STONHARD

STONCLAD HF

PRODUCT DATA

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 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. Stonkote HT4 is recommended for coating Stonclad HF. Consult the Stonclad HF directions for more information.

Primer
Not normally required. Certain substrates may require priming.

PACKAGING
Mortar
A 27 litre kit of Stonclad HF utilises the resins and cements of Stonclad UL with a bag of graded aggregate, i.e.
18lt Stonclad UL 955 Parts A + B + C + C2 pigment pack 20kg Stonhard 6225 Aggregate

COVERAGE
Applied 6mm thick: 4.5m²/27 litre kit
Applied 9mm thick: 3.0m²/27 litre kit

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

STORAGE CONDITIONS
Store all components of Stonclad HF between 15°C to 30°C in a dry area. Avoid excessive heat and do not freeze. The shelf life is 1 year for the isocyanate and polyol and 6 months for the Part C1 in their original, unopened containers.

TYPICAL PROPERTIES AT 25°C

Colour . . . . . .Refer to Stonhard colour card
Compressive Strength . . . . . .53 MPa
ASTM C-579
Flexural Strength . . . . . .14 MPa
ASTM C-580
Hardness . . . . . .80 to 84
ASTM D-2240, Shore D
Impact Resistance . . . . . .> 18 Nm
ASTM D-2794
Abrasion Resistance . . . . . .0.05 mg
ASTM D-4060
Flammability . . . . . .Class 1
ASTM E-648
Water Absorption . . . . . .< 1%
ASTM C-413
VOC Content . . . . . .Mortar: 33g/l
Cure Rate at 25°C . . . . . .8 Hours for foot traffic
24 Hours for normal operation
Heat Resistance Limitation . . . . . .6 mm Continuous: 80°C
6 mm Intermittent: 93°C
9mm Continuous: 93°C
9 mm 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 environment, values obtained on field applied materials may vary and certain test methods can only be conducted on lab made test coupons.

EQUIPMENT NEEDED FOR SUCCESSFUL APPLICATION

2 x 50lt Mixing bin
High torque 600 rpm mixer
150mm Spiral mixing impeller
Clock with second hand
For a 6mm application - 15mm Notch trowel or 6mm screeding rails
Flat plastic trowel
Short pile solvent-resistant rollers with extension poles
Spike shoes
Abrasive blasting and joint cutting equipment
Surface temperature gauge
Personal protective equipment

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 urea 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 10- 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 to a depth of 2mm. 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 Pro-Struct 529. 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. Remove all lids from resin components and open pigment packs and aggregate bags. Two 50 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 Base and Activator components into the 50 litre container. Mix mechanically for 30 seconds, then add the C2 pigment pack, continue mixing for a further 30 seconds. Pour in both the Part C aggregate and Stonhard 6225 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 50 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.

Ensure material is levelled using a flat plastic or straight edge trowel.

Using a short pile roller on extension poles, dampened with Carboline Thinner # 10, lightly roll the trowelled surface to remove trowel marks and expose the surface aggregate to create the non-slip texture. 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 solvent 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 10–30°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.

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.

RECOMMENDATIONS

- DO NOT attempt to install material if temperature of components and substrate are not within 10-30°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.

NOTES

- Procedures for maintenance of the flooring system during operations are described in "StonCor Cleaning Procedures".
- Specific information regarding chemical resistance is available in the Chemical Resistance Guide for Stonclad UT.
- 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.

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STONHARD

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