STONHARD

PRODUCT DATA SHEET

STONCLAD GS-SA

GENERAL SERVICE 6mm EPOXY MORTAR

IMPACT RESISTANT INDUSTRIAL FLOORING SOLID COLOUR THROUGHOUT DENSE MORTAR OPTION TO POWER-TROWEL FOR QUICK INSTALLATIONS

PRINCIPAL USES
Stonclad GS is formulated as a general service epoxy system for applications requiring superior impact and abrasion resistance with good chemical resistance. Stonclad GS may be used as a protective overlay on new floors, or to repair and restore old, worn surfaces.

SYSTEM OPTIONS
COATINGS
To improve cleanability and increase the resistance to damage from abrasion and chemical spillages. Seal the floor with Stonkote HT4.

COVE BASE
To provide for an integral seal at the joint between the floor and the wall, Stonclad GS cove bases in heights from 5 to 10cm may be specified.

FIBERGLASS REINFORCEMENT
To provide additional surface strength to the system, a fibreglass reinforcement CSM, and Stonchem 658 should be installed for areas exposed to instantaneous temperature changes of greater than 38°C.

PACKAGING, COVERAGE AND COLOUR
Primer, Stonprime 786 O.P.R.
5lt Kit Part A + B: Approximately 3m²/lt/coat. Refer to Stonprime 786 O.P.R. product data sheet.

Mortar, Stonclad GS 961
12LT Kit: 961 Part A + B + C + Part 950-C2 Pigment Pack : Approximately 2m²/12lt kit

Sealer, Stonkote HT4, 972
2lt Kit Part A + B: Approximately 4.5m²/lt/coat. 2 Coats required. Refer to Stonkote HT4 product data sheet. Standard colours, red, emerald green, steel grey, pewter grey, pebble grey and camel.

NOTE: Staining may occur depending on length of exposure time, chemical concentration and temperature.

TYPICAL PROPERTIES AT 25°C

Compressive Strength ASTM C-579	70 MPa
Tensile Strength ASTM C-307	12 MPa
Flexural Strength ASTM C-580	27.7 MPa
Flexural Modulus of Elasticity ASTM C-580	1.4 x 10 MPa
Hardness ASTM D-2240 / Shore D Durometer	85-90
Bond Strength ASTM D-4541	>2.7 MPa (100% concrete failure)
Impact Resistance ASTM D-4226	18 Joules
Abrasion Resistance ASTM D-4060, CS-17 Wheel	0.8gm max weight loss *
Coefficient of Friction ASTM D-2047	0.75
Flammability ASTM D-635	Self extinguishing Extent of burning 6.5mm max
Thermal Coefficient of Linear Expansion (ASTM C-531)	2.5 x 10^{-5}mm/mm/°C
Water Absorption ASTM C-413	0.2%
Heat Resistance Limitation	Continuous 60°C Intermittent 93°C
Cure Rate	8 hours for foot traffic 24 hours for normal Operations
VOC Content	18g/l

The above physical properties were measure in accordance with the referenced standards. Samples of the actual floor system, including binder and filler, were used as test specimens.

APPLICATION SPECIFICATION FOR STONCLAD GS-SA

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 – STONPRIME 786 O.P.R.
The use of Primer is necessary for all applications of Stonclad GS. Apply using a rubber squeegee 2 coats wet-on-wet at 3-4m²/lt. The Primer must be tacky during the application of Stonclad GS. If the primer becomes tack-free, the area must be re-primed prior to continuing the application. Refer to product data sheet for application instructions.

MIXING OF MORTAR – STONCLAD GS 961
- 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 pigment pack C-2 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.

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 6mm.
- Prior to sealing, grind the floor to remove all trowel marks and surface imperfections to give a smooth level surface. Seal with 2 coats of Stonkote HT4 using a rubber squeegee and back-roll with a medium nap roller. Number of coats is dependent on compaction that has been achieved and wear characteristics which are encountered.
- In large open areas, a slow-speed power trowel is used to compact and smooth the surface.
- 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.

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

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.
- 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.

CAUTION: MAY CONTAIN FLAMMABLE SOLVENTS. KEEP AWAY FROM SPARKS AND OPEN FLAMES. IN CONFINED AREAS WORKMEN MUST WEAR FRESH AIRLINE RESPIRATORS. HYPERSENSITIVE PERSONS SHOULD WEAR GLOVES OR USE PROTECTIVE CREAM. ALL ELECTRONIC EQUIPMENT AND INSTALLATIONS SHOULD BE MADE AND GROUNDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. IN AREAS WHERE EXPLOSION HAZARDS EXIST, WORKMEN SHOULD BE REQUIRED TO USE NONFERROUS TOOLS AND TO WEAR CONDUCTIVE AND NONSPARKING SHOES

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