



GUIDE-SPEC

VersiFlex™ PVC Mechanically Attached Roofing System RhinoBond Attachment Method

January 2012

This **GUIDE-SPEC** is a brief outline of Versico's VersiFlex Mechanically Attached Roofing System requirements using the RhinoBond Attachment Method 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 VersiFlex Mechanically Attached Roofing System incorporates 50, 60 or 80-mil Polyester Reinforced VersiFlex Polyvinyl Chloride (PVC) membrane or Polyester Reinforced VersiFlex-E Polyvinyl Chloride (PVC) Membrane. Either membrane is available in 10' wide (white membrane only) field sheets and 5' perimeter sheets. Standard Polyester Reinforced membrane is also available in 81" wide (white, gray or tan) field sheets and 40.5" perimeter sheets. VersiFlex sheets are available in rolls in 65', 80' or 100' rolls. Insulation is Mechanically Attached to an acceptable roof deck using the appropriate Versico Fasteners and RhinoBond Plates. VersiFlex membrane is positioned over the secured RhinoBond plates and welded to the top surface of the plate with the Rhinobond Induction Welding Tool. Adjoining sheets of VersiFlex membrane are overlapped and joined together with a minimum 1-1/2" wide heat weld. Membrane fastening requirements are outlined in Warranty Tables in the Thermoplastic Specification.

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 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 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 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.

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 Mechanically Attached Membrane Systems Warranty Options (4)

Years	Thermoplastic Membranes (VersiFlex PVC)				
	55, 72, 80 or 90 mph	100 mph	110 to 120 mph	Minimum Membrane Thickness (3)	Additional Puncture Coverage (1)
	Mech. Attached	Mech. Attached	Mech. Attached		
5,10, or 15 year	√(5)	N/A	N/A	VersiFlex 50-mil	Not Available
20 year	√(5)	N/A	N/A	VersiFlex 60-mil (2)	Not Available

Notes: N/A = Not Acceptable √= Acceptable

- (1) Limits of Hail/Puncture Coverage to be defined by other Tables.
- (2) All “T-Joints” must be overlaid with appropriate flashing material when using 60-mil membrane.
- (3) Enhancements may be required for certain flashing details. Published details must be referenced for applicable requirements.
- (4) Perimeter enhancements will be required for wind speed coverage greater than 72mph. Contact Versico for requirements.

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 VersiFlex membrane in the 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° Fahrenheit before use.
- E. Do not store adhesive containers with opened lids due to the loss of solvent, which will occur from flash off.

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

VersiFlex white, gray or tan 50-mil (100' long), 60-mil (80' long) or 80-mil (65' long) reinforced Polyvinyl Chloride (PVC) membrane is used for this system. Field membrane sheets are 81" wide. Perimeter sheets are 40.5" wide. For physical properties of the membrane, refer to Thermoplastic Specification.

2.03 RELATED MATERIALS

VersiFlex Non-Reinforced Flashing, Reinforced Cover Strips, Cut Edge Sealant, Water Cut-Off Mastic, PVC Membrane Cleaner, One-Part Pourable Sealer, Heat Weldable Walkway Pads, Pre-Molded Inside/Outside Corners, Pipe Flashings 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 to minimize construction traffic on completed sections. This will include completion of all flashings, terminations and daily seals.

3.02 ROOF DECK CRITERIA

- 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 Contractor shall not proceed with installation unless defects are corrected.
- C. Refer to Versico Technical Manual for acceptable decks and the applicable Sure-Seal Fasteners (when mechanical attachment of insulation is specified).

3.03 SUBSTRATE PREPARATION

- A. On retrofit-recover projects, cut and remove wet insulation, as identified by specifier, and fill all voids with new insulation so it is relatively flush with existing surface.
- B. For all projects, substrate must be even without noticeable high spots or depressions, and must be free of accumulated water, ice or snow.
- C. Clear the substrate of debris and foreign material. Fresh bitumen based roof cement must be removed or concealed.

3.04 INSTALLATION

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

A. Insulation Attachment

- 1. After placement of insulation on substrate, secure the insulation at a rate of six HPVX Fasteners and RhinoBond Plates per 4' x 8' in the designated field and eight HPVX Fasteners and RhinoBond Plates around the perimeter. Refer to appropriate Versico detail for patterns and depth of perimeter area.

Note: Avoiding fastener overdrive to prevent plate from deforming.

B. Membrane Placement, Attachment and Hot Air Welding

- 1. Place VersiFlex membrane over the appropriate RhinoBond Plates and allowing membrane to relax.
- 2. Place RhinoBond Induction Tool centered over the RhinoBond Welding Plate (+/- 1") under the roofing membrane.

3. Elevate the temperature of plate from ambient to 400-500°F using induction tool.
4. Immediately place Cooling Clamp on the membrane over the plate and leave in place for at least 60 seconds.
5. Resume process ensuring membrane is attached to all plates.
6. Overlap adjacent membrane a minimum of 2" at end roll sections (width of the membrane).
7. Hot air weld the membrane sheets a minimum of 1-1/2" with an Automatic Hot Air Welding Machine.
8. Membrane that has been exposed to the elements for approximately 7 days must be prepared with PVC Membrane Cleaner. Wipe the surface where PVC 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" in one horizontal foot and at all other penetrations in accordance with Versico's Details published with Versico's Specifications.

D. Membrane Flashing

1. Flash all walls and curbs with VersiFlex 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 appropriate Versico Termination Detail.

Copyright 2012 Versico

Versico and VersiFlex are Trademarks of Versico

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

Physical properties of VersiFlex 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.