

# CrownShield® 3-D SL

Product Description Sheet No. 316

## A Three-Dimensional Experience! Long Lasting Polymer Overlay. Built for Traffic! Creates a Unique 3-D Visual Effect, with Multi Color Sparkle.

### Description

**CrownShield 3-D SL**, Product No. 316 is a three- component epoxy floor overlay containing multi-color glitter. It is a 100% solids, non-shrink, modified for better UV stability (see limitations), nearly no odor during application of the clear polymer. It is applied over a **CrownShield 50, Product No.320** black base coat.

### Application Method

The mixed epoxy base coat is applied as a neat-pigmented protective base coat, over cleaned, smooth concrete surfaces, tile, or polymer overlays. The CrownShield 3-D SL is mixed and applied with a gauge rake onto the tack-free base coat. Product 316 is self-leveling. When the substrate is cold, it will be necessary to back-roll the wet epoxy with a spike roller to assist in distributing the glitter into gauge rake lines.

### Use

Used on floors where an ultra-dramatic effect is desired like hair salons, nightclubs, or on any decorative, commercial, institutional or industrial applications that needs protection and a visual improvement. It is beautiful in homes or around pool decks and patios. It will provide a smooth or textured profile surface for anti-slip environments.

### Benefits

The self-leveling polymer overlay creates a 3-D visual effect, with sparkling multi-color glitter, and a variety of proprietary components. This dense beautiful seamless polymer overlay and wear surface is available in smooth or a textured profile. It is easy to maintain. It requires no waxing. It has excellent durability and life cycle. It provides an in-depth look that enhances the floor's beauty. It cures down to 50°F (5°C). Products available for colder temps.

### Typical Coverage

Neat Base Coat: 10 Mills (140 ft<sup>2</sup> / Gal.)  
Self-leveling Wear Surface Kit cover 120 ft<sup>2</sup>  
@ 1/16 inch thick.

### Advantages

- Complies with USDA, FDA, OSHA, ADA and LEED® "Green" requirements
- Nearly no odor during application
- No VOC's – 100% solids formula
- Moisture-insensitive formula
- Excellent strength properties
- Excellent Impact Properties

### Typical Data for CrownShield 3-D SL

Material and curing conditions at 73°F (23°C), 50% R.H unless noted.

<b>COLOR</b> Clear	<b>VISCOSITY</b> 500 – 800 cps.
<b>MIX RATIO BY VOLUME</b> Comp "A" 2 to Comp "B" 1	<b>POTLIFE</b> 5-35 minutes
<b>TACK-FREE TIME</b>	<b>CONSISTENCY</b> Self-Leveling
Substrate Temperature	50°F      73°F      90°F
	10–12 hrs    5–7 hrs    4–6 hrs
<b>TENSILE PROPERTIES (ASTM D638 )</b> 7 days	
Tensile Strength	8,100 psi
Elongation at Break	>5 %
<b>FLEXURAL PROPERTIES (ASTM D790)</b> 7 days	
Flexural Strength	15,000 psi
Tangent Modulus of Elasticity	500,000 psi
<b>SLANT SHEAR STRENGTH (ASTM C882)</b> 7 days	
Test Temperature	Value      Mode of Failure
50°F	4,100 psi    100% Concrete Failure
90°F	4,300 psi    100% Concrete Failure
<b>COMPRESSIVE STRENGTH (ASTM D695)</b> Neat Polymer	
	50°F      73°F      90°F
8 hour	3,700 psi    6,300 psi    10,300 psi
1 day	10,100 psi    10,200 psi    10,300 psi
7 days	14,100 psi    14,200 psi    14,200 psi
<b>COMPRESSIVE STRENGTH (ASTM C579)</b> 7 days	
EPC	11,500 psi
<b>HARDNESS (INDENTATION - ASTM D2240)</b>	
Neat Epoxy, 7 day cure, Durometer, Shore D 80	
<b>ADHESION TO CONCRETE (TENSILE PULL - ACI 503 R)</b>	
EPC, 7 day cure, - 400 psi, 100% concrete failure	
<b>ABRASION RESISTANCE (TABER - ASTM D 4060) EPC,</b>	
7 day cure, 1,000 cycles, 1,000 g. load, Wheel No. 17, Loss 0.04.9 g	
<b>WATER ABSORPTION (ASTM D 570)</b>	
Neat, 7 day cure, max. 0.15%	
<b>COEFFICIENT OF THERMAL EXPANSION (ASTM D696)</b>	
Temperature Range	-30°C (-22°F) / 30°C (86°F)
7 days	18.0 X 10 <sup>-6</sup> in / in./°F
<b>FLAMMABILITY (ASTM D635)</b>	
EPC, 7 day cure, self-extinguishing	
<b>SHELF LIFE</b>	1.5 years in original unopened containers
<b>PACKAGING</b>	Kit = 120 sf2 @ 1/16"

# How to Apply CrownShield® 3-D SL

## Surface Preparation

Concrete and other substrates must be clean, sound, and free of dust, grease, waxes, coatings, curing compounds and all contaminants. Typical removal methods include dust-free abrasive shot blasting. Clean the substrate to the desired surface profile for the overlay system selected. Follow the Crown Polymer Surface Preparation Guide for best results.

## Test Substrate For Cleanliness and Adhesion

Before placement of the polymer overlay, test the cleaned concrete substrate for soundness and cleanliness with a Tensile Pull Test ACI 503 R (min.200 psi) or Crown Polymers Surface Shear Test. 100% concrete must fail to pass either test without bond line failure.

## Preconditioning Polymer

When temperatures drop, polymers typically thicken and it becomes harder to flow or to spread the product. When the temperatures are warmer, they typically become thinner. To improve product flow-ability maintain product temperature before mixing at about 20°C (73°F). When the substrate temperature is 5°C (40°F) or lower, preheat each epoxy component to 32°C (90°F) before mixing. Caution the pot life will be reduced by about 50%. It may be necessary to reduce the mixed volume quantity of the batch.

## Application Methods

Refer to Crown Polymers Application Method Guide and Specifications.

## Mixing

Pour Component "B" into "A" and mix for approximately 90 seconds (until one even colors develops), then add Component C and blend until an even mix develops with a low speed paddle attached to a drill (400-600 rpm). The mixed product is ready for immediate placement.

## Limitations

- Substrate temperature must be 3°C or (5°F) above measured dew point temperature.
- Minimum application substrate temperature is 5°C (40°F).
- **DO NOT APPLY on WET or MOIST (DAMP) SUBSTRATE discoloration could occur.**
- **DO NOT THIN** - solvents could prevent proper cure.
- **ALL EPOXIES WILL AMBER WHEN EXPOSED TO UV ENVIRONMENTS.** Do not use for outdoor applications. Do not use in areas with direct sunlight from the windows.
- Apply coating at an even thickness, uneven application could cause discoloration.
- Apply the next polymer lift within 24 hours if the ambient temperature is below 85°F (30°C) and 18 hours if above 85°F (30°C).
- Withstands vapor pressure up to 3 lbs/1,000 ft<sup>2</sup>. Request data.
- **Cold material (<60°F) will not flow properly and hot material (>90°F) will flow too much.**

## Maintenance

For maximum life expectancy, routinely sweep and wash floors with appropriate cleaners and detergents. All chemicals or abrasive grit should be removed as soon as possible.

## Caution

### Component "A" - Irritant

Contains epoxy resins. Prolonged contact with skin may cause irritation. Avoid contact with eyes.

### Component "B" - Corrosive

Contact with skin may cause severe burns. Avoid eye contact. The product is a strong sensitizer. Contains cycloaliphatic amines.

## Important Information

Use safety goggles and chemical-resistant gloves. NIOSH/OSHA approved respirator, and adequate ventilation is recommended when in a confined air space.

## Clean Up

In case of spills wear suitable protective equipment, contain spill, and collect with absorbent material, place in suitable container. Ventilate area. Avoid contact. Dispose according to applicable local, state, and federal regulations.

## First Aid

In case of skin contact, wash thoroughly with soap and water. For eye contact, flush immediately with plenty of water for at least 15 minutes. For respiratory problems, remove person to fresh air. Contact Physician Immediately. Wash clothing before re-use.

Consult Safety Data Sheet for More Information before use.

**FOR INDUSTRIAL USE ONLY**  
**KEEP OUT OF REACH OF CHILDREN**  
**KEEP CONTAINERS TIGHTLY CLOSED**

LIMITED WARRANTY - "Crown Polymers Corp warrants its products to be free of manufacturing defects, to be of good quality, and that they will meet Crown Polymers current physical published properties when applied in accordance with Crown Polymers written directions and tested in accordance with ACI, ASTM and Crown Polymers Standards. Product proved to be defective will be replaced. **There are no other warranties by Crown Polymers Corp of any nature whatsoever, expressed or implied, including any warranty of merchantability or fitness for a particular purpose in connection with this product.** Crown Polymers Corp shall not be liable for damages of any sort, including remote or consequential damages, resulting from any claimed breach of any warranty, whether expressed or implied, from any other cause whatsoever. Crown Polymers will not be responsible for use of this product in a manner to infringe on any patent held by others."

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