

# Concrete Roof Tile

## Safety Data Sheet

Revision Date: 6/1/2015

Date of Issue: 6/1/2015

Supersedes Date: 10/16/2000

Version 1.0



### SECTION 1: IDENTIFICATION

#### 1.1 Product Identifier

**Product Name:** Concrete Roof Tile

#### 1.2 Intended User of the Product

Building Material

#### 1.3 Name, Address, and Telephone Number of the Responsible Party

##### Company

BORAL ROOFING, LLC

200 Mansell Court East, Suite 305

Roswell, GA 30076

United States

(770) 645-4500

(949) 585-8200

[www.boralna.com/roofing](http://www.boralna.com/roofing)

#### 1.4 Emergency Telephone Number

(949) 981-3319

### SECTION 2: HAZARD(S) IDENTIFICATION

#### 2.1 Classification of the Substance or Mixture

This product is an article as defined in the OSHA Hazard Communication Standard [29 CFR 1910.1200(c)] and is exempt from regulatory requirements when handled as a manufactured item. This SDS contains additional health hazard information related to dust generation during construction.

##### Classification (GHS-US)

Eye Irritation 2B

Respiratory Irritation STOT Single Exposure 3

Respiratory Illness STOT Repeated Exposure 2

Carcinogen 1A

#### 2.2 Label Elements

##### GHS-US Labeling Hazard

##### Pictograms (GHS-US)



##### Signal Word (GHS-US):

- Warning

##### Hazard Statements

##### (GHS-US):

- May cause eye irritation (H320)
- May cause respiratory irritation (H335)
- May cause cancer (H350)
- May cause damage to respiratory system through prolonged or repeated exposure (H372)

##### Precautionary

##### Statements (GHS-US):

- Do not handle until all safety precautions have been read and understood (P202)
- Avoid breathing dust; in case of inadequate ventilation, wear respiratory protection (P264) (P284)
- Cut/grind/chip product in a well-ventilated area or use a wet saw (P271)
- Wear protective gloves, protective clothing, and eye protection (P280)
- IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing (P304) (P340)
- IF IN EYES: Rinse cautiously with water for at least 15 minutes. Remove contact lenses if present and easy to do. Continue rinsing until pain or irritation subsides. (P305) (P351) (P338)
- If symptoms persist: Get medical advice/attention (P308) (P313)

#### 2.3 Other Hazards

Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

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### 2.4 Unknown Acute Toxicity (GHS-US)

No data available

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Description of Product

Concrete matrix article.

### 3.2 Mixture

Substances and hazard classification based on dust composition.

Ingredient	Product Identifier (CAS No.)	% (w/w)	Classification (GHS-US)
Quartz	14808-60-7	40 - 60	<ul style="list-style-type: none"><li>• Carc. 1A, H350</li><li>• STOT Respiratory 2, H372</li></ul>
Portland cement (cured)	65997-15-1	20 – 40	<ul style="list-style-type: none"><li>• Respiratory Irritation, STOT 3, H335</li><li>• Eye Irritation 2B, H320</li></ul>
Limestone	1317-65-3	< 30	<ul style="list-style-type: none"><li>• Not classified</li></ul>
Amorphous silica	7631-86-9	< 4	<ul style="list-style-type: none"><li>• Not classified</li></ul>
Iron oxide	1309-37-1	≤ 3	<ul style="list-style-type: none"><li>• Not classified</li></ul>

*Note:* This product contains additional not classified substances at low concentrations that do not contribute to the hazards of this product.

## SECTION 4: FIRST AID MEASURES

### 4.1 Description of First Aid Measures

**General:** Never give anything by mouth to an unconscious person. Any person who is experiencing symptoms of injury or illness should be moved to a comfortable area with fresh air, and the label or SDS of this product reviewed.

**Inhalation:** If symptoms of dust exposure (respiratory irritation) occur, move the person to fresh air. Provide drinking water, if conscious, to flush mouth and irrigate upper respiratory tract. Seek medical attention for discomfort or if coughing or other symptoms do not subside.

**Eye Contact:** If injury is due to a projectile, seek immediate medical attention. If the person's symptom is eye irritation due to dust exposure, careful flushing with clean water should continue for at least 15 minutes. If contact lenses are present, they should be removed after flushing. Flushing should continue until irritation subsides. Medical attention should be obtained if irritation persists.

**Skin:** Injuries to skin due to abrasion, laceration, or crushing should be treated by flushing with clean water, followed by first aid (application of disinfectant and bandage). If the injury is more extensive or irritation and pain persists, medical attention should be sought.

### 4.2 Most Important Symptoms and Effects—Both Acute and Delayed

**General:** The most important symptoms and effects from exposure to this product's dust is respiratory irritation and respiratory system chronic illness if significant exposures occur repeatedly.

**Inhalation:** The immediate acute response to dust inhalation is respiratory system irritation. Upon repeated high levels of dust exposure, crystalline silica content of the dust may cause delayed or chronic respiratory illnesses, including silicosis and cancer.

**Eye Contact:** Exposures of the eyes to particles and dust may result in irritation, pain, redness, and blurred vision, which is usually temporary.

**Skin Contact:** Other than abrasion and irritation, skin contact does not cause delayed or chronic symptoms.

### 4.3 Indication of Immediate Medical Attention and Special Treatment

Any time symptoms of eye irritation or respiratory irritation persist, medical attention should be obtained.

## SECTION 5: FIRE-FIGHTING MEASURES

### 5.1 Extinguishing Media

**Suitable Extinguishing Media:** Use extinguishing media appropriate for surrounding fire. Finished product is not combustible.

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### 5.2 Special Hazards Arising from the Substance or Mixture

**Fire Hazard:** Not combustible.

**Explosion Hazard:** Product is not explosive.

**Reactivity:** Hazardous reactions are not expected to occur under normal conditions.

### 5.3 Advice for Firefighters

Not applicable.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1 Personal Precautions, Protective Equipment, and Emergency Procedures

**General Measures:** Do not breathe dust. Do not get in eyes, on skin, or on clothing.

#### 6.1.1. For Non-Emergency Personnel

**Protective Equipment:** Use appropriate personal protective equipment (PPE).

**Emergency Procedures:** Evacuate unnecessary personnel.

#### 6.1.2. For Emergency Personnel

**Protective Equipment:** Equip clean-up crew with proper protection.

**Emergency Procedures:** Ventilate area if dust is generated.

### 6.2 Environmental Precautions

Reuse product as appropriate to avoid disposal.

### 6.3 Methods and Material for Containment and Clean-Up

**Containment:** Contain and collect as any solid. Avoid actions that cause dust to become airborne. Do not breathe dust, and do not allow large quantities of dust to contact skin.

### 6.4 Reference to Other Sections

See Section 8. Exposure Controls and Personal Protection. For further information, refer to Section 13.

## SECTION 7: HANDLING AND STORAGE

### 7.1 Precautions for Safe Handling

**Additional Hazards when Processed:** Cutting, crushing, or grinding crystalline silica-bearing materials will release respirable crystalline silica. Use all appropriate measures of dust control or suppression and Personal Protective Equipment (PPE) described in Section 8.

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking, and again when leaving work.

### 7.2 Conditions for Safe Storage, Including any Incompatibilities

Not applicable.

### 7.3 Specific End-Use(s)

Not applicable.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Exposure Limits

The following exposure limits are based on a time-weighted full-shift exposure, unless otherwise noted.

Ingredient	OSHA PEL <sup>(1)</sup>	ACGIH-TLV <sup>(2)</sup>	Other <sup>(3)(4)</sup>
Quartz	30 mg/m <sup>3</sup> ÷ % SiO <sub>2</sub> + 2 (total dust); 10 mg/m <sup>3</sup> ÷ % SiO <sub>2</sub> + 2 (respirable fraction)	0.025 mg/m <sup>3</sup> (respirable fraction)	NIOSH REL – 0.05 mg/m <sup>3</sup> (respirable fraction)

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Ingredient	OSHA PEL <sup>(1)</sup>	ACGIH-TLV <sup>(2)</sup>	Other <sup>(3)(4)</sup>
Portland cement	15 mg/m <sup>3</sup> (total dust); 5 mg/m <sup>3</sup> (respirable fraction)	1 mg/m <sup>3</sup> (respirable fraction containing no asbestos and < 1% crystalline silica)	NIOSH REL – 10 mg/m <sup>3</sup> (total dust); 5 mg/m <sup>3</sup> (respirable fraction)
Limestone	15 mg/m <sup>3</sup> (total dust); 5 mg/m <sup>3</sup> (respirable fraction)	10 mg/m <sup>3</sup> (total dust); 3 mg/m <sup>3</sup> (respirable fraction)	NIOSH REL – 10 mg/m <sup>3</sup> (total dust); 5 mg/m <sup>3</sup> (respirable fraction)
Iron oxide	<u>Fume</u> : 10 mg/m <sup>3</sup> (total dust); <u>Particulate</u> : 15 mg/m <sup>3</sup> (total dust); 5 mg/m <sup>3</sup> (respirable fraction)	5 mg/m <sup>3</sup> (respirable fraction)	NIOSH REL – 5 mg/m <sup>3</sup> (total dust)
Amorphous silica	80 mg/m <sup>3</sup> ÷ %SiO <sub>2</sub>	10 mg/m <sup>3</sup> (total dust); 3 mg/m <sup>3</sup> (respirable fraction)	NIOSH REL – 6 mg/m <sup>3</sup> (total dust)

**Notes:**

- (1) OSHA PEL (Permissible Exposure Level at 29 CFR 1910.1000)
- (2) ACGIH-TLV (American Conference of Governmental Industrial Hygienists-Threshold Limit Values 2015)
- (3) NIOSH REL (National Institute for Occupational Safety & Health Recommended Exposure Limit)
- (4) Canadian Provincial and other nation control parameters are listed on the Supplement.

### 8.2 Exposure Controls

**Appropriate Engineering Controls:** Power equipment should be equipped with wet dust suppression or dust collection devices if cutting/grinding/chipping product. Emergency eyewash equipment should be available in the immediate vicinity of any potential exposure. Use local exhaust or general dilution ventilation, or other suppression methods to maintain dust levels below exposure limits.

**Personal Protective Equipment:** Protective goggles or safety glasses, and gloves. Wear respiratory protection if dust is present when cutting/grinding/chipping product.



**Hand Protection:** Protective gloves as appropriate to prevent abrasion and hand injuries.

**Eye and/or Face Protection:** Approved safety glasses, goggles, and/or face-shield.

**Skin and Body Protection:** Appropriate work clothing and footwear should be worn.

**Respiratory Protection:** If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on Basic Physical and Chemical Properties

**Physical State:** Solid.

**Appearance:** Solid. Tiles come in a wide range of colors.

**Odor:** Essentially odorless.

**Odor Threshold:** Not available.

**pH:** Not available.

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**Evaporation Rate:** Not available.

**Melting Point:** Not available.

**Freezing Point:** Not available.

**Boiling Point:** Not available.

**Flashpoint:** Not available.

**Auto-Ignition Temperature:** Not available.

**Decomposition Temperature:** Not available.

**Flammability (solid, gas):** Not available.

**Lower Flammable Limit:** Not available.

**Upper Flammable Limit:** Not available.

**Vapor Pressure:** Not available.

**Relative Vapor Density at 20° C:** Not available.

**Relative Density:** Not available.

**Specific Gravity:** 2.6

**Solubility:** Negligible in water.

**Partition Coefficient—N-Octanol/Water:** Not available.

**Viscosity:** Not available.

**Explosion Data—Sensitivity to Mechanical Impact:** Not expected to present an explosion hazard due to mechanical impact.

**Explosion Data—Sensitivity to Static Discharge:** Not expected to present an explosion hazard due to static discharge.

### SECTION 10: STABILITY AND REACTIVITY

#### 10.1 Reactivity

Hazardous reactions are not expected to occur under normal conditions.

#### 10.2 Chemical Stability

Stable.

#### 10.3 Possibility of Hazardous Reactions

Not applicable.

#### 10.4 Conditions to Avoid

Not applicable.

#### 10.5 Incompatible Materials

Not applicable.

#### 10.6 Hazardous Decomposition Products

Not applicable.

### SECTION 11: TOXICOLOGICAL INFORMATION

#### 11.1 Likely Routes of Exposure

**Skin Contact:** Product is abrasive and may irritate unprotected skin.

**Eye Contact:** When product is shaped or cut, chips or dust may enter unprotected eyes and cause injury or irritation.

**Inhalation:** When product is shaped or cut, respirable dust may be generated that, when inhaled, can cause respiratory system irritation. Prolonged or repeated inhalation exposure may cause chronic illness.

**Ingestion:** Not expected to be an exposure route of concern.

#### 11.2 Symptoms Related to Physical, Chemical, and Toxicological Characteristics

**Immediate Effects:** Irritation of skin, eyes, and respiratory tract due to abrasion or dust inhalation will produce immediate discomfort, and first aid provided.

**Delayed and Chronic Effects:** Inhalation of dust on a prolonged or repeated basis may result in chronic lung disease or silicosis, and may also result in lung cancer, in particular among tobacco smokers.

#### 11.3 Numerical Measures of Toxicity

The acute and chronic effects of exposure to this product's dust have not been quantified.

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### 11.4 Carcinogenicity

The ingredient quartz, also known as crystalline silica, has been determined to be carcinogenic by the International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP).

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1 Toxicity

No additional information available.

### 12.2 Persistence and Degradability

Not available.

### 12.3 Bioaccumulative Potential

Not available.

### 12.4 Mobility in Soil

Not available.

### 12.5 Other Adverse Effects

Not available.

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1 Waste Treatment Methods

**Waste Disposal Recommendations:** Scrap material should be re-used or recycled. Waste is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) (40 CFR 261). Dispose of waste material in accordance with all local, regional, national, provincial, territorial, and international regulations.

## SECTION 14: TRANSPORT INFORMATION

### 14.1 In Accordance with DOT

Not regulated for transport

### 14.2 In Accordance with IMDG

Not regulated for transport

### 14.3 In Accordance with IATA

Not regulated for transport

### 14.4 In Accordance with TDG

Not regulated for transport

## SECTION 15: REGULATORY INFORMATION

### 15.1 U.S. Federal Regulations

#### Roof Tile

#### SARA Section 311/312 Hazard Classes

Exempt article [40 CFR 370.13(b)].

#### SARA Section 313 Emission Reporting

This product may contain constituents listed under SARA (Title III) Section 313, but not in amounts requiring supplier notification under 40 CFR Part 372, Subpart C.

#### TSCA Inventory

All constituents are included on the Toxic Substances Control Act Chemical Inventory (40 CFR 720)

### 15.2 U.S. State Regulations

#### State Right-to-Know Laws

This product, as an article, is exempt from hazardous substance inventory reporting under the Massachusetts, New Jersey, and Pennsylvania right-to-know laws.

#### California Proposition 65—Warning Required

WARNING: This product contains crystalline silica and other chemicals known to the State of California to cause cancer, birth defects, and other reproductive harm.

### 15.3 Canadian Regulations

#### DSL

All ingredients are listed or exempt from inclusion on the Canadian Domestic Substances List (DSL).

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### WHMIS

Class D, Division 2, Subdivision A – Material causing other toxic effects. Very Toxic—Chronic.



This product has been classified in accordance with the hazard criteria of the CPR, and the SDS contains all of the information required by the CPR.

### 15.4 Other: HMIS and NFPA

#### HMIS:

CONCRETE ROOF TILE	
HEALTH	2
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	

#### NFPA:

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**NFPA Health Hazard**  
1 - Exposure could cause irritation, but only minor residual injury even if no treatment is given.

**NFPA Fire Hazard**  
0 - Materials that will not burn.

**NFPA Reactivity**  
0 - Normally stable; even under fire exposure conditions, and are not reactive with water.

## SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

### Party Responsible for Preparation of this Document

BORAL ROOFING, LLC  
(770) 645-4500  
(949) 585-8200

### Limitations

The information and recommendations set forth herein are based on data we have in our possession, and we have reason to believe is accurate. It is, however, the user's responsibility to determine the safety, toxicity, or suitability for his/her own use of the herein described product. Because the actions by others is beyond our control, Boral Roofing, LLC. makes no warranty expressed or implied regarding accuracy of the data or the results to be obtained from the use thereof.

NA GHS SDS