

DESCRIPTION

PermaRez 348 is a 120 mil multifunctional polymer lining system suited for concrete and steel substrates in aggressive chemical environments. The coating combines micro fillers and epoxy novolac resin to provide maximum durability and superior concrete compatibility.

TYPICAL APPLICATION

• Primer	PolySpec 300EX @ 5–7 mils (concrete) or PolySpec TITE M-50 @ 4–6 mils (steel)
• Basecoat	PermaRez 348 w/F-4 Powder @ 1/16"
• Fabric	Type M (1.5 oz mat)
• Saturant	PermaRez 348 @ 15–20 mils
• Topcoats	2 coats: NovoRez 351 @ 12–16 mils or NovoRez 360 @ 20 mils
• Options	Carbon-Filled, Non-Silica Applications (recommended for fluoride or caustic service) – Powder: F-5 Powder – Fabric: Type V (Nexus Veil)

PERFORMANCE DATA

Compressive Strength (ASTM C-579)	20,000 psi
Tensile Strength (ASTM C-307)	4,000 psi
Flexural Strength (ASTM C-580)	4,300 psi
Bond Strength (ASTM D-4541)	425 psi
Abrasion Resistance (ASTM D-4060)	70 mg
VOC	0.00 lb/gal; 0.00 gm/L
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	30 minutes
Foot Traffic, @ 77°F	12 hours
Full Service, @ 77°F	7 days

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. For best results, work area should be humidity and temperature controlled.
2. Do not thin with solvents unless advised to do so by PolySpec.
3. Confirm product performance in specific chemical environment prior to use.
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.

PermaRez® 348

TECHNICAL DATA SHEET

Reinforced Lining for Concrete & Steel, Chemical Resistant

BENEFITS

- Resists aggressive chemicals and concentrated acids, including 98% sulfuric acid, phosphoric acid and hydrochloric acid in immersion service
- Superior thermal compatibility with concrete when compared with conventional coatings
- 100% solids, zero VOC formulation
- No heat or baking required

RECOMMENDED USES

- Process area floors
- Secondary containment
- Truck loading/unloading areas
- Pump pads
- Pedestals
- Curbs

GENERIC DESCRIPTION

Epoxy Novolac

STANDARD COLORS

Gray
(Amber liquid, before addition of F-4 Powder)

Topcoat: See NovoRez 351 or 360 data sheet

PACKAGING

3-Gallon Unit

Powder sold separately; per 3-Gallon Unit:
– 75 pounds F-4 Powder, sold in 50 lb bags
– 18 pounds F-5 Powder, sold in 30 lb pail

Fabric sold separately:
– Type M sold in 1,000 ft² rolls
– Type V (Nexus Veil) sold in 6,000 ft² rolls

COVERAGE

30–35 ft² / gallon @ 120 mils
(Includes one 1/16" coat and saturant)

SEE SYSTEM DETAILS IN "TYPICAL INSTALLATION"
PORTION OF THIS DOCUMENT

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 immersion service, "White Metal" abrasive blast with an anchor profile of 2–4 mils in accordance with Steel Structures Painting Council Specification SP-5-63 or NACE No. 1 is required. For splash and spillage exposure, "Near White" SP-10-63 or NACE No. 2 is required.

Refer to PolySpec Surface Preparation Guidelines for more details.

INSTALLATION STEPS

1. Prime surface with PolySpec 300EX (concrete) or PolySpec TITE M-50 (steel) Primer. See data sheet for application details.
2. Pour Component B Hardener into Component A Resin pail. Mix well using a mechanical jiffy-type mixer operated at low speed until a consistent color is attained. Scrape the sides 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.
3. Stir in F-4 or F-5 filler powder and mix well until all particles are wetted out.
NOTE: Mix ratio is approximately 25 pounds F-4 (or 6 pounds F-5) filler per mixed gallon of binder.
4. Spread basecoat mixture onto surface by trowel to a thickness of 1/16". Immediately lay the reinforcement fabric into the basecoat and press out all air pockets with a dry paint roller.
5. Saturate the reinforcement with a coat of catalyzed PermaRez 348 Resin (without powder). Roll out saturant coat until the whiteness of the reinforcement disappears.
6. After the saturated basecoat has dried, grind down any burrs that have appeared on the surface.
7. Topcoat with NovoRez 351 (or, for additional chemical resistance, NovoRez 360). See data sheet for application details.
NOTE: Recoat time over saturant coat is normally 24 hours.
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 PR348-TDS

Rev 03/09

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

© Copyright 2009 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 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.