VERSIFLEECE TPO

G U I D E - S P E C

VersiFleece® Mechanically Attached Roofing System

January 2012

This **GUIDE-SPEC** is a brief outline of Versico's VersiFleece TPO Mechanically Attached Roofing System requirements and is intended for use as a submittal with a bid package. Specifiers and the Versico Authorized Roofing Contractor must comply with the applicable Sections of Versico's Technical Manual, prior to design or bid.

PART I GENERAL

1.01 DESCRIPTION

The Sure-Weld VersiFleece Mechanically Attached Roofing System incorporates 45, 60 or 80-mil thick, 12' or 6' wide white, gray or tan VersiWeld membrane laminated to a 55-mil non-woven polyester fleece-backing. Without an underlayment, the membrane can be installed directly over a smooth surfaced BUR, mineral surfaced cap sheet or modified bitumen and mechanically fastened to an acceptable steel or wood deck with Versico HPVX Fasteners and HPVX Plates spaced a maximum of 12" on center. Adjoining sheets of membrane are joined together with a minimum 1-1/2" wide hot air weld. Membrane securement to other types of decks will require an approval from Versico depending upon pullout values achieved.

1.02 QUALITY ASSURANCE

A. This roofing system must be installed by a Versico Authorized Roofing Contractor in compliance with shop drawings as approved by Versico.

B. Upon request, an inspection shall be conducted by a Field Service Representative of Versico to ascertain that the membrane roofing system has been installed according to Versico's published specifications and details applicable at the time of bid. This inspection is to determine whether a warranty shall be issued. It is not intended as a final inspection for the benefit of the owner.

C. For specific code approvals achieved with this system, refer to Versico's VersiFleece Code Approval Guide, FM Approvals or UL Fire Resistance Directory for Roofing Materials and System.

1.03 SUBMITTALS

A. To ensure compliance with Versico's warranty requirements, the following projects should be forwarded to Versico for review prior to installation, preferably prior to bid.

1. Air pressurized buildings, canopies, and buildings with large openings, cold storage buildings or freezer facilities, adhered roofing system projects over 100' in height or projects where the VersiFleece membrane is expected to come in direct contact with petroleum-based products, waste products (i.e., grease, oil, animal fats, etc) and other chemicals.

B. Shop drawings must be submitted to Versico by the Versico Authorized Roofing Contractor along with a completely executed Copy-A – Job Approval Request For Warranty form) for approval. Approved shop drawings are required for inspection of the roof and on projects where on-site technical assistance is requested.

1.04 GENERAL DESIGN CONSIDERATIONS

A. It is the responsibility of the building owner or his/her designated representative to verify structural load limitation. In addition, a core cut may be taken to verify weight of existing components when the roofing system is to be specified on an existing facility.

B. On new construction projects, especially in cold climate regions, moisture generated due to the construction process could adversely impact various components within the roofing assembly if not addressed. Refer to Spec Supplement G-01-11 "Construction Generated Moisture" included in the Versico Technical Manual.

C. On structural concrete decks, when a vapor retarder is not used, gaps in the deck along the perimeter and around penetrations must be sealed along with vertical joints between tilt-up panels, if present, to prevent infiltration of hot humid air and possible moisture contamination resulting from condensation. This is specifically important when adhesive is used to attach the roof insulation.

VERSICO ROOFING SYSTEMS

CAUTION: If left unaddressed, collected moisture could weaken insulation boards and facers resulting in a blow-off or increase the probability of mold growth.

D. Vapor Retarders

1. Versico does not require a vapor retarder for the protection of the membrane; however, it should be considered by the specifier for the protection of the roofing assembly (i.e. primarily insulation, underlayment and adhesives). The following criteria should be considered by the specifier:

   a. Use of a vapor retarder to protect insulation and reduce moisture accumulation within an insulated roofing assembly, should be investigated by the specifier.

   b. In the generally temperate climate of the United States, during the winter months, water vapor flows upward from a heated, more humid interior toward a colder, drier exterior. Vapor retarders are more commonly required in northern climates than in southern regions, where downward vapor pressure may be expected and the roofing membrane itself becomes the vapor retarder

1.05 WARRANTY

Table I VersiFleece TPO Mechanically Attached Systems Warranty Options

Years	Minimum Membrane Thickness	VersiWeld TPO			Additional Hail Coverage			
		55 or 72 mph	80 mph	90 or 100 mph	1" Dia. Hail	2" Dia. Hail	3" Dia. Hail	4" Dia. Hail
5,10, or 15 year	VersiWeld 100-mil	√	N/A	N/A	N/A	N/A	N/A	N/A

Notes: N/A = Not Acceptable √= Acceptable
General: Mechanical Fastening refer to Attachment II, of the VersiFleece Specification for number of fastening sheets and fasteners. Contact Versico for extended wind speed coverage or a 20-year System Warranty.

1.06 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Deliver materials to the job site in the original, unopened containers labeled with the manufacturer's name, brand name and installation instructions.

B. Job site storage temperatures in excess of 90° F may affect shelf life of curable materials (i.e., adhesive, sealants and cleaners).

C. VersiFleece TPO Membrane should be stored in its original plastic wrap or be covered to protect from moisture. Any moisture absorbed by the fleece-backing must be removed by using a wet-vac system prior to membrane securement.

1.07 JOB CONDITIONS

A. Refer to Versico Technical Manual for applicable project specific Job Conditions.

PART II PRODUCTS

2.01 GENERAL

The components of this roofing system are to be products of Versico or accepted by Versico as compatible. The installation, performance or integrity of products by others, **when selected by the specifier and accepted as compatible by Versico,** is not the responsibility of Versico and is expressly disclaimed by the Versico Warranty.

2.02 MEMBRANE

VersiFleece TPO 100, 115 or 135 membrane incorporates 45, 60 or 80-mil thick Thermoplastic Polyolefin (TPO) membrane laminated to a 55-mil non-woven fleece backing resulting in a total finished sheet thickness of 100, 115 or 135- mils. Membrane sheets are available in rolls 12' or 6' wide by 50' or 100 ' long. VersiFleece TPO Membrane is available in white, gray or tan in the 100 and 115.

2.03 RELATED MATERIALS

A. VersiWeld Reinforced and Non-Reinforced Flashing, Pressure Sensitive Cover Strips, Cut-Edge Sealant, Weathered Membrane Cleaner, Termination Bars, Insulation Fasteners and Water Cut-Off Mastic. Other Versico products such as insulation and edgings are also required when a System Warranty is specified.

B. **Other Products:** Heat Weldable Walkway Pads, Pre-Molded Pipe Flashings, Split Pipe Seals, Curb Wraps, Inside and Outside Corners and Pourable or Molded Sealant Pockets.

PART III EXECUTION

3.01 GENERAL

A. When feasible, begin the application at the highest point of the highest roof level and work to the lowest point to prevent moisture infiltration and minimize construction traffic on completed sections. This will include completion of all flashings and terminations.

3.02 ROOF DECK CRITERIA

A. A proper substrate shall be provided by the building owner. The structure shall be sufficient to withstand normal construction loads and live loads.

B. Defects in the roof deck must be reported and documented to the specifier, general contractor and building owner for assessment. The Versico Authorized Roofing Contractor shall not proceed unless the defects are corrected.

C. Refer to Versico Technical Manual for acceptable decks and the applicable Fasteners (when mechanical attachment of insulation is specified).

3.03 SUBSTRATE REQUIREMENTS

A. The membrane shall be installed over an existing smooth surfaced asphalt built-up roof (Type III or IV Asphalt), modified bitumen or mineral surfaced cap sheet and mechanically fastened to the roof deck with Versico HPVX Fasteners/HPVX Plates.

B. The substrate must be dry, relatively smooth, free of protrusions, debris, sharp edges or foreign materials and must be free of accumulated water, ice and snow. Cracks or voids in the substrate greater than 1/4" must be filled with a suitable material.

C. Cut and remove wet insulation as identified by the specifier and fill all voids with new insulation, so that it is relatively flush.

3.04 INSTALLATION

Refer to the applicable Material Safety Data Sheets and Product Data Sheets for cautions and warnings.

A. **Membrane Installation**

1. VersiFleece TPO Membrane shall be positioned over the existing roof surface and mechanically fastened to the roof deck with Versico HPVX Fasteners and Piranha Plates spaced a maximum of 12" on center.

2. **Perimeter Securement Requirements**

   The membrane shall be secured around the building perimeter using additional rows of HPVX Fasteners and HPVX Plates positioned along the centerline of the 12' wide sheets as follows.

   VersiWeld Pressure-Sensitive Cover Strips (in conjunction with TPO Primer) or a minimum 6" wide VersiWeld Reinforced Membrane (hot air welded) shall be used to overlay the fasteners and plates.

   Notes: Projects where a 20-year System Warranty is specified, must utilize the minimum 6” wide VersiWeld reinforced membrane as an overlay.

3. Adjoining sheets of VersiFleece TPO Membrane are overlapped approximately 5-1/2” along the length of the membrane (at the selvage edge) where fastening plates will be located. At end laps (along the width of the sheet), membranes shall be butted together which will be overlaid with minimum 6" wide Sure-Weld reinforced membrane hot air welded on all edges.

4. **Membrane Splicing – Heat Welding**

   a. Along the length of the membrane (at selvage edges), heat weld membrane sheets a minimum of 1-1/2” with an Automatic Heat Welder or Hot Air Hand Welder and silicone roller. Refer to the Versico Technical Manual for specific heat welding procedures.

b. Membrane that has been exposed to the elements for approximately 7 days must be prepared by scrubbing the splice area with a Scotch Brite Pad and Versico Weathered Membrane Cleaner. Clean all residue from the prepared splice area with a Splice Wipe or clean natural fiber (cotton) rag prior to welding.

B. Additional Membrane Securement

The membrane must be secured at the perimeter of each roof level, roof section, expansion joint, curb, skylight, interior wall, penthouse, etc., at any angle change which exceeds 2" in one horizontal foot and at all other penetrations in accordance with Versico's Details published in the Versico Technical Manual.

C. **Membrane Flashing**

1. Flash all walls and curbs with VersiWeld reinforced membrane. Non-Reinforced membrane shall be limited to inside and outside corners, field fabricated pipe seals, scuppers and Sealant Pockets where the use of pre-molded accessories are not practical.

2. On vertical surfaces, such as walls, curbs and pipes, Bonding Adhesive is not required when the flashing height is 12" or less and the membrane is terminated under a metal counterflashing (nailed). When a coping or termination bar is used for vertical terminations, Bonding Adhesive may be eliminated for flashing heights 18" or less.

3. When using the Pressure-Sensitive Cover Strip to overlay metal edging flanges or fasteners/plates, Membrane Cleaner is used to clean surfaces as needed. Apply Versico TPO Primer prior to applying Pressure-Sensitive Cover Strip.

4. Terminate the flashing in accordance with the appropriate Versico Details above anticipated slush line.

   Note: Fleece backing must be removed from the back of the membrane prior to completing compression seal terminations so Water Cut-Off Mastic is applied directly to the membrane surface. Apply heat to the fleece material and scrape to fully remove.

Versico
P.O. Box 1289, Carlisle, PA 17013
800-992-7663
www.versico.com

Physical properties of VersiFleece TPO Membrane can be referenced in Part II, "Products" of the VersiFleece Specification.

Attach copies of the applicable Versico Details that pertain to the individual project to complete a bid package submittal.