



## VersiWeld VersiFleece TPO Mechanically Attached Roofing System

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This **GUIDE-SPEC** is a brief outline of Versico's VersiWeld VersiFleece TPO Mechanically Attached Roofing System requirements and is intended for use as a submittal with a bid package.

### **PART I GENERAL**

#### **1.01 DESCRIPTION**

The VersiWeld VersiFleece TPO Mechanically Attached Roofing System incorporates 12' or 6' wide, 45 or 60-mil thick 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. There must be no deviations made from Versico's specifications or the approved shop drawings without the **PRIOR WRITTEN APPROVAL** of Versico.
- B. Projects with decks other than those in Part III, Paragraph 3.02C, must be reviewed by Versico prior to bid.
- C. Upon completion of the installation, an inspection will be conducted by a Field Service Representative of Versico to ascertain that the roofing system has been installed according to Versico's specifications and details.

#### **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. Projects where an extended wind speed warranty coverage greater than 55 mph is specified.
  - 2. Air pressurized buildings, canopies and buildings with large openings where the total wall openings exceed 10% of the total wall area on which the openings are located (such as airport hangars, warehouses and large maintenance facilities).

- 3. Cold storage buildings and freezer facilities.
- 4. Projects where a 20-year Total System Warranty is specified.
- 5. Projects located in a wind zone of 120 mph or greater (Zone 3 or 4).
- 6. Projects where the VersiFleece TPO Membrane is expected to come in direct contact with petroleum based products or other chemicals.

- B. Along with the project submittals (shop drawing and Request for Warranty), the roofing contractor must include pullout test results when the Versico HPVX Fastener is used with plywood decks less than 5/8" in thickness or steel decks less than 22 gauge.
- C. For all projects, prior to project inspection by Versico, a final shop drawing must be approved by Versico.

#### **1.04 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. When sealants or cleaners are exposed to lower temperatures, restore to a minimum of 60° F before use.
- D. VersiWeld 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.

#### **1.05 JOB CONDITIONS**

- A. This VersiWeld VersiFleece TPO Mechanically Attached Roofing System is intended for recover applications only. New construction projects or projects requiring the total removal of the existing roofing membrane may require a heavier fastening density or other design enhancements. For these projects, refer to the VersiWeld Mechanically Attached Roofing System Specifications or consult Versico prior to project bid.
- B. This system shall not be applied on projects where the slope

exceeds 18" in on horizontal foot. When the slope exceeds 5" per horizontal foot, use of an automatic welding machine may be more difficult. A hand held welder should be specified.

- C. Existing roofing material must be investigated and wet material must be removed and replaced with a suitable underlayment.
- D. Do not install this roofing system over existing roofing systems containing Phenolic Foam Insulation. If asbestos is present within the existing roofing system, consult with the project specifier and refer to applicable local codes.
- E. Coordination between various trades is essential to avoid unnecessary rooftop traffic over sections of the roof and to prevent damage to the membrane.

## 1.06 WARRANTY

All warranties are available for commercial projects only.

- A. A **10 or 15-year Total Roofing System Warranty** is available for a charge on projects that utilize all components manufactured or marketed by Versico. These projects will receive peak gust wind speed coverage up to 55 mph unless prior review is performed.
- B. A **20-year Total System Warranty** may be available for a charge for projects utilizing VersiWeld VersiFleece TPO 115 membrane and incorporating additional design enhancements. Projects must be submitted to Versico for review prior to installation to determine applicable design enhancements.

## 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

**VersiWeld VersiFleece TPO 100 or 115 Membrane** incorporates white, gray or tan 45 or 60-mil thick VersiWeld TPO membrane laminated to a 55-mil non-woven polyester fleece-backing. Membrane is available in widths of 12' or 6' and lengths of 50' or 100'. A selvage edge (fleece-backing is discontinued) is provided on one edge along the length of the membrane for splicing.

### 2.03 RELATED MATERIALS

- A. VersiWeld Reinforced and Non-Reinforced Flashing, Pressure Sensitive Cover Strips, Cut-Edge Sealant, Universal Single-Ply 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 Total System Warranty is specified.
- B. **Other Products:** Heat Weldable Walkway Pads, Pre-Molded Pipe Flashings, Split Pipe Seals, Curb Wrap

Corners, Corners and 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.
- B. Follow criteria outlined in the "Design Criteria" Section of Versico's Technical Manual to prepare the roof deck or substrate prior to application of the new roofing system.

### 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. Acceptable decks and the applicable Versico Fasteners.
  1. **Steel minimum 22 gauge** - Versico HPVX Fasteners/HPVX Plates.
  2. **Wood Plank or minimum 15/32 thick Plywood** – Versico HPVX Fasteners/HPVX Plates.
  3. For other deck types, contact Versico for specific requirements.

### 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 Technical Data Bulletins for cautions and warnings.

#### A. Membrane Installation

1. VersiWeld VersiFleece TPO Membrane shall be

positioned over the existing roof surface and mechanically fastened to the roof deck with Versico HPVX Fasteners and HPVX 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.

Wind Zone per ASCE 7-02	Deck Type	Perimeter Securement
<b>1</b> (Up to 100 mph)	Steel and Wood plank	Fasten along center of <b>first</b> 12' sheet
	Plywood	Fasten along center of <b>first two</b> 12' sheets
<b>2</b> (100-119 mph)	Steel and Wood Plank	Fasten along center of <b>first two</b> 12' sheets
	Plywood	Fasten along center of <b>first three</b> 12' sheets

VersiWeld Pressure Sensitive Cover Strips (in conjunction with V-150 Primer) or 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 6" wide VersiWeld reinforced membrane as an overlay.

As an option, 6' wide sheets can be used in lieu of the RUSS as perimeter sheets:

3. Adjoining sheets of VersiWeld 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 6" wide VersiWeld 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 VersiWeld VersiFleece TPO Adhered Roofing System Specification, Part II "Application", 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 HP 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 VersiWeld Mechanically Attached Roofing System Specifications.

**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, Versico Weathered Membrane Cleaner is used to clean surfaces as needed. Apply Versico V-150 Primer prior to applying Pressure Sensitive Cover Strip.

**Note:** Stripped in metal edgings are not approved for projects with a 20-year System Warranty. Versico must be consulted for an appropriate edge detail.

4. Terminate the flashing in accordance with the appropriate VWC-9 Termination Detail.

**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.

**D. Other Related Work**

1. **Walkways** are required for all traffic concentration points (i.e., roof hatches, access doors, rooftop ladders, etc.), regardless of traffic frequency. Walkways are also required if regular maintenance (once a month or more) is necessary to service rooftop equipment. Walkways are considered a maintenance item and are excluded from the Versico Warranty.
  - a. VersiWeld Heat Weldable Walkway Rolls are required when walkway pads are specified and are heat welded to the VersiWeld Membrane.
  - b. When concrete pavers are used, they shall be loose laid and installed in conjunction with a slip sheet of reinforced membrane or two layers of HP Protective Mat. Concrete pavers are not recommended when the roof slope is greater than 2" per 1 horizontal foot.

- c. Versico Interlocking Pavers™, 24" X 24" X 2", weighing approximately 6 pounds per square foot, may be loose laid directly over the membrane. Installation instruction sheets are available from Versico.
2. **Copings, counterflashing and other metal work**, not supplied by Versico, shall be fastened to prevent metal from pulling free or buckling and sealed to prevent moisture from entering the roofing system or building.

**Physical properties of VersiWeld VersiFleece TPO Membrane can be referenced in Part I, "Design Criteria."**

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

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