



T-SHIELD® WC-100 (FORMERLY TERRA-SHIELD WC-100)

A Single Component, High Solids, Water Catalyzed, Liquid-Applied Membrane for Vertical and Horizontal Surfaces Applied at any Field Thickness from 30 to 2500 mils

1.01 DESCRIPTION

T-Shield® WC-100 is a seamless, joint free and crack free system created from a single component, high solids, water curable, liquid applied, bitumen modified, coal-tar free, urethane polyurea, waterproofing membrane for vertical and horizontal surfaces. The system is fully adhered and reinforced and may be applied at any field thickness from 30 to 2500 mils (762-63,500 microns) or more in one application while supplying simultaneous curing throughout the coating. Please use the correct 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

- Applied at Any Required Thickness
- Change of Slope of Deck from Negative to Positive
- Economical
- Fast Curing
- Fast Recoat Times
- Fill Ponds & Low Areas in One Application
- Highly Flexible Over Extreme Temperatures
- Labor Saving
- Low Odor
- Meets the Criteria of ASTM C-836 & E-96
- No Heating or Kettles
- Non Gassing
- Resistant to Bacterial Growth
- User Friendly

1.03 TYPICAL USES

- Balcony & Breezeway Waterproofing
- Basements
- Between Slabs
- Foundation Walls
- Planters
- Plywood Waterproofing
- Showers, Laundry, Kitchen Floors
- Simultaneous Continuous Curing Throughout the Coating in Any Thickness
- Tunnels
- Under Malls, Plazas & Promenade Decks
- Green Roof Waterproofing
- Roofing

T-Shield® WC-100 is made to be able to supply slope to drain and fill ponds on plywood, concrete, metal, urethane foam and other roofing systems.

1.04 COLOR

Black

TECHNICAL DATA (Based on draw down films)

Tear Resistance Die C, ASTM D-624	50 ± 5 pli (8.76 ± 0.8 kNm)
Specific Gravity	1.12 ± 0.1 lbs/gal
Solids by Weight ASTM D-2369	95 ± 2%
Solids by Volume ASTM D-2697	94 ± 2%
Hardness, ASTM D-2240 Shore A	25 ± 5
Tensile Strength, ASTM-D412	300 ± 50 psi (2.07 ± 0.34 MPa)
Ultimate Elongation, ASTM D-412	650 ± 10%
Volatile Organic Compounds, ASTM D-2369-81	<0.5 lbs/gal (<60 gm/liter)

1.05 PACKAGING

T-Shield® WC-100 is made to be able to supply slope to drain and fill ponds on plywood, concrete, metal, urethane foam and other roofing systems.

1.06 SURFACE PREPARATION

Refer to General and Safety Guidelines for complete information. 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. Install a 100-200 sqft (9.30-18.58 sqm) mock up of the system to be installed and approve for actual coverage rates and functionality before proceeding.

1.07 PRIMING

Prime surface as required with Enviro-Grip™ EP#2(SC), #1 (mixture of Side-A & Side-B) or Enviro-Grip™ PUR#555 at a rate of 1 gallon per 300 sqft (0.14 liters/sqm) or 300 sqft/gallon. Apply using a brush or phenolic core roller. This will result in 3 dry mil (76 microns) of coating. 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 Poly-Tuff Systems International (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.

1.08 MIXING

Add one quart (0.95 liters) of water to 5 gallons (18.9 liters) of T-Shield® WC-100 and mixed thoroughly using a mechanical mixer at slow speed to ensure a homogeneous material. Take care not to allow entrapment of air into the material.

1.09 JOINTS, CRACKS, AND FLASHING

Apply T-Shield® WC-100 overall primed joints and cracks. Bridge the joints and cracks with 3 inch (7.6 cm) Polyester Tape or polyurethane foam, pushing it into the sealant with a trowel. Over reinforcement tape apply a thin coat of T-Shield® WC-100 and smooth onto adjacent surface. Optionally, in lieu of 3 coursing laps and joints, Super-Seal™ Tape may be applied over all primed concrete at laps, joints and cracks.

APPLICATION

2.01 APPLICATION BASICS

T-Shield® WC-100 may be applied directly with a brush, squeegee, or trowel. An airless sprayer or phenolic-core roller may be used but extra care should be taken not cause air bubbles. Apply T-Shield® WC-100 evenly over the primed surface. At 75°F (24°C) and 50% relative humidity, allow coating to cure a minimum of 2-4 hours before proceeding to subsequent coats. Cure time will vary depending on temperature and humidity.

A 30 mils (762 microns) construction coat may be applied for temporary waterproofing in horizontal surfaces until the finish system is applied. However, due to the probability of damage, more coating may be needed to create a smooth finish. Attention to proper slope to drain is essential for proper waterproofing. Primer is optional on plywood and CMU.

2.02 COVERAGE

Recommended coverage rates are a minimum dry film thickness of 90 mils (2286 microns) on plywood, 60 mils (1524 microns) on concrete. Extended warranties require 120-160 mils (3048-4064 microns) fully reinforced (See T-Shield® WC-100R System Specifications). 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. Extended Warranties require a minimum of 120 mils (0.31 cm) or more.

2.03 CURING

For multiple coat applications, allow coating to cure for a minimum of 2 and a maximum of 48 hours (curing is a function of ambient temperature and humidity) before proceeding to subsequent coats. If more than 48 hours pass between coats the surface must be reprimed. Curing time will vary depending on temperature and humidity.

2.04 EQUIPMENT CLEANUP

Equipment should be cleaned with an environmentally-safe solvent, as permitted under local regulations, immediately after use.

2.05 SHELF LIFE AND STORAGE

T-Shield® WC-100 has a shelf life of 12 months from date of manufacture in original, factory-sealed containers when stored indoors at a temperature between 60-95°F (15-35°C).

2.06 LIMITATIONS

- Surfaces must be dry, clean and free of foreign matter.
- Not UV stable
- Can not withstand direct wear or abrasion.
- Containers that have been opened must be used as soon as possible.
- Do not dilute under any circumstance.

The following conditions must not be coated with PSI deck coating systems or products:

- 1) 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, or areas where hydrostatic pressure is or may be present, 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.
- 2) Concrete must exhibit 3000 psi minimum strength. An ICRI CSP 2-3 surface or greater is required for concrete surfaces to be coated.
- 3) 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.
- 4) Concrete cleaning (see General and Safety Guidelines). Surface preparation may be completed by shotblasting or the use of Poly-Tuff Profile and Etch (PE) cleaner. Peel and adhesion tests are recommended.

WARNING: This product contains isocyanates.

Please read all information in the General & Safety Guidelines, Technical 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 and chemical properties. 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 user's 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.