

## DESCRIPTION

TuffRez® RT, a three-component polyurethane resin concrete, is easily applied at 3/16" to 1/4". Varying aggregate sizes are built into the topping, lending the surface an attractive, speckled, slip resistant texture. This heavy-duty, seamless topping withstands thermal shock, impact, abrasion and chemical exposure. Ultra-Fresh® performance anti-microbial can be added into the screed matrix to inhibit growth of bacteria and microorganisms.

## TYPICAL APPLICATION

• One Coat	TuffRez® RT @ 3/16"
• Options	Integral Cove Mortar (TuffRez® CM)

## PERFORMANCE DATA

Compressive Strength (ASTM C-579) .....	6,500 psi
Tensile Strength (ASTM C-307) .....	900 psi
Flexural Strength (ASTM C-580) .....	2,900 psi
Bond Strength (ASTM D-4541) .....	Concrete Failure
Impact Strength, in/lbs (ASTM D-4226) .....	>160
VOC .....	0.0 lb/gal; 0.0 gm/L
Microbial/Fungal Contact Inhibition (A.A.T.C.C. 147-1993) .....	100%

Inclusion of Ultra-Fresh® antimicrobial within the screed matrix of the industrial floor system ensures the permanency of this biocidal additive even in the event of excessive wear.

## STORAGE & INSTALLATION

Storage Environment .....	Dry area, 50–77°F
Application Temperature, ambient .....	40–85°F
Application Temperature, material .....	50–70°F
Application Temperature, substrate .....	Minimum 5°F above dew point
Shelf Life .....	6 months
Pot Life, @ 77°F .....	10 minutes
Traffic, @ 77°F .....	Light: 24 hours / Full: 48 hours
Fully Cured, @ 77°F .....	7 days

*Material cures more slowly at cooler temperatures, and working time will be substantially reduced at higher temperatures. In hot weather, material should be cooled to 50°F to 70°F prior to mixing and application to improve workability and avoid shortened pot life. The data shown above reflects typical results based on laboratory testing under controlled conditions. Reasonable variations from the data shown above may result.*

## CONSIDERATIONS & LIMITATIONS

1. Polyurethane mortar flooring materials shall not be installed or placed on substrates where water is present, or may be expected to be present before the cure of the flooring material.
2. Floors should be sloped to drain to prevent standing water or chemicals. As with any surface, all spills should be removed as soon as possible to prevent a slipping hazard.
3. Do not thin with solvents unless advised to do so by PolySpec.
4. Confirm product performance in specific chemical environment prior to use.
5. Prepare substrate according to "Surface Preparation" portion of this document.
6. Do not apply to below grade slabs unless a heavy unruptured vapor barrier has been installed under the slab.
7. Always use protective clothing, gloves and goggles consistent with OSHA regulations during use. Avoid eye and skin contact. Do not ingest or inhale. Refer to Material Safety Data Sheet for detailed safety precautions.
8. For industrial/commercial use. Installation by trained personnel only.

# TuffRez® RT

## TECHNICAL DATA SHEET

# Polyurethane Topping, Rake & Trowel

## BENEFITS

- Seamless, hygienic finish; no crevices in which dirt and bacteria can dwell
- Impact & abrasion resistant surface suitable for heavy foot traffic and fork lift operation
- Low odor, fast cure installation
- Excellent corrosion & chemical resistance
- Thermal shock resistant; steam cleanable: non-dusting, non-tainting
- Enhanced anti-slip surface
- Attractive speckled finish
- Optional Ultra-Fresh® antimicrobial inhibits growth of bacteria and other microorganisms

## RECOMMENDED USES

- Food & beverage processing areas
- Wet preparation & packaging areas
- Kitchens
- Solvent/chemical stores
- Battery charging areas
- Loading docks

## GENERIC DESCRIPTION

Polyurethane Concrete

## STANDARD COLORS

Gray, Red, Green

Additional colors available upon request.

## PACKAGING & COVERAGE

55-Pound Unit:

1 each Components A and B, 1 bag Filler, Color Pack  
– 28 ft<sup>2</sup> @ 3/16"

## SURFACE PREPARATION

**Concrete:** Apply only to clean, dry and sound concrete substrates that are free of all coatings, sealers, curing compounds, oils, greases or any other contaminants.

- *New concrete should be cured a minimum of 14 days.*
- *Concrete that has been contaminated with chemicals or other foreign matter must be neutralized or removed.*
- *Remove any laitance or weak surface layers.*
- *Concrete should have a minimum surface tensile strength of at least 300 PSI per ASTM D-4541.*
- *Surface profile shall be CSP-5 or greater meeting ICRI (International Concrete Repair Institute) standard guideline #03732 for coating concrete, producing a profile equal to 40-grit sandpaper or coarser. Prepare surface by mechanical means to achieve this desired profile.*
- *Moisture vapor transmission should be 3 pounds or less per 1,000 square feet over a 24 hour time period, as confirmed through a calcium chloride test, as per ASTM E-1907. Quantitative relative humidity (RH) testing, ASTM F-2170, should confirm concrete RH results <75%.*
- *All surface irregularities, cracks, expansion joints and control joints should be properly addressed prior to application.*

**Refer to PolySpec Surface Preparation Guidelines for more details.**

## INSTALLATION STEPS

1. To prevent undercutting or lifting, keyways (minimum 5/16" wide x 5/16" deep) must be formed at all edges, bay joints, columns, doorways, drains and at regular centers, spaced 10–12 feet apart across the floor surface. See TuffRez detail drawings (available for download at [www.polyspec.com](http://www.polyspec.com)) for construction details relating to terminations and connections.

*NOTE: TuffRez® RT may be used as a patching compound for cracks caused by movement (small non-moving surface cracks such as crazing or shrinkage cracks need not be addressed). Route out the crack, forming a groove with a width and depth twice the thickness of the TuffRez® RT to be installed. After routing, clean all debris and dust prior to patching. Allow a minimum of one (1) hour cure time of patching material before proceeding with installation of TuffRez® RT body coat.*

*TuffRez® RT may be used as a patching compound for holes up to six square feet, 1/2" deep in the existing concrete surface. Clean all debris and dust prior to patching; allow a minimum of six (6) hours cure time before installation of the TuffRez® RT. Holes patched with an alternate manufacturer's approved repair material can receive TuffRez® RT installation after a minimum of 24 hours.*

2. Remove all sand and dust from area to be covered.
3. OPTIONAL STEP: Using TuffRez® CM Cove Mortar Topping, install a cove and/or base; see TuffRez® CM data sheet for application details.
4. Component A Resin should be premixed prior to using due to possible settling that may occur during transportation and storage.
5. Add Component C (Color Pack) to Component A until mixed thoroughly.
6. Pour Component A Resin into a forced action mixer (Kohl-type or mortar mixer). Add Component B Hardener. Mix thoroughly for a minimum of 30 seconds.
7. Gradually add all contents of Filler into the liquid mixture and blend thoroughly until all particles are wetted out, normally about two minutes.
8. Immediately after mixing (within 3 minutes), spread the topping onto the floor at a thickness slightly greater than the desired finish, using a screed box or gauge rake.
9. Immediately roll the surface lightly in two passes with a (textured) loop roller.  
*NOTE: Late or heavy rolling may induce pinholes.*
10. OPTIONAL STEP: While wet, immediately broadcast aggregate into surface as desired for additional anti-slip texture.
11. Lay abutting edges within 10 minutes to ensure a neat edge. A "wet edge" installation is imperative during large placements.
12. For best results, clean tools and equipment with PolySpec® All Purpose Cleaner, a nonflammable and non-evaporating cleaner. Always wear gloves when using this product.

C / DOC RT-TDS

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