



T-SHIELD® BG & T-SHIELD® GC (FORMERLY TERRA-SHIELD BG)

A Single Component, Liquid Applied, Black Membrane System for Vertical, Horizontal Surfaces and for Green Concrete

1.01 DESCRIPTION

T-Shield® BG is a single component, liquid applied, bitumen modified, coal-tar free, urethane, polyurea joint and crack-free waterproofing membrane system for vertical and horizontal surfaces. T-Shield® BG-H is designed for horizontal grade. T-Shield® BG-V is for vertical grade. T-Shield® GC-H is for green concrete - horizontal grade. T-Shield® GC-V is for green concrete - vertical grade. This products meets 100 VOC limit. 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

- Economical
- Green Concrete Grades available for Horizontal & Vertical Apps. (T-Shield®GC-H & T-Shield® GC-V)
- Labor Saving
- Meets the Criteria of ASTM C-836 & E-96
- Resistant to Bacterial Growth
- User Friendly

1.03 TYPICAL USES

- Basements
- Between Slabs
- Bridges
- Foundation Walls
- Planters
- Shower Pans
- Tunnels
- Under Slab Plywood Waterproofing

1.04 COLOR

Black

1.05 PACKAGING

5 gallon (18.9 liter) pail

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

Available in both Horizontal and Vertical Grades

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

T-Shield® BG should be thoroughly mixed 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® BG or GC over all primed joints and cracks. Bridge the joints and cracks with 3" (7.66 cm) Polyester Tape. Apply a thin coat of T-Shield® BG or GC over the reinforcement tape and smooth onto the 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.

Wall-to-deck perimeter flashings shall be either a minimum of 24 gauge galvanize steel flashing or Flexi-Flashing™. Flashing should turn up the wall a minimum of 6" (15.24 cm) and turn out 4" (10.16 cm) onto the deck surface. Metal Flashings require Enviro-Grip™ EP#2. Flexi-Flashing™ must be primed with Enviro-Grip™ EP#1, #2, or PUR#5. The use of Flexi-Flashing may often replace corrosive metal flashings.

APPLICATION

2.01 APPLICATION BASICS

T-Shield® BG or GC may be applied directly with a brush, squeegee, trowel or phenolic core roller. Apply T-Shield® BG or GC evenly over the primed surface. Primer is optional on plywood and CMU.

2.02 CURING

For multiple coat applications, allow coating to cure for a minimum of 16 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.

T-Shield® BG or GC is very sensitive to heat and moisture. Higher

temperatures and/or high humidity will accelerate the cure time. Use caution in thickness of application. Limit single coat thickness to 30-40 wet mils (1016-1753 microns).

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 or GC 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).

2.05 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.
- Green concrete should be cured a minimum of 72 hours before applying green concrete coating T-Shield® GC-H (Horizontal grade) or T-Shield® GC-V. (Vertical Grade).

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 and solvents.

TECHNICAL DATA Based on Draw Down Film	T-Shield® BG-H Horizontal	T-Shield® BG-V Vertical	T-Shield® GC-H Green Concrete Horizontal	T-Shield® GC-V Green Concrete Vertical
Hardness, ASTM D-2240 Shore A	50 ± 5	45 ± 5	50 ± 5	45 ± 5
Tear Resistance, Die C, ASTM D-624	40 ± 20 pli (7.0 ± 3.5 kN/m)	35 ± 10 pli (6.1 ± 2 kN/m)	40 ± 20 pli (7.0 ± 3.5 kN/m)	35 ± 10 pli (6.1 ± 2 kN/m)
Tensile Strength, ASTM D-412	350 ± 50 psi (3.45 ± 0.3 MPa)	350 ± 50 psi (3.45 ± 0.3 MPa)	350 ± 50 psi (3.45 ± 0.3 MPa)	350 ± 50 psi (3.45 ± 0.3 MPa)
Total Solids by Weight, ASTM D-2369	92 ± 3%	92 ± 3%	92 ± 3%	92 ± 3%
Total Solids by Volume, ASTM D-2697	90 ± 3%	90 ± 3%	90 ± 3%	90 ± 3%
Viscosity, at 80°F (27°C)	5,000 ± 2000 cps	40,000 ± 20000 cps	5,000 ± 2000 cps	40,000 ± 20000 cps
Ultimate Elongation, ASTM D-412	300 ± 50%	300 ± 50%	300 ± 50%	300 ± 50%
Specific Gravity	1.32	1.23	1.32	1.23
Volatile Organic Compounds ASTM D-2369-81	0.83 lbs/gal (100 gm/liter)	0.83 lbs/gal (100 gm/liter)	0.83 lbs/gal (100 gm/liter)	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 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.

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