POLY-TUFF SYSTEMS INTERNATIONAL
WATERPROOFING DIVISION

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

A Two Component, Solvent Free, Liquid-Applied Membrane Applied at Any Thickness

1.01 DESCRIPTION

T-Shield® BG-100 is a two component, solvent free, high solids, low odor, liquid applied, bitumen modified, coal-tar free, polyurethane-waterproofing membrane. Please use the correct product grade that complies with VOC regulations as per federal, state, county and city regulations/codes at the place of installation of product.

1.02 FEATURES

- Apply at Any Thickness
- Fast Curing
- Labor Saving
- Low Odor
- Solvent Free
- User Friendly

1.03 USES

- Between Slabs
- Foundation Walls
- Planters
- Tunnels

1.04 COLOR

Side-A: Black, Side-B: Red

1.05 PACKAGING

10-gallon kit: 5 gallon (18.9 liters) pail of Side-A black liquid and 5 gallons
(18.9 liters) pail of Side-B red liquid

100-gallon kit: 55 gallon drum – net fill 50 gallons (189 liters) of Side-A black liquid and 55-gallon drum – net fill 50 gallons (189 liters) of Side-B red liquid.

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) mockup 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 mils (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 mockup. 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.

1.08 MIXING

The volume mixing ratio is 1 part Side-A black liquid to 1 part Side-B red liquid (1A:1B).

T-Shield® BG-100 Side-A and Side-B should be thoroughly mixed individually prior to combining to ensure a homogeneous material. Add the T-Shield® BG-100 Side-B to the T-Shield® BG-100 Side-A and thoroughly mix using a mechanical mixer at slow speed for at least 5 minutes, if mixed by hand. Use care not to allow the entrapment of air into the mixture. Mix no more material than can be used within 20 minutes.

1.09 JOINTS, CRACKS, AND FLASHING

Apply T-Shield® BG-100 overall primed joints and cracks. Bridge the joints and cracks with 3" (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® BG-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

For best results use a brush, squeegee or trowel. Airless sprayer or phenolic resin core roller may be used but extra care should be taken not to cause air bubbles.

Apply T-Shield® BG-100 evenly over the primed surface at 64 mil thickness (100 microns) which corresponds to 4 gallons/100 sqft (1.63 liters/sqm) or 25 sqft/gallon.

Primer is optional on new plywood.

2.02 CURING

Allow coating to cure a minimum of 1-2 hours before proceeding to subsequent coats. Subsequent coats may be applied immediately after the T-Shield® BG-100 cures and can support the weight. Do not allow more than six hours between coats.

2.03 EQUIPMENT CLEANUP

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

2.04 SHELF LIFE AND STORAGE

T-Shield® BG-100 has a shelf life of 12 months from date of manufacture

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in original, factory-sealed containers when stored indoors at a temperature between 60-95°F (15-35°C).

2.05 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.

TECHNICAL DATA

T-Shield® BG-100 Vertical. Based on draw down film.

Pot Life @ 75°F (24°C) 50%RH	25-35 Minutes
Hardness, ASTM D-2240 Shore A	
With Fabric	48 ± 5
Without Fabric	13 ± 2
Tear Resistance, Die C , ASTM D-624	
With Fabric	150 ± 15 pli (26.29 ± 2.6 kN/m)
Without Fabric	51 ± 5 pli (8.94 ± 0.8 kN/m)
Tensile Strength, ASTM D-412	
With Fabric	210 ± 20 psi (1.45 ± 0.14 MPa)
Without Fabric	175 ± 10 psi (1.21 ± 0.14 MPa)
Ultimate Elongation, ASTM D-412	
With Fabric	60 ± 6%
Without Fabric	410 ± 40%
Specific Gravity	Side-A:1.02 ± 0.1 Side-B:1.01 ± 0.1
Total Solids by Weight, ASTM D-2369 Combined	91 + 2%
Total Solids by Volume, ASTM D-2697 Combined	89.8 + 2%
Viscosity at 75°F (24°C)	Side-A:800 ± 200 cps Side-B:1100 ± 200 cps
Volatile Organic Compounds ASTM D-2369-81, Combined	<0.83 lbs/ gal (< 100 gm / liter)

TECHNICAL DATA

T-Shield® BG-100 Horizontal. Based on draw down film.

Pot Life @ 75°F (24°C) 50%RH	25-35 Minutes
Hardness, ASTM D-2240 Shore A	
With Fabric	63 ± 5
Without Fabric	12 ± 2
Tear Resistance, Die C , ASTM D-624	
With Fabric	160 ± 15 pli (28.04 ± 2.6 kN/m)
Without Fabric	16.4 ± 3 pli (2.94 ± 0.5 kN/m)
Tensile Strength, ASTM D-412	
With Fabric	214 ± 20 psi (1.48 ± 0.14 MPa)
Without Fabric	116 ± 10 psi (2.24 ± 0.07 MPa)
Ultimate Elongation, ASTM D-412	
With Fabric	54 ± 10%
Without Fabric	430 ± 40%
Specific Gravity	Side-A:1.02 ± 0.1 Side-B:1.01 ± 0.1
Total Solids by Weight, ASTM D-2369 Combined	91 + 2%
Total Solids by Volume, ASTM D-2697 Combined	89.8 + 2%
Viscosity at 75°F (24°C)	Side-A:800 ± 200 cps Side-B:1100 ± 200 cps
Volatile Organic Compounds ASTM D-2369-81, Combined	<0.83 lbs/ gal (< 100 gm / liter)

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 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.