



FLEXIDECK® TW-R

A Seamless, Low VOC, Water Catalyzed, Under Tile, Pavers, and Reinforced System

1.01 DESCRIPTION

Flexideck® TW-R is a liquid applied, high solids, low odor, low VOC, water catalyzed, heavy-duty polyurethane, waterproof membrane system for under tile shower pan and pavers.

The system utilizes a primer, two coats of a water catalyzed, urethane basecoat fully reinforced membrane system. Flexideck® TW-R is a specialized application of a polyurethane coating as a waterproof underlayment under tiles, shower pan and pavers. Be sure to use the right product grade that complies with VOC regulations as per federal, state, statutory bodies, county and city regulations/codes at the place of installation of product.

1.02 FEATURES

- Seamless (joint & crack-free)
- Low odor
- Non gassing
- Recoatable
- Patching or filling of concrete
- Elastomeric
- Pond free
- Fast curing
- Good weatherability

1.03 TYPICAL USES

- Showerpans
- Under Pavers
- Steam Room
- Under Tile
- Saunas
- Restrooms

1.04 PRODUCTS & PACKAGING

Enviro-Grip™ EP#1

3-gallon kit: One 3.5 gallon pail containing net 2 gallons (7.57 liters) of Side-A blue liquid and 1 gallons (3.78 liters) can of Side-B yellow liquid

15-gallon kit: Two 5 gallon (18.9 liters) pails of Side-A blue liquid, each containing 5 gallons and one 5 gallons pail of Side-B yellow liquid, containing 5 gallons (18.9 liters)

Enviro-Grip™ PUR#555

2-gallon kit: 1 gallon (3.78 liters) can of Side-A blue liquid and 1 gallon (3.78 liters) can of Side-B yellow liquid

10-gallon kit: 1 5-gallon (18.9 liters) pail of Side-A blue liquid and 1 5-gallon (18.9 liters) pail of Side-B yellow liquid

E-Tuff® 80 or 100

1 gallon (3.78 liters) can with a partial vial of catalyst
5 gallon (1.89 liters) pail with a full vial of catalyst

1.05 PRODUCT INSTRUCTIONS

- A. For complete information associated with the application of Flexideck® TW-R, refer to the General & Safety Guidelines of the Poly-Tuff Systems International (PSI) catalog which describes the surface preparation, job conditions, finishing details and other necessary information.

- B. All products/materials to be used on this system should be purchased from PSI or its distributors or approved by PSI. For details on individual product, please refer to Product Data Sheet.

- C. For project specific recommendations, please contact PSI.

- D. Refer to Products Data Sheets for products referred in the System Specifications.

APPLICATION

2.01 SURFACE PREPARATION

- A. Check area of application to ensure that it conforms to the substrate requirements, as stated in the general guidelines section. Concrete surfaces require a medium sandpaper finish equal to or greater than an ICRI CSP #3. Surface preparation may be completed by shotblasting or the use of Poly-Tuff Profile and Etch cleaner. Peel and adhesion tests are recommended.

- B. Install a 100-200 sqft (9.30-18.58 sqm) mock up of the system to be installed and approve for aesthetics, color, texture, actual coverage rates and functionality before proceeding.

- C. For project specific recommendations, please contact PSI.

2.02 REPAIRS, CRACKS, JOINTS & FLASHING

- A. Apply a single or two component non-gassing polyurethane sealant over all joints, cracks and flashing.
- B. Bridge the joints, cracks, and flashings with 4" (10 cm) Polyester tape pushing it into the 30 mil (762 microns) pre-stripe of base coat. Alternatively, joints and cracks 1/16" (0.15 cm) or larger may be sealed flush with PTS E-101 concealed with 4" (10 cm) Super Seal Tape (concrete

must be primed first and allow to dry).

- C. Over reinforcement tape, apply a pre-stripe coat of E-Tuff® 80 or 100 material and taper it onto the adjacent surface. Alternatively, no crack chasing or pre-stripe is necessary with the use of Super Seal Tape over a primed surface (see Super Seal Tape Data Sheet).
- D. Allow the surface to cure for 1 to 2 hours.

2.03 PRIMING

- A. Prime surface with Enviro-Grip™ EP#1 or PUR#555 at a rate of 1 gallon/300 sqft (0.140 liter/m²) or 300 sqft/gallon. Apply using a brush or phenolic-core roller. This will result in 3-5 dry mils (76-127 microns) of coating.
- B. Existing urethane coated surfaces should be primed with Enviro-Grip™ PUR#555. Rough and pin-holed concrete surfaces may require more primer. Discovery of these issues is generally revealed in the mock up. See the Tech-Note Section of the PSI website. Do not allow primer to puddle, dry roll excess primer with a dry nap roller to pick up excess primer in puddles and overlaps.
- C. Allow primer to become tack free before proceeding to Coating Application. The point at which the primer is generally discerned as nearly tack free is when the primer passes the thumbprint test. The thumbprint test is defined by when a thumbprint is left in the primer and the primer does not transfer onto the thumb. If the primer has been allowed to remain tack free for more than 12 hours, it is necessary to solvent wipe the primed area and reprime.
- D. Primer is optional on new plywood.
- E. Metal flashings should be sealed with PSI Super Seal Tape prior to the coating application. Metal flashings can also be primed with Enviro-Grip™ EP#2 after they have been mechanically abraded with an angle grinder and wire brush cup, followed by a rag with xylene solvent wipe to remove loose particles or oil film prior to the coating application.
- F. All railing posts perimeters are to be sealed with PTS E-101 or PTS E-102 Sealant prior to application of the deck coating.

2.04 COATING APPLICATION

- A. Apply E-Tuff® 80 or 100 mixed material to substrate at a rate of 1 2/3 gallons/100 sqft (0.68 liters/m²) or 60.2 sqft/gallon. E-Tuff® 80 or 100 mixed material or water-catalyzed mixed

E-Tuff 80® or 100 is a properly homogeneous mixed mixture of four parts of E-Tuff® 80 or 100 and one part of water by volume. Refer to the chart at the end of this System Description for coverage rates. Application will require more or less material depending on substrate conditions.

- B. Use a notched trowel or squeegee to spread E-Tuff® 80 or 100 mixed material evenly over the entire deck and backroll with a 3/8" (0.96 cm) nap roller to provide an even coating application. This coat will result in an additional 20 ± 2 dry mils (508 ± 50 microns) thick coating applications.

2.05 FABRIC REINFORCEMENT

- A. While basecoat is wet, fully reinforce the basecoat with Tie-Tex T-325 or T-326 Fabric or equivalent; brooming the fabric into the wet basecoat leaving a wrinkle free and void free surface on the fabric. Allow coating to cure for 4 to 6 hours.

2.06 SECOND COAT APPLICATION

- A. Apply second coat of E-Tuff® 100 mixed material at a rate of 1 2/3 gallons/100 sqft (0.68 liters/m²) or 60.2 sqft/gallon covering and hiding the fabric. Refer to the chart at the end of this System Description for coverage rates. Application will require more or less material depending on substrate conditions.
- B. Use a notched trowel or squeegee to spread E-Tuff® 100 mixed material evenly over the entire deck and backroll with a 3/8" (0.96 cm) nap roller. This coat will result in an additional 20 ± 2 dry mils (508 ± 50 microns) thick coating applications.
- C. Broadcast angular silica sand when membrane starts to thicken to a firm and sticky surface (approximately 30-45 min) when the sand will adhere but not sink into the base coat. The aggregate should be dry, washed, and angular silica sand in the, 12-20 (0.84-1.68mm), 16-30 (0.595-1.19mm) or 20-40 (0.84-1.6 mm) mesh size (as required by customer specifications or as specified in systems specifications) and a 6.5 Moh's scale minimum hardness. Time for thickening to a firm sticky condition is dependent on atmospheric environments especially temperature and humidity. Allow coating to cure 2-4 hours before proceeding to subsequent coats.

- D. When the E-Tuff® 100 or second coat is stiff enough to



SYSTEM SPECIFICATIONS

SECTION 2.2.6

support the weight of the installer without damaging the coating, or when coating is dry (approximately 2-3 hours), remove all loose aggregate by sweeping, vacuum or blowing the excess aggregate off the deck.

- E. Allow the membrane to cure a minimum of 12 to 16 hours, remove the excess aggregate, and apply thin set or mortar when ready for tile installation.
- F. When utilizing a mortar bed over the Flexideck® P-TW, allow the completed membrane to cure a minimum of 6-8 hours prior to installation of the float. A water test can be conducted after 24 hours.

2.07 FINISHED SYSTEM

- A. When applied as directed above, Flexideck® TW-R Decking System will provide minimum of 43 ± 2 dry mils (1092 ± 50 microns), exclusive of aggregate. Coverage rates and cure times will vary depending on temperature, relative humidity, surface roughness and porosity, aggregate selection and embedment, and application technique. Coverage rates provided are optimal and are not guaranteed.
- B. Material mil thickness rates are calculated on the theoretical coverage for smooth substrate and do not account for the actual texture or substrate conditions in the field or at the time of application. Sample mock ups on the projects are recommended to determine the exact coverage rates necessary to waterproof the deck and acceptable standards. Imperfections, spalling, scalling, rough surfaces, potholes, slope correction and other irregular textured surfaces may be filled in with P-Tuff® Classic Sand or Rubber Slurry and are estimated outside the stated minimum coverage rates reflected on Product Data Sheets.

2.08 LIMITATIONS

- A. **Concrete:**
The following conditions must not be coated with PSI deck coating systems or products: on grade or below grade slabs, split slabs with buried membrane, sandwich slabs with insulation, slabs over unvented metal pan, suspended pool, swimming pool decks without the use of Enviro-Grip™ 404FC primer and asphalt surfaces, asphalt overlays without the express written consent of PSI. PSI

Deck Coating is not recommended over magnesite, gypsum lightweight and where chained or studded tires may be used.

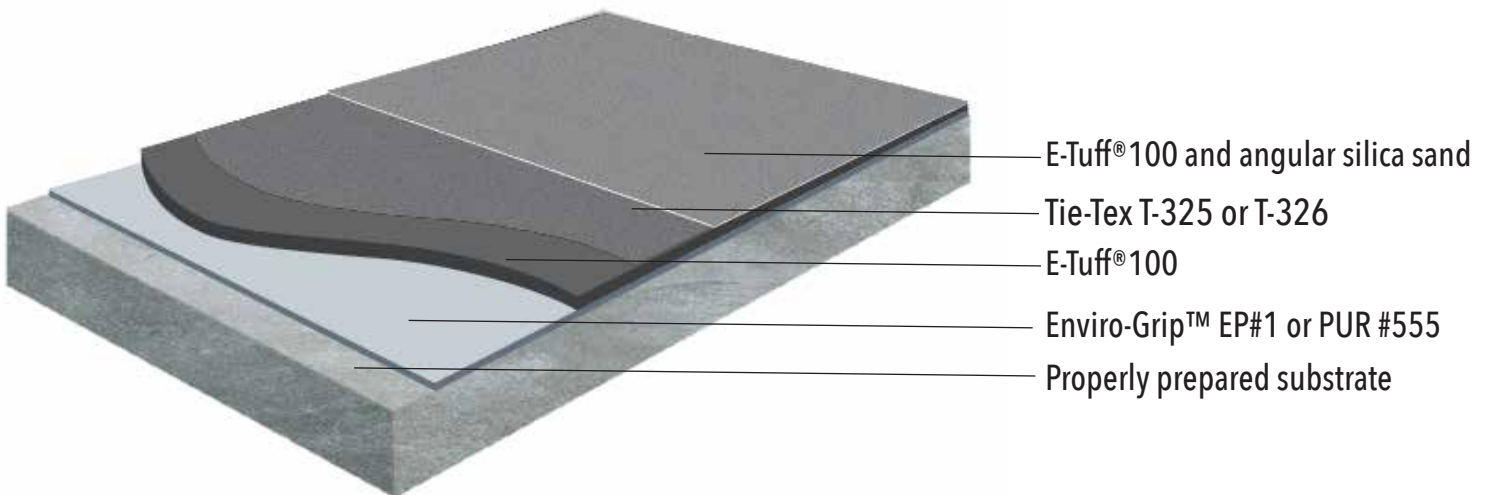
- 1. Concrete must exhibit 3000 psi minimum strength. An ICRI CSP 3 surface or greater is required for concrete surfaces to be coated.
 - 2. New concrete must be cured for 28 days unless otherwise approved by PSI in writing. New surfaces to be coated must be trowel finished in compliance with the American Concrete Institute (except that hand troweling is not required), followed by a fine hair brooming, left free of loose particles, and shall be without ridges, projections, voids and concrete droppings that would be mechanically detrimental to coating application or function. Light broom finished concrete should be power washed before coating application.
 - 3. Concrete cleaning see General & Safety Guidelines.
 - 4. Surface preparation may be completed by shotblasting or the use of Poly-Tuff Profile and Etch cleaner. Peel and adhesion tests are recommended.
- B. **Plywood:**
 - 1. The only acceptable grade of plywood is APA rated exterior grade or better.
 - 2. The appearance characteristics of the panel grade should be considered.
 - 3. Plywood should be new or cleaned and sanded (see General & Safety Guidelines).
 - C. PSI Decking Systems will not withstand rising water tables or hydrostatic pressure on slab-on-grade decks.
 - D. Uncured materials are sensitive to heat and moisture.
 - E. A continuous coating application should ensure a deck with no lines or streaks.
 - F. The substrate must be structurally sound and sloped for proper drainage.
 - G. PSI assumes no liability for substrate defects.

2.09 JOB COMPLETION

- A. Equipment should be cleaned with a urethane grade, environmentally-safe solvent, as permitted under local regulations, immediately after use.
- B. Field visits by PSI personnel are for the purpose of making technical recommendations only and are not to supervise or provide quality control on the job site.

COVERAGE RATE CHART

Primer: Enviro-Grip™ EP#1 or PUR#555	Basecoat: E-Tuff® 100
1 gallon/300 sqft (0.14 liters/m ²)	1st: 1 2/3 gallons/100 sqft (0.68 liters/m ²)
300 sqft/gallon	60.2 sqft/gallon
	mixed E-Tuff® 80 or 100
	2nd: 1 2/3 gallons/100 sqft (0.68 liters/m ²)
	60.2 sqft/gallon
	mixed E-Tuff® 100



- E-Tuff® 100 and angular silica sand
- Tie-Tex T-325 or T-326
- E-Tuff® 100
- Enviro-Grip™ EP#1 or PUR #555
- Properly prepared substrate

WARNING: The products in this system contain solvent, isocyanates, epoxy resin, and curative.

Please read all information in the General & Safety Guidelines, Product Data Sheets, Guide Specifications and Safety Data Sheets (SDS) before applying material. PSI Products are for “Professional Use Only” and preferably applied by professionals who have prior experience with the PSI Products or have undergone training in application of PSI Products. Published technical data and instructions are subject to change without notice. Contact your local PSI representative or visit our website for current technical data, instructions, and project specific recommendations.

LIMITED WARRANTY

PSI warrants its products to be free of manufacturing defects and that they will meet PSI current published physical properties. PSI warrants that its products, when properly installed by a state licensed waterproofing contractor according to PSI guide specifications and product data sheets over a sound, properly prepared substrate, will not allow water migration for a period of 12 months. Seller’s sole responsibility shall be to replace that portion of the product which proves to be defective. There are no other warranties by PSI of any nature whatsoever expressed or implied, including any warranty of merchantability or fitness for a particular purpose in connection with this product. PSI shall not be liable for damages of any sort, including remote or consequential damages resulting from any claimed breach of any warranty whether expressed or implied. PSI shall not be responsible for use of this product in a manner to infringe on any patent held by others. In addition, no warranty or guarantee is being issued with respect to appearance, color, fading, chalking, staining, shrinkage, peeling, normal wear and tear or improper application by the applicator. Damage caused by abuse, neglect and lack of proper maintenance, acts of nature and/or physical movement of the substrate or structural defects are also excluded from the limited warranty. PSI reserves the right to conduct performance tests on any material claimed to be defective prior to any repairs by owner, general contractor, or applicator.

DISCLAIMER

All guidelines, recommendations, statements, and technical data contained herein are based on information and tests we believe to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as a warranty, either expressed or implied. It is the users responsibility to satisfy himself, by his own information and test, to determine suitability of the product for his own intended use, application and job situation and user assumes all risk and liability resulting from his use of the product. We do not suggest or guarantee that any hazard listed herein are the only ones which may exist. Neither seller nor manufacturer shall be liable to the buyer or any third person for any injury, loss or damage directly or indirectly resulting from use of, or inability to use, the product. Recommendations or statements, whether in writing or oral, other than those contained herein shall not be binding upon the manufacturer, unless in writing and signed by a corporate officer of the manufacturer. Technical and application information is provided for the purpose of establishing a general profile of the material and proper application procedures. Test performance results were obtained in a controlled environment and PSI makes no claim that these tests or any other tests, accurately represent all environments.