

STONCLAD® GS

PRODUCT DESCRIPTION

Stonclad GS is a four-component, trowelled, epoxy mortar system. The system consists of an epoxy resin, amine curing agent, pigments and selected graded aggregates. Stonclad GS can be applied at thickness ranging from 3mm to 6mm, depending on application requirements.

USES

Stonclad GS cures to an extremely hard, impact-resistant mortar which exhibits excellent abrasion, wear and chemical resistance and can be used anywhere an epoxy mortar is required.

SYSTEM OPTIONS:**Coatings**

To improve cleanability and increase the resistance to damage from abrasion and chemical spillages, seal the floor with Stonkote HT4. Other coating options are available, please contact your local StonCor Africa representative or Technical Service for specific requirements.

Cove Base

To provide for an integral seal at the joint between the floor and the wall, cove bases in varying heights are available, contact your local StonCor Middle East LLC representative or Technical Service for details.

PACKAGING AND COVERAGE

Primer: Standard Primer Parts A + B

Mortar: 11lt kit Stonclad GS Part A + B + C1 + C2 Pigment Pack
2.75m²/kit at 4mm, 1.83m²/kit at 6mm

Topcoat: Stonkote GS4 Part A + B

COLOUR

Stonclad GS is available in 12 standard colours. Refer to the Stonclad colour chart. Colour variations will exist if the Stonclad GS surface is not coated with a pigmented coating. Please contact your local StonCor Africa representative or Technical Service with any questions.

REFERENCE SAMPLE

A trial reference sample should be installed by the applicator prior to start of contract to ensure correct coverage and workmanship.

STORAGE CONDITIONS

Store all components of Stonclad GS 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.

TYPICAL PROPERTIES AT 25°C

Compressive Strength (ASTM C-579)	80 MPa after 7 days
Tensile Strength (ASTM C-307)	12 MPa
Flexural Strength (ASTM C-580)	27 MPa
Flexural Modulus of Elasticity (ASTM C-580)	1.3 x 10 ⁴ MPa
Hardness (ASTM D-2240, Shore D)	85 to 90
Impact Resistance (ASTM D-2794)	> 18Nm
Abrasion Resistance (ASTM D-4060, CS-17)	0.1 gm *
Flammability (ASTM E-648)	Class I
Thermal Coefficient of Linear Expansion (ASTM C-531)	2.5 x 10 ⁻⁵ mm/mm/°C
Water Absorption (ASTM C-413)	0.2%
VOC Content	6.3g/ltr
Cure Rate at 25°C	24 Hours for normal operation

* 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. All sample preparation and testing is conducted in a laboratory, values obtained on the field applied materials may vary.

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PLACEMENT GUIDELINES

SCOPE OF WORK (BOQ):

Prepare surfaces and apply Stonclad GS as a 3 to 6mm impact, abrasion, wear and chemical resistant epoxy mortar.

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 (Carboclean 250 and Carboclean 252) and rinsing with clean water. The surface must show open pores throughout with main aggregate in concrete exposed and have a sandpaper texture. Substrate moisture content prior to coating should be below 5% and substrate tensile strength above 2 MPa. For recommendations or additional information regarding substrate preparation, refer to surface preparation data sheet or contact StonCor Africa Technical Service Department.

PRIMING:

The use of Primer is necessary for all applications of Stonclad GS. Mix Stonprime 739 Parts A, B and C with a mechanical mixer fitted with a spiral impeller for 2 minutes. Apply using a rubber squeegee 2 coats wet-on-wet at 3-4m²/lt. Do not hand mix. Lightly broadcast Stonhard 6222 medium grit at 0.5kg/m² into the wet Stonprime 739 to create a slightly gritted surface to improve adhesion of the Stonclad GS. Refer to product data sheet for application instructions.

MIXING OF MORTAR – STONCLAD GS:

- Empty entire contents of Part A (liquid) and Part B (liquid) into a mixing 25lt pail fitted to a JB Blender and mix for 60 seconds.
- Pour the entire contents of the pigment pack and one bag of Part C aggregate into the rotating pail and mix for a further 90 seconds.
- When the blender stops, scrape off excess from mixing blade and remove pail, delivering it to the floor area for application.
- Alternatively, a high torque 550rpm mechanical mixer fitted with a 160mm spiral impeller can be used for mixing.

POT LIFE:

After mixing, Stonclad GS has a working time of approximately 20 minutes at 25°C. The working time will vary depending on temperature.

APPLICATION:

- Material must be used immediately after mixing.
- A “Screed Applicator” is used to distribute the mixed Stonclad GS onto the floor, and should be continuous.
- Steel finishing trowels are used to compact and smooth the surface of the material to the required specified thickness.
- In large open areas, a slow-speed power trowel is used to compact and smooth the surface.
- If trowel marks and surface imperfections are evident, lightly grind the floor to give a smooth level surface.
- Depending on the porosity of the Stonclad GS, a scraper coat of Stonkote HT4 may be needed prior to sealing with finishing coats. The number of coats is dependent on compaction that has been achieved and wear characteristics which are encountered.
- Detailed instructions on application and installation can be found in StonCor’s guide, “Stonclad GS Directions”.

CURING:

At normal temperature conditions the coating system can be exposed to light traffic after 24 hours. Excessive traffic, aqueous cleaning and exposure to aggressive chemicals should only take place after seven days when full cure has been achieved.

RECOMMENDATIONS:

- DO NOT attempt to install material if temperature of Stonclad GS components and substrate are not within 16-30°C. The cure time and application properties of the material are severely affected.
- DO NOT use water or steam in the vicinity of the application. Moisture can seriously affect the working time and other properties.
- The use of NIOSH/MSHA approved respirator and safety glasses are recommended.
- Avoid contact with all liquid Parts A and Parts B as they may cause skin and/or eye irritation. Workmen should cover hands with protective creams or rubber gloves.

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(Stonclad GS)

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- Use only with adequate ventilation.

NOTE:

- Procedures for maintenance of the flooring system during operations are described in “Stonclad Cleaning Procedures”.
- Specific information regarding chemical resistance is available in “Stonclad GS Chemical Resistance Guide”.
- Material safety data sheets on Stonclad GS are available on request.
- A staff of technical service engineers is available to assist in installation, or to answer questions related to our flooring products specifically or flooring problems in general.
- Requests for technical service or literature can be made through local sales representatives and offices, or corporate offices located throughout the world.
- 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 condition of use.

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