

### PRODUCT DESCRIPTION

Stonclad UR is a four-component, trowel applied, polyurethane mortar system. Stonclad UR consists of a urethane-urea binder, pigments, and graded quartz aggregates. Stonclad UR can be applied at thickness ranging from 3 mm to 6 mm depending on application requirements. Stonclad UR is a high impact resistant mortar which exhibits excellent abrasion, thermal shock, thermal cycling and chemical resistant characteristics making it ideal for the food and beverage industry as well as any other applications requiring these properties.

### SYSTEM OPTIONS

#### 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 may be specified.

#### Waterproofing

Where the total system must be waterproofed, 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.

#### Coatings

The system is designed as an uncoated mortar system. If coatings are desired, two coats of topcoat are required with a sanding step between the coatings.

#### Accelerator

Stonplus Rapid can be used with this material to limit downtime and/or help guarantee curing windows in cold temperatures. Not all projects are suitable for accelerator use. Refer to the Stonplus Rapid Product Data Sheet for specific information and usage restrictions.

### PACKAGING

Stonclad UR is packaged in units for easy handling. Each unit consists of:

#### Mortar

- 2 cartons, each containing:
  - 6 foil bags of Isocyanate
  - 6 poly bags of Polyol
- 12 individual bags of Part C-1 aggregate

#### Pigment

- 1 carton containing:
  - 12 bags of Part C-2 pigment packs powder

### USGBC LEED RATING

Stonclad UR meets the requirements of LEED;  
 MR Credit 1 – Building Reuse  
 MR Credit 2 – Construction Waste Management  
 MR Credit 6 – Rapidly Renewable Materials  
 IEQ Credit 4 – Low Emitting Materials  
 VOC content of the total system <100 g/l

### COVERAGE

Each unit of Stonclad UR will cover approximately 18.6 m<sup>2</sup> at a nominal thickness of 6 mm.

### STORAGE CONDITIONS

Store all components of Stonclad UR between 16 to 30°C in a dry area. Avoid excessive heat and do not freeze. The shelf life of the liquids is one year while the C-1 has a 6-month shelf life in the original, unopened container.

### PHYSICAL CHARACTERISTICS

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| Compressive Strength<br>(ASTM C-579)                       | 35 N/mm <sup>2</sup><br>after 7 days                       |
| Tensile Strength<br>(ASTM C-307)                           | 7 N/mm <sup>2</sup>  |
| Flexural Strength<br>(ASTM C-580)                          | 14 N/mm <sup>2</sup>                                       |
| Flexural Modulus of Elasticity<br>(ASTM C-580)             | 7.6 x 10 <sup>3</sup> N/mm <sup>2</sup>                    |
| Hardness<br>(ASTM D-2240, Shore D)                         | 80 to 84   |
| Impact Resistance<br>(ASTM D-2794)                         | >18 Nm   |
| Flammability<br>(ASTM E-648)                               | Class 1  |
| Thermal Coefficient<br>of Linear Expansion<br>(ASTM C-531) | 1.1 x 10 <sup>-2</sup> mm/m°C                              |
| Water Absorption<br>(ASTM C-413)                           | < 1%   |
| VOC Content<br>(ASTM D-2369, Method E)                     | 5 g/l  |
| Cure Rate<br>(@25°C)                                       | 8 hours for foot traffic<br>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 are 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.

## **SUBSTRATE**

Stonclad UR, with the appropriate primer, is suitable for application over concrete, wood, brick, quarry tile, metal or Stonhard Stonset grouts. For questions regarding other possible substrates or an appropriate primer, contact your local Stonhard representative or Technical Service.

Note: Stonclad UR is suitable for application over new/green concrete. The concrete must be in place for a minimum of 5 days, be dry and have sufficient strength to handle mechanical preparation.

## **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 Stonclad UR. See the Urethane Primer Product Data sheet for details.

## **MIXING**

- Proper mixing is critical for the product to exhibit the proper application properties, cure properties and ultimate physical properties.
- Mechanical mixing using a JB Blender (or equivalent 20 litre. pail mixer) or a larger mortar mixer (e.g., a Baugh 3 Batch Mixer) is required.
- See Stonclad UR Directions for further details.

## **APPLYING**


- DO NOT attempt to install material if the temperature of Stonclad UR components and substrate are not within 16 to 30°C. The cure time and application properties of the material are severely affected at temperatures outside of this range.
- Material must be applied immediately after mixing.
- A suitable screed applicator is used to distribute the mixed Stonclad UR onto the floor.
- Steel finishing trowels are used to compact and smooth the surface of the material to the required thickness.
- Detailed application instructions can be found in the Stonclad UR Directions.

## **NOTES**

- Procedures for maintenance of the flooring system during operations are described in the Stonklean Floor Cleaning Procedures Brochure.
- Specific information regarding chemical resistance is available in the Stonclad Chemical Resistance Guide. If a coating is utilized to seal the Stonclad UR 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 Stonclad UR are available online at [www.stonhard.com](http://www.stonhard.com) under Tech Info or upon request.
- A staff of technical service engineers is available to answer questions related to Stonhard products specifically or flooring problems in general.
- 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-labelled as **per Annex ZA., Table ZA.1.5 and 3.3** and fulfil the requirements of the given mandate of the Construction Products Regulation no. 305/2011


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| StonCor Europe<br>Rue du Travail 9<br>1400 Nivelles, Belgium<br><br>11   |
| DOP-2013.01.005  |
| EN 13813 SR-AR0.0-B2.0-IR18  |
| Synthetic resin flooring system for use internally<br>in buildings<br>(system as per Product Data Sheet)   |
| Release of corrosive substances: SR<br>Wear resistance: AR0.0<br>Adhesion strength by pull-off: > B2.0<br>Impact resistance: IR18<br>Thermal resistance: 0.0235 m <sup>2</sup> K.W.-1<br>Chemical resistance: CRG* |
| *CRG: See Stonhard Chemical Resistance Guide   |

## CE MARKING

The harmonized European Standard EN 1504-2 „Products and systems for the protection and repair of concrete structures – Definitions, requirements, quality control and evaluation of conformity – Part 2: Surface protection systems for concrete” gives specifications for products and systems based on methods “hydrophobic impregnation”, “impregnation” and “coating” for the various principles presented under EN 1504-9.

Products which fall under this specification have to be CE-labelled as per Annex ZA. 1, Tables ZA1a to ZA 1g according to the scope and relevant clauses there indicated, and fulfil the requirements of the given mandate of the Construction Products Directive (89/106):

For flooring systems not dedicated to protect or reinstate the integrity of a concrete structure, EN 13813 applies. Products acc. EN 1504-2 used as flooring systems with mechanical loads also must fulfil EN 13813. Here below indicated are the performance classes achieved according to the standard. For the specific performance results of the product to the particular tests, please see the actual values above in the PDS.

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| StonCor Europe<br>Rue du Travail 9<br>1400 Nivelles, Belgium<br><br>11   |
| DOP-2013.01-005  |
| EN 1504-2<br>Surface protection product  |
| Physical Resistance/Surface Improvement Coating<br><br>Permeability to CO <sub>2</sub> : S <sub>D</sub> < 38m<br>Permeability to water vapor: Class 11<br>Capillary absorption and permeability to water: W <sub>24</sub> < 0.1 kg/m <sup>2</sup> x h <sup>0.5</sup><br>Impact resistance: Class II<br>Adhesion by pull off strength: > 2.0 N/mm <sup>2</sup><br>Abrasion resistance: > 3000 mg* |
| **Tested in combination with one coat of protective coating  |

### 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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