

PRODUCT DESCRIPTION

Stonclad HF is a dense, self-priming, medium texture, 6 to 9mm polyurethane mortar which does not require surface sealing. Stonclad HF is designed to withstand thermal shock, heavy loading, abrasion and wet exposure areas where a durable, hard-wearing, easily cleanable surface is required.

USES

It is most suitable for production plants, workshops, industrial kitchens, dairy plants and damaged concrete areas where quick turnaround resurfacing is required.

SYSTEM OPTIONS:

Cove Base

To provide for an integral seal at the joint between the floor and the wall, cove bases in height from 5 to 15cm and various radiuses are available – refer to Stonshield 980 Coving Resin.

Coatings

Stonclad HF is designed to be uncoated, however, the option of a pigmented topcoat is available. Contact your local Stonhard sales representative for recommendations.

Primer

Not normally required. Certain substrates may require priming.

PACKAGING AND COVERAGE

Mortar

14 Litre kit consists of the following:

Stonclad HF Part A

Stonclad UT Part B

Stonclad HF Aggregate

Stonclad UT Pigment Pack

Applied 6mm thick: 2.33m²/14 litre kit

Applied 9mm thick: 1.55m²/14 litre kit

NOTE: Coverage rates shown are theoretical. Actual coverage rates may vary. Make necessary allowances for the condition of the surface to be coated, working conditions, waste, spillage, experience level and skill of the installers, etc.

TEXTURE

The default level of finished texture can be adjusted based on the area's intended use. Wet areas will receive a higher level of texture, whereas dry areas can receive a less textured finish. The level of texture is determined through application techniques. No additional materials are needed to achieve these textures. Note that with an increased texture comes a general decrease in "cleanability" of the floor. It is important to find the necessary balance between slip resistance and cleanability for each installation.

REFERENCE SAMPLE

A trial reference sample should be installed by the applicator for approval by the client, prior to start of contract to ensure correct coverages and workmanship.

STORAGE CONDITIONS

Store all components of Stonclad HF between 16°C to 30°C in a dry area. Avoid excessive heat and do not freeze.

SHELF LIFE

The shelf life is 1 year for the isocyanate and polyol and 6 months for the HF Aggregate in their original, unopened containers.

TYPICAL PROPERTIES AT 25°C

Compressive Strength ASTM C-579	53 MPa
Tensile Strength ASTM C-307	7 MPa
Flexural Strength ASTM C-580	14 MPa
Hardness ASTM D-2240, Shore D	80-84
Impact Resistance ASTM D-2794	> 18 Nm
Abrasion Resistance ASTM C-4060	0.05mg
Flammability ASTM E-648	Class I
Water Absorption ASTM C-413	< 1%
VOC Content	Mortar: 33 g/l
Cure Rate at 25°C	8 Hours foot traffic 24 Hours normal operation
Heat Resistance Limitations	6mm Continuous: 80°C 6mm Intermittent: 93°C 9mm Continuous: 93°C 9mm Intermittent: 121°C

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 field applied materials may vary and certain test methods can only be conducted on lab-made test coupons.

PLACEMENT GUIDELINES

SCOPE OF WORK (BOQ)

Prepare surface and apply Stonclad HF as a 6mm or 9mm self-priming, impact and thermal shock resistant polyurethane mortar.

NOTE: Do not attempt to install this material unless application team is fully trained and understands the requirements of working with materials with short application times within the specified temperature range. Substrate and material temperature are to be within 16-30°C.

SUBSTRATE PREPARATION

Stonclad HF can be applied over properly prepared concrete surfaces which are level and do not require renovation. Remove all oils, grease and other contaminants by scrubbing with CarboClean 252 and rinsing with clean running potable water to obtain a water break-free surface. Allow to dry. Abrade the surface by vacu-blasting, or scarifying to remove laitance, open all voids and expose the aggregate. The roughened surface should be a dust-free sound concrete surface with a portion of the main aggregate in the concrete exposed. Then, retaining slots, 6mm x 6mm, must be cut running 75mm from and parallel to the walls, edges and both sides of joints. If weak, friable substrates exist, they should be removed and repaired with appropriate Euclid Concrete Repair products. Product can be laid on 1 to 2 week old concrete, provided a minimum tensile strength of 2.0MPa has been achieved, with a maximum moisture content of 5%. For recommendations or additional information regarding substrate preparation, please consult StonCor's "Surface Preparation Methods".

MIXING

Mixing station must be set up to deliver a kit of material to the applicators every 3 minutes. A well displayed clock is necessary to ensure consistent supply and mixing times. Remove all lids from resin components and open pigment packs and aggregate bags. Two 25 litre clean dry mixing drums must be available. Spiral impellers fitted to a high torque, variable speed 600 rpm mixer should be used for thorough mixing.

Empty the entire contents of the Part B and Part A components into the 25 litre container. Mix mechanically for 30 seconds, then add the pigment pack, continue mixing for a further 30 seconds. Pour in the HF aggregate and mix for another 90 seconds. Immediately send the mixed material to the application floor area and within 30 seconds start another mix in the second 25 litre container. Every 3 minutes a new batch should be made.

APPLICATION

- The use of screeding rails is recommended during application to ensure even spread and levelling is achieved.
- Divide the floor into panels not greater than 5m wide. This will ensure that fresh product is applied onto the wet edge of the previous kit.
- Apply one kit of Stonclad HF by pouring the mixture in a line onto the floor and raking out using a 15mm notched trowel, or screeding rails with a straight edge, spreading evenly at specified thickness. This application should not take longer than 2 minutes.
- Level out the material to an even finish by floating with a flat plastic trowel.
- If a less textured finish is required, lightly roll the trowelled surface with a loop roller. This process is carried out immediately behind the applicator trowelling the material level, whilst still wet and fresh.
- Do not re-roll material after 6 minutes of application.
- Allow to cure for 12 hours at 25°C before re-cutting joints and sealing.

COLOUR UNIFORMITY

Erratic periods of mixing and variable times of back rolling will lead to an uneven colour and non-uniform appearance. The use of a well displayed clock and fully trained staff is essential.

CURING

If temperatures are between 16-30°C, the flooring system can be exposed to light traffic after 24 hours. Excessive traffic, aqueous cleaning and exposure to aggressive chemicals should only take place after 4 to 5 days when full cure has been achieved.

RECOMMENDATIONS

- **DO NOT** attempt to install material if temperature of 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.
- Protect areas from dust and isolate access. Contamination between layers will affect the final appearance.
- Avoid contact with all liquid Parts A and B as they may cause skin and/or eye irritation. Workmen should cover hands with protective creams or rubber gloves and wear safety glasses.
- Use only with adequate ventilation.

August 2023 replaces August 2022

(Stonclad HF)

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NOTES

- Procedures for maintenance of the flooring system during operations are described in "StonCor Cleaning Procedures".
- Material Safety Data Sheets 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.

COLD AND HOT CONDITIONS

Low temperatures decrease flow, delay set and affect water resistance and final appearance. Elevated temperatures decreases working time. It is recommended that material is pre-conditioned to suit application temperatures. Consult StonCor Africa for recommendations.