311 CrownStone TD

Technical Data Sheet (TDS)

PHYSICAL PROPERTIES

SOLIDS CONTENT	100%
MIX RATIO	Full Kit
COVERAGE RATE	**1/4":** 20 ft²/kit
APPLICATION TEMP	50°- 90°F
POTLIFE 1 Gal mass @ 75°F	20 Minutes
DRY TIME @ 75°F	5-12 Hours
RECOAT WINDOW	12-24 Hours
FULL CURE	7 Days
PACKAGING	Pre-Packaged Kit

MECHANICAL PROPERTIES

COMPRESSIVE STRENGTH ASTM C579	11,500 p.s.i
TENSILE STRENGTH ASTM D638	8,800 p.s.i
ELONGATION ASTM D638	5%
ADHESION ASTM D7234	>410 p.s.i
HARDNESS ASTM D2240	80

CHEMICAL RESISTANCE

Refer to CrownTech Chemical Resistance Guideline Technical Bulletin No. 9

PRODUCT DESCRIPTION

CrownStone TD is a 100% Solids, 100% reactive, moisture-insensitive non shrink, 3 component, Epoxy Polymer Mortar formulated to be hand or power-troweled applied at a typical thickness of 3/16" - 1/4". Crown TD cures to very tough and durable, dense mortar for applications demanding a superior abrasion wear and impact resistance.

TYPICAL USES

- Shallow, Partial & Full Depth Patching
- Great restoration system to resurface and waterproof
- To resurface old worn concrete
- Pitching or to pitch concrete areas for discharging to drains
- For heavy-duty protected overlay floor

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

Clear | Light Grey | Med Grey | Light Tan | Tan

LIMITATIONS

- Higher temperatures will result in shortened working times and faster drying time.
- Use 310 as a primer first
- Dry aggregates only
- Use 8303 CrownShield Moisture Barrier when MVT exceeds 3 lbs. or 80% RH
- May amber with UV Exposure
- Do not thin

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 or Concrete Mixer
Box Screed
Hand or Power Trowel
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 psi 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 psi. but below 25 psi. 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.

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.
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 DISPOSIBLE ARM SLEEVES, SAFETY GLASSES, DISPOSIBLE 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 10 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 into a clean 5-gal bucket and mix for 1-2 minutes at low RPMs being sure to scrape sides of the bucket with a stir stick ensuring both components are thoroughly blended. Slowly add CS Trowel Blend sand at a rate of 1 part mixed resin to 7 parts CS sand aggregate and mix for 4 minutes until uniformly blended.

COVERAGE RATE

20 Ft² / Kit @ 1/4”

COVERAGE RATE MAY VARY DEPENDING ON SUBSTRATE CONDITION

WORKING TIME

10-15 Minutes @ 75°F

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

APPLICATION PROCEDURE

SURFACE SHOULD BE PRIMED WITH 310 CROWN STONE EPOXY FIRST

1. Pour a band of mixed material across the surface roughly 6-8” wide. Use box screed or trowel to gauge material across surface
   - Maintain wet edge
   - Always pour next mixed batch onto wet edge

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

2. Finish surface using a flat trowel or power trowel
   - Do not overwork material

Allow coating to dry 5-12 Hrs @ 75°F
Do not force dry.
Recoat: 12-24 Hrs

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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