

# POLISHABLE CONCRETE TOPPING

## PC-5614

Technical Information Sheet

### Product Description

PC-5614 is a high performance, polishable concrete topping. PC-5614 exhibits exceptional hardness, gloss and volume stability making it an ideal topping for demanding commercial applications. Developed from technology proven on infrastructure repairs and utilizing a high concentration of recycled materials PC-5614 demonstrates market leadership in durability and sustainability. PC-5614 accepts foot traffic within 2-3 hours, and provides the natural color and visual variation found in concrete.

### Product Details

DIAMATIC™ POLISHABLE CONCRETE TOPPING is designed to be installed by certified ULTRAFLOOR® installers only. Training is provided by DIAMATIC™ and is available through our Training Department in San Diego, CA. **PC-5614** high performance topping will provide excellent durability in commercial use. Perfect for retail or other high traffic areas, including commercial buildings, entries, casinos, hotels, themed areas and parks.

### Coverage Rate

After mixing with the appropriate amount of water **PC-5614** will cover approximately **14** square feet per bag at 3/8". A sample or test area should always be done before the application to ensure the coverage rate.

### Limitations

The DIAMATIC™ **PC-5614** is designed for interior use only. Before grinding the material should be allowed to cure for a minimum of 12-16 hours or until a rebound hammer test produces a minimum result of 2500 PSI. The material should be placed at an average depth of 3/8" with a maximum depth of 1". Avoid subjecting the surface to rolling dynamic loads for a period of 48 hours after installation. The allowable moisture limits for the system are 5-8 pounds MVER per 1000 square feet or 75-80% RH. For floors using color the permissible limits will be 5 pounds MVER or less or 75% RH.

The material will continue to gain strength for 28 days with the following results;

- 1 day > 2500 PSI
- 7 days > 4500 PSI
- 28 days > 6000 PSI

### Packaging and Shelf Life

The material is available in 56 lb bags (25.4 KG). The product has a shelf life of 6 months when stored properly. The product should be stored indoors, away from heat or direct sunlight with pallet wrapped until use.

### Surface Preparation

The surface of the concrete should be properly processed by either shot-blasting or grinding. The surface should be profiled to a CSP 3-5 in accordance with **ICRI-03732** technical guidelines. The sanded epoxy primer must be applied before the application of the **PC-5614**. All excess or unbonded sand must be removed by vacuum before the application.

### Equipment

**PC-5614:** Mixing barrel, drill motor (800-1200 rpm), stainless smoother, spiked shoes or cleates, calibrated container, particle masks, safety glasses, protective clothing.  
**Batch Mixing:** For large projects batch mixing may be done using a 9 cubic foot mortar mixer, Multiquip WM90PE or equal.  
**Epoxy Primer:** Mixing container, calibrated pails, slow speed drill, jiffy mixer paddle, roller frame and cover, latex gloves, safety glasses, particle masks. Consult manufacturers installation sheet for complete details.

### Jobsite Sample

A representative job site sample or mock-up panel should always be done prior to any application to insure that the surface is acceptable. This should always be done over the same substrate as the actual job will require. Be sure that all of the intended steps are followed that will be done on the actual project to ensure consistency.

### Drying Times

The DIAMATIC™ **PC-5614** should be placed within 10 minutes of mixing the material. The initial set time is 15-20 minutes depending on ambient conditions. The final set will occur between 40-55 minutes. The surface should not be touched with tools after 18 minutes.

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### Mixing

Use 3.0 US Quarts (2.84 liters) of clean water per each unit of **PC-5614**. Place the full amount of water into the mixing barrel (always place the water in the barrel before the powder) Mix the material using a high speed drill motor (800-1200 RPM) and a box style paddle, for 3 - 3.5 minutes. Be sure to hit the sides and bottom of the barrel to get all the dry material into the mix. **Do not add any additional water during mixing.**

Use caution not to entrain air into the mixture by lifting the paddle during mixing. Mixing barrel and equipment should be cleaned immediately.

**Large Batch Mixing:** For large batch mixing place the measured amount of water in the mixer for all of the bags first. Hold back a small amount of the water to add during mixing. Add all of the bags to the mixer with the mixer running. Add the retained water during mixing. The material should mix for 6-7 minutes until a smooth and even consistency has been reached. Discharge the hopper directly into the pump for placement.

### Application

The application temperature range should be between 50-90 degrees F (10-32 C).

**Epoxy Primer:** Consult the manufacturers technical data sheet for complete details. After mixing the epoxy should be rolled onto the prepared surface profile at the coverage rate indicated, typically 140 square feet per gallon. Broadcast into the wet epoxy with a #20-30 grit kiln dried sand to the point of refusal. The surface should be completely covered with no wet areas visible. Allow the epoxy primer to dry for a minimum of 12-16 hours before the application of **PC-5614** begins.

**PC-5614:** Remove any excess or un-bonded sand by vacuum from the primed area before beginning. After mixing thoroughly (see mixing details) place the material into the area and level using a gauged rake set to 3/8". Using a smoothing tool to lightly smooth the surface. Use caution not to make low spots or voids in the surface. Smoothing must be done within 15 minutes of placement. Be sure to mark any existing joints in the substrate so that they can be honed in the final surface. Terrazzo strips, or adhesive foam may be used as straight lines for separation or for stopping a placement.

**Polishing:** Allow the material to cure for a minimum of 12-16 hours or until a reading of 2500 PSI is obtained on the rebound hammer before grinding operations may begin. Do not use water for cleaning during polishing. Remove any debris from the surface before beginning. Refer to the **PC-5614** Manual or the specification for the complete polishing steps.

### Polishing Continued

Step 1	50 grit DIAMATIC Ceramic Overlay Diamond-Hard Bond
Step 2	100 grit DIAMATIC Ceramic Overlay Diamond-Hard Bond
Step 3	FLOR-FILL™ (RSG) Reactive Surface Grout @ 300 FT <sup>2</sup> per gallon
	Allow FLOR-FILL™ to dry completely before continuing 1-2 hours See FLOR-FILL™ TIS sheet for complete application details
Step 4	100 grit DIAMATIC Ceramic Overlay Diamond Hard Bond
Step 5	200 grit DIAMATIC Super Flex resin bonded diamond
Step 6	400 grit DIAMATIC Super Flex resin bonded diamond
Step 7	800 grit DIAMATIC Super Flex resin bonded diamond
Step 8	800 grit DIAMATIC FLOR-GRIT™ Pad
Step 9	Apply FLOR-FINISH™ or FLOR-GUARD™ EX based on specification
Step 10	1500 grit DIAMATIC FLOR-GRIT™ Pad
Step 11	Apply FLOR-FINISH™ 2nd coat and burnish

### Safety

See Material Safety Data Sheet (MSDS). This document does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this document to establish appropriate safety and health practices and to determine the applicability of regulatory limitations prior to use. Dispose of water and materials in accordance with Federal, State and Local regulations. The use of a dust mask, safety goggles and gloves is recommended. Keep out of the reach of children.

MATERIAL PROPERTIES	
Compressive Strength (ASTM C 109)	1 day - >2500 psi
	7 days - >5000 psi
	28 days - >6000 psi
Yield per unit (When gauged at 3/8" and smoothed on smooth, uniform surface)	14 ft <sup>2</sup>
Density	140 lbs ft <sup>3</sup>
pH	11.5
Placement Time	15 minutes
Initial Set	18 - 25 Minutes
Final Set	40 - 55 minutes
CSI Classification	03 53 00

### Warranty

DIAMATIC™ warrants that its products are free from defects in materials and workmanship. If any DIAMATIC™ product fails to conform to this warranty, DIAMATIC™ will replace the product at no cost to the buyer or refund the purchase price, at DIAMATIC's™ election. Any warranty claim must be made within one (1) year from the date of the shipment of the product to the buyer. In no event shall DIAMATIC™ be liable to the buyer for any consequential or incidental damages of any nature. DIAMATIC™ MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, WRITTEN OR ORAL AS TO THE MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF ITS PRODUCTS AND EXCLUDES THE SAME. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF.