

## High-Build Pigmented Epoxy Floor Coating for Light and Moderate Duty Commercial and Industrial Use

### PRODUCT DESCRIPTION

Shield 50<sup>TM</sup>, is a 100% solids, non-shrink, two-component, straw or pigmented epoxy floor coating.

### APPLICATIONS

On dry concrete surfaces as a pigmented base coat or clear top coat for foot and vehicular pneumatic tire traffic. Also used as a binder coat for quartz floor systems:

- Food Processing
- Pharmaceutical Plants
- Acid Stain Top Coat

### ADVANTAGES

- Good Working Time
- Nearly No Odor
- No VOC's – 100%Solids
- 100% Cross-linking
- Medium Cure Rate
- Cures down to 50°F (10°C)
- Excellent Strength Properties
- High Compressive Strength
- Excellent Impact Resistant
- DOT Non-Corrosive
- Easy to Place
- Used as Neat Coating or Textured Polymer Overlay

### Typical Neat Coverage

**Base Coat:** 8-10Mils(160-200ft<sup>2</sup>/Gal)

**Top Coat:** 10 Mils (160ft<sup>2</sup>/Gal)

**Shelf Life:** 6 months

**Pot Life at 73°F:** 25-35 min.

**Thin Film Cure:** 5 – 12 hrs

**Light Traffic Use:** 24 hrs

**Full Cure at 73°F:** 7 days

**Mix Ratio:** 2:1 by volume

### CURED RESIN PERFORMANCE

<u>Test Description</u>	<u>Test Method</u>
<b>Compressive Strength</b> Days – 14,200 PSI	ASTM D 6957
<b>Tensile Strength, Min.</b> 8,800 PSI	ASTM D 638
<b>Elongation @ Break</b> 5%	ASTM D 638
<b>Flexural Strength</b> 16,000 PSI	ASTM D 790
<b>Flexural Modulus</b> 400,000 PSI	ASTM D 790
<b>Shore D Hardness</b> 80	ASTM D 2240
<b>Adhesion</b> 400 PSI	ASTM D 4541
<b>Impact Resistance</b> Sec. 4.7.3 16 ft./lbs.	Mil-D-3134 Passes
<b>Taber Abrasion</b> 89 mg/1000rev., cs17	ASTM D 4060
<b>Water Resistance</b> <0.21%	ASTM D 570
<b>MVT (Moisture Vapor Transmission)</b> 96 0.10 Perm @ 20 Mils	ASTM E
<b>Fungus &amp; Bacteria Resistance</b> 52505 No Support of Growth Under TT-P-34	Mil-F-
<b>Coefficient of Thermal Expansion</b> Temperature Range -22°F(-22°C) / 86°F(30°C) 7 Days 18.0 X 10 <sup>-6</sup> in/in./°F	ASTM D 696

### PRODUCT DATA

Weight per Gallon	9.1 lbs/gal (mixed)
Solids %	100% (mixed)
Viscosity	500-750 cps (mixed)
Flash Point	>205°F
VOC EPA Method 24	<10 g/l

### ORDER SPECIFICATIONS

Shield50 1 gal	EP-S50-1
Shield50 3 gal	EP-S50-3
Shield50 5 gal	EP-S50-5
Shield50 15 gal	EP-S50-15

### **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 CCI Surface Preparation Guide for best results.

### **TEST SUBSTRATE FOR CLEANNESS 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 Concrete Coatings Inc. 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 maintain product temperature before mixing at about 20°C (73°F). When the substrate temperature is 15°C (60°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.

**Keep containers tightly closed**

### **MIXING**

Pre-mix Component "A", (when pigmented) then pour Component "B" into "A" and mix for 90 seconds (until one even colors develops) with a low speed paddle attached to a drill (400-600rpm). 5-10% Xylene may be added to the completed mix. In some cases this helps to minimize bubbling caused from warmer conditions or accelerated cure. Mix slowly and thoroughly. The mixed product is ready for immediate placement.

### **COVERAGE**

Product coverage is 100 – 200 sq ft per gallon depended upon the existing substrate surface profile and thickness of the designed system.

### **APPLICATION METHODS**

Apply by squeegee in left to right motions, and back roll with a short nap roller at 90° angles to squeegee lines. Do not roll excessively, only enough to smooth material.

### **LIMITATIONS**

- Substrate temperature must be 3°C (5°F) above measured dew point temperature.
- Minimum application temperature is 10°C (50°F).
- **DO NOT APPLY on WET OR DAMP SUBSTRATE.**
- 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/MSHA approved respirator is recommended.

### **CLEAN UP**

In case of spills wear suitable protective equipment, contain spill, 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**

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