PolySpec THIOKOL

TECHNICAL DATA SHEET – TUFFREZ® 236

Revised: 2/2017

DESCRIPTION

TuffRez 236, a three-component aliphatic water borne polyurethane floor coating, contains zero VOCs and has very little odor during application. It offers excellent wear properties and chemical resistance for high performance applications. It is suited for use as a topcoat over an epoxy system or alone over primed floor surfaces.

TYPICAL APPLICATION

PRIMER	PolySpec Primer @ 5–7 mils
BASECOAT	Epoxy Basecoat from PolySpec @ 15–20 mils (various coatings available)
TOPCOAT	TuffRez 236 @ 3–5 mils WFT
OPTIONS	Non-Skid Grit (1-1.5 lb/gal)

PERFORMANCE DATA

ABRASION RESISTANCE 1000 CYCLES/CS-17, 1000 GM (ASTM D-4060)	30 mg
COEFFICIENT OF FRICTION	0.84
VOC	0.12 lbs/gal; 16 gm/L
VOLUME SOLIDS	60%

BENEFITS

- Zero VOC, low odor; ideal for use in confined spaces where occupants are present
- UV stable, non-yellowing
- Resists attack by most acids, alkalies, detergents, lubricating oils, solvents and chemicals
- Orange peel finish diffuses light and reduces glare
- Excellent abrasion resistance

RECOMMENDED USES

- Laboratories
- Hospitals & healthcare facilities
- Educational & institutional facilities
- Stadiums & other entertainment venues
- Animal holding areas
- Chemical processing plants
- Marine living quarters & galleyways

APPROVALS

- MPI # 213 Barrier Coating, Two Coat, Low VOC for Industrial Maintenance
- Meets GPS-1 and GPS-2 Standard

GENERIC DESCRIPTION:

Aliphatic Water Borne Polyurethane

STANDARD COLORS:

Clear

PACKAGING:

.75 - Gallon Unit

COVERAGE:

350 ft^2 / gallon @ 4.5 mils WFT

TUFFREZ® 236

POLYURETHANE COATING, LOW ODOR

ITW Engineered Polymers

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STORAGE & INSTALLATION

STORAGE ENVIRONMENT	Dry area, 65-80ºF
APPLICATION TEMPERATURE, AMBIENT	50-85ºF
APPLICATION TEMPERATURE, SUBSTRATE	Minimum 5º above dew point
SHELF LIFE	6 month
POT LIFE, @ 77ºF	60 minutes
FOOT TRAFFIC, @ 77ºF	12 hours
FULL SERVICE, @ 77ºF	48 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 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. Vehicles with rubber tires should not be parked on coating within 36 hours of installation.
2. ITW Engineered Polymers 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 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. TuffRez 236 is normally applied over a PolySpec Primer or as a finish coat over a TuffRez epoxy floor coating system. See applicable data sheets for detailed installation instructions of these products.
   NOTE: *For use as a topcoat for TuffRez epoxy coatings, apply within 24 hours of epoxy installation. If 24 hours has passed, sand the coating using 100 grit or smaller pads and wipe with a 50:50 mixture of water and isopropanol. Once cleaner solution has flashed, proceed with application of TuffRez 236.*
2. Premix Component A Resin with a mechanical jiffy-type mixer operated at medium speed.
3. Pour Component B Hardener into Component A Resin and mix for two additional minutes at medium speed.
   IMPORTANT: Do not add Component C to mixture until Components A and B have been mixed according to the instructions outlined above.
4. Add Component C. Mix for an additional 30 sec.
5. **OPTIONAL STEP:** Add 1-1.5 pound, per gallon of non-skid grit for increased texture and skid resistance.
   NOTE: *The addition of non-skid grit will reduce gloss level.*
6. For best results pour material into roller pan and apply by dip and roll. Apply at 3 to 5 WFT using 1/4” or 1/8” nap rollers; coating may foam at a greater film thickness. To minimize lap lines in finish coat, immediately cross roll material (uniform 90º angle to initial coat). Use 18” rollers whenever possible.
7. For best results, clean tools and equipment before product has cured, using warm, soapy water. If material has cured, use PolySpec® All Purpose Cleaner, a nonflammable and non-evaporating cleaner. Always wear gloves when using this product.

C / DOC TR236-TDS Rev 11/09

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