

# CrownShield 40

Product Description Sheet No. 321.1



## High-Build Epoxy Floor Coating for Commercial and Industrial Pedestrian and Vehicular Traffic Use

### DESCRIPTION

CrownShield 40, Product No. 321.1 is a 100% Solids, Moisture-Insensitive, Non-shrink, Two-Component Epoxy Base Coat and Top Coat Floor Coating System.

### WHERE TO USE

On Dry or Damp Concrete Floor or Slab Surfaces for Foot & Vehicular Pneumatic Tire Traffic.

- Food Processing Plants
- Pharmaceutical Plants
- Manufacturing Plants
- Factories
- Water Treatment Plants

### ADVANTAGES

- Good Working Time
- Nearly No Odor
- 100% Solids, No VOC's
- Non-Shrink Coating
- Moisture-insensitive Formula
- Self Leveling
- Fast Cure Rate
- Cures Down to 40°F
- Excellent Strength Properties
- Excellent Impact Resistant
- Easy to Place
- Used as Neat, Slurry, Broadcast or Epoxy Polymer Concrete Troweled System.
- 2 to 1 Volume Mix Ratio

### PACKAGING

- 3 Gal/Unit
- 5 Gal/Unit
- 15 Gal/Unit

### TYPICAL DATA FOR CrownShield 40

(Material and Curing Conditions at 73°F unless noted, 50% R.H.)

<b>COLOR</b>	Straw , 10 Standard Colors
<b>VISCOSITY</b>	500 – 750 cps.
<b>POTLIFE</b>	25 – 35 minutes
<b>CONSISTENCY</b>	Nearly Self-Leveling

### TACK-FREE TIME

Substrate Temperature	40°F *	73°F	90°F
	10 – 12 hrs.	6 – 8 hrs.	5 – 7 hrs.

### TENSILE PROPERTIES (ASTM D638 ) 7 Days

Tensile Strength	8,800 psi
Elongation at Break	5 %

### FLEXURAL PROPERTIES (ASTM D790) 7 Days

Flexural Strength	16,000 psi
Tangent Modulus of Elasticity	5.1 X 10 <sup>5</sup>

### SLANT SHEAR STRENGTH (ASTM C882) 7 Days

Test Temperature	Value	Mode of Failure
90°F	4,000 psi	100% Concrete Failure
40°F *	4,200 psi	100% Concrete Failure

### COMPRESSIVE STRENGTH (ASTM D695)

	40°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

### COEFFICIENT OF THERMAL EXPANSION (ASTM D696)

Temperature Range	-30°C (-22°F) / 30°C (86°F)
7 days	18.0 X 10 <sup>-6</sup> in / in./°F

### HARDNESS, SHORE D (ASTM D2240)

7 Days	80
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### WATER ABSORPTION (D570)

7 Days	0.21%
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**SHELF LIFE** 1.5 years in original unopened containers

\* Pre-conditioned epoxy to 90°F before mixing

### CROWN POLYMERS, LLC

# How to Apply CrownShield 40

## SURFACE PREPARATION

All substrate surfaces must have all loose and deterioration removed to a sound surface. 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 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 CLEANNES 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 the flow-ability maintains product temperature before mixing at about 20°C (73°F). When the substrate temperature is 10°C (50°F) or lower preheat each epoxy component to 90°F before mixing. **Caution the potlife will be reduced by about 50%.**

## CUSTOMER SATISFACTION

Apply a test area to ensure that the application meets the customer's expectations.

## MIXING

Pre-mix Component "A", (when pigmented) then pour Component "B" into "A" and mix for 90 seconds (until one even color develops) with a low speed paddle attached to a drill (400-600rpm). The mixed product is ready for immediate placement.

## COVERAGE

Product coverage is depended upon the existing substrate surface profile and thickness of the designed system. Refer to Crown Polymers Application Method Guide and Specifications.

## APPLICATION METHODS

Refer to Crown Polymers Application Method Guide and Specifications.

## LIMITATIONS

- Substrate temperature must be 3°C or 5°F above measured dew point temperature.
- Minimum application temperature is 5°C (40°F).
- DO NOT APPLY on WET Substrate.
- DO NOT THIN - solvents could prevent proper cure.
- Aggregate must be dry when used.
- Pre-condition polymer as needed.

## 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

Contains aliphatic/cycloaliphatic amines. Contact with skin may cause severe burns. Avoid eye contact. Product is a strong sensitizer

### Important Information

Use of safety goggles, chemical-resistant gloves, adequate ventilation and NIOSH/OSHA approved respirator is recommended.

## 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 Material Safety Data Sheet for More Information

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

LIMITED WARRANTY - "Crown Polymers, LLC warrants its products to be free of manufacturing defects, to be of good quality, and that they will meet Crown Polymers current published physical 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, LLC 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, LLC 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."

For the Location of Your Nearest Crown Polymers Representative



**CALL NATIONWIDE TOLL-FREE 1-888 / 732-1270**

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