

K A U F M A N

PRODUCT
INFORMATION

KAUFMAN
PRODUCTS
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Patchwell Deep

Description

Patchwell Deep is a high quality, single-component, polymer modified mortar specifically designed for repairs to concrete where the depth of repair is between ¼" and 2" without the need for the addition of pea gravel. Patchwell Deep consists of special cements, dry latex polymers, and non-shrink additives that allow it to be used at greater thicknesses than most patching materials without shrinkage. For greater thicknesses the addition of pea gravel is recommended.

This product is self-curing and provides better adhesion than standard mortars. The coefficient of thermal expansion is similar to that of normal concrete, ensuring thermal compatibility. Patchwell Deep contains a migrating corrosion inhibiting agent to protect embedded steel reinforcement from chloride and carbon dioxide penetration. Patchwell is specifically engineered for increased resistance to calcium chloride & deicing chemicals, as well as for increased resistance to freeze-thaw cycling.

Uses

Recommended for durable structural repairs to both interior, exterior, above, below or on grade applications. Both small and large areas may be resurfaced.

Typical Properties

Compressive Strength, psi. (ASTM C-109)	3,200 psi. @ 1 day 5,700 psi. @ 7 days 7,000 psi. @ 28 days
Flexural Strength, psi. (ASTM C-348)	1,500 psi. @ 7 days
Slant Shear Bond Strength (ASTM C-882)	1,200 psi. @ 1 day 1,500 psi. @ 3 days 2,100 psi. @ 7 days
Splitting Tensile Strength, psi. (ASTM C-496)	750 psi. @ 28 days
Length Change-Wet (ASTM C-157)	+0.031% @ 14 days +0.038% @ 28 days
Length Change-Dry (ASTM C-157-Dry)	-0.080% @ 14 days -0.120% @ 28 days
Weight Loss in Calcium Chloride Freeze-Thaw Testing (MDOT)	1.4% @ 25 cycles
Coefficient of Thermal Expansion, per 0°C	7.3 x 10 ⁻⁶
Freeze-Thaw Resistance (ASTM C-666, Procedure A)	98% @ 300 cycles
Modulus of Elasticity (ASTM C-469)	3.1 x 10 ⁶ @ 28 days

Packaging/Yield

@ ½" thick, yield is 11 ft²
@ 1" thick, yield is 5 ½ ft²
One bag is equivalent to .45 ft³

Directions

Surface Preparation

The concrete surface must be clean, free of all contaminants and all deleterious materials. The surface must be prepared to a minimum of ¼ " or to a minimum Concrete Surface Profile (CSP) of five, as per Guideline Number 03732, *Selecting & Specifying Concrete Surface Preparation for Sealers, Coatings, and Polymer Overlays* from the International Concrete Repair Institute (ICRI). Additionally, once prepared properly, the concrete surface must be saturated surface dry (SSD), unless using an epoxy bonding agent. If steel reinforcement is exposed, it should be prepared by mechanical means to remove all rust. If corrosion has occurred the steel should be prepared with high-pressure water after the mechanical preparation. For proper priming of the steel, use SurePoxy HMEPL or SurePoxy HM 24.

Mixing

Patchwell Deep only requires the addition of water for mixing. The correct mixing ratio is 3.1 quarts of water to each 50 pound bag of Patchwell Deep. Add the water to the mixing container first and then add the powder. Mix with a jiffy mixer attached to a ½" drill for a 5 gallon can size or use a mortar mixer for larger sizes. Continue mixing until the material is free of lumps (approximately 2-3 minutes)

Mix material as close as possible to the area to be repaired. Do not allow mixed material to build up on mixing materials. **Do not Re-temper or use admixtures, plasticizers, accelerators, retarders, or any other ingredients besides potable water unless advised by Kaufman Products in writing.**

Application

Patchwell Deep must be scrubbed into the substrate, filling all pores and voids. Apply mixed Patchwell Deep over the properly prepared surface, working the material firmly into the sides and bottom, eliminating any air pockets and assuring maximum bond. Where practical, work from one side to the other. Working time is approximately 20-35 minutes. Patchwell Deep may be applied in single lifts from ¼" up to 2" without the addition of aggregate.

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When desired thickness is achieved, finish smooth with wood float and then trowel. A broom finish can be achieved, if desired. For applications 2" to 6" deep, add up to 20% 3/8" to 1/2" washed, dried, and non-reactive (ASR), saturated surface dry pea gravel. For structural bond strength, where hydrostatic pressure is not an issue, the use of SurePoxy HM, SurePoxy HM Class B, or SurePoxy HMEPL is recommended. Do not add additional water to the surface during finishing, but rather use VaporAid as a finishing aid. When using multiple lifts, be sure to score top surface for the next lift, make certain that the prior lift is saturated with potable water, and use either a bonding agent or a slurry coat to enhance the bond of the successive lift.

Curing

As per ACI recommendations for Portland cement based materials, curing is beneficial. Moist cure Patchwell Deep with wet burlap, polyethylene, a fine mist of potable water, or a solvent-based curing & sealing compound, such as Krystal ReFresh, Krystal ReFresh OTC, Krystal 25, Krystal 30, Krystal 25 OTC, or Krystal 30 OTC. Never apply a curing/curing & sealing compound if subsequent lifts are to be applied on top of Patchwell Deep.

Precautions

Minimum application thickness is 1/4". Minimum ambient and substrate temperature is 45°F and rising at time of application, and at least for the first 24 hours. Control and expansion joints must be taken into consideration and followed to the new surface. Never use limestone aggregates with this product. We recommend pretesting with the pea gravel. Read the complete Product Data Sheet, Safety Data Sheet and the Concrete Surface Preparation guideline before using.

Technical Information

The following results were achieved under laboratory conditions. Statistical variations will occur based upon mixing methods, temperature & humidity, test methodology, site conditions, curing conditions, application methods, and equipment.

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