



TECHNICAL DATA SHEET – NOVOREZ® 351

Revised: 2/2017

DESCRIPTION

NovoRez 351 is a 100% solids, multi-functional, two component polymer coating suited for concrete substrates in aggressive chemical environments. The coating combines an epoxy novolac resin with a special "stressrelieving" additive to provide maximum durability and superior concrete compatibility.

TYPICAL APPLICATION

PRIMER	PolySpec 100EX
BASECOAT	NovoRez 351 @ 16 mils
TOPCOAT	NovoRez 351 @ 16 mils
OPTIONS	Non-Skid Grit @ 0.50 lbs/ft ² Woven Roving (24 oz.) Fabric Reinforcement

PERFORMANCE DATA

COMPRESSIVE STRENGTH (ASTM C - 579)	19,000 psi
TENSILE STRENGTH (ASTM D - 638)	4,000 psi
ELONGATION (ASTM D - 638)	7%
FLEXURAL STRENGTH (ASTM C - 580)	4,300 psi
BOND STRENGTH (ASTM D - 4541) (CONCRETE FAILURE)	425 psi
ABRASION RESISTANCE (ASTM D - 4060)	70 mg
OPERATING TEMPERATURE, MAXIMUM, DRY: WET:	185°F Dependent on chemical exposure
VOC	0.0 lb/gal; 0.0 gm/L
VOLUME SOLIDS	100%

BENEFITS

- Resists concentrated acids including 98% sulfuric acid, urea ammonium nitrate (UAN), and other aggressive chemicals
- Superior thermal compatibility with concrete
- Improved thermal shock resistance
- 100% solids, zero VOC formulation
- No baking required to achieve properties
- Superior flexibility compared to conventional novolac coatings

RECOMMENDED USES

- Process area floors
- Truck loading/unloading areas
- Secondary containment
- Pump pads, pedestals, curbs

GENERIC DESCRIPTION:

Polysulfide-Modified Epoxy Novolac

STANDARD COLORS:

Light Gray, Tile Red

PACKAGING:

3-Gallon Unit

MIX RATIO:

2R : 1H

COVERAGE:

100 ft² / gallon @ 16 mils

NOVOREZ® 351
CONCRETE COATING, ACID RESISTANT

STORAGE & INSTALLATION

STORAGE ENVIRONMENT	Dry earea , 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	16 hours
FULL SERVICE, @ 77°F	5-7 days
RECOAT WINDOW	-

SURFACE TEMPERATURE

	60-69°F	70-89°F	90°F
RECOAT (MIN)	6-8 hours	4-5 hours	2-3 hours
RECOAT (MAX)	20-24 hours	12-16 hours	6-8 hours

CONSIDERATIONS & LIMITATIONS

1. This product is not recommended as a steel tank lining.
2. For best results, work area should be humidity and temperature controlled.
3. Protect area from direct sunlight during application and from sudden temperature changes within 24 hours of application.
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 PolySpec Primer. See data sheet for application details.
2. Component A Resin should be premixed prior to using due to possible pigment settling that may occur during transportation and storage.
3. Pour Component B Hardener into the Component A Resin pail and mix well with 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 overmix. Product will become increasingly viscous if overmixed.

NOTE: Do not turn the pail upside down and allow to drain onto substrate.

4. Apply by 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: Do not exceed recommended application thickness; doing so will result in stress build-up within the coating, resulting in cracking and delamination.

5. Follow application with a spiked plastic roller to remove entrapped air.

6. OPTIONAL STEP: FABRIC REINFORCED COATING

When applied as a fabric reinforced coating, immediately lay the reinforcement fabric into the basecoat and press out all air pockets with a dry paint roller. Saturate the reinforcement with a coat of catalyzed resin. Roll out saturant coat until the whiteness of the reinforcement disappears. After the saturated basecoat has dried, grind down any burrs that have appeared on the surface.

7. OPTIONAL STEP: NON-SKID COATING

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: Broadcast grit into the basecoat of NovoRez 351. Do not broadcast into the prime coat.

8. After the first coat has become slightly tack free (within approximately 4 hours @ 70°F), apply an additional coat of resin/hardener mixture according to Step 4.

NOTE: If the basecoat becomes glossy and/or hard to the touch, a light sanding followed by a wipe with a 50:50 mixture of water and isopropanol will be necessary before applying the second coat. Allow the solvent to flash before applying coating.

2R:1H / DOC NR351-TDS

© Copyright 2017. 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 ITW Engineered Polymers representative for current technical data and instructions.

ITW Engineered Polymers warrants its products to be free from defects in material and workmanship. ITW's sole obligation and Buyer's exclusive remedy in connection with the products shall be limited, at ITW'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 ITW 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 ITW of such nonconformance as required herein shall bar Buyer from recovery under this warranty.

ITW 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 ITW Engineered Polymers be liable for consequential or incidental damages.

Any recommendation or suggestion relating to the use of the products made by ITW, 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. ITW cannot guarantee that color will conform to sample, if provided.