

PHYSICAL PROPERTIES

VOC	.....	<5 g/L
SOLIDS CONTENT	.....	>99%
VOLUMETRIC MIX RATIO	.....	2A:1B
COVERAGE RATE	.....	160 ft ² /gal 10 Mills
APPLICATION TEMP	.....	Slow 70°- 90°F Med 50°- 70°F Fast 40°- 60°F
POTLIFE 1 Gal mass @ 75°F	.....	Slow 50 Mins Med 30 Mins Fast 15 Mins
DRY TIME @ 75°F	.....	8-10 Hours
RECOAT WINDOW	.....	12-24 Hours
FULL CURE	.....	7 Days
PACKAGING	.....	3 Gal Kit 15 Gal Kit

MECHANICAL PROPERTIES

COMPRESSIVE STRENGTH ASTM C579	.....	10,000 p.s.i
TENSILE STRENGTH ASTM D2370	.....	4,000 p.s.i
ELONGATION ASTM D2370	.....	30-40%
GLOSS INDEX 60° ASTM D523	.....	75-80
SHORE D HARDNESS ASTM D2240	.....	75-80

CHEMICAL RESISTANCE

Refer to CrownTech Chemical Resistance Guideline Technical Bulletin No. 9

PRODUCT DESCRIPTION

CrownShield™ 8318 is a two-component, low viscosity, high build, epoxy binder designed for decorative and industrial flooring. It comes in three different cure speeds: Slow, Medium, and Fast. It can be applied directly to properly prepared concrete or over Crown Polymers 8303 CrownShield™ MVB (moisture mitigation primer). It is VOC Compliant in all states and provinces in North America.

TYPICAL USES

- Animal Care and Housing
- Commercial Bakeries and Kitchens
- Hospital and Health Care Facility Floors
- Manufacturing and Warehouse Floors
- Pharmaceutical Floors
- Automotive Show Room and Repair Areas
- Food, Beverage and Spirits Processing
- Laboratories and Research Floors
- Mechanical Equipment Room Floors

BENEFITS

- Complies with USDA, FDA, FSMA. See Crown Polymers Technical Bulletin: 3 Food and Beverage Compliance.
- LEED requirements. See Crown Polymers Technical Bulletin: 5 LEED information
- Cures to an inert finish. See Crown Polymers Technical Bulletin: 2 VOC Compliance

COLORS



LIMITATIONS

- Higher temperatures will result in shortened working times and faster drying time.
- Color may vary due to batch-to-batch variation, always “box” different batches to avoid it.
- Use 8303 CrownShield™ Moisture Barrier when MVT exceeds 3 lbs. or 80% RH
- May amber with UV Exposure
- Will not bridge cracking

SHELF LIFE

1 Year from Date of Manufacture provided unopened

STORAGE

Store in a dry environment at room temperature and out of direct sunlight.

APPLICATION EQUIPMENT

Personal Protective Equipment
Jiffy Mixing Paddle
Drill
18"x 3/8" Nap Shedless Roller Cover
8-12 Mil Notched Squeegee
4" Chip Brush
Spike Shoes

SURFACE DIAGNOSTICS

Concrete must be structurally sound and free of all contaminants and bond breakers. Test concrete compressive strength using a Schmidt or Rebound Hammer to ensure substrate has compressive strength of 3500 psi or higher.

Perform a pH test using concrete pH test strips or meter to ensure substrate pH is between 9-12.

Perform Moisture Test using either Calcium Chloride per ASTM F1869 or In-Situ Relative Humidity Probe per ASTM F2170 to ensure substrate has Moisture Vapor Emission Rate of 3 lbs or less and Relative Humidity of 80% or less. See CrownTech Bulletin 6: Moisture Mitigation Negative Side Moisture Barrier

If Moisture Vapor Emission Rate is above 3 lbs but below 25 lbs and relative humidity is above 80% but below 99% then apply 8303 Moisture Barrier Primer first at 16 mils with a coverage rate of 100 Ft²/ Gal.

SURFACE PREPARATION

Use Mohs scratch test to determine concrete hardness for proper diamond bond selection.

Concrete should be mechanically profiled and prepared to produce a Concrete Surface Profile (CSP) level between #2 & #4 per ICRI Guideline no. 310.2R. See CrownTech Bulletin 1: Concrete Surface Preparation.

All perimeter areas of coating termination shall be masked for protection. Saw cut and key-in all termination points.

SURFACE REPAIR

All depressions, divots and cracks should be profiled and free of dust and contaminants. Repair surface imperfections to reduce the ability to see the defect through the coating.

Honor all dynamic (moving) joints, static joints may be filled, use dynamic joints as initiation and termination points during application process where needed.

CLIMATE EVALUATION

Ambient and substrate temps should be above 50°F and a minimum of 5°F above Dew Point.

Product temps should be between 70-80°F.

Atmospheric Relative Humidity should not exceed 80%. See CrownTech Bulletin 7: Temperature & Relative Humidity

REFER TO SAFETY DATA SHEETS (SDS)

FOR SAFETY PRECAUTIONS.

SAFETY PRECAUTIONS MUST BE FOLLOWED DURING STORAGE, HANDLING AND USE.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

SHALL BE WORN AT ALL TIMES INCLUDING BUT NOT LIMITED TO LONG SLEEVE SHIRTS OR DISPOSABLE ARM SLEEVES, SAFETY GLASSES, DISPOSABLE NITRILE GLOVES, AND PROPERLY FITTED NIOSH RESPIRATORS

ALL SOURCES OF IGNITION SHOULD BE TURNED OFF AND ENVIRONMENT SHOULD HAVE PROPER AND ADEQUATE VENTILATION DURING APPLICATION AND CURING PROCESS

MIXING AREA SHOULD BE PLACED ON OR IN CLOSE PROXIMITY TO PROJECT. AREA SHOULD BE SECURELY COVERED WITH PLASTIC, CARDBOARD OR TARP. STAGE MATERIALS, TOOLS AND CLEANING SUPPLIES IN MIXING AREA PRIOR TO APPLICATION PROCESS.

DO NOT MIX MORE MATERIAL THAN CAN BE APPLIED IN 20 MINUTES

MIXING

1

Pre-Mix A-Component in its respective container using Jiffy mixer and drill at slow speeds for 1 minute until pigment is uniform.

IF USING MULTIPLE BATCHES, IT IS BEST TO BOX ALL A-COMPONENTS TOGETHER THEN SEPARATE BACK INTO INDIVIDUAL CONTAINERS TO ENSURE EVEN PIGMENTATION.

2

Pre-Mix B-Component in its respective container using clean Jiffy mixer and drill at slow speeds for 30 seconds or until thoroughly homogeneous.

3

Transfer A-component and B-component at a mix rate of 2A:1B by volume into a clean 5-gal bucket and mix for 2-3 minutes being sure to scrape sides of the bucket with a stir stick ensuring both components are thoroughly blended

COVERAGE RATE

160 Ft² / Gal @ 10 Mils

COVERAGE RATE MAY VARY DEPENDING ON SUBSTRATE CONDITION

WORKING TIME

15-30 Minutes @ 75°F

WARMER AMBIENT, PRODUCT AND SURFACE TEMPERATURES WILL SHORTEN POTLIFE AND WORKING TIME.

APPLICATION PROCEDURE

1

Cut-in edges using a 4" chip brush. Do not allow wet edges to stand more than 10 minutes ahead of application of main body of floor.

EPOXY SETS FASTER IN MASS, MIXED MATERIAL SHOULD NOT REMAIN IN BUCKET

2

Pour a band of mixed material across the surface roughly 6-8" wide. Use 8-12 mil notched squeegee to gauge material across surface

- Maintain wet edge
- Always pour next mixed batch onto wet edge
- Do not apply heavier than recommended coverage rates

3

Back roll the surface with 18" x 3/8" nap roller by walking into the wet material wearing spike shoes and roll the surface wall to wall with overlap perpendicular to your first pass

- Do not overwork material

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Allow coating to dry 8-10 Hrs @ 75°F
Do not force dry.
Recoat: 8-24 Hrs
Light Traffic: 24 Hours
Heavy Traffic: 48 Hours
Equipment Traffic: 72 Hours

SLIP RESISTANCE

Skid-Resistance – Field (in situ) Wet Dynamic Coefficient of Friction (DCOF), ANSI A326.3. See Crown Polymers Technical Bulletin: 4 Coefficient of Friction.

CLEAN-UP

Clean-up mixing station, tools, and equipment as required. Use acetone, a VOC exempt solvent, for cleaning up. Observe all legal, and health, and safety precautions when handling or storing solvents and materials, particularly in confined spaces. Make sure the working areas are well ventilated at all times during placement and curing time.

DISPOSAL

Dispose of empty packaging and other waste in accordance with federal, state, provinces and local regulations.

MAINTENANCE

Inspect the installed floor by spot cleaning and spot repairing the damaged or cracked areas. To prolong life of the flooring system, a daily maintenance program is highly recommended to ensure the floor is safe for its intended purposes. See Crown Polymers Technical Bulletin: 8 Care and Maintenance.

TECHNICAL SUPPORT

For questions, contact a Crown Polymers Representative. Additional Support Documents are available from Crown Polymers, including brochures, application guidelines, videos and more. Visit Crownpolymers.com or contact Crown for additional resources

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