

PRODUCT DESCRIPTION

Stonclad HD is a four component, troweled, epoxy mortar system. The system consists of an epoxy resin, amine curing agent, fine silica aggregates and aluminum oxide aggregates. The system also includes a high performance, chemically resistant, urethane sealer. The standard thickness for Stonclad HD is a nominal 1/4 in./6 mm. Stonclad HD cures to an extremely hard, impact resistant mortar which exhibits excellent abrasion and wear resistance.

USES, APPLICATIONS

Stonclad HD is formulated using a multi-functional epoxy resin. The system is specifically designed to provide excellent abrasion, impact and wear resistance.

SUBSTRATE

Stonclad HD, with HT Primer, is suitable for application over concrete, wood, brick, quarry tile or metal. Not recommended for use on asphalt, mastic, gypsum based products or painted surfaces. These must first be removed by mechanical means to expose the substrate prior to priming and overlayment.

SYSTEM OPTIONS

Waterproofing

Where the total system must be waterproof, use of Stonhard's Stonproof ME7 membrane system is required with strict adherence to application instructions.

Cove Base

To provide for an integral seal at the joint between the floor and the wall, cove bases in heights from 2 to 6 in./5 to 15 cm are available.

PACKAGING

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

Mortar

Two cartons each containing:
 6 foil bags of Part A (curing agent)
 6 poly bags of Part B (resin)

Two cartons each containing:
 6 poly bags of Part C-2 (pigment)

12 individual bags of Part C-1 (aggregate)

Stonclad UT Sealer

One carton containing:
 2 metal 1 gallon cans of Part A (curing agent)
 2 metal 1 gallon cans of Part B (resin)

PHYSICAL CHARACTERISTICS

Compressive Strength	11,000 psi
(ASTM C-579)	after 7 days
Tensile Strength	2,000 psi
(ASTM C-307)	
Flexural Strength	4,000 psi
(ASTM C-580)	
Flexural Modulus of Elasticity	1.7 x 10 ⁶ psi
(ASTM C-580)	
Hardness	90-93
(ASTM D-2240/Shore D Durometer)	
Bond Strength	>400 psi
(ASTM D-4541)	(100% concrete failure)
Impact Resistance	>160 in./lbs.
(ASTM D-4226)	
Abrasion Resistance	<0.01 gm max. weight loss
(ASTM D-4060, CS-17 wheel)	
Coefficient of Friction	0.75
(ASTM D-2047)	
Flammability	Self Extinguishing
(ASTM D-635)	Extent of burning 0.25 in.es max
Thermal Coefficient of	
Linear Expansion	2.0 x 10 ⁻⁵ in./in.°C
(ASTM C-531)	
Water Absorption	0.2%
(ASTM C-413)	
Heat Resistance Limitation	200°F/93°C
	(continuous exposure)
	250°F/121°C
	(intermittent spills)
Cure Rate	8 hours for foot traffic
(at 77°F/25°C)	24 hours for normal operations

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.

COVERAGE

Each unit of Stonclad HD will cover approximately 200 sq. ft./18.58 sq. m of surface at a nominal 1/4 in./6 mm thickness.

STORAGE CONDITIONS

Store all components of Stonclad HD between 60-85°F/16-30°C in a dry area. Avoid excessive heat and do not freeze. The shelf life is three years in the original, unopened container.

COLOUR

Stonclad HD is available in Steel or Charcoal Gray.

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 (Stonkleen DG9) and rinsing with clean water. The surface must show open pores throughout and have a sandpaper texture. For recommendations or additional information regarding substrate preparation, please contact Stonhard's Technical Service Department.

PRIMING

The use of HT Primer is necessary for all applications of Stonclad HD over all substrates except Stonset grouts. Over Stonset grouts, Stonhard's Stonset Primer is used. The Standard or Stonset Primer must be tacky during the application of Stonclad HD. If the primer becomes tack-free, the area must be re-primed prior to continuing the application.

MIXING

1. Empty the entire contents of one foil bag of Part A (liquid) and one poly bag of Part B (liquid) into a mixing pail.
2. Place the mixing pail on a JB Power Blender and activate the timer to start the one minute blending cycle. While this is mixing, add one bag of Part C-2 (pigment).
3. When the blender stops, reactivate the timer and immediately pour the entire contents of one bag of Part C-1 (aggregate) into the rotating pail. Allow the contents to mix for the complete one minute blending cycle.

POT LIFE

After mixing, Stonclad HD has a working time of approximately 20 minutes at 70°F/21°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 HD onto the floor.
- Steel finishing trowels are used to compact and smooth the surface of the material to the required 1/4 in./6 mm thickness.
- Allow to cure for 8-10 hours and apply sealer coat.
- Detailed instructions on application and installation can be found in Stonhard's Stonclad HD Directions.

RECOMMENDATIONS

- DO NOT attempt to install material if the temperature of the Stonclad HD components and substrate are not within 60-85°F/16-30°C. The cure time and application properties of the material are severely affected at temperatures outside this range.
- 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 respirators and safety glasses are recommended.
- Avoid contact with all liquid Parts A and B as they may cause skin and/or eye irritation. Workmen should cover hands with rubber gloves.
- Use only with adequate ventilation.

NOTES

- Procedures for maintenance of the flooring system during operations are described in the Stonclad Cleaning Procedures.
- Specific information regarding chemical resistance is available in the Stonclad Chemical Resistance Guide.
- Material Safety Data Sheets on Stonclad HD are available on request.
- A staff of technical service engineers is available to assist in installation or to answer questions related to our products specifically or flooring problems in general.
- Requests for technical literature or service can be made through local sales representatives and offices, or corporate offices located worldwide.

IMPORTANT:

Stonhard believes the information contained here to be true and accurate as of the date of publication. Stonhard makes no warranty, expressed or implied, based on this literature and assumes no responsibility for consequential or incidental damages in the use of the systems described, including any warranty of merchantability or fitness. Information contained here is for evaluation only. We further reserve the right to modify and change products or literature at any time and without prior notice.

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