



# VERSIWELD TPO

## G U I D E - S P E C

### VersiWeld® Fully Adhered Roofing System

January 2025

This **GUIDE-SPEC** is a brief outline of Versico's VersiWeld Fully Adhered Roofing System requirements and is intended for use as a submittal document to compliment a contractor's bid package. Specifiers and Versico Authorized Contractors must reference and comply with applicable information contained within the current Versico Thermoplastic Roofing System Specification prior to design or bid of a project.

#### **PART I GENERAL**

##### **1.01 DESCRIPTION**

**The VersiWeld Adhered Roofing System** incorporates maximum 12' wide white, gray or tan 45, 60 or 80-mil thick scrim-reinforced VersiWeld Thermoplastic Polyolefin (TPO) membrane (also available in special colors in 60-mil thick, maximum 10' wide sheets). Versico Insulation is mechanically fastened to the roof deck or secured with Flexible DASH Adhesive, OlyBond 500 BA, or OlyBond Spot Shot Adhesive and the membrane is fully adhered to the insulation with the appropriate VersiWeld TPO Bonding Adhesive or CAV-GRIP 3V. Adjoining sheets of membrane are overlapped approximately 2" and joined together with a minimum 1-1/2" wide heat weld.

##### **1.02 QUALITY ASSURANCE**

- A. The specified roofing system must be installed by a Versico Authorized Roofing Contractor in compliance with drawings and specifications 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 VersiWeld TPO Code Approval Guide, DORA (Directory of Roof Assemblies), FM Approvals or UL Fire Resistance Directory for Roofing Materials and Systems.

##### **1.03 SUBMITTALS**

- A. To ensure compliance with Versico's minimum 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, projects over 250' in height or projects where the 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 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 Design References DR-01-21 "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.

**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 towards 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 Adhered Membrane Systems Warranty Options**

Years	Thermoplastic Membranes (VersiWeld TPO)				
	55, 72, 80 or 90 mph	100 mph	110 to 120 mph	Minimum Membrane Thickness	Additional Puncture Coverage (1)
	Adhered	Adhered	Adhered		
5,10, or 15 year	√(2)	√	√	VersiWeld 45-mil	Not Available - 80-mil Membrane Required
20 year	√	√	√	VersiWeld 60-mil (3)	Not Available - 80-mil Membrane Required
25 year	√	√	N/A	VersiWeld 80-mil	Available – See Below
30 year	√	√	N/A	VersiWeld 80-mil	Available – See Below

Notes:

N/A = Not Acceptable

√= Acceptable

- (1) Limits of Hail/Puncture Coverage to be defined by other Tables.
- (2) Water based adhesive may be used for projects with 15 year maximum warranty and wind speed coverage up to 55 mph.
- (3) VersiWeld QA TPO 60-mil membranes may be used in lieu of VersiWeld 60-mil membrane.
- (4) VersiWeld 80-mil TPO in Special Colors are limited to Warranties Up to 20 Year.

VersiWeld TPO Membrane	
<b>Hail</b>	<ul style="list-style-type: none"> <li>- 1" Dia. Hail Coverage requires a minimum of 60-mil TPO Adhered to cover board.</li> <li>- 2" Dia. Hail Coverage requires 80-mil TPO Adhered to cover board.</li> </ul>
<b>Additional Design Requirement:</b>	<ul style="list-style-type: none"> <li>- Cover board (SecurShield HD, SecurShield HD Plus, SecurShield HD or DuraFaceR Composite, DensDeck Prime, or Securock – Adhered Only).</li> </ul>
<b>Puncture</b>	<ul style="list-style-type: none"> <li>- Minimum 80-mil TPO Adhered or Mechanically Fastened.</li> <li>- Versico's Accidental Puncture Warranty covers labor hours and material used during the repair. Maximum labor and material hours are dependent upon system design. Refer to the Warranty Availability Quick Reference Guide for coverage.</li> </ul>

## **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. Store VersiWeld membrane in original undisturbed plastic wrap.
- C. Job site storage temperatures in excess of 90°F may affect shelf life of curable materials (i.e., adhesives and sealants).
- D. When liquid adhesives and sealants are exposed to lower temperatures, restore to a minimum of 60°F before use.

## **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 by Versico**, is not the responsibility of Versico and is **expressly disclaimed** by the Versico Warranty.

### **2.02 MEMBRANE**

VersiWeld, white, gray or tan reinforced 45, 60 or 80-mil thick Thermoplastic Polyolefin (TPO) membrane is used for this roofing system. Field membrane sheets are 12', 10' or 8' wide by 100' long based on project conditions. Perimeter sheets are 6' wide (used with 12' or 10' field sheets), or 4' wide (used with 8' field sheets).

### **2.03 RELATED MATERIALS**

VersiWeld Non-Reinforced or Reinforced Flashing, Standard and Low VOC Bonding Adhesive, Pressure Sensitive Cover Strip, TPO Pressure Sensitive RUSS, TPO T-Joint Covers, Cut Edge Sealant, Water Cut-Off Mastic, Universal Single Ply Sealant, Weathered Membrane Cleaner, Standard and Low-VOC Primers, One Part Pourable Sealer, Pre Molded Accessories, Heat Weldable Walkway Rolls and LIQUISEAL Liquid Flashing.

## **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 Versico Fasteners (when mechanical attachment of insulation is specified).

### **3.03 SUBSTRATE REQUIREMENTS**

- A. Acceptable Versico insulations include all types currently approved with Design "A" Adhered Roofing Systems.
- 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 Flexible DASH Adhesive or other suitable material.
- C. On retrofit-recover projects, 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 Safety Data Sheets and Technical Data Bulletins for cautions and warnings.

#### **A. Insulation Attachment**

1. Versico Flexible DASH Adhesive may be specified for insulation securement as outlined in the Versico Technical Manual.
2. Versico Fasteners may be used, when specified, to secure Versico Insulation at the specified density outlined in the Versico Technical Manual.

#### **B. Membrane Installation and Hot Air Welding**

1. Sweep loose debris from the substrate.
2. Position VersiWeld Membrane over acceptable substrate and fold membrane back so half the underside is exposed.
3. Apply the applicable Versico Bonding Adhesive to the exposed underside of the membrane and the corresponding substrate area with a plastic core medium nap paint roller at the published application rate on the applicable Technical Data Bulletin.
4. Allow adhesive to dry until tacky and roll coated membrane into coated substrate and avoid wrinkling.
5. Brush down the bonded section of membrane immediately with a soft bristle push broom.
6. Fold back the un-bonded half of the sheet and repeat the bonding procedure.
7. Install adjoining membrane sheets in the same manner, overlapping edges a minimum of 2" to provide for a minimum 1-1/2" hot air weld. It is recommended that all splices be shingled to avoid bucking of water.
8. Hot air weld the membrane sheets a minimum of 1-1/2" with an Automatic Hot Air Welding Machine.
9. Membrane that has been exposed to the elements for approximately 7 days must be prepared with Weathered Membrane Cleaner. Wipe the surface where Weathered Membrane Cleaner has been applied with a clean, dry Splice Wipe or other white rag to remove cleaner residue prior to hot air welding.

#### **C. 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" per horizontal foot and at all other penetrations in accordance with Versico's published details.

#### **D. 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. Terminate the flashing in accordance with an appropriate Versico Termination Detail.
2. On vertical surfaces, such as walls, curbs and pipes, Bonding Adhesive is not required when flashing height is 12" or less and 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.

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

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

