



# FLEXIDECK® P-PDEF

A 50 Dry Mils, Fast Curing, Seamless, Vehicular Traffic Coating for Concrete

## 1.01 DESCRIPTION

Flexideck® P-PDEF is a liquid applied, fast cure, high solids, water-catalyzed polyurethane, waterproof Vehicular Traffic DeckSystem. The system utilizes a primer, one coat of a water catalyzed, urethane basecoat, one coat of an aliphatic urethane topcoat for medium traffic, a second coat of an aliphatic topcoat for heavy traffic areas, and an additional aliphatic urethane topcoat on ramps and turn radii.

Flexideck® P-PD can be applied to protect 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. It will not soften in heat nor become brittle in cold. Flexideck® P-PDEF is a proven waterproofing system primarily used on plywood, concrete and metal surfaces. Flexideck® P-PDEF Vehicular Traffic Deck 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

- Seamless
- Elastomeric
- Non gassing
- Meets California VOC and SCAQMD Requirements
- Recoatable
- Good weatherability
- Fast curing

## 1.03 TYPICAL USES

- Parking Decks
- Over Occupied Space
- Sun Decks
- Balconies
- Patios
- Roof Decks

## 1.04 APPROVALS

- Meets ASTM C-957
- Miami Dade Approved
- CLASS A FIRE RATED
- ASTM E-108
- ASTM C-836
- PASS ACRC 10-024 WIND UPLIFT TEST

## 1.05 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

### Enviro-Grip™ EBF-LV

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

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

### P-Tuff® Classic

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

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

### Topshield® 5600EF

4.4-gallon kit: One 5 gallons (net 4 gallons, 15.1 liters) pail of Side-A and one 1/2 gallon (net 0.4 gallon, 1.5 liters) jar of Side-B

## 1.06 PRODUCT INSTRUCTION

- For complete information associated with the application of Flexideck® P-PDEF, refer to the General & Safety 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.

- 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 pre-stripe of base coat. Alternatively, joints and cracks 1/16" 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 P-Tuff® Classic 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, EP#2, or EBF-LV at a rate of 1 gallon/200-400 sqft (0.1-0.2 liters/m<sup>2</sup>) or 200-400 sqft/gallon per project specifications. Apply using a brush or phenolic-core roller on spray apparatus. This will result in 3 dry mils (76 microns) of coating. 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.

### **2.04 COATING APPLICATION**

- A. Apply P-Tuff® Classic mixed material to substrate at a rate of 2 gallons/100 sqft (0.80 liters/m<sup>2</sup>) or 50 sqft/gallon. P-Tuff® Classic mixed material or water-catalyzed mixed P-Tuff® Classic is a properly homogeneous mixed mixture of four parts of P-Tuff® Classic and one part of water by volume. Application will require more or less material depending on substrate conditions.
- B. Use a notched trowel or squeegee to spread P-Tuff® Classic mixed material evenly over the entire deck resulting in a minimum 24 ± 2 dry mils (610 ± 50 microns) thick membrane.
- C. When P-Tuff® Classic mixed material begins to gel, approximately 15 minutes after placement, broadcast 14-30 mesh rubber granules into the wet membrane to refusal. Normal usage is 20 lbs of rubber granules /100 sqft (0.98 kg/m<sup>2</sup>). Two top coats are required when utilizing rubber aggregates. Each top coat should be applied at a minimum of 100 sqft /gallon.
- D. When broadcasting silica sand, allow membrane 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 rounded silica sand in the 12-20 (0.84-1.68mm), 16-30 (0.595-1.19mm) or 20-40 (0.84-1.62mm) mesh size (as required by customer specifications or as specified in systems specifications) and a 6.5 Mohs 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.
- E. When P-Tuff® Classic mixed material is stiff enough to support weight without imprinting or denting the coating or, when coating is dry (approximately 2-3 hours 70°F (21°C). Remove all loose aggregate by sweeping, vacuum or blowing the excess sand off the deck. Make any touch up or repairs. Allow repairs to cure.

### **2.05 TOPCOAT APPLICATION**

- A. Apply desired color of Topshield® 5600EF at a rate of 1 2/3 gallons/100 sqft (0.68 liters/m<sup>2</sup>) or 60 sqft/gallon. This coat will result in an additional 24 ± 2 dry mils (610 ± 50 microns) thick coating. Refer to the chart at the end of this System Description for coverage rates. Broadcast addition-



# SYSTEM SPECIFICATIONS

## SECTION 2.3.3

al aggregate as needed via the "rain method" to cover any bare or insufficient aggregate placement.

- B. Check that no pinholing has occurred from concrete out gassing.
- C. For a heavy-duty traffic system, apply an additional coat of desired color of Topshield® 5600EF at a rate of 1 gallon/100 sqft (0.41 liters/m<sup>2</sup>) or 100 sq/ft/gallon. This coat will result in an additional 14± 2 dry mils (356 ± 50 microns) thick coating.
- D. At 70°F (21°C) and 50% relative humidity allow a minimum of 16 and a maximum of 48 hours for topcoat to cure before subjecting to vehicular traffic.

### 2.06 RAMPS, TURN RADII APPLICATION

- A. Over ramps, turn radii, and other heavy traffic areas only, apply desired color of Topshield® 5600EF at a rate of 1 gallon/100 sqft (0.41 liters/m<sup>2</sup>) or 100 sq/ft/gallon. This coat will result in an additional 14± 2 dry mils (356 ± 50 microns) thick coating. Refer to the chart at the end of this System Description for coverage rates. Broadcast additional aggregate as needed to cover any bare or insufficient aggregate placement.
- B. At 70°F (21°C) and 50% relative humidity allow a minimum of 24 hours for topcoat to cure before subjecting to vehicular traffic.

### 2.07 FINISHED SYSTEM

- A. When applied as directed above, Flexideck® P-PDEF Vehicular Traffic Deck System will provide minimum 50 ± 5 dry mils (1270 ± 125 dry microns) with single topcoat, exclusive of aggregate, of superior waterproofing protection. A heavy duty traffic system, with a second coat of topcoat will result in 64 ± 5 dry mils (1625 ± 50 microns). A third coat of topcoat on ramps, turn radii will result in 78 ± 5 dry mils (1982 ± 50 microns). 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.

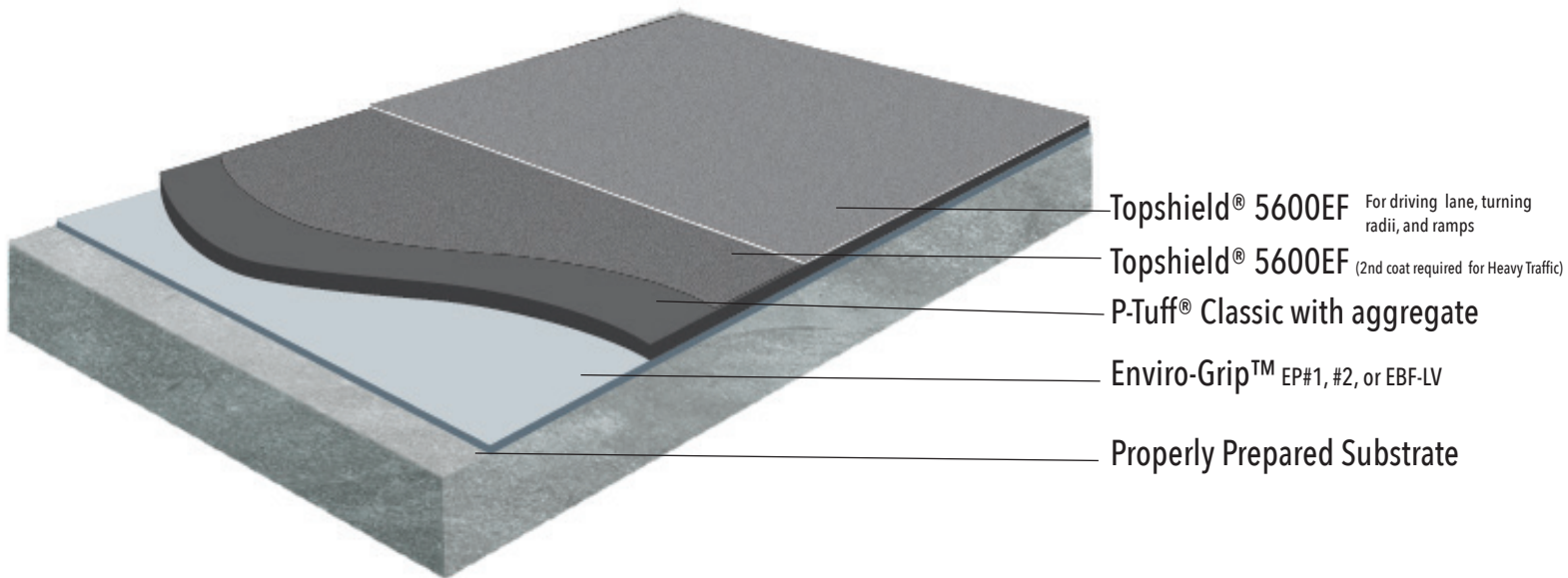
**2.09 JOB COMPLETION**

- 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.

**WARNING: The products in this system contain solvent, isocyanates, Epoxy Resin, and curatives.**

**COVERAGE RATE CHART**

| Primer: Enviro-Grip™ EP#1, #2, or EBF-LV  | Basecoat: P-Tuff® Classic           | Topcoat: Topshield® 5600EF            | Ramps, Turn Radii Topshield® 5600EF |
|---|-------------------------------------|---------------------------------------|-------------------------------------|
| 1 gallon/200-400 sqft (0.2-0.1 liters/m²) | 2 gallons/100 sqft (0.82 liters/m²) | Medium Duty (60 sqft/gallon)          | 1 gallons/100 sqft (0.51 liters/m²) |
|   | 50 sqft/gallon                      | Heavy Duty (100 sqft/gallon)          | 100 sqft/gallon                     |
|   |                                     | 2nd coat at 1 gallon/100 sqft/gallon) |                                     |



Topshield® 5600EF For driving lane, turning radii, and ramps

Topshield® 5600EF (2nd coat required for Heavy Traffic)

P-Tuff® Classic with aggregate

Enviro-Grip™ EP#1, #2, or EBF-LV

Properly Prepared Substrate

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.