

PRODUCT DATA

STONDECK XD4 EXTERIOR RAMP POLYURETHANE SYSTEM

DESCRIPTION

StonDeck XD4 is a semi-flexible solvent free polyurethane car park deck coating system which provides a UV stable, colourful, crack bridging, waterproof wearing surface for exterior ramps or exit lanes and is designed to meet requirements of CSA S413-14.

USES / APPLICATIONS

StonDeck XD4 is designed to provide a durable and slip resistant surface that cosmetically enhances and reduces noise, provides lighter, safer environments to visit. StonDeck XD4 is suitable for refurbishment of existing decks and on new construction projects.

ADVANTAGES

- Extremely durable
- Waterproof - Protects from chlorides
- Aesthetically attractive – brightens up dull, dark, musty car parks
- Reduces noise – stops tire squeal
- Hard wearing – abrasion resistant
- Solvent free
- Fire resistant
- Slip resistant
- Resistant to cracking
- Excellent bond strength

MODEL SPECIFICATION

Product: StonDeck XD4 – Exterior Ramp Membrane

Finish: Gloss

Thickness: 50-60 mils

SYSTEM COMPONENTS

StonDeck Basecoat

A two-component, semi-flexible polyurethane bodycoat to hold the broadcast aggregate and provide system thickness.

StonDeck Aggregate*

A high-wear graded quartz aggregate broadcast to provide an abrasion, slip and wear resistant surface.

*System durability can be upgraded by substituting for emeraldum or aluminum oxide aggregates.

StonDeck UV Finish

A two component, UV stable, low viscosity and low flexibility sealer to seal the broadcast aggregate.

ADDITIONAL COMPONENTS (If required):

StonDeck Primers

A range of two component, low viscosity epoxy primers to provide a strong,

PHYSICAL CHARACTERISTICS

The figures that follow are typical properties achieved in laboratory tests at 20°C (68°F) and at 50% Relative Humidity.

Slip Resistance ASTM F1679	Dry >1.20 Wet >0.95
Temperature Resistance	Softens over 70°C, hardens on cooling
Water Permeability	Nil - Karsten test (impermeable)
Chemical Resistance	Resistant to gasoline, oil, diesel, antifreeze, hydraulic fluid, chlorides and battery acids
Resistance to Chloride Ions ASTM C1202	Charge Passed <100 Coulombs. Chloride Ion Penetration Negligible
Abrasion Resistance	Taber Abrader: 40mg loss per 1,000 cycles (1 kg load using H-22 wheels)
System Tensile Strength ASTM D412	7.15 MPa (1036 psi)
Fire Resistance BS476 Part 3 (2004)	Designated EXT.FAA (Extended Fire Exposure Roof Test) - No fire penetration within 1 hour - No spread of flame
System Elongation % ASTM D412	50.9%
Tear Strength MOAT 27	Method 5.41 Test Result = 192 N (43 lbs.)
Bond Strength ASTM D4541	Greater than cohesive strength of 3,600 psi (25 N/mm ²) concrete >275 psi (1.9 MPa)

Note: Complies with the requirements of ASTM C957.
(Tests: ASTM C501, C794, C836, D412 and D471)

secure bond on damp and poor quality substrates.

StonDeck Thixotrope

A fine filler to modify the rheology of StonDeck system components on ramps and sloped surfaces.

SUBSTRATE REQUIREMENTS

Concrete substrate should be a minimum of 25 MPa, sound and free from laitance, dust, oils, and other contamination. Substrate should be dry to 80% Relative Humidity. (See Primers for damp/ poor substrates.)

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PACKAGING

StonDeck XD4 is conveniently packaged as detailed below for easy handling.

StonDeck Primer (If required)

As required a selection/range of Epoxy Primers for poor quality and damp substrates. See separate data sheets.

StonDeck Basecoat

4.5 gallon pail of Polyurethane Body Coat.
(approx. 80 sq. ft. per gallon at 20 mils.)

Broadcast Aggregate

30 lb bags of quartz broadcast* aggregate (approx. 90 sq. ft./bag).

*(Can be substituted with aluminum oxide or emeraldum for higher abrasion resistance)

StonDeck UV Finish

UV stable topcoat for final finishing (approx. 100 sq. ft. per gallon at 10-15 mils. DFT over texture).

StonDeck Thixotrope

(0.3) bag

STORAGE CONDITIONS

Store all components between 60°F to 77°F / 16°C to 25°C in a dry area. Keep out of direct sunlight. Avoid excessive heat and do not freeze.

COLOUR

StonDeck XD4 is available in 8 standard colours. Refer to the StonDeck colour sheet. Custom colours are available upon request with extended lead times.

SPEED OF CURE

	10°C	20°C	30°C
Light Traffic	30 Hours	16 Hours	10 Hours
Full Traffic	36 Hours	24 Hours	16 Hours
Full Chemical Cure	12 Days	7 Days	5 Days

CLEANING AND MAINTENANCE

For best performance clean regularly using a single or double rotary scrubber drier in conjunction with a mildly alkaline detergent.

ENVIRONMENTAL CONSIDERATIONS

The finished system is assessed as non-hazardous to health and the environment. The long service life and seamless surface reduce the need for repairs, maintenance and cleaning. Environment and health considerations are controlled during manufacture and application of the products by Stonhard staff and fully trained and experienced contractors.

SUBSTRATE

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 contaminant's may be removed by scrubbing with a heavy-duty industrial detergent (Stonklean TD9) and rinsing with clean water. The surface must show open pores throughout and have a sandpaper texture. For recommendations or additional information regarding a range of substrate priming and preparation options, contact Stonhard's Technical Service Department.

PRIMING (As required)

StonDeck Primers are available for poor quality and damp substrates when required. The primer must be fully cured and the concrete must be completely sealed off prior to the application of the membrane. For recommendations or additional information regarding substrate priming, contact Stonhard's Technical Service Department.

POT LIFE

After mixing, the StonDeck XD4 components will have a working time of approximately 10 – 15 minutes. The working time varies greatly depending upon temperature.

BANDING

Proper banding of any cracks will ensure that the system is able to bridge dynamic cracking found in most parking decks and outdoor walkways. Application of the banding is accomplished as follows;

1. Cracking shall be chased out to a minimum of 1/4" x 1/4" (6mm x 6mm) and cleaned by vacuum.
2. Cleaned and chased cracks shall be filled with a suitable, compatible PU sealant.
3. StonDeck FD Membrane is mixed and applied to the prepared floor using a brush to a thickness of approximately 30 mils (0.8 mm). Apply the banding to an approximate overall width of at least twice the slab depth at that location. Introduce localized reinforcement as required. Allow to cure.

Note: FD Membrane may be applied wet on wet to PU sealant.

APPLYING

Application of the StonDeck system is accomplished as follows;

1. StonDeck Primer (If required) is mixed and applied immediately to the floor. The material is distributed using nap rollers. Allow to cure.
2. StonDeck Basecoat is mixed and poured onto the floor. The material is distributed using notched trowel/squeegee and back rolled to ensure even distribution. After 5 minutes maximum, the chosen aggregate is broadcasted until refusal into the wet bodycoat. Allow to cure then remove excess aggregate.
3. StonDeck UV Finish is mixed and applied to the aggregate. The material is distributed using nap rollers. Ensure an even coat of approximately 10-15 mils is applied to seal the broadcast aggregate. For additional slip resistance, broadcast quartz aggregate into StonDeck UV finish and back roll to evenly distribute. Refer to StonDeck XD4 Directions for further details.

Note: StonDeck Thixotrope can be added to system resin components to reduce "run off" on ramps and sloped surfaces (to a maximum of 1% by weight).

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RECOMMENDATIONS

- DO NOT attempt to install material if the StonDeck XD4 components are not within 60 to 77°F / 16 to 25°C.
- DO NOT use water or steam in the vicinity of the application.
- The use of suitable protective clothing, gloves and safety glasses must be worn during mixing and application of the product.
- Avoid Contact! In case of contact with eyes, rinse immediately with copious amounts of water and seek medical attention. In case of contact with skin, clean immediately with water and soap.

NOTES

- Safety Data Sheets for StonDeck XD products are available upon request.
- A staff of Technical Service engineers is available to assist with installation or to answer questions related to Stonhard Decking products.
- Requests for technical service or literature can be made through local sales representatives and offices or corporate offices located worldwide.

Important:

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