MATERIAL SAFETY DATA SHEET

I. PRODUCT IDENTIFICATION

Trade Name (as labeled): **EAGLE ROOFING PRODUCTS**

Eagle Concrete Roof Tile

Phone number for additional information:

General Offices
3546 N. Riverside Avenue, Rialto, CA 92377
909-355-7000 / FAX 909-822-3516

Address (complete mailing address):

Manufacturing
2352 N. Locust Avenue, Rialto, CA 92377
4602 W. Elwood, Phoenix, AZ 85043
4555 McKinley Ave, Stockton, CA 95206

Date prepared or revised: 05-26-09 **Prepared by EAGLE Roofing Products Co.**

II. HAZARDOUS INGREDIENTS

Hazardous Components/CAS Number	OSHA PEL (mg/m^2)	ACGIH TLV (mg/m^2)	% by Weight
Portland Cement 65997-15-1	15 Total 5 Respirable	10 Total 3 Respirable	20-30%
Sand and Aggregate (variable crystalline Silica content) 14808-60-7	15 Total 5 Respirable	10 Total 3 Respirable	50-60%
Limestone 1317-65-3	15 Total 5 Respirable	10 Total 3 Respirable	0-5%
Fly Ash 68131-74-8	15 Total 5 Respirable	10 Total 3 Respirable	0-8%
Mold Release Agent (petroleum oil, vegetable oil)	None Established for Vapor	None Established for Vapor	Less Than 1%
Acrylic Polymer	None Established	None Established	0-8%
Metal Oxide Pigments (various mixtures to produce color section): Cobalt Metal Pigments (blue) 1307-96-6 Iron Oxide Pigments (black, red and yellow) 1309-37-1 Titanium Dioxide Pigment (white) 13463-67-7 Chromium (111) Oxide Pigments (green) 1308-38-9	- 0.1 10 (fume) 15 1	- 0.05 5 (dust & fume) 10 0.5	0 – 3.0% - - - - -

III. PHYSICAL PROPERTIES

Boiling Point Not applicable	**Specific Gravity ($H_20=1$)** Denser than water
Vapor Pressure (mm Hg.) Not applicable	**Melting Point** Not applicable
Vapor Density (AIR = 1) Not applicable	**Evaporation Rate (Butyl Acetate = 1)**
Solubility in Water Negligible	
Appearance and Odor Concrete roof tiles in various colors. Heavy solid objects. Dust can be generated during cutting, grinding or drilling.	

IV. FIRE AND EXPLOSION

Flash Point (Method Used) Not applicable	**Explosive Limits** Not applicable
Extinguishing Media Not applicable	
Special Fire Fighting Procedures Not applicable	
Unusual Fire and Explosion Hazards Under extremely unusual circumstances, fine airborne silica dust could explode if contacted by a strong ignition source such as a welder's torch.	

V. REACTIVITY DATA

Stability	**Unstable**		**Conditions to Avoid**
	Stable	✓	**None**
Incompatibility (Materials to Avoid) **None**			
Hazardous Decomposition of Byproducts **None**			
Hazardous Polymerization	**May Occur**		**Conditions to Avoid**
	Will Not Occur	✓	**None**

VI. HEALTH HAZARD DATA

Health Hazards (Acute and Chronic)
Concrete roof tiles contain mineral dust and crystalline silica which may be released as dust when dry cutting, grinding or drilling. All such activities are normally conducted outside in a non-confined area.
CHRONIC HAZARDS

Primary Route of Exposure: Inhalation

Exposure Limits: (Permissible exposure levels for this product must be defined in the workplace due to the combination of silica and other constituents and condition of use). Unless specified otherwise, limits are expressed as eight-hour-time-weighted averages (TWA).

Particulates or Dust: TLV = 10 mg/m^3 (total particulate) or 3mg/m^3 (respirable particulate, not otherwise classified); OSHA PEL = 15 mg/m^3 (total particulate, not otherwise regulated), or 5mg/m^3 (respirable particulate, not otherwise classified.)

Respirable Crystalline Silica (quartz): TLV = 0.1mg/m^3; OSHA PEL = 10 mg/m^3 ÷ (%SiO_2+2)

Respirable Dust Containing Silica: OSHA PEL = 10 mg/m^3 ÷ (%SiO_2+2)

Total Dust Containing Silica: OSHA PEL = 30 mg/m^3 ÷ (%SiO_2+2)

ACGIH and OSHA have determined that adverse effects are not likely to occur in the workplace provided exposure levels to not exceed the appropriate TLV/PEL. However, because of the wide variation in individual susceptibility, lower exposure limits may be appropriate for some individuals, including persons with pre-existing medical conditions such as those described below.

Abbreviations: TLV = threshold limit value of the American Conference of Governmental Industrial Hygienists (ACGIH); OSHA PEL = permissible exposure limit of the Occupational Safety and Health Administration (OSHA) [29 CFR §1910.1000]; mg/m^3 = milligrams of substance per cubic meter of air.

SUBCHRONIC AND CHRONIC HEALTH EFFECTS:

Pulmonary Diseases: Excessive exposure to particulates (dust) over an extended period of time may result in the development of silicosis and other pulmonary diseases.
Carcinogenicity: IARC has classified respirable crystalline silica (quartz) as a known carcinogen in humans.
California Proposition 65 Warning: Dry cutting, sanding or grinding of concrete roofing tiles will generate dust containing respirable crystalline silica which is "known to the State of California to cause cancer, and other substances which are known to the State of California to cause cancer, birth defects and other reproductive harm."

VI. HEALTH HAZARD DATA (continued)

ACUTE HAZARDS:

Eye Contact: Direct contact with dust may cause irritation by mechanical abrasion.
Skin Contact: Direct contact may cause irritation by mechanical abrasion.
Skin Absorption: Not expected to be a significant route of exposure.
Ingestion: Expected to be practically non-toxic. Ingestion of large amounts of dust or material may cause gastrointestinal irritation and blockage.
Inhalation: Dusts may irritate the nose, throat, and respiratory tract by mechanical abrasion. Coughing,

sneezing, and shortness of breath may occur following exposures in excess of appropriate exposure limits. Use of natural sand and gravel for construction purposes is not believed to cause additional acute toxic effects. However, repeated overexposure to very high levels of respirable crystalline silica for periods as short as six months have caused acute silicosis. Acute silicosis is a rapidly progressive, incurable lung disease that can be fatal. Symptoms include (but are not limited to) shortness of breath, cough, fever, weight loss, and chest pain.

Medical Conditions Aggravated by Exposure: Excessive dust exposure may aggravate any existing respiratory disorders or diseases. Possible complications of allergies resulting in irritation to skin, eyes and respiratory passage may occur from excessive exposure to dusts.

VII. FIRST AID AND EMERGENCY PROCEDURES

FIRST AID:

Eyes: Immediately flush eye(s) with plenty of clean water for at least 15 minutes, while holding the eyelid(s) open. Occasionally lift the eyelid(s) to ensure thorough rinsing. Beyond flushing, do not attempt to remove material from the eye(s). Contact a physician if irritation persists or later develops.

Skin: Wash with soap and water. Contact a physician if irritation persists or later develops.

Ingestion: If person is conscious, give large quantity of water and induce vomiting; however, never attempt to make an unconscious person drink or vomit. Get immediate medical attention.

Inhalation: Remove to fresh air. Dust in throat and nasal passages should clear spontaneously. Contact a physician if irritation persists or later develops.

EMERGENCY PROCEDURES:

Beyond first aid, not applicable.

VIII. PERSONAL PROTECTION AND CONTROL MEASURES

RESPIRATORY PROTECTION: To minimize exposure to dust and/or crystalline silica, dry cutting, grinding, and drilling roof tiles should be performed keeping in mind the possible use or requirement of dust control systems (vacuum, wet suppression), the use of respirators and always with the consideration of atmospheric conditions and wind direction. Use vacuum when possible for clean up when tile cutting is finished. It is the end user or installer's responsibility to determine if NIOSH-approved respirators are to be worn/used in accordance with a respiratory protection program which meets OSHA requirements as set forth at 29 ξ1910.134 and ANSI Z88.2 "Practices for Respiratory Protection."

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."

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 when dry sawing roof tile. Dust goggles should be worn when excessively (visible) dusty conditions are present or are anticipated. (See ANSI Z87.1)

LOCAL EXHAUST: When dry-sawing or grinding concrete roof tile, use sufficient local exhaust to reduce the level of respirable dust to the applicable standards set forth in Section II. See ACGIH "Industrial Ventilation, A Manual of Recommended Practice," latest edition.

SAFETY MEASURES: Wear hard hats meeting ANSI Z89.1 and/or steel-toed safety shoes meeting ANSI Z41 if tiles may fall from an elevation or be dropped during handling.

WORK/HYGIENIC PRACTICES: Avoid creating and breathing dust. Wash or vacuum clothing which has become dusty.

OTHER CONTROL MEASURES: Respirable dust and quartz levels may be required to be monitored regularly. Dust and quartz levels in excess of appropriate exposure limits should be reduced by feasible engineering controls, including (but not limited to) wet sawing, wet suppression, vacuuming, ventilation and process enclosures, etc. It is the operator/employer's responsibility to determine if respirators must be worn in accordance with a respiratory protection program which meets OSHA requirements as set forth at 29 ξ1910.134 and ANSI Z88.2 "Practices for Respiratory Protection" when such controls are not feasible or do not completely control dust generation. It is the operator, installer or employer's responsibility to determine what safety regulations or standards apply to the job pertaining to the installation and use of concrete roof tiles.

IX. OTHER REGULATORY INFORMATION

CLASSIFICATION OF PRODUCT FOR REGULATORY PURPOSES: Concrete roof tile is an "article" as defined in 29 CFR §1200 (b) (5) (IV) and 40 CFR §372.38. As an article, an MSDS is not required for the product's normal storage, transportation and use. OSHA requires a MSDS for concrete roof tile since it is occasionally cut, shaped or drilled in a manner which generates dust.

COMMUNITY RIGHT TO KNOW: Emergency Planning and Community-Right-To-Know Act (EPCRA) §311/312 Categorizes hazardous substance inventory [40 CFR §370]. This product is an exempt article. EPCRA §313 Toxic Chemical Release Inventory (TRI) Reporting [40 CFR §372]. This product in normal construction use is an exempt article. It contains two chemicals (chromium and cobalt compounds less than 1% by weight) which are listed in the reference regulation above *de minimus* concentrations.

Section 313 Supplier Notification

Blue or green tiles may contain the following EPCRA section 313 chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372):

CAS Registry Number	Chemical Name	Percent by Weight
1308-38-9	Chromium	Less than 1 %

This information should be included in all MSDSs that are copied and distributed for this material.

TRANSPORTATION:

DOT Hazard Classification: Not Regulated [49 CFR §171 et.seq.]
UN/NA Code: None
Placard Required: None
Labeling Requirement: None

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA): Scrap concrete roof tiles as supplied do not meet any of the RCRA characteristics of hazardous waste (ignitable, corrosive, reactive, or toxic), nor are they listed hazardous wastes [40 CFR §261]. State and local requirements for disposal of concrete roof tiles as non-hazardous solid waste should be determined.

WASTE DISPOSAL METHOD: Concrete roof tiles scrap is classified as a non-hazardous solid waste for disposal. In California, the Regional Water Quality Control Board - Central Valley Region has classified concrete roof tiles that have been crushed (waste tile materials) as "designated waste." State and local requirements for disposal of the concrete roof tiles as non-hazardous and/or "designated waste" should be determined.

TOXIC SUBSTANCE CONTROL ACT (TSCA): All components of concrete roof tiles are listed on the TSCA Section 8(a) Inventory of Chemical Substances.

THE INFORMATION AND RECOMMENDATIONS CONTAINED HEREIN ARE BASED UPON THE DATA REASONABLY BELIEVED TO BE CORRECT. HOWEVER, NO GUARANTEE OR WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED, IS MADE WITH RESPECT TO THE INFORMATION CONTAINED HEREIN. THE PREPARER ACCEPTS NO RESPONSIBILITY AND DISCLAIMS ALL LIABILITY FOR ANY HARMFUL HEALTH EFFECTS WHICH MAY BE CAUSED BY EXPOSURE TO AIRBORNE DUST PARTICLES CREATED BY DRY SAWING, GRINDING, OR DRILLING OF ROOF TILES, NOR ANY OTHER INJURY RESULTING FROM THEIR USE. CUSTOMERS/USERS OF CONCRETE ROOF TILE MUST COMPLY WITH ALL APPLICABLE HEALTH AND SAFETY LAWS, REGULATIONS, AND ORDERS.