STONHARD

STONCLAD® UT

PRODUCT DATA

PRODUCT DESCRIPTION

Stonclad UT is a dense, liquid-rich, self-priming, textured, four-component, notch trowel applied, polyurethane mortar system. Stonclad UT consists of a urethane-urea binder, pigments and graded quarts aggregates. Stonclad UT is a nominal 5mm system.

USES

Stonclad UT is a high impact resistant mortar which exhibits excellent abrasion, thermal shock cycling and chemical resistant characteristics making it ideal for the food and beverage industry, kitchens as well as any other applications requiring these properties.

SYSTEM OPTIONS

Cove Base

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

Textures

To find the necessary balance between cleanability and slip resistance, Stonclad UT is offered in two incremental levels of texture. The texture is specified as light or medium. For aesthetic and cleanability purposes, light and medium textures are coated with Stonkote HT4. For an aggressive non-slip and abrasion resistant texture, an alumina oxide grit, UT-AR 2,2 to 4mm, is specified which is not sealed.

PACKAGING

Stonclad UT is packaged in units for easy handling. Each unit consists of:

Mortar

12 litre kit Stonclad UT 950 Parts A, B, C & C2 Pigment Pack; approximately 2.4m²/12 litre kit

Broadcast Texture

Light texture, 25kg Stonhard 6221, 2 to 3kg/m²
Medium texture, 25kg Stonhard 6222, 2 to 3kg/m²

Abrasion Resistant texture, Stonhard 6224AR, 2 to 3kg/m²

Sealer

2 litre kit Stonkote HT4, 972 Parts A & B, 3 to 4m²/litre/coat (2 coats required)

Note: No priming is required

TYPICAL PROPERTIES AT 25˚C

Colour . . . . . .Refer to Stonhard colour card
Compressive Strength . . . . . .53.2 MPa
ASTM C-579
Tensile Strength . . . . . .6.9 MPa
ASTM C-307
Flexural Strength . . . . . .16.6 MPa
ASTM C-580
Flexural Modulus of Elasticity . . . . . .1.8×10^4 MPa
ASTM C-580
Hardness . . . . . .80 to 84
ASTM D-2240, Shore D
Bond Strength . . . . . .>2.7 MPa
ASTM D-4541 . . . . . .(100% Concrete failure)
Impact Resistance . . . . . .18 Joules
ASTM D-2794
Abrasion Resistance . . . . . .0.05 mg max weight loss
ASTM D-4060, CS-17 Wheel
Coefficient of Friction . . . . . .Dependent on texture selection
ASTM D-2047
Flammability . . . . . .Class 1
ASTM E-648
Thermal Coefficient of Linear . . . . . .1.1×10^{-5} mm/mm˚C
Expansion ASTM C-531
Water Absorption . . . . . .<1%
ASTM C-413
Heat Resistance Limitation . . . . . .Continuous 93˚C
Intermittent 121˚C
Cure Rate at 25˚C . . . . . .12 Hours for foot traffic
24 Hours for light traffic
7 Days chemical exposure
VOC Content. . . . . 7 g/l Mortar
30g/l Stonkote HT4

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.

COVERAGE
Coverage will vary depending on coarseness of broadcast aggregate used and desired finish.

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 UT 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 C in their original, unopened containers.

PLACEMENT GUIDELINES
SCOPE OF WORK (BOQ)
Prepare surfaces and apply Stonclad UT as a 5mm high impact, thermal shock and chemical resistant self-priming polyurethane urea mortar and seal with Stonkote HT4.

SUBSTRATE PREPARATION
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 the laitance open all voids and expose the aggregate to a depth of 1-2mm. The roughened surface should be a dust free sound concrete surface with a portion of the main aggregate in the concrete exposed. A minimum tensile strength of 2 MPa and moisture content of less than 5 % is required. Refer to Product Data Sheet for additional surface preparation requirements.

MIXING
Set up the mixing station to deliver material every 3 minutes to the application area. A well displayed clock or timer is necessary to ensure consistent mixing and supply. Remove all lids from resin components and open pigment packs and aggregate bags to ensure continuous supply to the Applicators. Two 25 litre mixing drums and a spiral impeller fitted to a high torque 550 rpm mixer should be used.

Empty entire contents of Stonclad UT 950 Part B into the 25 litre mixing pail. Start mixing at slow speed, adding Stonclad UT 950 Part A (liquid) and Stonclad UT 950 Part C-2 (pigment powder) and mix for 60 seconds.

Pour the entire contents of one bag of Stonclad UT 950 Part C1 Aggregate into the pail and mix for a further 90 seconds.

Scrape excess material from the mixing blade and deliver the pail to the floor application area.

Immediately start mixing another kit in the 2nd mixing pail, so that a fresh batch of Stonclad UT can be transferred to the application area every 3 to 4 minutes.

APPLICATION PROCEDURE FOR STONCLAD UT POLYUREA SCREED
Apply the material with a 15mm notched hand-held trowel, ensuring a theoretical coverage of 2.4m² per 12 litre kit at 5mm wet film thickness.

Within 5 minutes of spreading the material, applicators with spike shoes are to spike the spread Stonclad UT with a spike roller for a maximum of 5 minutes at first with increased pressure, attempting to feel the rough texture of the concrete below, steadily decreasing the pressure. By lightly spiking, float the pigmented resin to the surface to give a uniform level gloss appearance. New batches of material should always be incorporated within 3 to 4 minutes into the wet edge of the previously trowelled screed to ensure no "cold joint" lines appear.

Using the Stonhard 6221 Aggregate for fine texture or Stonhard 6222 Aggregate for medium texture, broadcast the aggregate into the wet mortar by means of an electric spray caster to allow the broadcast aggregate to fall from height, onto the uniform wet level resin surface. Blind the surface of the Stonclad UT screed with the selected aggregate (± 2kg per m²) evenly to rejection, ensuring no wet area remains on the surface. Allow to cure for a minimum of 8 hours at 25°C.

Sweep and vacuum all excess aggregate from the surface, de-nib the sharp edges of the aggregate using the edge of a steel finishing trowel, to reduce the profile. Vacuum to remove all traces of de-nibbed aggregate.

If a smooth texture is required, lightly grind the surface to remove high profiled aggregate, vacuum and then seal.

SEALING
Mix Stonkote HT4 thoroughly for 4 minutes using an impeller fitted to a variable speed drill.

Option 1
Transfer mixed material into a paint tray and, using a medium nap roller, dip and roll the Stonkote HT4. The roller should be saturated with sealer at all times. This will smooth and level the sealer to achieve a uniform texture and appearance.

Option 2
Stonkote HT4 is applied with a rubber squeegee and backrolled with a medium nap roller. The roller is used to remove squeegee lines and smooth out the surface, leaving a slightly textured, mild non-slip finish. A brush may be used where necessary.

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 four to five days when full cure has been achieved.

RECOMMENDATIONS
- DO NOT attempt to install material if temperature of Stonclad UT components and substrate are not within 16-30°C. The cure time and application properties of the material are severely affected.

- Protect areas from dust and isolate access. Contamination between layers will affect the final performance.
- The use of NIOSH/MSHA approved respirator and safety glasses are recommended.
- Avoid contact with all liquid Parts A and B as they may cause skin and/or eye irritation. Applicators should cover hands with impervious gloves.

NOTES

- Further detailed instructions on application and installation can be found in the "Stonclad UT Directions".
- Procedures for maintenance of the flooring system during operations are described in "Stonclad Cleaning Procedures".
- Specific information regarding chemical resistance is available in "Stonclad UT Chemical Resistance Guide".
- Safety Data Sheets on Stonclad UT 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.
- Staining may occur depending on length of exposure time, chemical concentration and temperature.

STONHARD

Worldwide Offices:

Africa	(27)11.254.5500	stonhard.co.za	Canada	(905)430.3333	stonhard.ca	Europe	(32) 67.49.37.10	stonhard.co.uk
India	(91) 22 28500321	stonhard.in	Mexico	(52)55.9140.4500	stonhard.mx	Middle East	(971)4.3470460	stonhard.me
USA	800.257.7953	stonhard.com	South America	(54-11) 5032 3113	stonhard.ar	Asia	(86)21.5466.5118	stonhard.ch