



## TECHNICAL DATA SHEET – TUFFREZ® 200CR

Revised: 2/2017

### DESCRIPTION

TuffRez 200CR is a heavy-duty epoxy novolac resin and aggregate floor surfacer suited for floors subjected to aggressive chemical exposure and mechanical abuse. Applied at 1/8 to 1/4", this durable system is commonly utilized for new construction as a protective overlay or for renovation work to restore surfaces; it can also be used as a cove base.

### TYPICAL APPLICATION

PRIMER COAT	PolySpec Primer @ 5–7 mils
MORTAR COAT	TuffRez 200CR w/F-3 powder @ 1/4"
GROUT COAT	TuffRez 200CR @ 125–250 ft <sup>2</sup> /gal
OPTIONS	TuffRez or NovoRez Topcoat Non-Skid Grit

### PERFORMANCE DATA

COMPRESSIVE STRENGTH (ASTM C-579)	10,990 psi
TENSILE STRENGTH (ASTM C - 307)	1,895 psi
FLEXURAL STRENGTH (ASTM C-580)	4,990 psi
VOC	0.00 lb/gal; <0.00 gm/L
VOLUME SOLIDS	100%

### BENEFITS

- Seamless, monolithic application; no crevices where dirt and bacteria can dwell
- Excellent impact and abrasion resistance
- Resists many concentrated acids, including 98% sulfuric acid
- Qualifies as a non-slip floor under Federal Standards
- 100% solids, zero VOC

### RECOMMENDED USES

- Chemical processing plants
- Food and beverage plants
- Breweries
- Laboratories
- Animal holding areas

### GENERIC DESCRIPTION:

Epoxy Novolac

### STANDARD COLORS:

Light Gray, Tile Red

### PACKAGING:

3-Gallon Unit

*F-3 Powder sold separately in 50 pounds bags; 5 bags needed per 3-Gallon Unit*

### COVERAGE:

Mortar Coat (1 gal. binder + 75 lb. F-3 powder):  
33 ft<sup>2</sup> / gallon @ 1/4 inch

Grout Coat:  
125–150 ft<sup>2</sup> / gallon

**TUFFREZ® 200CR**  
EPOXY NOVOLAC TOPPING BINDER,  
CHEMICAL RESISTANT

**STORAGE & INSTALLATION**

STORAGE ENVIRONMENT	Dry area, 65-80°F
APPLICATION TEMPERATURE, AMBIENT	50-100°F
APPLICATION TEMPERATURE, SUBSTRATE	Minimum 5° above dew point
SHELF LIFE	1 year
POT LIFE, @ 77°F	25 minutes
FOOT TRAFFIC, @ 77°F	10 hours
FULL SERVICE, @ 77°F	24 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 resists most strong inorganic acids except nitric acid. It performs well when exposed to aliphatic and aromatic solvents, trichloroethane, toluene, most petroleum products, alkalis, salts, peroxides and foodstuffs. It is not recommended for resistance to organic acids and chlorinated solvents.
2. This product is not designed for exterior use, immersion, or any use where moisture can reach the underside of the flooring.
3. Do not apply to wet or damp substrates.
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 TuffRez PolySpec Primer. See data sheet for application details.

**MORTAR COAT**

2. Component A Resin should be premixed prior to use due to possible separation that may occur during transportation and storage.
3. Combine Component A Resin and Component B Hardener in a separate mixing vessel. Mix with a mechanical jiffy-type mixer operated at low speed.
4. OPTIONAL STEP: For cove base, mix fumed silica thixotrope into resin/hardener mixture until desired consistency is achieved. Trowel into place.
5. Pour catalyzed liquid into a concrete or mortar mixer. Add F-3 powder (75 lbs per gallon of binder) and mix thoroughly until all particles are wetted out.
6. Apply mortar coat with a screed box or a rake set at the appropriate height. Trowel smooth using a power trowel or a steel finishing trowel. Allow to cure.

**GROUT COAT**

7. Repeat steps 2 and 3 above to prepare grout coat mixture.
8. Apply a grout coat by pulling a trowel tightly over the surface at a coverage rate of approximately 125-250 ft<sup>2</sup>/gallon. The grout coat should fill any slight voids or surface imperfections and provide a smooth finish. Optional Topcoat
9. Apply one or two topcoats of selected coating as needed for chemical resistance. Introduce non-skid grit into the topcoats for additional slip resistance.

**CLEANING**

10. 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 200CR-TDS

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