

PRODUCT DESCRIPTION

Stonclad GR is an environmentally friendly four-component, troweled, epoxy mortar system utilizing recycled materials and rapidly renewable soy based components. The system utilizes 30% recycled glass blended with an epoxy resin, amine curing agent and soy based additives. Stonclad GR can be applied at thickness ranging from 1/8 in./3 mm to 1/4 in./6 mm depending on application requirements. Stonclad GR cures to an extremely hard, impact resistant mortar which exhibits excellent abrasion, wear and chemical resistance.

USES, APPLICATIONS

Stonclad GR is formulated as a general service epoxy system for applications requiring an environmentally sensitive product. In addition to meeting the qualifications for acquiring LEED points, Stonclad GR has superior impact and abrasion resistance with good chemical resistance. Stonclad GR may be used as a protective overlayment on new floors, or to repair and restore old, worn surfaces.

SUBSTRATE

Stonclad GR, with the appropriate primer, is suitable for application over concrete, wood, brick, quarry tile or metal. Not recommended for use on asphalt, mastic, gypsum based products or painted surfaces. These must first be removed by mechanical means to expose the substrate prior to priming and overlayment.

SYSTEM OPTIONS

Coatings

To improve cleanability and increase the resistance to damage from abrasion and chemical spillage, the following coatings are recommended: Stonkote GS4, Stonkote HT4.

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 for 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 may be specified.

Fiberglass Reinforcement

To provide additional surface strength to the system, a surface veil of fiberglass reinforcement should be installed for areas exposed to instantaneous temperature changes of greater than 100°F/38°C.

PHYSICAL CHARACTERISTICS

Compressive Strength	10,000 psi (ASTM C-579) after 7 days
Tensile Strength	1,750 psi (ASTM C-307)
Flexural Strength	4,000 psi (ASTM C-580)
Flexural Modulus of Elasticity	2.0 x 10 ⁶ psi (ASTM C-580)
Hardness	85 to 90 (ASTM D-2240, Shore D)
Bond Strength	>400 psi (ASTM D-7234) (100% concrete failure)
Impact Resistance	>160 in./lbs. (ASTM D-2794)
Abrasion Resistance	0.1 gm max. weight loss* (ASTM D-4060, CS-17)
Coefficient of Friction (Dry)	0.83* (ASTM F-1679)
Slip Resistance Index (Wet)	0.66* (ASTM F-1679)
Flammability	Class I (ASTM E-648)
Thermal Coefficient of Linear Expansion	1.5 x 10 ⁻⁵ in./in.°C (ASTM C-531)
Water Absorption	0.2% (ASTM C-413)
Heat Resistance Limitation	140°F/60°C (continuous exposure) 200°F/93°C (intermittent spills)
Cure Rate	24 hours for normal operations (at 75°F/25°C)
VOC Content	0 g/L (ASTM D2369)

**Test samples finished with one coat of high solids epoxy coating*

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.

PACKAGING

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

- 2 cartons, each containing:
 - 6 foil bags of Part A (curing agent)
 - 6 poly bags of Part B (resin)
- 2 individual bags of Part C-1 (aggregate)

2 cartons C-2 pigment packs

COVERAGE

Each unit of Stonclad GR will cover approximately 200 sq. ft./18.58 sq. m of surface at a nominal 1/4 in./6 mm thickness.

STORAGE CONDITIONS

Store all components of Stonclad GR 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.

COLOUR

Stonclad GR is available in 12 standard colours. Refer to the Stonclad Colour Sheet.

SUBSTRATE PREPARATION

Proper preparation is critical to ensure an adequate bond. The substrate must be dry and free of all wax, grease, oils, fats, soil, loose or foreign materials and laitance. Laitance and unbonded cement particles must be removed by mechanical methods, i.e., abrasive blasting or scarifying. Other contaminants may be removed by scrubbing with a heavy-duty industrial detergent (Stonkleen DG9) and rinsing with clean water. The surface must show open pores throughout and have a sandpaper texture. For recommendations or additional information regarding substrate preparation, contact Stonhard's Technical Service Department.

PRIMING

The use of Standard Primer is necessary for all applications of Stonclad GR over all substrates except Stonset grouts. When using a Stonset grout, Stonhard's Stonset Primer should be used. The Standard or Stonset Primer must be tacky during the application of Stonclad GR. If the primer becomes tack-free, the area must be re-primed prior to continuing the application.

MIXING

- Empty the entire contents of one foil bag of Part A (liquid) and one poly bag of Part B (liquid) into a mixing pail.
- Place the mixing pail on a JB Power Blender and activate the timer to start the one minute blending cycle.
- When the blender stops, reactivate the timer and immediately pour the entire contents of one bag of Part C-2 (pigment) into the rotating pail. Allow the contents to mix for the complete one minute cycle.
- When the blender stops, reactivate the timer and immediately add the C-1 (aggregate) to the rotating pail. Allow the contents to mix for a complete minute.

- When the blender stops, scrape off excess from the mixing blade and remove the pail, delivering it to the floor area for application.

POT LIFE

After mixing, Stonclad GR has a working time of approximately 25 minutes at 70°F/21°C. The working time will vary depending upon ambient and surface temperature.

APPLYING

- Material must be used immediately after mixing.
- A Screed Applicator is used to distribute the mixed Stonclad GR onto the floor.
- Steel finishing trowels are used to compact and smooth the surface of the material to the required 1/4 in./6 mm thickness.
- Detailed instructions on application and installation can be found in Stonhard's Stonclad GR Directions.

RECOMMENDATIONS

- DO NOT attempt to install material if the temperature of Stonclad GR 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 at temperatures outside of this range.**
- DO NOT use water or steam in the vicinity of the application. **Moisture can seriously affect the working time and other properties.**
- Avoid contact with all liquid Parts A and B as they may cause skin and/or eye irritation. The use of safety goggles and impervious gloves is required.
- Use only with adequate ventilation.

NOTES

- Procedures for maintenance of the flooring system during operations are described in the Stonclad Cleaning Procedures.
- Specific information regarding chemical resistance is available in the Stonclad Chemical Resistance Guide.
- Material Safety Data Sheets for Stonclad GR are available upon request.
- A staff of technical service engineers is available to assist with installation or to answer questions related Stonhard's flooring products.
- Requests for technical service or literature can be made through local sales representatives and offices, or corporate offices located worldwide.

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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Worldwide Offices:

Canada 800.263.3112
USA 800.257.7953

Mexico (52)55.9140.4500
South America (54-3327)44.2222

Europe (32)2.720.8982
Middle East (971)4.3470460

Africa (27)11.254.5500
Asia (86)21.5466.5118



STONHARD
www.stonhard.ca

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