TERRA-SHIELD® WC-100R

A Single Component, Water Curable, Liquid, Cold Applied Reinforced Roofing and Waterproofing Membrane System

1.01 DESCRIPTION

Terra-Shield® WC-100R is a seamless and joint free waterproofing system created from a single component, water curable liquid applied, coal tar free, urethane/polyurea roofing and waterproofing membrane system for vertical and horizontal surfaces. The coating may be applied in the field from 30 to 2500 mils (0.076 -6.35 cm) in one application while supplying simultaneous curing throughout the coating. The system may be applied as one or two applications of Terra-Shield® WC-100 when heavily reinforced with Tie-Tex 326 Fabric. The Terra-Shield® WC-100R System is capable of correcting negative slope, filling pond areas and creating moderate positive slope to drain. 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

- Economical
- Resistant to bacterial growth
- Non gassing
- Fast curing
- Low odor
- Controlled cure
- Labor saving
- User friendly
- Fast recoat times
- No heating or kettles
- Meets the Criteria of ASTM C-836 & E-96
- Fills Ponds and Low areas
- Applied at any required thickness
- Highly Flexible over extreme temperatures
- Meets SCAQMD VOC Requirements

1.03 TYPICAL USES

- Reroofing
- Planters
- Between Slabs
- Terrazzo and Tile Floors
- Green Roof Waterproofing
- Modified Cap Sheet
- Under Malls, Plazas and Promenade Decks.
- I.R.M.A Roofing
- Tunnels
- Basements
- Foundation Walls

1.04 COLOR

Black

1.05 PACKAGING

Terra-Shield® WC-100

5 gallon (18.9 liters) pail

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

1.06 SURFACE PREPARATION

A. 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.

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. Refer to Products Data Sheets for products referred in the System Specifications.

1.07 MIXING

A. One quart (0.95 liters) of water should be added to 5 gallons (18.9 liters) of Terra-Shield® WC-100 and 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.

1.08 JOINTS, CRACKS, AND FLASHING

A. Apply Terra-Shield® WC-100 over all primed joints and cracks. Bridge the joints and cracks with 4" (10.16 cm) Super Seal Tape. Do not prime over Super Seal Tape. Over reinforcement tape apply a thin coat of Terra-Shield® WC-100 and smooth onto adjacent surface. Optionally in lieu of 3 coursing laps and joints, Super Seal Tape may be used over all cleaned laps, joints and cracks and then coated. Fully reinforced systems do not require the use of Super Seal Tape over joints and cracks.

TECHNICAL DATA Terra-Shield® WC-100	
Hardness, ASTM D-2240	25 ± 5 D
Tear Resistance Die C, ASTM D-624	50 ± 5 pli
Tensile Strength, ASTM D-412	300 ± 50 psi
Ultimate Elongation, ATSM D-412	650% ± 50%
Specific Gravity	1.12
Total Solids by Weight, ASTM D-2369	95% ± 2%
Total Solids by Volume, ASTM D-2697	94% ± 2%
Volatile Organic Compounds, ASTM D-2369-81	<0.5lbs/gal
	<60 gm/liter

B. Wall to deck perimeter flashings shall be either a minimum of 24 gauge galvanize steel flashing or 40-60 mils (0.1-0.15 cm) EPDM Sheet Rubber. Flashing shall 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. EPDM must be primed with Enviro-Grip® EP#1, EP#2, or PUR#5. The use of Flexi-Flashing may often replace corrosive metal flashings.

APPLICATION

2.01 APPLICATION BASICS

A. Terra-Shield® WC-100 may be applied directly by spray, brush, squeegee, trowel or phenolic-core roller. Apply Terra-Shield® WC-100 evenly over the primed EPDM surface in 60 mil + application thicknesses.

B. When reinforcing with Tie-Tex 326 Fabric; specified mils of base membrane is applied followed by the application of Tie-Tex 326 Fabric or approved equal fabric by broomed or spike rolled into place saturating the fabric into the wet membrane. Overlap fabric 6" (15.24 cm) and apply coating over the laps and adjacent areas. An additional membrane as a topcoat is applied over the fabric.

C. The fabric installation should be wrinkle and air-pocket free before applying topcoat. Tie-Tex 326 Fabric should be applied after the first application of Terra-Shield® WC-100 is firm in approximately 2 hours.

D. Terra-Shield® WC-100R System yields a total of a minimum 60 mils (0.15 cm) coating without fabric. Systems with a total of 100 mils (0.25 cm) with the Tie-Tex 326 Fabric will require 45 mils (0.11 cm) of base membrane and 45 mils (0.11 cm) of topcoat membrane. Systems with a total of 150 mils (0.38 cm) will require a base membrane of 70 mils (0.18 cm) and a topcoat membrane of 70 mils (0.18 cm) with the Tie-Tex 326 Fabric sandwiched between coats.

E. Primer is optional on plywood and CMU. Enviro-Grip® #1, #2, or PUR#5 is acceptable on concrete surfaces. Allow primer to become "thumbprint tacky" before coating application. Consult PSI before choosing primer on single-ply membrane surfaces.

2.02 ROOFING

Terra-Shield® WC-100R may be utilized as an exposed roof coating, when a roof granule or aggregate to refusal while the coating is in the thumbprint tacky stage and before the coating loses its tack.

2.03 CURING

A. For multiple coat applications, allow coating to cure for a minimum of 1 and a maximum of 48 hours (curing is a function of ambient temperature and humidity) before proceeding to subsequent coats. If more than 48 hour pass between coats the surface must be reprimed.

B. Terra-Shield® WC-100 is 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 (0.08- 0.1 cm) wet mils.

C. 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.

2.04 EQUIPMENT CLEANUP

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

2.05 STORAGE

Terra-Shield® WC-100 has a shelf life of six (6) months from date of manufacture in original, factory sealed containers.

2.06 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 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 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.

WARNING: This product contains hydrocarbons, isocyanates and solvent

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.

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