

## PHYSICAL PROPERTIES

|                                     |       |  |
|-------------------------------------|-------|--|
| <b>SOLIDS CONTENT</b>               | ..... | 100%   |
| <b>VOC CONTENT</b>                  | ..... | 0 g/L  |
| <b>VOLUMETRIC MIX RATIO</b>         | ..... | 2A:1B  |
| <b>COVERAGE RATE</b>                | ..... | 100 ft <sup>2</sup> /gal<br>16 Mils<br>Green Concrete:<br>64 ft <sup>2</sup> /gal<br>25 Mils |
| <b>APPLICATION TEMP</b>             | ..... | 50°- 90°F  |
| <b>POTLIFE</b><br>1 Gal mass @ 75°F | ..... | Standard:<br>25-30 Mins<br><br>Fast:<br>10-15 Mins   |
| <b>DRY TIME</b><br>@ 75°F           | ..... | Standard:<br>7-8 Hours<br><br>Fast:<br>4-5 Hours   |
| <b>RECOAT WINDOW</b>                | ..... | 4-24 Hours   |
| <b>FULL CURE</b>                    | ..... | 7 Days   |
| <b>PACKAGING</b>                    | ..... | 3 Gal Kit<br>15 Gal Kit  |

## MECHANICAL PROPERTIES

|   |       |                                |
|---|-------|--------------------------------|
| <b>COMPRESSIVE STRENGTH</b><br>ASTM D695  | ..... | 10,000 p.s.i                   |
| <b>TENSILE STRENGTH</b><br>ASTM D638      | ..... | 7,500 p.s.i                    |
| <b>ELONGATION</b><br>ASTM D638            | ..... | 1.5-2%                         |
| <b>ADHESION TO CONCRETE</b><br>ASTM D7234 | ..... | >400 p.s.i<br>Concrete Failure |
| <b>WATER ABSORPTION</b><br>ASTM D570      | ..... | 0.10%                          |
| <b>SHORE D HARDNESS</b><br>ASTM D2240     | ..... | 75-85                          |
| <b>PERMEANCE</b><br>ASTM E96              | ..... | 0.022 g/ft/hr                  |

## PRODUCT DESCRIPTION

8303 CrownShield™ MVB can be used as a single primer coat negative side moisture vapor barrier suitable for various types of concrete. The low viscosity formula not only promotes deeper concrete penetration for superior substrate adhesion but also generates a higher propensity for sealing and blocking moisture drive up to 25 lbs per 1000 ft<sup>2</sup> and 99% relative humidity. It is intended for use when high moisture levels are present in the concrete which may cause loss of bond of moisture-sensitive flooring systems, including impervious and semi-pervious flooring, such as, epoxy, polyaspartic, polyurethane, epoxy terrazzo, carpets, vinyl tiles and covering, tile, wood floors, etc. It meets or exceeds ASTM F3010 Standard Practice for Two-Component Resin Based Membrane-Forming Moisture Mitigation Systems for Use Under Resilient Floor Coverings. It is VOC Compliant in all states and provinces in North America.

## TYPICAL USES

- Floors containing high-moisture level
- Beneath moisture sensitive flooring systems (epoxy terrazzo, carpet, VCT, tile, laminates and wood)

## 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

## COLORS



## LIMITATIONS

- Do not add pigments, solvents, diluents, or aggregates and do not thin
- Must be applied at a minimum 16 Mils dry film thickness (DFT) to meet permeance requirement
- Not a finish coat
- Blocks moisture drive up to 25 lbs per 1,000ft<sup>2</sup>/24 Hrs
- Will not bridge cracking
- Do not broadcast into wet film
- When on applying to green concrete product must be applied at 64 Ft<sup>2</sup>/gal (25 Mils)

## 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  
15-20 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 25 lbs (per 1000 ft in 24 hours) or less and Relative Humidity of 99% or less. See CrownTech Bulletin 6: Moisture Mitigation Negative Side Moisture Barrier

## 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.

## TEMPERATURE 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 PROCEDURE

- 1 Pre-Mix B-Component in its respective container using Jiffy mixer and drill at low RPMs for 30 seconds to ensure components are fully suspended.
- 2 Pre-Mix A-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 at low RPMs being sure to scrape sides of the bucket with a stir stick ensuring both components are thoroughly blended

## COVERAGE RATE

**100 Ft<sup>2</sup> / Gal @ 16 MILS  
64 Ft<sup>2</sup> / Gal @ 25 MILS over Green Concrete**

**COVERAGE RATE MAY VARY DEPENDING ON  
SUBSTRATE CONDITION**

## WORKING TIME

**25-30 Minutes @ 75°F**

**FAST VERSION AND 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 15-20 mil notched squeegee to gauge material across surface
    - Maintain wet edge
    - Always pour next mixed batch onto wet edge
    - Do not flip bucket upside down onto surface
    - Apply at recommended coverage rate
  - 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
- Allow coating to dry 4-8 Hrs @ 75°F  
Do not force dry.  
Recoat: 4-24 Hrs

## 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](http://Crownpolymers.com) or contact Crown for additional resources

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