

PRODUCT DESCRIPTION:

Stonclad UL is a 4 component, liquid rich, self-levelling slurry, polyurethane mortar system. Stonclad UL consists of a urethane-urea binder, pigments and graded quarts aggregates. Stonclad UL can be applied at a thickness ranging from 3mm to 6mm, depending on application requirements. Stonclad UL is a high performance mortar that has a smooth, matte finish and exhibits excellent wear resistance, impact resistance and chemical resistance.

USES:

Stonclad UL is ideal for dry food processing areas and other quick turn industrial applications or anywhere a tough self-levelling mortar system is required. For thermal shock cycling in cold storage facilities, Stonclad UT should be used.

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 UL is designed to be uncoated, however, the option of a pigmented topcoat is available. Stonkote HT4 is recommended for coating Stonclad UL. Consult the Stonclad UL directions for more information.

Primer and Skim Coat

To fill substrate voids and detect possibility of “outgassing”, the use of either Stonprime 739 or Stonprime PU is essential. If blow holes are detected in the primer, they should be skimmed level with Pro-Struct 30/35NS Quickset.

PACKAGING AND COVERAGE:

Primer

20 litre kit Stonprime 739 Parts A, B, C – 50 to 60m²/kit; or
10 litre kit Stonprime PU Parts A, B, C – 20 to 30m²/kit
25kg Stonhard 6222 Medium Texture Aggregate – 50m²/bag

Mortar

18 litre kit Stonclad UL 955 Parts A, B, C1, C2 pigment pack – 6m²/kit at 3mm

Coving Sealer

1 litre kit Stonclad 956 Part A, B, C1, C2pigment pack – 20 linear metres/kit for 5 x 10cm cove.

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 UL between 16 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 ASTM C-579	41 MPa after 7 days
Tensile Strength ASTM C-307	7 MPa
Flexural Strength ASTM C-580	14 MPa
Hardness ASTM D-2240, Shore D	75 to 80
Impact Resistance ASTM D-2794	> 18 Nm
Flammability ASTM E-648	Class I
Water Absorption ASTM C-413	< 1%
VOC Content	UL Mortar: 33g/l
Cure Rate at 25°C	8 Hours for foot traffic 24 Hours for normal operation
Heat Resistance Limitation	Continuous: 60°C Intermittent: 75°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.

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PLACEMENT GUIDELINES

SCOPE OF WORK (BOQ):

Prepare surfaces and apply Stonclad UL as a 3mm high impact and chemical resistant self-levelling polyurethane-urea floor 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 to 30°C.

SUBSTRATE PREPARATION:

Stonclad UL with its appropriate primer is suitable over properly prepared concrete surfaces which are level and do not require renovation. The substrate must be dry and free of all wax, grease, oils, fats, loose or foreign materials and laitance. After cleaning, abrade the surface by vacu-blasting or scarifying to remove laitance and open all voids and expose the aggregate to depth of 1 to 2mm. The surface must show open pores throughout and with main aggregate in concrete exposed and have a coarse sandpaper texture. Retaining slots, 5mm x 5mm, must be cut running 150mm from and parallel to the walls, edges and joints. If weak, dusty substrates exist, they should be removed and repaired with Pro-Struct 529-MCI. Product can be laid on 1 to 2 week old new concrete, provided a minimum tensile strength of 1.5 MPa has been achieved. For recommendations or additional information regarding substrate preparation, please consult StonCor's "Surface Preparation Methods".

PRIMING AND PATCHING:

1. Mix either Stonprime 739 Epoxy Primer or Stonprime PU Part A and B for 90 seconds in a 25 litre pail using a 600rpm high torque mixer, fitted with a spiral impeller. Then add Part C and mix for a further 90 seconds. Do not hand mix.
2. Apply two coats wet-on-wet of either Stonprime 739 Epoxy Primer or Stonprime PU at 2.5 to 3m²/litre with a rubber squeegee. The rougher the substrate, the lower the coverage per kit. Remove puddles and squeegee lines with the squeegee or a brush. DO NOT backroll with a roller.
3. Lightly broadcast into the wet primer Stonhard 6222 medium grit at 0.5kg/m² to create a slightly gritted surface to improve adhesion of the Stonclad UL.
4. Sealed surface should be free of air holes or depressions. If necessary, patch cracks and blowholes with Pro-Struct 30/35NS Quickset Epoxy Paste.
5. Stonprime 739 Epoxy Primer should be allowed to cure for 6 to 8 hours at 25°C and overcoated within 16 hours. Stonprime PU should cure for 16 hours at 25°C and overcoated within 48 hours.

MIXING:

Mixing station must be set up to deliver a kit of material to the applicators every 3 minutes. A well displayed clock or timer is necessary to ensure consistent supply. Remove all lids from resin components and open pigment packs and aggregate bags. Two 25 litre clean dry mixing drums and spiral impellers fitted to a high torque variable speed 550 rpm AGP-EV160 mixer should be used for thorough mixing.

Empty the entire contents of the Base and Activator 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 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:

1. The use of floor lights is critical during application to ensure even spread and levelling is achieved.
2. 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.
3. Apply one kit of Stonclad UL at 6m²/kit by pouring the mixture in a line onto the floor and raking out using a 7mm notched trowel, spreading evenly at a thickness of 3mm. This application should not take longer than 1 minute.
4. Ensure material is level before spike rolling the first kit for a full 5 minutes.
5. The spike rolling team wearing "spiked shoes" will be standing in the material, rolling backwards and forwards in a uniform direction, moving every 5 minutes from one applied kit to the next. Failure to follow a uniform spiking period will lead to an uneven appearance.
6. Do not re-roll material after 8 minutes of application.
7. Allow to cure for 12 hours at 25°C before re-cutting joints and seal with Pro-Struct 748 Non-moving Sealant.
8. An easy cleaning mild non-slip finish can be achieved by overcoating with Stonseal 722 Non-slip Clear Sealer at approximately 8m²/litre/coat.

COLOUR UNIFORMITY:

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

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(Stonclad UL)

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CURING:

If temperatures are between 16 to 30°C, 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 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 to 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.
- 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 CONDITIONS:

Low temperatures decrease flow, delay set and affect water resistance and final appearance. Materials should be conditioned for 16 hours at 21 to 27°C; heaters should be utilised to warm floors.

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