

DESCRIPTION

TuffRez 240 is a 100% solids, chemical resistant epoxy liner used for protection of concrete and steel from chemicals and wastewater in immersion and splash and spillage conditions.

TYPICAL APPLICATION

Rough Concrete	
• One Coat	TuffRez 240 @ 100 mils
Smooth Concrete / Steel	
• Basecoat	TuffRez 240 @ 15-20 mils
• Topcoat	TuffRez 240 @ 15-20 mils

PERFORMANCE DATA

Compressive Strength (ASTM C-579) .....	12,870 psi
Tensile Strength (ASTM D-638) .....	6,690 psi
Flexural Strength (ASTM C-580) .....	12,443 psi
Bond Strength (ASTM D-4541) .....	.450 psi
VOC .....	0.0 lb/gal; 0.0 gm/L
Volume Solids .....	100%

STORAGE & INSTALLATION

Storage Environment .....	Dry area, 55–95°F
Application Temperature, ambient .....	40–85°F
Application Temperature, substrate .....	Minimum 5°F above dew point
Shelf Life .....	1 year
Pot Life, @ 77°F .....	60 minutes
Tack Free, @ 70°F .....	8 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. Do not thin with solvents unless advised to do so by PolySpec.
2. Confirm product performance in specific chemical environment prior to use.
3. If applying gray colored TuffRez® 240 in direct sunlight product will yellow within 24 hours. This will not compromise the ultimate properties.
4. Prepare substrate according to “Surface Preparation” portion of this document.
5. Do not apply to slabs on grade unless a heavy unruptured vapor barrier has been installed under the slab.
6. 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.
7. For industrial/commercial use. Installation by trained personnel only.

# TuffRez® 240

## TECHNICAL DATA SHEET

### Epoxy Liner, Chemical Resistant

BENEFITS

- Excellent resistance to dilute acids, alkalis, wastewater and sewer gas (H<sub>2</sub>S)
- Moisture insensitive
- May be applied at 100 mil thickness (two 50 mil coats for vertical surfaces)

RECOMMENDED USES

- Manholes
- Large diameter sewer pipe
- Lift station walls
- Tanks

GENERIC DESCRIPTION

Epoxy

STANDARD COLORS

Gray, Black

PACKAGING

10-Gallon Unit

COVERAGE

16 ft<sup>2</sup> / gallon @ 100 mils (concrete)

100ft<sup>2</sup> / gallon @ 16 mils (steel surfaces)



## 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.*

**Steel:** For steel surfaces, a “Near White Metal” ultra high-pressure wash or abrasive blast with anchor profile of 2–4 mils in accordance with Steel Structures Painting Council Specification SP-10 or NACE No. 2 is required.

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

## INSTALLATION STEPS

1. Under optimum conditions, TuffRez 240 requires no priming. If a primer is necessary, prime concrete surfaces with PolySpec 300EX Primer or TITE M-50 to hold blast on steel surfaces. See data sheet for application details.
2. Mix Component A Resin and Component B Hardener with a mechanical jiffy-type mixer operated at low speed until a uniform blend is attained.
3. Apply by brush or spray.  
*NOTE: Recommended spray equipment is a 68:1 airless sprayer with reverse-a-clean tips, orifice size of 0.031" – 0.035".*
4. Multiple coats can be applied within 12 hours of the previous coat. Material is tack-free within 8 hours @ 70°F.
5. 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.

## CHEMICAL RESISTANCE GUIDE

CONTACT MATERIAL	RATING	KEY
Acetic Acid, 10%	2	<i>VALUES REFLECT PERFORMANCE AT AMBIENT OPERATING TEMPERATURE:</i> 1 = <i>Suitable for immersion and/or splash &amp; spillage conditions</i> 2 = <i>Suitable for occasional/intermittent contact for up to 72 hours</i> 3 = <i>Suitable for occasion/intermittent contact for short periods with frequent washing</i> NR = <i>Not recommended</i>
Butyl Cellosolve	2	
Ethanol	2	
Ethylene Glycol	1	
Lactic Acid, 10%	1	
Methanol	2	
Methyl Ethyl Ketone	3	
Monobutyl Ether	2	
Skydrol	1	
Sodium Hydroxide, 50%	1	
Sodium Hypochlorite, 10%	1	
Sulfuric Acid, 70%	1	
Sulfuric Acid, 98%	NR	
Toluene	1	
Trichloroethane	1	
Water, Deionized	1	
Xylene	1	

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