



TECHNICAL DATA SHEET – TUFFREZ® 650

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DESCRIPTION

TuffRez® 650 is a two-component, 100% solids, high performance, self leveling epoxy floor coating that can be tinted using the standard 844 Universal Pigment system. This product provides a high gloss, seamless, hygienic surface that is extremely hard and durable.

TYPICAL APPLICATION

PRIMER	PolySpec® 100EX Primer @ 10 mils (varies)
BASECOAT	TuffRez® 650 @ 10–16 mils
OPTIONS	Non-Skid Grit

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, SHORED (ASTM D-2240)	85–90
BOND STRENGTH (ASTM D-4541)	425 psi
ABRASION RESISTANCE (ASTM D-4060)	80 mg
VOC	0 lb / gal: 0 gm/L
VOLUME SOLIDS	100%

BENEFITS

- Versatile design possibilities
 - Full gloss finish
 - Multi-color quartz and flake finishes
 - Various surface finishes available
- Seamless, monolithic application
- Durable finish withstands wear from foot traffic and rubber wheel vehicles
- Tintable to a wide array of colors
- Zero VOC, extremely low odor

RECOMMENDED USES

- Warehousing & manufacturing facilities
- Laboratories, hospitals, healthcare facilities
- Stadiums & other entertainment venues
- Educational & institutional facilities
- Cafeterias, kitchens, storefronts, aisles

GENERIC DESCRIPTION:

Epoxy

STANDARD COLORS:

Medium Gray, Neutral Tint Base, Pastel Tint Base

PACKAGING:

1-Gallon Unit
5-Gallon Unit

COVERAGE:

160 ft² / gallon @ 10 mils

TUFFREZ® 650

EXPOXY FLOOR COATING

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
RECOAT WINDOW	Minimum: 8 hours / Maximum: 48 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. 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 environments with PolySpec 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.

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® Primer for epoxies on concrete surfaces. See data sheet for application details.
2. Component A Resin should be premixed prior to using due to possible additive separation.
3. 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.
4. 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.
5. OPTIONAL STEP: When applied as a non-skid coating, broadcast clean, dry 20/40-mesh sand or aluminum oxide aggregate into wet resin. Allow to dry. A full broadcast to refusal will produce the most consistent and durable system. Brush off excess grit before applying second coat.
NOTE: Do not broadcast aggregate into the prime coat.
6. After the first coat has become slightly tack free (within approximately 8 hours of cure @70°F), apply a second coat of resin/hardener mixture, following the application procedure outlined in Step 4.
NOTE: If the coating has not been recoated within 48 hours, a light sanding followed by a wipe with a 50:50 mixture of water and isopropanol may be necessary. Allow the solvent to flash before applying coating.
7. 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, or contact PolySpec® or an Authorized Representative.
8. 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 TR650-TDS
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