

## Safety Data Sheet

### Boral Roof System Components (Underlayment, Flashing, and Hip & Ridge Products)

Date Prepared: 10/01/2018

Supersedes Date:

Version 1.0



#### SECTION 1: IDENTIFICATION

##### 1.1 Product Identifier

**Product Names:** Boral® Ply40, Boral TileSeal® HT, Boral® MetalSeal<sup>HT</sup> GatorSeal®, Citadel® Plus, Wakaflex®, Camel Flash®, Figaroll® Plus, Zephyr Roll®, Zephyr Block™, Boral™ Hip & Ridge Block

##### 1.2 Intended Use of the Product

Building material (roofing)

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

BORAL ROOFING LLC

200 Mansell Court East, Suite 305

Roswell, GA 30076

(770) 645-4500

(949) 585-8200

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

##### 1.4 Emergency Telephone Number

(949) 447-3985

(951) 642-3327

#### SECTION 2: HAZARD(S) IDENTIFICATION

##### Classification of the Substance or Mixture (GHS-US)

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 transported, stored and handled as a manufactured item. In most cases, installation can be accomplished using hand tools as recommended to avoid dust exposure and respiratory hazards. Safe work practices and personal protective equipment will minimize any other hazards identified.

##### 2.1 Hazard Classification (GHS-US)

Skin Irritation 2

Eye Irritation 2B

STOT-SE (Single Exposure) 3 (Respiratory Irritation)

STOT-RE (Repeated Exposure) 2 (Respiratory Illness)

##### 2.2 Label Elements (GHS-US)

**Hazard Pictograms:**



**Signal Word:**

- Warning

**Hazard Statements:**

- Causes skin irritation (H315)
- Causes eye irritation (H320)
- May cause respiratory irritation (H335)
- May cause damage to respiratory system through prolonged or repeated exposure (H373)

**Precautionary and**

**Response Statements:**

- Do not handle until all safety precautions have been read and understood (P202)
- Do not breath dust (P260)
- Wash hands and exposed skin thoroughly after handling (P264)
- Do not eat, drink or smoke when using the product (P270)
- Use only outdoors in a well-ventilated area (P271)
- Wear protective gloves, protective clothing, and eye protection (P280)
- In case of inadequate ventilation, wear respiratory protection (P284)
- IF ON SKIN: Wash with plenty of water (P302)
- IF INHALED: Remove person to fresh air and keep 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. If eye irritation persists, get medical advice/attention (P305) (P351) (P337) (P338)
- If skin irritation or eye irritation persists or you feel unwell: Get medical advice/attention (P312) (P313) (P314)
- Store in a well-ventilated place (P403)
- Dispose of waste material in accordance with local/state/federal regulations (P501)

### 2.3 Other Hazards

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

### 2.4 California Proposition 65:



**WARNING: CANCER AND REPRODUCTIVE HARM**—[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Description of Product

Polymer modified asphalt roofing product with application-specific components

### 3.2 Product Ingredients and Hazard Classification

Ingredient	Product Identifier (CAS No.)	% (w/w)	Hazard Classification (GHS-US)
<b>Polymer Modified Asphalt Components: Ply40, TileSeal™, MetalSeal<sup>HT</sup>, GatorSeal®, Citadel® Plus</b>			
Petroleum asphalt	8052-42-4	30 – 50	<ul style="list-style-type: none"> <li>• Skin Irritation 2, H315</li> <li>• Eye Irritation 2B, H320</li> <li>• STOT-SE (Single Exposure) 3 (Respiratory), H335</li> <li>• STOT-RE (Repeated Exposure) 2 (Respiratory), H373</li> </ul>
SBS (polystyrene-butadiene-styrene)	9003-55-8	1 – 30	<ul style="list-style-type: none"> <li>• Not classified</li> </ul>
Highly hydrotreated naphthenic oil	64742-88-4	1 – 10	<ul style="list-style-type: none"> <li>• Skin Irritation 2, H315</li> <li>• Eye Irritation 2B, H320</li> <li>• STOT-SE (Single Exposure) 3 (Respiratory), H335</li> <li>• STOT-RE (Repeated Exposure) 2 (Respiratory), H373</li> </ul>
<b>Reinforcement Components: Ply40, GatorSeal®, Citadel® Plus (fiberglass), Figaroll® Plus, Zephyr Roll®, Hip &amp; Ridge Block, TileSeal™, MetalSeal<sup>HT</sup> (polymer reinforcement)</b>			
Woven polypropylene	9003-07-0	2 – 5	<ul style="list-style-type: none"> <li>• Not classified</li> </ul>
Woven polyester	25038-59-9	2 – 5	<ul style="list-style-type: none"> <li>• Not classified</li> </ul>
Fiberglass	65997-17-3	2 – 5	<ul style="list-style-type: none"> <li>• Skin Irritation 2, H315</li> <li>• Eye Irritation 2B, H320</li> <li>• STOT-SE (Single Exposure) 3 (Respiratory), H335</li> <li>• STOT-RE (Repeated Exposure) 2 (Respiratory), H373</li> </ul>
<b>Surface and Undersurface: Ply40, GatorSeal® (granule surfaces); other products are quartz-free</b>			
Crushed mineral granules (contains quartz)	Various	5 – 10	<ul style="list-style-type: none"> <li>• STOT-RE (Repeated Exposure) 2 (Respiratory), H373</li> </ul>
Quartz (crystalline silica)	14808-60-7	> 1	<ul style="list-style-type: none"> <li>• Carcinogenicity 1A, H350 (no exposure to dust)<sup>(1)</sup></li> </ul>
Aluminum foil	7429-90-5	> 5	<ul style="list-style-type: none"> <li>• Not classified</li> </ul>
Butyl rubber adhesive	9003-29-6	> 3	<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>

*fn*<sup>(1)</sup> Due to product form, exposure to hazardous dusts is not expected to occur.

## 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 for 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:** Do not rub or scratch eyes; dust particles may cause the eye to be scratched. 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:** Wash gently with soap and warm water to remove fibers or other irritants. Injuries to skin due to abrasion or laceration 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.

**Ingestion:** Not an expected route of exposure.

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

**General:** This product is a mechanical irritant and is not expected to produce any chronic health effects from acute exposures.

**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 should 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.

**Notes to Physician:** Treatment should be directed toward removing the source of irritation, with symptomatic treatment as necessary.

### SECTION 5: FIRE-FIGHTING MEASURES

#### 5.1 Extinguishing Media

**Suitable Extinguishing Media:** Foam, water or dry chemical (ABC rated).

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

**Fire Hazard:** Product is combustible when ignited by a source of heat or flame.

**Explosion Hazard:** Petroleum asphalt fumes can explode if emitted in an enclosed environment and supplied with an ignition source.

**Reactivity:** Carbon dioxide, carbon monoxide. If burned, the material could release toxic fumes and smoke.

**Other Hazards:** When heated, fumes may burn if ignition source is present.

#### 5.3 Advice for Firefighters

Firefighters should not engage in fire suppression without wearing NIOSH-approved self-contained breathing apparatus with full-face mask and other protective equipment.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

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

**General Measures:** Install with hand tools. 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) during clean-up.

**Emergency Procedures:** Not applicable.

##### 6.1.2. For Emergency Personnel

**Protective Equipment:** Equip responders with proper PPE.

**Emergency Procedures:** Ventilate area or use wet methods if dust is generated.

#### 6.2 Environmental Precautions

No unusual environmental effects. Product waste is not a RCRA-listed hazardous waste. Dispose of debris in accordance with federal, state and local requirements.

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

**Containment:** Contain and collect as any solid. Pick up large pieces. Vacuum dust. Avoid actions that cause dust to become airborne; avoid creating dust by using a dust suppressant such as water to minimize potential exposures.

#### 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

Use hand tools for installation. Do not breathe dusts or fumes generated from cutting, shaping or heating this product. Comply with OSHA and other safety standards and codes for roof work. Always use fall protection systems when working on roofs. Product may be slippery when wet, dusty or covered with water, ice, dew, frost or snow.

**DO NOT USE A DIRECT FLAME DEVICE ON THIS PRODUCT.**

**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

Material should be kept dry and stored in an upright position. Store away from heat, ignition sources, open flames and protected from the elements. This product will react with strong oxidizing agents, reducing agents, strong acids and alkalis, and certain amines.

### 7.3 Specific End-Use(s)

No applicable limits.

## 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)</sup>
Petroleum asphalt	None Established	0.5 mg/m <sup>3</sup> (total)	5 mg/m <sup>3</sup> (15-minute ceiling)
Petroleum distillates, solvent-refined heavy paraffinic	5 mg/m <sup>3</sup>	5 mg/m <sup>3</sup> (respirable)	5 mg/m <sup>3</sup> (mist); 10 mg/m <sup>3</sup> (STEL, mist)
SBS (polystyrene-butadiene-styrene)	None Established	None Established	None Established
Fiberglass	5 mg/m <sup>3</sup> (respirable) 15 mg/m <sup>3</sup> (total)	1 fiber/cc (respirable)	3 fibers/cc (respirable) 5 mg/m <sup>3</sup> (total)
Polypropylene	None Established	None Established	None Established
Polyester	None Established	None Established	None Established
Mineral granules (particulate matter, N.O.R.) <sup>(4)</sup>	15 mg/m <sup>3</sup> (total) 5 mg/m <sup>3</sup> (respirable)	10 mg/m <sup>3</sup> (total) 3 mg/m <sup>3</sup> (respirable)	5 mg/m <sup>3</sup> (total) 15 mg/m <sup>3</sup> (respirable)
Crystalline silica <sup>(5)</sup>	0.05 mg/m <sup>3</sup> (respirable)	0.025 mg/m <sup>3</sup> (respirable)	0.05 mg/m <sup>3</sup> (respirable)
Aluminum	15 mg/m <sup>3</sup> (total) 5 mg/m <sup>3</sup> (respirable)	1 mg/m <sup>3</sup> (respirable)	10 mg/m <sup>3</sup> (total) 5 mg/m <sup>3</sup> (respirable)
Polyisobutylene	None Established	None Established	None Established

*fn*<sup>(1)</sup> OSHA PEL (Permissible Exposure Levels at 29 CFR 1910.1000)

*fn*<sup>(2)</sup> ACGIH-TLV (American Conference of Governmental Industrial Hygienists-Threshold Limit Values 2018)

*fn*<sup>(3)</sup> NIOSH REL (National Institute for Occupational Safety & Health Recommended Exposure Limit)

*fn*<sup>(4)</sup> N.O.R. means Not Otherwise Regulated

*fn*<sup>(5)</sup> Crystalline silica is encapsulated in non-releasable matrix.

### 8.2 Exposure Controls

**Appropriate Engineering Controls:** No special ventilation systems are required when handling this product.

**Personal Protective Equipment:** Protective goggles or safety glasses, and gloves. Wear respiratory protection if dust is present or when cutting product in accordance with the OSHA Respiratory Protection Standard [29 CFR 1910.134].



**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 exposed to excessive dust or if product is heated, NIOSH-approved respiratory protection should be worn in accordance with the OSHA Respiratory Protection Standard.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on Basic Physical and Chemical Properties

**Physical State:** Solid.

**Appearance:** Various—Product design related.

**Odor:** Asphalt-like.

**Odor Threshold:** No data.

**pH:** Not applicable.

**Evaporation Rate:** No data.

**Melting Point:** No data.

**Freezing Point:** Not applicable.

**Boiling Point:** Asphalt – > 700° F (370° C)

**Flashpoint:** Asphalt – > 450° F (232° C) [ASTM D92]

**Auto-Ignition Temperature:** Asphalt – > 860° F (460° C) [ASTM E659]

**Decomposition Temperature:** No data.

**Flammability (solid, gas):** No data.

**Lower Flammable Limit:** No data.

**Upper Flammable Limit:** No data.

**Vapor Pressure:** No data.

**Relative Vapor Density at 20° C:** No data.

**Relative Density:** No data.

**Specific Gravity:** 1.2 – 1.6

**Solubility:** Insoluble.

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

**Viscosity:** Not applicable.

**Explosion Data—Sensitivity to Mechanical Impact:** Not applicable.

**Explosion Data—Sensitivity to Static Discharge:** Not applicable.

## 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

Incompatible materials. See Section 7 for storage information.

### 10.5 Incompatible Materials

This product will react with strong oxidizing agents, reducing agents, strong acids and alkalis, and certain amines.

### 10.6 Hazardous Decomposition Products

Product may form carbon dioxide, carbon monoxide, oxides of sulfur and various hydrocarbons during heating or burning.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1 Likely Routes of Exposure

**Skin Contact:** Product may irritate unprotected skin.

**Eye Contact:** When product is shaped or cut, fibers or dust may enter unprotected eyes and cause injury or irritation resulting in tearing, stinging, redness or swelling.

**Inhalation:** When product is shaped or cut, respirable dust may be generated that, when inhaled, can cause respiratory system irritation causing scratchy throat and/or slight coughing. 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 producing immediate discomfort.

**Delayed and Chronic Effects:** Prolonged and repeated contact with product may cause prolonged irritation. Extreme exposures to fumes may cause upper respiratory irritation. Inhalation of fumes/dust on a prolonged or repeated basis may result in chronic lung disease. Typical product use does not require heating or dust generation.

### 11.3 Numerical Measures of Toxicity

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

### 11.4 Carcinogenicity

**Asphalt:** Occupational exposures to non-oxidized asphalt and its emissions during roofing material installation have not been classified as carcinogenic to humans. The International Agency for Research on Cancer (IARC) has determined that certain bitumen (asphalt) constituents are possibly carcinogenic to humans (Group 2B).

**Continuous Filament Glass Fiber:** Fiberglass has been determined to be not classifiable as to its carcinogenicity by IARC and the National Toxicology Program (NTP). This product is not considered respirable due to the large diameter of the continuous filament fibers and encapsulation in a solid matrix.

**Crystalline Silica:** Crystalline silica has been determined to be carcinogenic by IARC and NTP, but exposure to respirable crystalline silica is not expected due to encapsulation in a solid matrix.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1 Toxicity

No additional information available.

### 12.2 Persistence and Degradability

No additional information available.

### 12.3 Bioaccumulative Potential

No additional information available.

### 12.4 Mobility in Soil

No additional information available.

### 12.5 Other Adverse Effects

No additional information available.

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1 Waste Treatment Methods

**Waste Disposal Recommendations:** Waste material is not a RCRA-listed hazardous waste. Collect waste material and dispose in accordance with all federal, state and local regulations. Do not burn.

## 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

#### SARA Section 311/312 Hazard Classes (40 CFR 370)

Product is an exempt article [§ 370.13], but if reporting is required by local agency: Skin irritation, eye irritation, specific target organ toxicity (single or repeated exposure)

#### SARA Section 313 Emission Reporting (40 CFR 372)

This product is an exempt article [§ 372.38(b)].

#### TSCA Inventory

All constituents are included on the Toxic Substances Control Act Chemical Inventory (40 CFR 720) or exempt from listing.

### 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

Refer to Section 2.4.

### 15.3 Canadian Regulations

#### DSL

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

#### WHMIS

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.

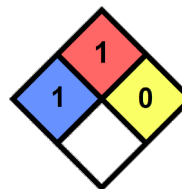
## 15.4 Other: HMIS and NFPA

### HMIS:

HEALTH	*	1
FLAMMABILITY		1
PHYSICAL HAZARD		0

PERSONAL PROTECTION:  
Protective goggles or safety glasses,  
gloves, protective clothing and  
protective footwear. Wear respiratory  
protection if fumes/dust is present.

### NFPA:



## 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.