

## **8370 TerraCrown™ Thin Set Epoxy Terrazzo**

**Product Number: 8370**

**Thin-Set Epoxy Terrazzo Incorporates Marble & Glass Chips, Oyster Shell & Other Aggregates**

### **DESCRIPTION**

8370 TerraCrown is a pigmented two-component epoxy binder that is used to create the most decorative floors in the construction industry. It is formulated to meet the physical properties of the NTMA (National Terrazzo and Mosaic Association), TTMAC (Terrazzo, Tile and Marble association of Canada) and Crown Polymers thin-set terrazzo flooring standards. It is installed at a normal thickness of 3/8 inch (9.5 mm), but can be applied as thin as 1/4 inch (6.35 mm). The thickness of the installation will affect the aggregate sizes. The most common chips are marble, which naturally occurs in different colors and MOH's hardness. Recycled glass chips and mirrored chips adds color and a three-dimensional depth, while Mother of Pearl, other aggregates and pigment colors are incorporated to create unique "one of a kind" looks. It is VOC Compliant in all states and provinces in North America.

### **TYPICAL USES**

- Airport, Bus and Train Terminals and Areas
- Hospital and Health Care Facility Floors
- Hotel Lobby and Office Lobby Floors
- Schools and Universities
- Retail Spaces and Mall Common Areas
- High End Designer Floors

### **BENEFITS**

- Create monolithic to polyolithic looking floors with the use of different colors, chips, and divider strips.
- Resists staining vs. cement and polyacrylate terrazzo.
- Light weight and does not require a slab depression.
- Complies with USDA, FDA, Food Safety Modernization Act. **See Crown Polymers Technical Bulletin: 3 Food and Beverage Compliance.**
- Slip Resistance (ADA) **See Crown Polymers Technical Bulletin: 4 Coefficient of Friction.**
- USGBC LEED<sup>®</sup> and Green Seal<sup>®</sup> requirements. **See Crown Polymers Technical Bulletin: 5 LEED and Green Seal Information.**
- VOC and EPA Compliant all states and provinces in North America. Cures to an inert finish. **See Crown Polymers Technical Bulletin: 2 VOC Compliance.**
- Strong and Tough, out performs all other decorative floors
- Intended for new floors and for resurfacing old floors

### **LIMITATIONS**

- This product is best suited for applications in temperatures between 60°F to 90°F (16°C to 32°C). **See Crown Polymers Technical Bulletin: 7 Temperature and Relative Humidity Limits.**
- Cracked concrete substrate must be repaired prior to placement. **See Crown Polymers Technical Bulletin: 14 Crack Repair and Crown Polymers Technical Bulletin: 13 Crack Dampening and Isolation Membrane.**
- Higher temperature installations will result in shortened working time and drying time.
- Requires primer when applied directly to concrete and cementitious overlayers. **See Crown Polymers Technical Bulletin: 20 Selecting a Primer.**
- Fiberglass or scrim cloth is recommended for dimensional stability. **See Crown Polymers Technical Bulletin: 15 Fiberglass or Scrim Cloth for Dimensional Stability.**

### **COLORS**

TerraCrown 8370 color palate is nearly infinite, submit color(s) for color matching to Crown Polymers.

### **COVERAGE RATE (1,000 sq. ft.)**

Description	1/4 inch	3/8 inch
8371 TerraCrown Prime	5 gal	5 gal
8370 TerraCrown Binder	77 gal	100 gal
Terrazzo Marble Fillers	385 lbs.	500 lbs.
#0 Chips	1,538 lbs.	1,000 lbs.
#1 Chips	1,100 lbs.	1,100 lbs.

#2 Marble Chips	n/a	1,000 lbs.
8370 TerraCrown Grout	3 gal	3 gal
Terrazzo Marble Fines	25 lbs.	25 lbs.

## CONCRETE

Concrete must be structurally sound and free of curing agents, coatings, sealers, densifiers and other bond breakers.

New Concrete:

- Place concrete per ACI 302.2R Guide for Concrete Slabs that Receive Moisture-Sensitive Floor Materials.
- Water Cement Ratio 0.4 to 0.5, and an approximate 4,000 psi (28 MPa) strength level.
- Requiring a positive side moisture barrier in direct contact with the concrete meeting ASTM E1745 Standard Specification for Plastic Water Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs.
- The moisture barrier needs to be placed per ASTM E1643 Standard Practice for Selection, Design, Installation of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs, Class A 15 mils (0.38mm)

Existing Concrete:

If field tests or laboratory analysis reveals inferior concrete flooring slabs containing contaminants from previously applied unreacted silicate materials that will interfere with the bond, use 8201 CrownPrime WBC. **See Crown Polymers Technical Bulletin: 20 Selecting a Primer.**

- Contaminants include, but are not limited to: organic hydrocarbon materials, calcium chlorides and aluminum stearates.
- Concrete flooring slab can lose their structural strength over time, caused by conditions beyond the control of the flooring manufacturer or the installation contractor.
- If the concrete substrate deteriorates sufficiently, it will no longer support the bond of the remediation floor system.

Such conditions are detailed in ACI 201.2R “Guide to Durable Concrete” published by the American Concrete Institute. **See Crown Polymers Technical Bulletin: 1 Concrete Surface Preparation.**

<b>Physical Properties at 77°F (25°C) 7 Day Cure (8370 TerraCrown Terrazzo)</b>	
VOC (Volatile Organic Compounds), (VOC Calculated Per ASTM D3960)	<100 gr./lt.
Viscosity, Mixed	2,000 cps
Mix Density, Mixed	10.79 lb./gal
Gel Time (150 gm) ASTM C881	35 – 40 Minutes
Pot Life, 1 gallon (3.79 liters) Mass, Pot Life is Reduced by Increases in Mass & Temperature	15 Minutes
Mix Ratio, by Volume	5:1
Minimum Application Surface Temperature	50°F (10°C)
Dry to Touch 50°F to 90°F (10°C to 32°F)	5 to 10 Hours
Recoat Time 50°F to 90°F (10°C to 32°F)	10 to 16 Hours
Grind Time 50°F to 90°F (10°C to 32°F)	24 Hour Minimum
Full Cure 50°F to 90°F (10°C to 32°F)	7 to 14 Days
Shelf Life (shipped and stored) at 40°F to 100°F (4.4°C to 38°C)	1 Years
Packaging 5 gal, 25 gal (18.9 lt., 94.6 lt.)	

<b>Mechanical Properties at 77°F (25°C) 7 Day Cure (Unless stated otherwise stated)</b>	
Surface Preparation ICRI Guideline No. 310.2R Concrete Surface Profile (CSP 2 and above) Depending on System to be Installed and Condition of Concrete.	
Adhesion, ASTM D7234, Concrete Failure	>400 psi (2.8 MPa)
Compressive Strength, ASTM D695 (Resin and Hardener)	10,000 psi (68.9 MPa)
Compressive Strength, ASTM D579 (Resin, Hardener and Aggregates)	8,500 psi (58.6 MPa)
Tensile Strength, ASTM D638	4,000 +/- 400 psi (27.6 +/- 2.8 MPa)
Tensile Elongation, ASTM D638	< 5%
Tensile Strength, ASTM C307	1,400 psi (9.7 MPa)
Surface Hardness, ASTM D2240 Shore D	83 +/- 2

Abrasion Resistance, ASTM D4060 500 cycles, Wheel No. CS17, 1000 gr. Load	0.03 gr.
Microbial (fungi) Resistance, ASTM G21 (Without the Anti-Microbial Agent)	Pass #1
Wet Dynamic Coefficient of Friction, ASNI 326.3 Depends on texture of system selected, ranging from smooth to aggressive. Measured with BOT 3000E equipment.	>0.45 (inclines) >0.42 (level)
Moisture Vapor Emission Rate, ASTM F1869*	3 lbs.
Moisture Relative Humidity, ASTM F2170*	80% RH
*If moisture or relative humidity exceeds the limits consult the Crown Polymers representative and refer to <b>Crown Polymers Technical Bulletin: 6 Moisture Mitigation Negative Side Moisture Barrier.</b>	

Note: Although testing is critical, it is not a guarantee against future problems. This is especially true if there is not a positive side vapor barrier or it is not functioning properly and/or concrete has contamination from oils, chemical spills, densifiers, excessive salts or other bond breakers.

### CHEMICAL RESISTANCE DATA

#### ASTM D1308 5 Days @ 70°F

No deleterious effects:

- Distilled Water
- Mineral Oil
- Isopropanol
- Ethanol
- Soap solution at 1 percent
- Sodium hydroxide at 10 percent solution
- Hydrochloric acid at 10 percent solution
- Hydrochloric acid at 30 percent solution
- Detergent Solution Diluted to 0.025%
- Acetic Acid at 5 percent solution

### CHECK CONCRETE MOISTURE

Concrete must be dry before application of this floor coating material. Concrete moisture tests are required, either ASTM F1869 (calcium chloride) or ASTM F2170 (in situ RH probe). Refer to appropriate Technical Data Sheet limits and **Crown Polymers Technical Bulletin: 6 Moisture Mitigation Negative Side Moisture Barrier.**

### CHECK TEMPERATURE & HUMIDITY

Floor and material temperature must be at or above the published Technical Data Sheet. Dew Point must be 5°F (3°F) or more below the surface temperature. Do not apply if humidity is at or above 85%. **See Crown Polymers Technical Bulletin: 7 Temperature and Relative Humidity Limits.**

### SURFACE PREPARATION

Surface preparation in accordance with: ICRI Guideline No. 310.2R Selecting and Specifying

Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays, and Concrete Repair. The pH of the concrete substrate should be at 9 or above. All bond-breaking material must be removed. **See Crown Polymers Technical Bulletin: 1 Concrete Surface Preparation.**

### APPLICATION EQUIPMENT

Depending on system applied: Variable low speed drill (450 rpm) with Jiffy® type impeller mixing paddle, disposable 3" brush for cutting in, 3/8 inch nap non-shedding phenolic core roller, drum mixer, paddle mixer, margin trowel, rectangular finishing trowel, hand grinder, planetary grinder, etc.

### OPTIONAL ANTIMICROBIAL

The antimicrobial additive is a non-heavy metal biocide that can be added during the manufacturing process. The antimicrobial agent can be added to the top coat only for an economical application or it can be added to each step of the application, primer, body coat and top coat, which is recommended for abusive environments. **See Crown Polymers Technical Bulletin: 11 Understanding the Optional Antimicrobial Additive.**

### MIXING

For ease of mixing and placement, the temperature of the "A" and "B" components should be between 70°F to 80°F (20°C to 26°C). Pre-mix the "A" and "B" component to ensure all raw material and pigments are dispersed uniformly. **See Crown Polymers Technical Bulletin: 10 Mixing Guidelines.**

## **APPLICATION**

After mixing all contents as instructed, immediately pour all liquid material on to the properly prepared concrete. Place trowel mortar mix within installation sequence. Place all steps per **Crown Polymer Installation Guidelines**.

## **SKID-RESISTANCE**

Skid-Resistance – Field (in situ) Wet Dynamic Coefficient of Friction (DCOF), ANSI A326.3. **See Crown Polymers Technical Bulletin: 12 Wet Dynamic Coefficient of Friction.**

## **SHIPPING and STORAGE**

Ship and store material between 40°F to 90°F (4°C to 32°C). Store in a dry environment and out of direct sunlight.

## **SHELF LIFE**

Shelf life is 1 year from the date of manufacturer, provide the containers are unopened.

## **TECHNICAL SUPPORT**

For questions, contact a Crown Polymers Representative.

## **DISCLAIMER**

All technical bulletins, installation guidelines, guidelines, recommendations, statements, specifications, and technical data contained herein are based on information and tests. The accuracy and completeness of such tests are not guaranteed and are not to be construed as a warranty, expressed or implied. It is the responsibility of the user to document information and tests to determine the intent of the product for ones' own use. The application, job conditions and user assume all risks and liability resulting from use of the product. We do not suggest or guarantee any hazards listed herein are the only ones, which may exist. Neither seller nor manufacturer shall be liable to the buyer or any third person for any injury, loss or damage directly or indirectly resulting from use of, or inability to use the product. Recommendations or statements, whether in written or verbal, other than those contained herein shall not be binding upon the manufacturer, unless in writing and signed by a corporate officer of the manufacturer. Technical and application information is provided for the purpose of establishing a general profile of the material and proper application procedures. Test performance results were obtained in a controlled environment and Crown Polymers makes no claim that these tests or any other tests accurately represent all environments. Not responsible for any typographical errors.

## **LIMITED WARRANTY**

Crown Polymers warrants its products to be free of manufacturing defects and meets all Crown Polymers current published physical properties. Crown Polymers' sole responsibility shall be to replace the portion of any product proved to be defective. There are no other warranties by Crown Polymers of any nature whatsoever expressed or implied, including any warranty of merchantability or fitness for a particular purpose in connection with this product. Crown Polymers shall not be liable for damages of any sort, including remote or consequential damages resulting from any claimed breach of any warranty whether expressed or implied. Crown Polymers shall not be responsible for the use of this product in a manner to infringe on any patent held by others. In addition, no warranty or guarantee pertaining to appearance, color, fading, chalking, staining, shrinkage, peeling, normal wear and tear or improper application by the applicator will be issued. Damage caused by abuse, neglect and lack of proper maintenance, acts of

## **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.**



nature and/or physical movement of the substrate or structural defects are also excluded from the limited warranty. Crown Polymers reserves the right to conduct performance tests on any material claimed to be defective prior to any repairs by owner, general contractor, or applicator.

**FOR INDUSTRIAL USE ONLY. KEEP OUT OF REACH OF CHILDREN. KEEP CONTAINERS TIGHTLY CLOSED.**