

PRODUCT DATA

STONDECK FD4 FLEXIBLE POLYURETHANE EXTERIOR SYSTEM

PRODUCT DESCRIPTION

StonDeck FD4 is a flexible solvent free polyurethane car park deck coating system which provides a colourful crack bridging, waterproof wearing surface for exterior parking decks, balconies and walkways and is designed to meet requirements of CAN CSA S413-21 Canadian Building Codes.

USES/APPLICATIONS

StonDeck FD4 cosmetically enhances and reduces noise, provides lighter, safer environments to visit. StonDeck FD4 is suitable for refurbishment of existing decks and on new construction projects.

BENEFITS

- 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 FD4 – Exterior Deck Membrane

Finish: Gloss

Thickness: 75-90 mils (with aggregate)

SYSTEM COMPONENTS

StonDeck Epoxy Primers

Due to the variable nature of site conditions, primer is not included in the system. Our recommended primer for most applications is StonDeck Primer HT. A complete range of Epoxy Primers for poor quality and damp substrates are also available. See separate data sheets.

StonDeck Membrane

A two-component highly flexible epoxy hybrid membrane for extreme crack bridging ability required in external applications.

StonDeck Bodycoat

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

StonDeck UV Finish

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

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	Rapid Determination of Concrete's Ability to Resist Chloride Ion Penetration <100 (Negligible) DOT BD47/94: Appendix B, Method B4, 2(d). Result: No chloride ion penetration after 28 days
Abrasion Resistance	Taber Abrader: 70 mg loss per 1000 cycles ASTM D 4060, C5-17
Fire Resistance of Dry Film (UV Sealer)	Self Extinguishing
Tear Strength	MOAT 27 Method 5.4.1 Test Result = 192 N
System Elongation % ASTM D412	400% - Membrane 100% - Bodycoat 50% - Finish
Bond Strength	Greater than cohesive strength of 25 N/mm ² concrete >1.5 MPa

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

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 aluminum oxide aggregates.

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 FD4 is conveniently packaged as detailed below for easy handling.

StonDeck Primer

Primer is not included in kit. StonDeck Primer HT is recommended for most applications.

StonDeck Membrane

StonDeck FD Membrane is packaged in 4 gallon units for easy handling (approx. 50 sq. ft. per gallon @ 30 mils)

StonDeck Basecoat

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

StonDeck 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 top coat for final finishing.
(approx. 100 sq. ft. per gallon at 15 mils. DFT over texture)

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 FD4 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 hrs	16 hrs	10 hrs
Full traffic	36 hrs	24 hrs	16 hrs
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 contaminants may be removed by scrubbing with a heavy-duty industrial detergent 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 options on substrate priming and preparation, contact Stonhard's Technical Service Department.

PRIMING

On good quality concrete prime with StonDeck HT Epoxy Primer; other primers are available for poor quality and damp substrates as and 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 FD4 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 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: Membrane may be applied wet on wet to PU sealant.

APPLYING

Application of the StonDeck system is accomplished as follows:

1. StonDeck HT Primer is mixed and applied immediately to the floor, lightly broadcast with aggregates and allow to cure.
2. StonDeck Membrane is mixed and applied immediately to the primed floor using a notched squeegee to a thickness of approximately 30 mils. Allow to cure.
3. StonDeck Basecoat is mixed and applied immediately to the membrane at a thickness of approximately 20 mils. 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.

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4. StonDeck UV Finish is applied over the StonDeck Finish to provide a UV resistant top coat. It is distributed using nap rollers to an even coat of approximately 15 mils. Allow to cure.

Refer to StonDeck FD4 Directions for further details.

RECOMMENDATIONS

- DO NOT attempt to install material if the StonDeck FD4 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 FD4 products are available upon request.
- A staff of Technical Service Engineers is available to assist with installation or to answer questions related to Stonhard Construction Solution Decking products.
- Requests for technical service or literature can be made through local sales representatives and offices or corporate offices located worldwide.

Important:

Stonhard Construction Solutions believes the information contained here to be true and accurate as of the date of publication. Stonhard Construction Solutions 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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