

### PRODUCT DESCRIPTION

Stonshield URI 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 URI 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:

#### **Stonclad UR Mortar**

A four-component, troweled mortar base consisting of a urethane-urea binder, pigments and graded silica aggregate

#### **Stonshield URT Undercoat**

A three-component, free-flowing, solvent-free, aliphatic urethane and an aliphatic isocyanate formulation consisting of a polyaspartic resin, and an aliphatic isocyanate

#### **Stonshield Aggregate**

Brightly colored, quartz broadcast aggregate

#### **Stonseal CA7**

A two-component, UV-resistant, aliphatic, polyaspartic, urethane sealer

### SYSTEM OPTIONS

#### **Waterproofing**

Where the total system must be waterproof, the use of Stonhard's Stonproof ME7 membrane system with Texture #3 broadcast to refusal is required with a strict adherence to application instructions.

#### **Crack Treatment**

When crack treatment is needed due to cracks in the substrate, the use of Stonhard's Stonproof CT5 or RH7 with Texture #3 broadcast to refusal is required with a 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.

#### **Recycled Glass Content**

It is possible to obtain LEED points by using standard Stonshield URI. Stonclad UR mortar can provide LEED points under the rapidly renewable resources category. Stonclad G2 can be used in place of the standard Stonclad UR to provide additional LEED points under the recycled materials category. Contact Technical Service for more information.

### PACKAGING

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

#### **Stonclad UR**

2 cartons, each containing:

- 6 foil bags of Isocyanate
- 6 poly bags of Polyol

12 individual bags of Stonclad UR aggregate

1 carton containing:

12 bags of Part C-2 Pigment Packs

### PHYSICAL CHARACTERISTICS

Compressive Strength (ASTM C-579)	34 N/mm <sup>2</sup> after 7 days
Tensile Strength (ASTM C-307)	6.9 N/mm <sup>2</sup>
Flexural Strength (ASTM C-580)	13.8 N/mm <sup>2</sup>
Flexural Modulus of Elasticity (ASTM C-580)	7.6 x 10 <sup>3</sup> N/mm <sup>2</sup>
Hardness (ASTM D-2240, Shore D)	80 to 84
Impact Resistance (ASTM D-2794)	18 N/m
Abrasion Resistance (ASTM D-4060, CS-17)	0.06 gm max. weight loss
Flammability (ASTM E-648)	Class I
Thermal Coefficient of Linear Expansion (ASTM C-531)	2.3 x 10 <sup>-5</sup> mm/m°C
Water Absorption (ASTM C-413)	0.1%
VOC Content (ASTM D-2369)	Stonshield URI Base - 11 g/l Stonshield URT Undercoat - 22 g/l Stonseal CA7 - 100 g/l
Cure Rate (@ 25°C)	12 hours for foot traffic 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.

#### **Stonshield URT Undercoat**

1 cartons, each containing:

- 2 foil bags of Isocyanate
- (2) 1 gallon cans of Polyaspartic Resin

0.33 carton containing:

- 6 bags of Undercoat Filler

#### **Stonshield Aggregate**

6 individual bags of colored quartz aggregate

#### **Stonseal CA7**

1.5 cartons, each containing:

- 2 foil bags of Aliphatic Isocyanate
- (2) 1 gallon cans of Amine

## COVERAGE

Each unit of Stonshield URI will cover approximately 27.9 m<sup>2</sup> of surface at a nominal 5 mm thickness.

## STORAGE CONDITIONS

Store all components of Stonshield URI between 16 to 30°C in a dry area. Avoid excessive heat and do not freeze. The shelf life is one year in the original, unopened container.

## COLOR

Stonshield URI 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 URI, 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 Urethane Primer is necessary for all applications of Stonshield URI. See the Urethane 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 URI, consult the Stonshield URI Directions for details.

## APPLYING

- DO NOT attempt to install material if the temperature of Stonshield URI components and substrate are not within 17 to 30°C. The cure time and application properties of the material are severely affected.
- Material must be applied immediately after mixing.
- Stonclad UR is screeded and troweled into wet primer.
- Stonshield URT Undercoat is mixed and applied to the floor surface with a squeegee, then rolled with a medium nap roller.
- Stonshield Aggregate is broadcast into the freshly rolled undercoat. Allow to cure.
- Sweep and vacuum to remove loose aggregate.
- Stonseal CA7 is then mixed and applied.
- Refer to Stonshield URI Directions for further detail.

## HIGH HUMIDITY APPLICATIONS

It is common to have installation difficulties when applying URT Undercoat and Stonseal CA7 under high humidity conditions. The working time of the URT Undercoat and Stonseal CA7 are inversely related to the relative humidity level. Under these conditions, the working time of the material is greatly reduced as the excessive moisture present in the atmosphere accelerates the cure.

To slow down the cure rate, limit the amount of moisture coming in contact with the material. It is common practice, once materials are mixed, to pour the entire bucket onto the floor. Though this is advantageous when working with epoxies, it is potentially detrimental when working with these unique urethanes. Increase the open time by pouring only a portion of the material onto the floor while leaving the rest in the bucket until it is ready to be applied. This limits the amount of material being exposed to the moisture in the air at one time. The cure rate of these urethane materials is not accelerated when sitting in the bucket, unlike epoxy materials. Also, NEVER mix multiple mixes at once; only mix one mix at a time!

Low humidity will affect this product in the opposite way. When the humidity is low it is not unusual for the undercoat to take more than 4 hours to cure. It may even stay slightly soft for up to 12 hours. This will not affect the overall performance of the finished system. As the material cures the physical properties will develop to their full potential.

## 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 URI surface, please ensure that you consult the Product Data sheet for details regarding chemical resistance of the coating utilized.
- Safety Data Sheets for Stonshield URI are available online at [www.stoncor-europe.com](http://www.stoncor-europe.com) under Products or upon request.
- A NIOSH approved air purifying respirator (APR) equipped with organic vapor/acid gas cartridges is required during application of the Stonseal CA7.
- Avoid contact with all liquid Parts A and B as they may cause skin and/or eye irritation. Workmen should cover hands with impermeable rubber gloves.
- Use only with adequate ventilation.
- 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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