

## DESCRIPTION

TuffRez DL-2 is a decorative floor surfacing system combining a clear epoxy resin binder with color quartz aggregates and topped with a clear finish coat. The color quartz are spherical, translucent particles coated with a pigmented film. They can be combined in various colors to provide a seamless, chemical resistant surfacing with a decorative finish.

## TYPICAL APPLICATION

• Primer	PolySpec or TuffRez Primer for Epoxy @ 5–7 mils
• Receiving Coat	TuffRez 201 or TuffRez 201CC @ 15–20 mils
• Broadcast	Decorative Quartz @ 0.6 lb/ft <sup>2</sup>
• Topcoat	TuffRez 201 or TuffRez 201CC @ 15–20 mils Various other topcoats available
• Options	Double-Broadcast System 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

## DL-2 System: Decorative Quartz 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

Quartz: See “Decorative Quartz” 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. Install cap strip at the top of the base and divider strip at doorways and other places as desired.
3. Component A Resin should be premixed prior to using due to possible additive separation.
4. OPTIONAL STEP: 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.  
*NOTE: A mix ratio (by volume) of 1 part resin/hardener mixture, 4 parts aggregate, 1 part fumed silica thixotrope is recommended, but may vary depending on applicator preference.*
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 will introduce small air bubbles into the system.*
8. While resin basecoat is wet, broadcast quartz aggregate into it, making sure the entire floor is covered (i.e. broadcast to complete refusal). Aggregate must "free fall" onto the coating; do not throw down upon or across the surface.
9. Allow to cure and then vacuum off the excess aggregate. After excess aggregate is removed, "stone" the surface lightly with a coarse stone or steel trowel to remove imperfections and vacuum again.
10. Apply mixed resin/hardener mixture as topcoat; see step 7.
11. Steps 8–10 can be repeated for additional thicknesses.
12. Apply one to two topcoats of resin/hardener mixture as needed. 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.
13. 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.

2R:1H / DOC TR\_DL2-TDS

Rev 03/05

TuffRez, NovoRez and PolySpec are © Registered Trademarks of PolySpec L.P.

© Copyright 2005 PolySpec L.P. All rights reserved. Published technical data and instructions are subject to change without notice. Please visit the online catalog at [www.polyspec.com](http://www.polyspec.com) for the most current technical data and instructions. Or, you may contact your PolySpec representative for current technical data and instructions.

PolySpec, L.P. warrants its products to be free from defects in material and workmanship. PolySpec's sole obligation and Buyer's exclusive remedy in connection with the products shall be limited, at PolySpec's option, to either replacement of products not conforming to this warranty or credit to Buyer's account in the invoiced amount of the nonconforming products. Any claim under this Warranty must be made by Buyer to PolySpec in writing within five days of Buyer's discovery of the claimed defect, but in no event later than the expiration of the applicable shelf life, or one year from the delivery date, whichever is earlier. Buyer's failure to notify PolySpec of such nonconformance as required herein shall bar Buyer from recovery under this warranty.

**PolySpec makes no other warranties concerning this product. No other warranties, either expressed or implied, or statutory, such as warranties of merchantability or fitness for a particular purpose, shall apply. In no event shall PolySpec be liable for consequential or incidental damages.**

Any recommendation or suggestion relating to the use of the products made by PolySpec, whether in its technical literature, or in response to specific inquiry, or otherwise, is based on data believed to be reliable; however, the products and information are intended for use by Buyers having requisite skill and know-how in the industry, and therefore it is for the Buyer to satisfy itself of the suitability of the products for its own particular use, and it shall be deemed that Buyer has done so, at its sole discretion and risk. Variation in environment changes in procedures of use, or extrapolation of data may cause unsatisfactory results. PolySpec cannot guarantee that color will conform to sample, if provided.