PolySpec THIOKOL

TECHNICAL DATA SHEET – TUFFREZ® 201

Revised: 2/2017

DESCRIPTION

TuffRez 201 is a two component, 100% solids, highly versatile polymer for coating and sealing concrete floors. Mixed with PolySpec Color Packs, this durable material cures to a smooth, glossy color surface finish or, with the addition of aggregate, a non-skid texture. Color quartz or flakes can also be used with TuffRez 201 to produce a seamless, decorative surface.

TYPICAL APPLICATION

PRIMER	PolySpec Epoxy Primer @ 5–7 mils
BASECOAT	TuffRez 201 @ 15–20 mils
TOPCOAT	TuffRez 201 @ 15–20 mils / Various other topcoats available
OPTIONS	Non-Skid Grit Integral Cove Base Flexible Waterproofing & Crack-Bridging Membrane Decorative Quartz Decorative Flakes 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 STRENGT H (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%
VOC	0 g/L

BENEFITS

- Versatile design possibilities
  - Solid colors using easy-mix color packs
  - Multi-color quartz and flake finishes
  - Various surface finishes available
- Seamless, monolithic application
- Durable finish withstands wear from foot traffic and rubber wheel vehicles
- Resists many acids, alkalies and salts
- Easy to maintain surface

RECOMMENDED USES

- Warehousing & manufacturing facilities
- Chemical processing plants
- Laboratories, hospitals, healthcare facilities
- Stadiums & other entertainment venues
- Educational & institutional facilities
- Cafeterias, kitchens, storefronts, aisles
- Bathrooms, showers

GENERIC DESCRIPTION:

Epoxy

STANDARD COLORS:

Clear
Solid Colors: See “Color Packs, Epoxy”
Decorative Broadcast: Quartz or Flake

PACKAGING:

3-Gallon Unit
15-Gallon Unit

COVERAGE:

100 ft^2 / gallon @ 16 mils

TUFFREZ® 201

EPOXY FLOOR COATING

ITW Engineered Polymers

PolySpec THIOKOL

TECHNICAL DATA SHEET – TUFFREZ® 201

STORAGE & INSTALLATION

STORAGE ENVIRONMENT	Dry area, 65-80ºF
APPLICATION TEMPERATURE, AMBIENT	50-95ºF
APPLICATION TEMPERATURE, SUBSTRATE	Minimum 5º above dew point
SHELF LIFE	1 year
POT LIFE, @ 77ºF	20 minutes
FOOT TRAFFIC, @ 77ºF	10-12 hours
SERVICE, @ 77ºF	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 ITW Engineered Polymers.
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.

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. **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. **OPTIONAL STEP:** For color version, add pre-mixed Epoxy Color Pack(s) to Component A. Refer to “Color Pack, Epoxy” data sheet for mix ratio and mixing instructions.
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. **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.*
9. After the first coat has become slightly tack free (within approximately 10 hours of cure @70°F), apply a second coat of resin/hardener mixture, following the application procedure outlined in Step 7.
   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.*
10. ITW Engineered Polymers 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 ITW Engineered Polymers’ online catalog at www.polyspec.com, or contact ITW Engineered Polymers 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.

2R:1H / DOC TR201-TDS

ITW ENGINEERED POLYMERS
130 Commerce Drive | Montgomeryville, PA 18936
Phone: 215-855-8450 | Fax: 215-855-4688 | www.polyspec.com

ITW Engineered Polymers