Crown Natural Stone

Product Description Sheet No. 371

A Decorative Epoxy Polymer Concrete Overlay Embedded with Natural Stones

DESCRIPTION

Crown Natural Stone, Product No. 371, is a troweled Epoxy Polymer Concrete (EPC) System. By combining a 100% solids, non-shrink, pigmented epoxy resin matrix with natural stones, marble, granite, onyx, glass chips, or other approved aggregates an unique and decorative overlay system will protect the concrete and other substrates. The system maybe used as decorative flooring, deck overlays, balcony overlays, counter tops, benches and wall panels.

Our limitation is only our imagination for color and design!

Exposed Aggregate Natural Stone Texture

After placement of Crown Natural Stone EPC the surface maybe left with the exposed stone for non-walking surfaces such as wall panels or vertical precast applications. Depending on the stone selection of color, size and shape, the exposed surface will vary with the amount of epoxy matrix showing. Each system becomes an individual customized overlay.

Exposed Aggregate Natural Stone with Smooth Surface

After placement of Crown Natural Stone EPC the surface will be mechanically ground and polished to create a smooth surface that reveals the inner natural beauty of the aggregates and the epoxy matrix. The smooth surface is top coated with a U.V. resistant polymer. These systems are used for walking, light vehicular traffic and sitting surfaces.

Inlays

Inlays enhance the EPC overlay by adding color, character, designs, borders, thresholds, information, and corporate or product branding.

Additional Waterproofing Protection

An optional 100% solids flexible epoxy membrane is available with or without an epoxy-glass grid for bridging cracks, and increasing flexural and live load properties. Each system adds waterproofing, durability, and toughness to the overlay system.

Vapor Transmission Barrier

Another option is available when vapor transmission exceeds 3-lbs./1000 ft^2. The penetrating polymer, CrownCote Vapor Barrier, Product No. 303 is an exclusive system created by Crown Polymers to stop vapor transmission through.on grade concrete slabs.

Biocide Protection

CrownCide, Product No. SP 668, an antimicrobial additive is also available upon request for the protection of bacteria, antinomycetes, algae and fungi, which maybe exposed to the overlay surface.

Protective Top Coat

The completed system when ground smooth is than sealed with a U.V. resistant polymer topcoat that enhances the colors within the overlay. It provides additional wearability, waterproofing and ADA slip resistance for walking surfaces. It is also used on natural un-ground stone systems to enhance stone color. Three clear coat polymer products, epoxy, urethane and polyurea, are available.

SYSTEM ADVANTAGES

- Aesthetically attractive appearances
- Customized designs
- Chemical and stain resistant
- Seamless or divided into decorative patterns
- Unlimited color and design options
- ADA Slip resistant compliance
- Useable for interior or exterior applications
- Thickness of 3/8 in. to any depth
- Applicable and curable down to 40^0F
- Maybe precast offsite and bonded onsite to the substrate
- Factory assistance on design and aggregate selection

PLACEMENT ADVANTAGES

- Low to nearly no odor during application
- 100% solids, No shrinkage, No VOC's
- Very safe to use
- Excellent working time
- Cures and adheres on dry or damp concrete surfaces
- Maybe placed in metal or other structural sound forms - non-corrosive
- Cures with minimal surface voids
- Requires less grinding & grouting labor to create smooth surfaces
- Meets or exceeds all NTMA & TTMAC standards
- Maybe placed on-site or precast for faster placement

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WHERE TO USE

Use Crown Natural Stone floor and walls systems on clean concrete or other structurally sound interior or exterior surfaces that require minimal maintenance.

- Health care, hospitals, pharmaceuticals, research, and clean rooms
- Commercial, retail, hallways, lobby, elevator and office areas
- Animal care and animal research
- Laboratory and chemical research
- Institutional facilities – schools and government offices and work areas

LIMITATIONS

- Do not apply on wet or water saturated surfaces.
- Do not apply when substrate temperature is below 40^0F (4^0C) or dropping during cure.
- Do not thin with solvents or other materials, they will prevent proper cure.
- Substrate temperature must be at least 5^0F above the dew point.

CHEMICAL RESISTANCE	Result
ASTM D 1308, 7 days immersion @ 73^0F	
Distilled Water	NE
Mineral Water	NE
Isopropanol	NE
1% Soap Solution	NE
10% Sodium Hydroxide	NE
10% Hydrochloric Acid	NE
5% Acetic Acid	NE
0.25 Detergent Solution	NE
30% Sulfuric Acid	NE
Ethanol	NE

NE = No effect on specimens

TYPICAL PHYSICAL PROPERTIES

Color: Standard Colors. Computerized custom color matching including NTMA and TTMAC standard color plates.

Hardness, @ 24 hours Shore D
ASTM D 2240 — 80

Compressive Strength
ASTM D 695 — 9,000 psi

Tensile Elongation %
ASTM D 638 — 6-12

Tensile Strength
ASTM D 638 — 3,100 psi

Water Absorption, %
ASTM D 570 — 0.15

Abrasion Resistance
ASTM D 4060, CS-17 Wheel
Lost — 20-40 mg

Flammability
ASTM D 635 — Self-extinguishing over concrete

Flexural Strength
ASTM C 580 — 3,900 psi
ASTM D 790 — 6,000 psi

Thermal Coefficient of Linear Expansion
ASTM D 696, in./in./^{0}F — 17 X 10^{-6}

Impact Resistance
MIL-D-3134, Sec. 4.7.3
Withstands — 19 ft.-lbs. without cracking, chipping, delamination

Adhesion
ACI 503R — 350 psi
100% concrete failure

Resistance to Elevated Temperatures
MIL-D-3134J — No slip or flow at required temperature of 158°F

Slip Resistance Complies with ADA Standards
ASTM C = Polymer Concrete System
ASTM D = Resin Only

Changing of the aggregate could change the physical strength properties; however, the above properties are very typical for North America aggregate and epoxy overlays.

For the Location of Your Nearest Crown Polymers Representative

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