

PRODUCT DESCRIPTION

Stonshield HRI is a nominal 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 and 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 instruction

Cove Base

To provide for an integral seal at the joint between the floor and the wall, cove bases in heights from 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, 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 carton, containing:

6 foil bags of Amine

6 poly bags of Resin

0.75 carton containing

6 bags of undercoat filler

Stonshield Aggregate

3 individual bags of colored quartz aggregate

PHYSICAL CHARACTERISTICS

Compressive Strength	68.9 N/mm ²
(ASTM C579)	after 7 days
Tensile Strength	13.8 N/mm ²
(ASTM C-307)	
Flexural Strength	29,6 N/mm ²
(ASTM C-580)	
Flexural Modulus of Elasticity	1.38 x 10 ⁴ N/mm ²
(ASTM C-580)	
Hardness	85 to 90
(ASTM, D-2240, Shore D)	
Impact Resistance	> 18 Nm
(ASTM D-2794)	
Abrasion Resistance	0.06 gm max. weight loss
(ASTM D-4060, CS-17)	
Flammability	Class I
(ASTM E-648)	
Thermal Coefficient of	
Linear Expansion	2.34 x 10 ⁻⁵ mm/m°C
(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
(@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

1 carton containing:

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

USGBC LEED RATING

Stonshield HRI meets the requirements of LEED;

- MR Credit 1 – Building Reuse
- MR Credit 2 – Construction Waste Management
- IEQ Credit 4 – Low Emitting Materials
- VOC content of the total system <100 g/l

COVERAGE

Each unit of Stonshield HRI will cover approximately 27.9 m² of surface at a nominal 5 mm thickness.

STORAGE CONDITIONS

Store all components of Stonshield HRI between 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's 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 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.
- 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 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.

CE MARKING

The harmonized European Standard EN 13813 „Screed material and floor screeds- Screed materials - Properties and requirements“ specifies the requirements for screed materials for use in floor construction internally. Resinous flooring systems as well as resinous screeds fall under this specification they have to be CE-labeled as per Annex ZA., Table ZA.1.5 and 3.3 and fulfill the requirements of the given mandate of the Construction Products Regulation no. 305/2011


StonCor Europe Rue du Travail 9 1400 Nivelles, Belgium I3
DOP-2013.05.002 EN 13813 SR-AR1.0-B2.0-IR18
Synthetic resin flooring system for use internally in buildings (system as per Product Data Sheet) Release of corrosive substances:SR Wear resistance:AR1.0 Adhesion strength by pull-off test:>B2.0 Impact resistance:IR18 Chemical resistance:CRG*
* CRG: see Stonhard Chemical Resistance Guide

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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