OSHA Hazard Communication Rule 29 CFR 1910.1000, 1915.99, 1917.28, 1918.20, 1926.59, and 1928.21, and state and local worker or community "right to Know" law and regulations. We recommend that smoking be prohibited in all areas where respirators must be used. WARN YOUR EMPLOYEES (AND YOUR CUSTOMERS-USERS IN CASE OF RESALE) BY POSTING, AND OTHER MEANS OF THE HAZARD AND OSHA PRECAUTIONS TO BE USED. PROVIDE TRAINING FOR YOUR EMPLOYEES ABOUT THE OSHA PRECAUTIONS. See also American Society for testing and Materials (ASTM) Standard Practice E1132-86. *Standard Practice for Health Requirements Relating to Occupational Exposure to Quartz Dust.

G. CONTROL MEASURES

Respiratory Protection:

The following chart specifies the type of respirators, which may provide respiratory protection for crystalline silica.

RESPIRTORY PROTECTION FOR CRYSTALLINE SILICA
MINIMUM REPIRATORY PRTCTION

CONDITION	
Particulate Concentration	
Up to 5F x PEL	Any dust respirator,
Up to 10 x PEL	Any dust respirator, except single-use or quarter-mask respirator. Any fume respirator or high efficiency particulate fuller respirator. Any supplied-air respirator. Any self-contained breathing apparatus.
Up to 50 x PEL	Any high efficiency particulate filter respirator with full-face piece. Any supplied air respirator with full face-piece, helmet, or hood. Any self-contained breathing apparatus.
Up to 500 x PEL	A powered air-purifying respirator with a high efficiency particulate filter. A type C Supplied air respirator operated in pressure-demand or other positive pressure or continuous-flow mode.
Greater than 500 x PEL	Self-contained breathing apparatus with a full face-piece operated in pressure-demand or other positive mode.

A combination respirator, which includes a Type C supplied-air respirator with a full face- piece, operated in pressure-demand or other positive pressure continuous-flow mode and an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive mode.

Only NIOSH-approved or MSHA-approved equipment should be used (See 29 CFR 1910.31).
See also ANSI Standard Z88.2-1980 "Practices for Respiratory Protection"

Ventilation: When sawing brick use adequate ventilation to maintain exposure below the OSHA PEL and ACGIH TLV.

Skin Protection: Use gloves and/or protective clothing if abrasion or allergic reactions are experienced.

Eye Protection: Use safety glasses with side shields. Face shields should also be used where dry sawing brick.

Local Exhaust: When dry sawing or grinding clay brick, use sufficient local exhaust to reduce the level of repairable dust to the PEL. See ACGOH “Industrial Ventilation, A Manuel of Recommended Practice”, latest edition.

Mechanical:	See “Other Precautions” under Section E.
Special:	See “Other Precautions” under Section E.
Other:	Wear steel-toed safety shoes. A wet saw is recommended for sawing brick.
Work/Hygienic Practices	Avoid creating and breathing dust See “Other Precautions” under Section E.

H. SARA 313 INGREDIENTS

Chemical Name	Category Code
Chromium Compounds	N090
Barium Compounds	N040
Manganese Compounds	N450

I. OTHER INFORMATION

Pacific Clay Products considers brick products and “article” as defined in 29 CFR Part 1200(b) (5) (IV) and 40 CFR Part 372.38. As an article, an MSDS is not required and the product is exempt from all other requirements of the hazardous communication standard. OSHA requires an MSDS since it is occasionally dry-sawn.
The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful health effects which may be caused by exposure to airborne dust particles increased by dry sawing or grinding of brick products. Users for this product should comply with all applicable health and safety laws, regulations and orders.