

# BIO-CEM™ TC

POLYURETHANE CONCRETE TOP-COAT

## TECHNICAL DATA SHEET



BIO-CEM™ TC is a fluid applied matte finish polyurethane concrete top-coat designed to be applied directly over Bio-Cem™ MonoFloor™ Slurry systems that have been broadcast with aggregate. Available in 6-solid color finishes, TC may also be used as a primer or standalone coating in situations where a fast and durable single coat application is required. This environmentally-friendly formulation incorporates plant-based raw materials with low-odor and minimal VOCs.

### USES:

- » Garages
- » Industrial manufacturing
- » Food service preparation
- » Laboratories
- » Restrooms & Locker Rooms
- » Anti-Slip flooring (meets ADA recommendations)

### ADVANTAGES:

- » Good impact resistance
- » Fast turn around
- » Seamless, hygienic finish
- » Versatile finish options
- » 0-VOC, low odor
- » Attractive matte finish

### PACKAGING & SHELF-LIFE

- » Store material in a cool, dry place
- » Liquids are packaged in 1-gal, 5-gal, 50-gal or 250-gal units
- » TCUV Fillers packaged in 6.5 lb bags
- » Pigments: 1 lb powder pigment

Full Kit: 220 SF

- » 1-Gal A, 1-Gal B, (2) 6.5lb TCUV Fillers, 2 Pigment

Shelf-Life::

- » 6-months factory sealed and stored at room temperature.

### SUGGESTED APPLICATION:

- » Apply with notched squeegee and back-roll with 1/4" nap roller
- » See page two for detailed application instructions

### ANCILLARY PRODUCTS:

- » Bio-Cem™ TC may be top-coated with other Resinwerks™ top-coat systems.

### MATERIAL COVERAGE

WET FILM THICKNESS	DRY FILM THICKNESS	APPROXIMATE COVERAGE
20-25 mils	20-25 mils	220-ft <sup>2</sup> / kit

### GENERAL PRODUCT INFORMATION

**Colors:** tan, green, red, med grey, drk grey, black  
**V.O.C.:** 5 g/L

**Pot-life:** 15-20 Minutes @ 72° F

**Mix-Ratio:** Mix Full Kit

**Cure Schedule:** 72° F @ 50% R.H.

To re-coat: 4-6 Hours Minimum  
24-Hours Maximum

Light Traffic: 6-8-Hours

Heavy Traffic: 24-Hours

**Clean-up:** Acetone / MEK

**Application Temp:** 40°F(4.4°C) - 85°F(29.4°C)

**Environment:** For Interior Use Only

### GENERAL PRODUCT PERFORMANCE

TEST TYPE	TEST METHOD	RESULT
Tensile Strength	ASTM C-307	1,250 psi
Flammability	ASTM D 635	Self extinguishing
Impact Resistance	ASTM D 4226	> 160 lb
Compressive Strength	ASTMC579	5,900 PSI
Flexural Strength	ASTM C-580	2,900 PSI
Adhesion	ASTMD-4541	500+ PSI concrete fracture
Coefficient of Friction	ASTM-D 2047	>0.6 / pass
Resistance to Fungi Growth	ASTM G-21	1-pass

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Part A: 250-000A  
Part B: 250-000B  
Filler: 250-topp-65

### SURFACE PREPARATION

Ensure substrate to be coated is clean, dry, and in sound condition. All laitance, curing compounds, concrete hardeners, and other surface contaminants must be removed. Concrete must have a minimum surface tensile strength of 300 PSI per ASTM D-4541. Prepare concrete in accordance with ASTM D 4259-83. Mechanical shot blasting or grinding is recommended to achieve a surface profile of ICRI CSP 3-5. Surface to be coated must be completely porous and free of excessive dust & contaminants.

### NEW CONCRETE

Bio-Cem™TC can be installed on new concrete greater than 7-days old provided it has reached a minimum of 3,500 PSI to allow for proper surface preparation. Shrinkage or cracking in new slabs may telegraph through final finish.

### DE-GREASING OF CONTAMINATED SUBSTRATES

Bio-Cem™ TC should not be applied over contaminated surfaces. All dust and remaining contaminants should be completely removed prior to coating.

### TREATMENT OF JOINTS & CRACKS

Prior to installation of Bio-Cem™ TC, all joints, cracks and other substrate irregularities must be addressed and prepared prior to application. Keyways must be cut at all terminations, joints and drains to a minimum width and depth of 5/16" This is absolutely critical to prevent future de-lamination. For more information, please consult Resinwerks technical construction drawings.

### MIXING INSTRUCTIONS: PROFESSIONAL USE ONLY

- » Prior to mixing, all products should be properly acclimated to the local ambient room temperature of 40°F(4.4°C) -85°F(29.4°C)
- » Pour 1 part A into a large mixing pail.
- » Add pigment and mix for 15-seconds with a slow speed mixing drill
- » Add 1 part B and mix for an additional 15-seconds
- » Slowly add entire contents of TC fillers to mix. Take special care not to introduce air or create a vortex. Mix for approximately 45 seconds until materials are properly wetted out.

### APPLICATION INSTRUCTIONS

- » Immediately following mixing, spread material with a notched squeegee. Lay abutting edges within a minimum of 10-minutes to ensure a uniform transition.
- » Once material has been spread, back-roll immediately with a 3/8"-1/4" nap roller over the entire floor to help ensure a uniform finish.

### LIMITATIONS

- » Do not apply over existing coatings / sealers
- » Do not apply to concrete < 3500 PSI compression strength
- » This product is not recommended for immersion service.
- » Product is not color stable and should be top-coated
- » Do not install on wet concrete
- » Moisture vapor emission should be a maximum of 90% relative humidity as per ASTM F2170 or ASTM F2420 or 12 lbs over 1000 SF area for 24 hours as confirmed through a calcium chloride test (ASTME-1907)
- » Do not apply this product at ambient or floor temperatures below 40°F or over 85°F or if the relative ambient humidity is above 90%.

### MAINTENANCE

The long-term performance, appearance, and life expectancy of wear surface products are dependent on an adequate routine maintenance program designed specifically for the installed wear surface. Resinous floor coating systems are nonporous, causing dirt and contaminants to remain on the surface. Recommended maintenance programs consist of frequent and thorough cleaning utilizing a neutral PH cleaner. The frequency of washing will vary depending on floor usage type, traffic and age. Please contact your local Resinwerks technical representative for more information.

### NOTES

Thoroughly read all Material Safety Data Sheets prior to use and maintain copies on job-site at all times.

Mock-ups and field test areas are strongly recommended in order to validate performance and appearance related characteristics (including but not limited to color, inherent surface variations, wear, anti dusting, abrasion resistance, chemical resistance, stain resistance, coefficient of friction, etc.) to ensure system performance as specified for the intended use, and to determine approval of the coating system.

Variability in job site conditions (including but not limited to surface preparation, sunlight, humidity, dew point, temperature, etc.) during application of Urethane products may lead to fish-eyes, blistering, pinholes, wrinkling, or out-gassing of air in the concrete and are not product defects.

Standard recommended coverage is 200-ft<sup>2</sup> per full kit.

### TECHNICAL ASSISTANCE

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