



FLEXIDECK® E-ML

A Fluid Applied, TDI Free Deck System Using E-Tuff® Slurry Over a Metal Lath

1.01 DESCRIPTION

Flexideck® E-ML is a fluid applied, reinforced, water catalyzed, polyurethane waterproof Decking System incorporating a E-Tuff® Sand Slurry mixture installed over mechanically-fastened-metal lath, in combination with a topcoat.

The system utilizes a primer over metal flashings, E-Tuff® Sand Slurry over attached 2.5 lbs. (1.13 Kg) galvanized Metal Lath and one or two coats of an aliphatic urethane topcoat. Flexideck® E-ML protects surfaces against spalling, freeze/ thaw damage and chemicals commonly encountered on these surfaces. It is an elastomeric system designed to expand and contract with normal structural movements. Flexideck® E-ML is a proven waterproofing system primarily used on plywood or OSB. The product is not limited to these usages and may also be installed without the expanded metal lath over metal and concrete substrates. Installed and maintained properly, Flexideck® E-ML Decking System will ensure years of service. 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

- TDI Free Patented Technology
- Seamless
- Elastomeric
- Non gassing
- Fast curing
- Recoatable
- Good weatherability

1.03 TYPICAL USES

- Renovation or remediation existing surfaces
- Surfaces that experience wide fluctuations in temperature
- High traffic areas for the ski industry
- OSB Plywood
- All typical pedestrian traffic surfaces over wood substrate

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™ EP#2

2-quart kit: One quart (0.946 liter) can of Side-A black liquid, and one quart (0.946 liter) can of Side-B white liquid

2-gallon kit: One gallon (3.78 liter) can of Side-A black liquid, and one gallon (3.78 liter) can of Side-B white liquid

10-gallon kit: one 5 gallon (18.9 liter) pail of Side-A black liquid, and one 5 gallon (18.9 liter) pail of Side-B white liquid

E-Tuff® 100

1 gallon (3.78 liters) can with a partial vial of catalyst

5 gallon (18.9 liters) pail with a full vial of catalyst

Topshield® EST

1 gallon (3.78 liter) can

5 gallon (18.9 liter) pail

55 gallon drum, net fill 50 gallons (189 liters)

1.05 PRODUCT INSTRUCTIONS

- For complete information associated with the application of Flexideck® E-ML, refer to the general guidelines section of the Poly-Tuff Systems International (PSI) catalog which describes the surface preparation, job conditions, finishing details and other necessary information.
- 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.
- For project specific recommendations, please contact PSI.
- Refer to Product Data Sheets referred in System Specifications.

APPLICATION

2.01 SURFACE PREPARATION

- 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 sandpa-

per finish equal to or greater than an ICRI CSP #3. Surface preparation may be completed by shot blasting 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.

2.02 REPAIRS

- A. Apply a polyurethane caulking or mixed base membrane material over all joints, cracks and flashing. The E-Tuff® 100 mixed material is a mixture of 4 parts E-Tuff® 100 and 1 part of water by volume.
- B. Bridge the joints, cracks, and flashings with 4" (10 cm) Super Seal Tape tape pushing it into the polyurethane caulking or E-Tuff® 100 mixed material with a trowel.
NOTE: Using E-Tuff® 100 mixed material as a caulking compound will shorten the curing time appreciably over conventional polyurethane caulks. Conventional polyurethane caulks must be allowed to dry and/or out gas before proceeding with a membrane system.
- C. Over Super Seal Tape, apply a stripe coat of E-Tuff® 100 mixed material and taper it onto the adjacent surface.
- D. Allow the surface to cure for 1 to 2 hours.

2.03 PRIMING

- A. Prime all areas not covered by metal lath with Enviro-Grip™ EP#1 or EP#2 at a rate of 1 gallon/300 sqft (0.14 liters/m²) or 300 sqft/gallon. Apply using a brush or phenolic-core roller. This will result in 3-5 dry mils (76-126 microns) of coating.
- B. Allow primers to become almost 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 thumb-print test. The thumb-print test is defined by when a thumb-print is left in the primer and the primer does not transfer onto the thumb. If primer has been allowed to remain tack free for more than 12 hours, it is necessary to solvent wipe the primed area and reprime.
- C. 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.

2.04 COATING APPLICATION

- A. Mechanically fasten metal lath to deck with 1" (2.54 cm) crown staples over wood substrates. Ensure lath seams and staples are flush at the surface of the lath.
- B. Premix 5 gallon (18.9 liters) pail of E-Tuff® 100 from bottom to top until the coating is homogeneous in appearance. Pour 2.5 gallons (9.46 liters) into a separate empty pail and mix 2.5 gallons (9.46 liters) of E-Tuff® 100 with 2 .5 quarts (2.36 liters) of clean water and desired catalyst (not exceeding 2 catalysts per/mix, heat and humidity can significantly affect cure times become familiar with the catalyst before adding more than 1 vial p/2.5 gallon mix). Add clean, washed, dry silica sand to the mixed water-induced base membrane until the pail is approximately 5 gallons (18.9 liters) or more in the pail. E-Tuff® 100 mixture is prepared and is referral to B-Tuff® Slurry
- C. Apply of E-Tuff® 100 Slurry over metal lath to encapsulate metal lath, hiding the metal lath and while skimming over the surface. Practice before first application in order to maintain the approximate coverage rate of 6 gallons of E-Tuff® 100 Slurry for every 100 sqft (2.45 liters/m²).
- D. The coverage rate is approximately 6 gallons/100 sqft (2.45 liters/m²) or 16 sqft/gallon of E-Tuff® 100 Slurry. Spread E-Tuff® 100 Slurry as per 2.04B, evenly over the entire deck resulting in a minimum 95 ± 2 dry mils (2413 ± 50 microns) thick membrane with E-Tuff® 100.
- E. When E-Tuff® 100 Slurry begins to gel tack set (when membrane is firm and retains tack and does not allow the aggregate to submerge into the membrane) broadcast 14-30 mesh (0.56-1.41 mm) rubber granules, or clean 16-30 mesh (0.595-1.19 mm) sand aggregates, 6.5 Mohs minimum hardness until refusal. The amount of aggregate used will vary depending on trowel finish and mesh size. Remove loose aggregate by sweeping, vacuuming and/or blowing the excess aggregate off the deck.
- F. When E-Tuff® 100 Slurry is firm enough to support the weight of the installer or when coating is dry (approximately 2-3 hours) proceed to application of top coat.

2.05 TOPCOAT APPLICATION

- A. Apply desired color of Topshield® EST at a rate of 1 1/4 gallons/100 sqft (0.51 liters/m²) or 80 sqft/gallon. This



SYSTEM SPECIFICATIONS

SECTION 2.4.2

coat will result in an additional 13 ± 2 dry mils (330 ± 50 microns) thick coating.

- B. At 70°F (21°C) and 50% relative humidity allow a minimum of 16 and a maximum of 48 hours for topcoat to cure.
- C. A finish second topcoat of Topshield® EST should be applied over granulated rubber surfaces, and medium to heavy-duty traffic areas at a rate of 3/4 gallons/100 sqft (0.31 liters/m²) or 133 sqft/gallon. This coat will result in an additional 8 ± 2 dry mils (203 ± 50 microns) thick coating. When rubber granules are used, two coats of topcoats are required to encapsulate the rubber aggregate.
- D. Optional Fast Cure Topcoat: The addition of Topshield® Accelerator will shorten cure time to 6 to 8 hours for each coat.
- E. Optional Topcoats: Topshield® EST may be substituted with:
 - 1. Topshield® 5600EF for fast cure and low odor.
 - 2. Topshield® ALP-150 for value engineered projects.
 - 3. Staintuff® 4072 for fast cure, clears and exceptionally durable finishes.

2.06 FINISHED SYSTEMS

- A. When applied as directed above, Flexideck® E-ML Decking System will provide minimum 120 ± 5 dry mils (3044 ± 125 dry microns) exclusive of aggregate, of superior waterproofing protection. 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 E-Tuff® Rubber/Sand Slurry

and are estimated outside the stated minimum coverage rates reflected on Product Data Sheets.

2.07 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 expressed 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 shot-blasting 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 without the use of Enviro-Grip™ 404FC primer (see Enviro-Grip™ 404FC Product Data Sheet).

- 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.

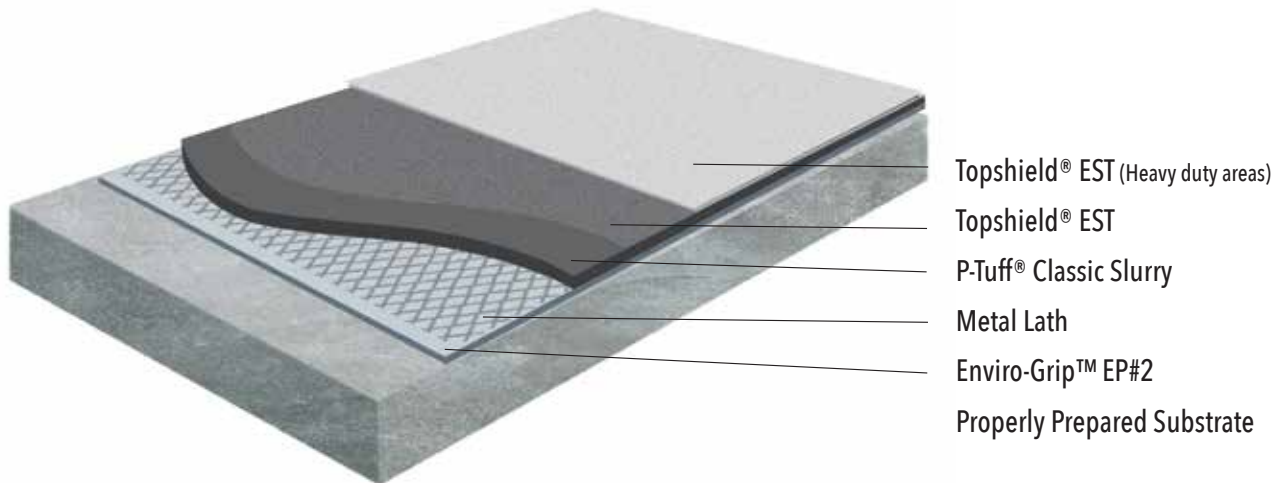
2.08 JOB COMPLETION

- 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.

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

COVERAGE RATE CHART

Primer: Enviro-Grip™ EP#1 EP #2	Basecoat: E-Tuff® 100 Slurry	Topcoat: Topshield® EST
1 gallon/300 sqft (0.14 liters/m ²)	6 gallons/100 sqft (2.45 liters/m ²)	1st: 1 1/4 gallons/100 sqft (0.51 liters/m ²)
300 sqft/gallon	16 sqft/gallon	80 sqft/gallon
		2nd with rubber aggregate or heavy duty areas:
		3/4 gallon/100 sqft (0.31 liters/m ²)
		133 sqft/gallon



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.