

## DESCRIPTION

TuffRez DF is a decorative floor surfacing system that combines a durable, colored basecoat topped with randomly broadcast colored flakes and a crystal clear finish coat. The color flakes can be combined in various colors to provide a seamless, chemical resistant surfacing with a decorative finish.

## TYPICAL APPLICATION

• Primer	PolySpec or TuffRez Epoxy Primer @ 5–7 mils
• Base Color Coat	TuffRez 201 or TuffRez 201CC, pigmented @ 15–20 mils
• Receiving Coat	TuffRez 201 or TuffRez 201CC @ 15–20 mils
• Broadcast	Decorative Flakes @ 1/8–1/4 lb/ft <sup>2</sup>
• Topcoat	TuffRez 201CC @ 15–20 mils Various other topcoats available
• Options	Integral Cove Base Flexible Waterproofing & Crack-Bridging Membrane Anti-Microbial Formulation Upgrade (TuffRez 201-AM)

## PERFORMANCE DATA

Compressive Strength (ASTM C-579) .....	9,200 psi
Tensile Strength (ASTM D-638) .....	1,650 psi
Flexural Strength (ASTM C-580) .....	4,000 psi
Hardness, Shore D (ASTM D-2240) .....	85–90
Bond Strength (ASTM D-4541) .....	425 psi
Abrasion Resistance (ASTM D-4060) .....	80 mg
Volume Solids .....	100%

## STORAGE & INSTALLATION

Storage Environment .....	Dry area, 65–80°F
Application Temperature, ambient .....	50–95°F
Application Temperature, substrate .....	Minimum 5°F above dew point
Shelf Life .....	1 year
Pot Life, @ 77°F .....	20 minutes
Foot Traffic, @ 77°F .....	10–12 hours
Service, @ 77°F .....	Light: 24 hours / Full: 48–72 hours

*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 65°F to 80°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. This product is not designed for exterior use, immersion, or any use where moisture can reach the underside of the flooring.
2. Do not use partial units. Prolonged exposure of product in containers to air may cause loss of clarity.
3. 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.
4. Do not thin with solvents unless advised to do so by PolySpec.
5. Confirm product performance in specific chemical environment prior to use.
6. Prepare substrate according to “Surface Preparation” portion of this document.
7. Do not apply to slabs on grade unless a heavy unruptured vapor barrier has been installed under the slab.
8. 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.
9. For industrial/commercial use. Installation by trained personnel only.

# TuffRez<sup>®</sup>

TECHNICAL DATA SHEET

## DF System: Decorative Flake Broadcast Epoxy Floor

### BENEFITS

- Seamless, monolithic application
- Durable finish withstands wear from foot traffic and rubber wheel vehicles
- Resists many acids, alkalies and salts
- Easy to maintain, non-skid surface

### RECOMMENDED USES

- Laboratories, hospitals, healthcare facilities
- Stadiums & other entertainment venues
- Educational & institutional facilities
- Cafeterias, storefronts, aisles
- Bathrooms, showers

### GENERIC DESCRIPTION

Epoxy

### STANDARD COLORS

Clear

Solid Colors:

- White (pre-blended units)
- See Also: “Color Packs, Epoxy” data sheet

Flakes: See “Decorative Flake” color chart

### PACKAGING

3-Gallon Unit

15-Gallon Unit

### COVERAGE

100 ft<sup>2</sup> / gallon @ 16 mils

## 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 28 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-3 to CSP-5 meeting ICRI (International Concrete Repair Institute) standard guideline #03732 for coating concrete, producing a profile equal to 60-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.*
- *Outgassing may occur due to the porosity of some concrete surfaces. To reduce the effect of outgassing, the primer and coating should be applied when the temperature of the concrete substrate is dropping. This usually occurs in the evening; however, the concrete substrate temperature should be measured with a surface thermometer for verification. Double priming will greatly reduce the effects of outgassing by additionally filling the pores in the concrete.*

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

## INSTALLATION STEPS

1. Prime surface with a PolySpec or TuffRez Primer for epoxies on concrete surfaces. See data sheet for application details.
2. OPTIONAL STEP: If integral cove base is desired, install cap strip at the top of the base and divider strip at doorways and other places as required.
3. Component A Resin should be premixed prior to using due to possible additive separation.
4. For color base coat, add pre-mixed Epoxy Color Pack(s) to Component A. Refer to "Color Pack, Epoxy" data sheet for mix ratio and mixing instructions.  
*NOTE: TuffRez 201CC, a UV-stabilized epoxy coating, can be used in place of TuffRez 201 as a pigmented basecoat.*
5. Pour Component B Hardener into the Component A Resin pail and mix for a minimum of two minutes, using a mechanical jiffy-type mixer operated at low speed. Scrape the side of the pail to ensure the entire product has been properly mixed; any unmixed material left on the side of the pail will not cure.  
*NOTE: Do not turn the pail upside down and allow to drain onto substrate.*
6. OPTIONAL STEP: For cove base, mix fumed silica thixotrope into resin/hardener mixture until desired consistency is achieved. Trowel into place.
7. Apply resin/hardener mixture by roller or squeegee and back-roll. Move quickly and empty contents of pail onto surface as soon as possible to provide maximum working time. Material left in the pail will generate heat and have a reduced pot life.  
*NOTE: Back-roll lightly if necessary. DO NOT OVER ROLL. Too much rolling may introduce small air bubbles into system.*
8. After color base coat has cured (12–16 hours at 75°F), apply an unpigmented receiving coat of TuffRez 201, following steps 3, 5 and 7 outlined above.  
*NOTE: TuffRez 201CC clear, a UV-stabilized epoxy coating, can be used in place of TuffRez 201 as a receiving coat.*
9. While receiving coat is wet, evenly broadcast flakes into it with a hand motion similar to scattering grass seed. The flakes must evenly free fall onto the wet coating; do not throw down upon or across the surface. Using a short nap roller, lightly backroll the flakes so they are evenly embedded in the clear coat. Allow to cure for 12–16 hours at 75°F.  
*NOTE: The receiving coat must be wet for the flakes to adhere completely.*
10. Apply a topcoat of TuffRez 201CC. Or, PolySpec offers a diverse line of epoxy and CRU topcoats for enhanced resistance to UV exposure, chemicals, abrasive wear, and other performance requirements. Please refer to PolySpec's online catalog at [www.polyspec.com](http://www.polyspec.com), or contact PolySpec or an Authorized Representative.
11. 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.

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