TuffRez® 212

TECHNICAL DATA SHEET

Epoxy Coating, Low Temperature

DESCRIPTION

TuffRez 212 is a unique, two-component hybrid polymer coating designed to cure at extremely low temperatures. Derived from a product development program for Siberian environmental conditions, TuffRez 212 has the unique ability to cure in low mil thicknesses and without the odor problems associated with mercaptans or methacrylates.

TYPICAL APPLICATION

• Primer (optional)	PolySpec 300EX Primer @ 5–7 mils
• Base Coat	TuffRez 212 @ 20 mils
• Options	Non-Skid Grit @ 0.6 lbs/ft^2 Anti-Microbial Formulation Upgrade (TuffRez 212-AM)

PERFORMANCE DATA

Compressive Strength (ASTM C-579)	14,900 psi
Tensile Strength (ASTM D-638)	1,200 psi
Flexural Strength (ASTM C-580)	17,400 psi
Hardness, Shore D (ASTM D-2240)	56
Bond Strength (ASTM D-4541)	Concrete Failure
Volume Solids	100%

STORAGE & INSTALLATION

Storage Environment	Dry area, 40ºF
Application Temperature, ambient	0–85ºF
Application Temperature, substrate	Minimum 5ºF above dew point
Shelf Life	1 year
Pot Life	@ 77ºF: 5 min / @ 35ºF: 10 min / @ 0ºF: 20 min
Foot Traffic	@ 77ºF: 45 min / @ 35ºF: 3 hrs / @ 0ºF: 20 hrs
Full Service	@ 77ºF: 4 hrs / @ 35ºF: 24 hrs / @ 0ºF: 72 hrs

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 65ºF to 80ºF 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 is not designed for exterior use, immersion, or any use where moisture can reach the underside of the flooring.
2. PolySpec recommends the use of a slip resistant grit with this product.
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 PolySpec.
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.

BENEFITS

- *Cures at temperatures as low as 0ºF*
- *Rapid set for higher temperature applications (60–85ºF)*
- *100% solids*
- *Meets USDA requirements*
- *Low odor during application*

RECOMMENDED USES

- *Cold storage rooms*
- *Freezers & meat lockers*
- *Other low temperature environments*
- *Environments at standard room temperature (60–85ºF) that require fast set with low odor*

GENERIC DESCRIPTION

Modified Epoxy

STANDARD COLORS

Light Gray, Medium Gray, Tile Red

Additional colors available upon request. Non-stocking colors may be subject to additional lead time, minimum order requirements, and a slight premium.

PACKAGING

1-Gallon Unit

COVERAGE

80 ft^2 / gallon @ 20 mils

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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

NOTE: For low temperature applications, ensure that product is properly conditioned prior to use.

1. If temperature is above 45ºF and time allows, prime surface with PolySpec 300EX Primer. See technical data sheet for application details.
2. Component A Resin should be premixed prior to using 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. IMMEDIATELY mix well with a mechanical jiffy-type mixer operated at low speed.

   NOTE: Work quickly! Material has a very short pot life.
4. Immediately apply by roller. 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.
5. OPTIONAL STEP: When applied as a non-skid coating, broadcast clean, dry 20/40-mesh sand or aluminum oxide aggregate into surface while binder is wet.

   NOTE: Do not broadcast aggregate into the prime coat.
6. 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.

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