

PRODUCT DESCRIPTION

Stonclad G2 is a four-component, trowel applied, polyurethane mortar system designed with sustainability in mind. Stonclad G2 consists of a urethane-urea binder, pigments, graded quartz aggregates and recycled glass aggregate. Stonclad G2 incorporates 25% post-industrial recycled glass and rapidly renewable, bio-based materials in the system. It can be applied at thickness ranging from 3 mm to 6 mm depending on application requirements and cures to a hard, high impact resistant mortar which exhibits excellent abrasion, wear and chemical resistance. Also uniquely formulated to withstand thermal cycling and thermal shock.

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 15cm may be specified.

Waterproofing

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

Coatings

The system is designed as an uncoated mortar, however a coating can be applied if a coated surface is preferred. If coatings are desired, two coats of topcoat are required with a sanding step between the coatings. Contact your local Stonhard Representative or Technical Service to discuss possible coating options.

PACKAGING

Stonclad G2 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 aggregate

Pigment

- 1 carton, each containing:
 - 12 bags of pigment

COVERAGE

Each unit of Stonclad G2 will cover approximately 18.6 m² of surface at a nominal 6 mm thickness.

STORAGE CONDITIONS

Store all components of Stonclad G2 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

Stonclad G2 is available in 12 standard colors. Refer to the Stonclad color sheet. Color variations will exist if the Stonclad G2 surface is not coated with a pigmented coating. Please contact your local Stonhard representative or Technical Service with any questions.

LEED

Stonclad G2 is ideal for projects pursuing LEED credits MR 4.1, 4.2 and MR 6

PHYSICAL CHARACTERISTICS

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

USGBC LEED RATING

Stonclad G2 meets the requirements of LEED;

- MR Credit 1 – Building Reuse.
- MR Credit 2 – Construction Waste Management.
- MR Credit 4 – Recycled Content.
- MR Credit 6 – Rapidly Renewable Materials.
- IEQ Credit 4 – Low Emitting Materials.
- VOC content of the total system <100 g/l.

SUBSTRATE

Stonclad G2, with the appropriate primer, is suitable for applications 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 .

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 the substrate preparations should be directed to your local Stonhard representative or

Technical Service.

PRIMING

The use of Urethane Primer is necessary for all applications of Stonclad G2. The Urethane primer must be tacky during the application of the Stonclad G2. Do not allow the primer to become tack free prior to troweling into it.

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 c.a. 20 ltr pail mixer) or a larger mortar mixer (e.g., a Bough 3 Batch Mixer) is required.
- See Stonclad G2 Directions for further details.

APPLYING


- DO NOT attempt to install material if the temperature of Stonclad G2 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 G2 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 G2 Directions.

NOTES

- Procedures for maintenance of the flooring system during operations are described in the Stonkleen Floor Cleaning Procedures Brochure.
- Specific information regarding chemical resistance is available in the Stonclad Chemical Resistance Guide.
- Safety Data Sheets for Stonclad G2 are available online at www.stonhard-europe.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 technical service or 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 build up 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 II	
DOP-2013.01.006 EN 13813 SR-AR0.5-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:	AR0.5
Adhesion strength by pull off test:	> B2.0
Impact Resistance:	IR18
Thermal resistance:	0.0235 m ² .K.W-1
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. I, Tables ZA I a to ZA I g according to the scope and relevant clauses there indicated, and fulfill the requirements of the given mandate of the Construction Products Regulation no. 305/2011

For flooring systems not dedicated to protect or reinstate the integrity of a concrete structure, EN 13813 applies. Products according to EN 1504-2 used as flooring systems with mechanical loads also must fulfill 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.

	
StonCor Europe Rue du Travail 9 1400 Nivelles, Belgium	
II	
DOP-2013.01-006	
EN 1504-2 Surface protection product	
Physical Resistance/Surface Improvement Coating Protection against ingress Moisture Control	
Permeability to CO ₂ :	SD < 38m
Permeability to water vapor:	Class II
Capillary absorption and permeability to water:	$W_{24} < 0.1 \text{ kg/m}^2 \times \text{h}^{0.5}$
Impact resistance:	Class II
Adhesion by pull off strength:	> B2.0 N/mm ²
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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