



## TECHNICAL DATA SHEET – POLYSPEC® 100EX

Revised: 8/2019

### DESCRIPTION

PolySpec 100EX is a 100% solids, moisture tolerant, penetrating epoxy primer used to prime concrete and steel surfaces for high performance applications. Commonly utilized as part of a complete TuffRez flooring system, 100EX is also suited for use with epoxy novolac and elastomeric polyurethane lining systems.

### TYPICAL APPLICATION

PRIMER	PolySpec 100EX Primer @ 150-400* sq. ft /gallon)
OVERCOAT	Flooring or Lining System from PolySpec
OPTIONS	Carbon Filler Formula Upgrade (PolySpec 100EX-CF)

### PERFORMANCE DATA

BOND STRENGTH (ASTM D - 4541)	concrete failure; >350 psi
VOC	< 25 g/l Mixed components
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	60 minutes
SET TIME, @ 77°F	4-6 hours

### BENEFITS

- 100% solids formulation eliminates solvent odors
- Low viscosity formulation penetrates and seals concrete pores
- Provides superior adhesion to concrete and higher tensile and flexural strengths when compared to conventional polyamide primers
- Cures at ambient temperatures down to 50°F
- Resistant to amine blush, even when cured at low temperatures and high humidity
- Requires zero induction time

### RECOMMENDED USES

- Concrete primer, as part of a complete TuffRez® flooring system
- Concrete primer, as part of a complete epoxy novolac lining system
- Steel primer, as part of a complete elastomeric polyurethane lining system.
- Primer for wood, tile and other porous substrates.
- Enclosed and occupied spaces

### GENERIC DESCRIPTION: Primer

### STANDARD COLORS: Amber

### PACKAGING: .75-Gallon Unit, 3-Gallon Unit

### MIX RATIO: 2R:1H

### COVERAGE:

- Thin film epoxies @ 6-8 mils:  
150-250 sq. ft. / 1 gallon OR 100-180 sq. ft. / .75 gallon kit
  - Anti-slip @ 3-4 mils:  
350-400 sq. ft. / gallon OR 260-300 sq. ft. / .75 gallon
- May vary depending on concrete, steel or substrate porosity*

# POLYSPEC® 100EX

## EPOXY PRIMER FOR CONCRETE, 100% SOLIDS

**CONSIDERATIONS & LIMITATIONS**

1. ITW Polymers Sealants North America, Inc. does not recommend that grit be broadcast or otherwise introduced into PolySpec 100EX Primer. If enhanced slip resistance is desired, the flooring systems' body coat or topcoat may be specified to serve this function.
2. This product is not designed to provide complete hide and color coverage. If complete hide is required, use additional topcoats, from TuffRez, THIOKOL or NovoRez line.
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 Polymers Sealants North America, Inc.
5. Confirm product performance in specific chemical environment prior to use.
6. Prepare substrate according to "Surface Preparation" portion of this document.
7. Always use protective clothing, gloves and goggles during use. Avoid eye and skin contact. Do not ingest or inhale. Refer to Safety Data Sheet for detailed safety precautions.
8. 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.

**METAL: POLYSPEC 100EX** can be applied to any clean, dry surface. All rust, mill scale, paint, dirt, grease, oil, etc. must be completely removed. Recommended methods of cleaning steel surfaces are as follows:

- Grit-blasting to SA 2.5 (near white metal) or SSPC-SP10, is the preferred method of cleaning and results in the best surface for adhesion.
- Where grit-blasting is not feasible, power tool cleaning utilizing power sanders fitted with #16 grit aluminum oxide sanding discs can produce a sufficiently clean surface provided cleaning is carefully and intensively done.
- Remove oil, dirt, wax, etc., by dissolving in a water-based cleaner/degreaser such as LPS Precision Clean available from American Safety Technologies. An alternative method is to remove the grease or oil with a solvent. Solvents are flammable and must be handled with care. It is important that the solvent not be allowed to evaporate during the cleaning process and redeposit grease or oil on the deck. Ample solvent must be applied to the surface to completely dissolve the grease and oil and the solvent containing the dissolved grease and oil must be wiped up with clean rags before the solvent dries.

**WOOD FLOORS:** Remove any weathered wood to expose a clean solid substrate. Smooth wood must be sanded to ensure proper mechanical bonding.

**TILE AND FIBERGLASS:** Glazed or ceramic tile and fiberglass must be sanded to completely remove all glazing to ensure a good mechanical bond. Remove any residual sanding dust by air blowing or wiping with alcohol.

*After cleaning, all loose particles must be removed by brushing, air hosing or similar method.*

**HIGH AND ULTRA HIGH-PRESSURE WATER JETTING**

ALL SURFACES TO BE RECOATED SHALL BE CLEANED IN ACCORDANCE WITH NACE/SSPC WJ-2/SC-2.

WJ-2: A WJ-2 surface shall be cleaned to a matte finish with at least 95% of the surface area free of all previously existing visible residues and the remaining 5% containing only randomly dispersed stains of rust, coatings and foreign matter.

SC-2: An SC-2 surface shall have less than 7 mg/cm<sup>2</sup> chloride contaminants, less than 10 mg/cm<sup>2</sup> of soluble ferrous ion levels, and less than 17 mg/cm<sup>2</sup> of sulfate contaminants as verified by field or laboratory analysis using reliable, reproducible test equipment.

**Refer to PolySpec Guidelines for Subfloor Preparation for additional details.**

## INSTALLATION STEPS

1. Component A Resin should be premixed prior to using due to possible additive separation.
2. 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.
3. Apply resin/hardener mixture by roller or squeegee. 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 turn the pail upside down and allow to drain onto substrate.

4. Follow squeegee application with a back-roll using a short nap roller.
5. **OPTIONAL STEP:** Once primer has become tacky to the touch, a second primer coat may be applied.

**NOTE:** Double priming will greatly reduce the effects of outgassing by additionally filling the pores in the concrete.

**NOTE:** Broadcasting grit into PolySpec 100EX Primer is not recommended.

6. Once primer has become tacky to the touch, proceed to installation of a PolySpec flooring or lining system; refer to technical data sheet for installation instructions.

**NOTE:** Primed surfaces should be recoated within 48 hours. For longer waiting periods, wipe with xylene until surface becomes tacky. If surface remains hard, abrasive sanding is required.

**NOTE:** Prior to installing an overcoat and/or lining system, closely inspect the surface of the PolySpec 100EX to ensure that no contaminants have settled there. The longer the time between the primer application and the overcoat, the greater the chance of contamination. If any contamination occurs, it should be removed from the surface to be coated in accordance with SSPC-SP1.

2R:1H / DOC PS100EX-TDS

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