

### PRODUCT DESCRIPTION

Stonshield HRI is a nominal 3/16 in./5 mm thick durable flooring system with a decorative, slip-resistant surface. Its troweled base provides superior impact resistance and allows the Stonshield HRI to be applied over rough substrates. The color quartz broadcast topshield layer results in an attractive floor surface that is textured for safety. It is comprised of:

#### *Stonshield HRI Base*

A four-component, troweled mortar base consisting of epoxy resin, curing agent and finely graded silica aggregate

#### *Stonshield Undercoat*

A three-component, free flowing epoxy formulation consisting of resin, curing agent, pigment and fine aggregate

#### *Stonshield Aggregate*

Brightly colored, quartz broadcast aggregate

#### *Stonkote CE4*

A two-component, high-performance, UV-resistant, clear epoxy sealer

### SYSTEM OPTIONS

#### *Waterproofing*

Where the total system must be waterproof, use of Stonhard's Stonproof ME7 membrane system is required with strict adherence to application instructions.

#### *Cove Base*

To provide an integral seal at the joint between the floor and the wall, cove bases in heights from 2 to 6 in./5 to 15 cm are available.

#### *Standard or Medium Texture*

Stonkote CE4 is applied at a thickness that will produce the desired texture.

#### *Recycled Glass Content*

It is possible to obtain LEED points by replacing Stonshield HRI Base with Stonclad GR. The epoxy mortar system contains 30% recycled materials and rapidly renewable soy-based components.

### PACKAGING

Stonshield HRI is packaged in units for easy handling. Each unit consists of:

#### **Stonshield HRI Base**

2 cartons of Stonclad GS, each containing:

6 foil bags of Amine

6 poly bags of Resin

12 individual bags of Part C-1 Aggregate

1 carton containing:

12 bags of Part C-2 Pigment

#### **Stonshield Undercoat**

0.75 cartons of Stonkote CE4, each containing:

0.75 carton containing:

6 foil bags of Amine

6 poly bags of Resin

0.75 carton containing:

6 bags of undercoat filler

#### *Stonshield Aggregate*

6 individual bags of colored quartz aggregate

### PHYSICAL CHARACTERISTICS

Compressive Strength .....	10,000 psi
(ASTM C-579).....	after 7 days
Tensile Strength.....	2,000 psi
(ASTM C-307)	
Flexural Strength .....	4,300 psi
(ASTM C-580)	
Flexural Modulus of Elasticity .....	2.0 x 10 <sup>6</sup> psi
(ASTM C-580)	
Hardness .....	85 to 90
(ASTM D-2240, Shore D)	
Impact Resistance .....	>160 in./lbs.
(ASTM D-2794)	
Abrasion Resistance.....	0.06 gm max. weight loss
(ASTM D-4060, CS-17)	
Flammability.....	Class 1
(ASTM E-648)	
Thermal Coefficient of	
Linear Expansion .....	1.3 x 10 <sup>-5</sup> in./in. °F
(ASTM C-531)	
Water Absorption .....	0.1%
(ASTM C-413)	
VOC Content .....	Stonshield HRI Base - 4 g/l
(ASTM D-2369).....	Stonshield Undercoat - 34 g/l
	Stonkote CE4 - 34 g/l
Cure Rate .....	12 hours for foot traffic
(@ 77°F/25°C) .....	24 hours for normal operations

Note: The above physical properties were measured in accordance with the referenced standards. Samples of the actual floor system, including binder and filler, were used as test specimens. All sample preparation and testing is conducted in a laboratory environment, values obtained on field applied materials may vary and certain test methods can only be conducted on lab-made test coupons.

#### *Stonkote CE4 Standard Texture*

0.75 carton containing:

- 6 foil bags of Amine
- 6 poly bags of Resin

#### *Medium Texture*

One carton containing:

- 6 foil bags of Amine
- 6 poly bags of Resin

### **COVERAGE**

Each unit of Stonshield HRI will cover approximately 300 sq. ft./27.9 sq. m of surface at a nominal 3/16 in./5 mm thickness.

### **STORAGE CONDITIONS**

Store all components of Stonshield HRI between 60 to 85°F/16 to 30°C in a dry area. Avoid excessive heat and do not freeze. The shelf life is 3 years in the original, unopened container.

### **COLOR**

Stonshield HRI is available in 2 solid colors and 10 tweed pattern standard colors. Refer to the Stonshield Color Sheet. Custom colors are available upon request.

### **SUBSTRATE**

Stonshield HRI, in conjunction with its appropriate primer, is suitable for application over properly prepared concrete, both new and old. It is also designed for renovation work over wood or sound brick and quarry tile. For questions regarding other substrates or an appropriate primer, contact your local representative or Technical Service.

### **SUBSTRATE PREPARATION**

Proper preparation is critical to ensure an adequate bond and system performance. The substrate must be dry and properly prepared utilizing mechanical methods. Questions regarding substrate preparation should be directed to your local Stonhard representative or Technical Service.

### **PRIMING**

The use of Standard Primer is necessary for all applications of Stonshield HRI Base over all substrates except Stonset grouts. Over Stonset grouts, Stonhard's Stonset Primer is used. See the appropriate primer product data sheet for details.

### **MIXING**

Proper mixing is critical for the product to exhibit the proper application properties and ultimate physical properties. Due to the variety of system configurations available for Stonshield HRI, consult the Stonshield HRI Directions for details.

### **APPLYING**

- DO NOT attempt to install material if the temperature of Stonshield HRI components and substrate are not within 60 to 85°F/16 to 30°C. The cure time and application properties of the material are severely affected.
- It is important to understand the risks when installing the Stonshield Undercoat in jobsites that are being conditioned with temporary heat.
- If the finished heat is not installed in the facility, and temporary heat is being utilized to achieve good site conditions, there is an increased risk of with broadcast aggregate acceptance with the Stonshield Undercoat. The use of temporary heat will increase the delta between air and slab temperature and will also increase the level of humidity and CO2 in the air. These conditions increase the risk of blushing of the Stonshield Undercoat surface and can lead to significant broadcast aggregate acceptance issues. If you have a site with temporary heat, contact Technical Service for recommendations.
- Material must be applied immediately after mixing.
- Stonshield HRI Base is screeded and troweled into wet primer.
- Stonshield Undercoat is mixed and applied to the floor surface.
- Stonshield Aggregate is broadcast into the freshly rolled undercoat. Allow to cure.
- Scrape the floor with a steel squeegee, sweep to remove loose aggregate, then vacuum.
- Stonkote CE4 is then mixed and applied.
- Refer to Stonshield HRI Directions for further detail.

### **PRECAUTIONS**

- Use these materials only in strict accordance with the manufacturer's recommended safety procedures. Dispose of waste materials in accordance with government regulations.
- The selection of proper protective clothing and equipment will significantly reduce the risk of injury. Body covering apparel, safety goggles or safety glasses and impermeable gloves are required.
- In case of contact, flush area with water for 15 minutes and seek medical attention. Wash skin with soap and water.
- If material is ingested, immediately contact a physician. DO NOT INDUCE VOMITING.
- During prep-work of floor substrate or mixing of Stonhard product while adding aggregate, dust masks must be worn.

### **NOTES**

- Procedures for cleaning of the flooring system during operations can be found in the Stonhard Floor Maintenance Guide.
- Specific information regarding chemical resistance is available in the Stonshield Chemical Resistance Guide. If a coating is utilized to seal the Stonshield HRI surface, please ensure that you consult the Product Data Sheet for the coating for details regarding chemical resistance of the coating utilized.

- Safety Data Sheets for Stonshield HRI are available online at [www.stonhard.com](http://www.stonhard.com) under Products or upon request.
- A staff of technical service engineers is available to assist with installation or to answer questions related to Stonhard products.
- Requests for literature can be made through local sales representatives and offices, or corporate offices located worldwide.
- The appearance of all floor, wall and lining systems will change over time due to normal wear, abrasion, traffic and cleaning. Generally, high gloss coatings are subject to a reduction in gloss, while matte finish coatings can increase in gloss level under normal operating conditions.
- Surface texture of resinous flooring surfaces can change over time as a result of wear and surface contaminants. Surfaces should be cleaned regularly and deep cleaned periodically to ensure no contaminant buildup occurs. Surfaces should be periodically inspected to ensure they are performing as expected and may require traction-enhancing maintenance to ensure they continue to meet expectations for the particular area and conditions of use.

**IMPORTANT:**

Stonhard believes the information contained here to be true and accurate as of the date of publication. Stonhard makes no warranty, expressed or implied, based on this literature and assumes no responsibility for consequential or incidental damages in the use of the systems described, including any warranty of merchantability or fitness. Information contained here is for evaluation only. We further reserve the right to modify and change products or literature at any time and without prior notice.

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