

## SAFETY DATA SHEET

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Effective Date June 21, 2006

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### SECTION 1: PRODUCT IDENTIFICATION

**Material Name:** SCHIST NOT A CONTROLLED PRODUCT

**Company:** PENTAL SURFACES

3900A Industry Drive, Fife, WA 98424

253-344-5150

**Emergency Contact Information:** Poison Control Center- 1-800-222-1222 or 911

**Recommended use:** Building material, Countertops, Floor and Wall Tile, and other applications. As defined by guidelines by the Environmental Protection Agency, the American Society for Testing and Materials, and the Federal Trade Commission, tile is one of the most environmentally friendly building materials.

### SECTION 2: HAZARD IDENTIFICATION

This product contains mixtures of clays, silica sand, and other natural occurring minerals in slab form. When crushed and mixed with water and baked at high temperatures. The finished products are odorless, stable, nonflammable, and pose no known health hazard. When cut, ground or during demolition this product can produce Silica containing airborne particulates which can lead to lung cancer

**GHS Classification:**

**Global Harmonization Identification System GHIS:** Health: 3 Fire: 4 Reactivity: 4

Carcinogenicity Category 1A (H350)

Specific Target Organ toxicity, single exposure; Respiratory tract irritation-

Category 3A (H335)

Specific target organ toxicity- repeated exposure- Category 1A (H372)

**GHS Pictogram:**

Crystalline Silica



Category 3 (Respiratory Tract Irritation) (H335)



Category 1A (Carcinogenicity) (H372)

**SECTION 2: HAZARD IDENTIFICATION (CONT)****Signal Word:** DANGER**Hazard Statements:**

(H350) May cause CANCER (Inhalation)

(H335) May cause Respiratory Irritation

(H372) Causes damage to organs (Lung/respiratory) through repeated or prolonged exposure

**Precautionary Statements:**

Do not handle until all safety precautions have been read and understood (P202)

Do not breath dusts (P260) when cutting, use water and/or exhaust ventilation to minimize exposure.

Wear respiratory protection (If ventilation is inadequate) (P284)

Do not eat, drink, or smoke when using this product (P270)

Wash skin thoroughly after handling (P264)

**Potential Health Effects:**

Inhalation: Do not breathe dust. See Health Hazards in Section 11 for more information.

**SECTION 3: COMPOSITION OF INGREDIENTS**

Chemical Name	CAS#	% by Weight (approximate)
Silicon Dioxide, SiO <sub>2</sub>	14808-60-7	45.6-56.5
Aluminum Oxide, Al <sub>2</sub> O <sub>3</sub>	1344-28-1	16-25
Ferric Oxide, Fe <sub>2</sub> O <sub>3</sub>	1309-37-1	5.4-8.4
Potassium Oxide, K <sub>2</sub> O	12136-45-7	2.8-6.5
Magnesium Oxide, MgO	1309-48-4	2.6-3.8
Carbon Dioxide, CO <sub>2</sub>	124-38-9	0.8-5.5
Calcium Oxide, CaO	1305-78-8	1.6-4.2
Sulfur, S	7704-34-9	1.1-2.7
Carbon, C	7440-44-0	1.5-2.1
Titanium(IV) Oxide, TiO <sub>2</sub>	1317-70-0	0.7-1.9
Sodium Oxide, Na <sub>2</sub> O	1313-59-3	0.5-1.5
Magnesia, MnO	82375-77-7	<0.1
Water, H <sub>2</sub> O	7732-18-5	<0.3

#### **SECTION 4: FIRST AID MEASURES**

**Eyes:** (Dusts) Immediately flush with large amounts of water for a minimum of 15 minutes. Seek medical attention if irritation persists.

**Skin:** Wash thoroughly after working with natural stone products.

**\*Inhalation:** Remove to fresh air if exposed to large amounts of dusts. Administer artificial respiration if breathing has stopped. Seek medical attention immediately.

**Ingestion:** Not applicable for intact natural stone products.

\*Always use methods to reduce dusts during cutting ( wet cutting/grinding and/or exhaust ventilation) Use respiratory protection as necessary

Always have emergency eyewash available in area where products are cut or ground.

#### **SECTION 5: FIRE FIGHTING MEASURES**

**Flash Point:** Not applicable

**Auto Ignition Temperature:** Not applicable

**Flammable Limits LEL & UEL:** Not applicable

**Fire Extinguishing Media:** None required-Non-Flammable

**Fire and Explosion Hazards:** None

#### **SECTION 6: ACCIDENTAL RELEASE**

Avoid creating excessive amounts of dusts. Clean up dusts with wet mop methods or use an approved HEPA vacuum system.

#### **SECTION 7: HANDLING AND STORAGE**

When cutting, or grinding, use equipment with integral dust collection and/or exhaust ventilation. Use wet cutting methods to reduce dusts. Use respiratory protection in the absence of effective engineering controls, or when PEL's are exceeded.

Do not store near acids. Natural stone products may be damaged or discolored

#### **SECTION 8: EXPOSURE CONTROL PERSONAL**

PENTAL SURFACES SCHIST SAFETY DATA SHEET

**PROTECTION**

<b>Component</b>	<b>OSHA PEL</b>	<b>ACGIH TLV</b>
Silicon Dioxide, SiO <sub>2</sub>	0.05mg/m <sup>3</sup>	0.025mg/m <sup>3</sup>
Aluminum Oxide, Al <sub>2</sub> O <sub>3</sub>	(T) 15mg/m <sup>3</sup> (R) 5mg/m <sup>3</sup>	10mg/m <sup>3</sup>
Ferric Oxide, Fe <sub>2</sub> O <sub>3</sub>	10mg/m <sup>3</sup>	5mg/m <sup>3</sup>
Potassium Oxide, K <sub>2</sub> O	Not Established	Not Established
Magnesium Oxide, MgO	10mg/m <sup>3</sup>	10mg/m <sup>3</sup>
Carbon Dioxide, CO <sub>2</sub>	5000ppm or 9000mg/m <sup>3</sup>	5000ppm or 9000mg/m <sup>3</sup>
Calcium Oxide, CaO	5mg/m <sup>3</sup>	2mg/m <sup>3</sup>
Sulfur, S	Not Established	Not Established
Carbon, C	Not Established	Not Established
Titanium(IV) Oxide, TiO <sub>2</sub>	Not Established	10mg/m <sup>3</sup>
Sodium Oxide, Na <sub>2</sub> O	Not Established	Not Established
Magnesia, MnO	Not Established	Not Established
Water, H <sub>2</sub> O	Not Established	Not Established

(T)= Total Dusts  
(R)= Respirable Dusts

**Engineering Controls:** Use integral dust collection and/or exhaust ventilation, avoid inhalation of dusts. The highest probability of silica exposure occurs during installation using dry cutting methods or during removal of installed natural stone. Wet cutting methods to reduce or maintain dust levels below the PEL is highly recommended.

**Skin:** Wear impermeable gloves during cutting, sanding, or grinding

**Eye:** Wear approved Safety Goggles, or Safety Glasses and Face Shield when cutting, sanding, or grinding.

**Respiratory:** Wear a NIOSH approved respirator with N95 particulate filters or higher if PEL is exceeded or when engineering controls are not feasible. Higher levels of exposure will dictate the type of respiratory protection used. Review NIOSH chemical hazard guide for information on respiratory protection at [cdc.gov/niosh/npg](http://cdc.gov/niosh/npg)

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Solid, color may vary
<b>Odor:</b>	Odorless
<b>Melting Point:</b>	Not applicable
<b>Boiling Point:</b>	Not applicable
<b>Vapor Pressure:</b>	Not applicable
<b>Vapor Density:</b>	Not applicable
<b>Solubility in Water:</b>	Insoluble
<b>Specific Gravity:</b>	2.6-2.81
<b>Percent Volatile by Volume:</b>	Not applicable
<b>Evaporation Rate:</b>	Not applicable
<b>Viscosity:</b>	Not applicable

## SECTION 10: STABILITY AND REACTIVITY

<b>Stability:</b>	Stable in current form
<b>Conditions to Avoid:</b>	Avoid contact with acids, avoid contact with dusts created during cutting or grinding
<b>Incompatibility:</b>	Avoid contact with acids, and strong oxidizers
<b>Hazardous Polymerization:</b>	Will not occur
<b>Hazardous Decomposition Products:</b>	Avoid inhalation of dusts created when cutting/ grinding, or removing tiles

## SECTION 11: TOXICOLOGICAL INFORMATION

### Potential Health Effects

#### Primary Routes of Exposure

None for intact natural stone products. Inhalation and potential exposure to eyes, hands, and other body parts if contact is made with broken stone, and/or during procedures involving cutting, grinding, and removal of installed products

#### Acute Health Effects

No acute health effects from exposure to intact natural stone products. Working with broken or cut natural stone produces the potential for cuts to the hands or other exposed body parts. Acute effects such as eye irritation may occur if associated with high dust operations such as dry cutting, or during removal of installed stone. In rare cases, symptoms of acute silicosis, a form of silicosis associated with exposure to respirable crystalline silica, may develop following acute exposure to extremely dusty environments caused by generation of dusts. Signs such as labored breathing and early fatigue may indicate silicosis, however, these symptom may arise from other causes.

## SECTION 11: TOXICOLOGICAL INFORMATION (CONT)

### Chronic Effects

No chronic effects are known for exposure to intact natural stone products. Long-term, continual exposure to respirable crystalline silica at or above established permissible occupational exposure limits may lead to the development of silicosis, a nodular pulmonary fibrosis (NPF). NPFs are also associated with pulmonary tuberculosis, bronchitis, emphysema, and other airway diseases. This type of chronic exposure to silica dust may also result in the development of autoimmune disorders, chronic renal disease, and other adverse health effects. Epidemiologic studies demonstrate that workers exposed to elevated silica concentrations have a significant risk of developing chronic silicosis. Signs such as labored breathing and early fatigue may indicate silicosis; however, these same symptoms can also arise from many other causes.

### Potential Adverse Interactions

Silicosis may be complicated by severe mycobacterial or fungal infections and result in tuberculosis (TB). Epidemiologic studies have established that silicosis is a risk factor for developing TB. Existing respiratory or pulmonary diseases may be complicated by exposure to respirable crystalline silica. Smoking may increase the risk of adverse effects in conjunction with occupational exposure to silica dust at or above permissible exposure limits.

### Carcinogen Status

Respirable crystalline silica is classified by the International Agency for Research on Cancer (IARC) as a Group I Carcinogen (carcinogenic to humans). The National Toxicology Program (9th Report) lists respirable crystalline silica as "Known to be a Human Carcinogen". USDOL/OSHA and NIOSH have recommended that crystalline silica be considered a potential occupational carcinogen

**California Proposition 65 Warning:** Crystalline Silica is known in the state of California to be a human Carcinogen.

### Overview of Animal Testing

Short term experimental studies of rats have found that intra-tracheal instillation of quartz particles leads to the formation of discrete silicotic nodules in rats, mice and hamsters.

### Oral (silica) Lethality

LD50 Rat oral >22,500 mg/kg LD50

Mouse oral >15,000 mg/kg LC50

Carp >10,000 mg/l (per 72 hr.)

## SECTION 12: ECOLOGICAL INFORMATION

None available at this time.

## SECTION 13: DISPOSAL CONSIDERATIONS

Dispose all waste in accordance with federal, state, and local regulations. Material is non-hazardous Class III regulated material.

## SECTION 14: TRANSPORT INFORMATION

<b>D.O.T Shipping Name:</b>	Not Applicable
<b>Hazard Class:</b>	Non Regulated
<b>ID Number:</b>	Not Applicable
<b>Marking:</b>	Not Applicable
<b>Labels:</b>	None
<b>Placard:</b>	None
<b>Hazardous Substance/RQ:</b>	Not Applicable
<b>Shipping Description:</b>	Natural Stone Products

## SECTION 15: REGULATORY INFORMATION

This product and/or its components have been previously introduced into U.S. commerce and is listed in the Toxic Substances Control Act (TSCA) Inventory of Chemicals in Commerce. Hence, it is subject to all applicable provisions and restrictions under TSCA 40 CFR Section 721 and 723.250.

This natural stone tile contains <1 percent by weight each of the following elements, which are SARA 313 Recordable: Antimony, Arsenic, Barium, Beryllium, Cadmium, Cobalt, Chromium, Copper, Manganese, Mercury, Nickel, Lead, Silver, Thallium, Tin, Titanium, Vanadium, and Zinc

Title 22 Division 2, California Code of Regulation Chapter 3 (Proposition 65): This product contains a chemical or chemicals known to the State of California to cause cancer and/or birth defects or other reproductive harm.

This product or its components meets the following hazard definition(s) as defined by the Occupational Safety and Health Hazard Communication Standard (29 CFR Section 1910.1200):  
Health Hazard (Sections 2&11)

The information in this data sheet provides information related to the potential hazards associated with dusts which may be produced during cutting or otherwise changing the shape of the product during installation and/or removal.

## SECTION 16: OTHER INFORMATION

**Global Harmonization Identification System GHIS:** Health: 3 Fire: 4 Reactivity: 4

**Hazardous Material Identification System HMIS:** Health: 0 Fire: 0 Reactivity: 0

**National Fire Protection Association NFPA:** Health: 1 Fire: 0 Reactivity: 0

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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