



# VERSIGARD EPDM

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

### VersiGard Reinforced Mechanically Attached Roofing System

June 2016

This **GUIDE-SPEC** is a brief outline of Versico's VersiGard Reinforced 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 Versico Technical Manual prior to design or bid. The "Products" Section included in the Versico technical manual and Versico's Technical Data Bulletins contain information on proper usage of Versico products as well as applicable cautions and warnings. Prior to the installation of this roofing system, this information must be thoroughly reviewed.

#### **PART I GENERAL**

##### **1.01 DESCRIPTION**

**The Mechanically Attached Roofing System** incorporates 45, 60 or 75-mil VersiGard Reinforced EPDM membrane. An acceptable insulation is mechanically attached to the roof deck and, depending on project criteria; the reinforced membrane is mechanically attached with the appropriate Versico fastener and 2" or 2-3/8" diameter Fastening Plates (Polymer Plates required over steel deck) or Fastening Bars at 6" minimum to 12" maximum along the center of the membrane splice.

Adjoining sheets of EPDM membrane are spliced together using factory applied QA Seam Tape (VersiGard QAT) and Primer OR QA Seam Tape and Primer. Field membrane sheets are either 6.5', 8' or 10' wide depending upon wind load requirements, building height and type of roof deck. At the roof perimeter, a heavier fastening density is required utilizing 4-1/2' or 6.5' wide sheets or 9" wide Quick Applied RTS (Reinforced Termination Strip). The maximum roof slope for this roofing system is 18" in one horizontal foot.

This roofing system can also be specified over an existing standing seam, flat seam or corrugated metal roof with the membrane secured to the structural purlins. Refer to the appropriate specification for Metal Retrofit System.

##### **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 EPDM Code Approval Guide, FM Approvals or UL Fire Resistance Directory for Roofing Materials and Systems.

##### **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 EPDM 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 Reinforced EPDM Membrane Systems Warranty Options**

Years	VersiGard Reinforced Membranes				
	55, 72 or 80 mph	90 mph	100 to 120 mph	Minimum Membrane Thickness	Additional Puncture Coverage
	Mech. Fastened	Mech. Fastened	Mech. Fastened		
5,10, or 15 year	√	√	N/A	VersiGard Reinforced 45-mil	N/A
20 year	√	√	N/A	VersiGard Reinforced 60-mil	N/A
25 year	√	√	N/A	VersiGard Reinforced 75-mil	N/A
30 year	√	√	N/A	VersiGard Reinforced 75-mil	N/A

Notes: N/A = Not Acceptable                          √= Acceptable

**1.06 PRODUCT DELIVERY, STORAGE AND HANDLING**

- A. Deliver materials to job site in 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., uncured flashing, adhesives, sealants, primers, QA Seam Tape, Pourable Sealer and Quick Applied Flashings).
- C. When liquid adhesives and sealants are exposed to lower temperatures, restore to a minimum of 60° F before use. Do not store adhesive containers with opened lids due to loss of solvent, which will occur from flash off.

**1.05 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**

VersiGard Reinforced EPDM Membranes: Cured reinforced EPDM (Ethylene, Propylene, Diene Terpolymer) compounded elastomer and is available in black, 45, 60, or 75-mil thicknesses. Reinforced membrane with polyester fabric conforms to ASTM D4637, Type II (reinforced). All sheets referenced in table are available with 3" or 6" factory applied QA Seam Tape (VersiGard QAT).

45 and 60-mil membranes are available in widths of 4-1/2' or 6.5', used as perimeter membrane sheets, and 6.5', 8' or 10', used as field membrane sheets. When greater puncture or wind uplift resistance is desired, 10' wide 75-mil VersiGard Reinforced, may be specified.

### **2.03 RELATED MATERIALS**

- A. G200SA Yellow Substrate Adhesive, Low-VOC or Solvent Free Bonding Adhesive, Aqua Base Adhesive, Lap Sealant, Primer, QA Seam Tape, Quick Applied Cured EPDM Flashing, Quick Applied Flashing, uncured EEPDM Flashing, Versico Fasteners and Fastening Plates or Bars and Quick Applied RTS (with the corresponding fasteners) are required for use with this roofing system. Other Versico products, such as, insulation, insulation fasteners, edgings and Termination Bars are also required when a Total System Warranty is specified.
- B. Other Products: Metal Fastening Bars, Versico Walkway Pads, Quick Applied Pipe Flashings, Quick Applied Inside/Outside Corners and Pourable Sealer 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 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. When mechanically attaching the insulation with Versico Fasteners and Insulation Plates, refer to Versico Technical Manual.

### **3.03 SUBSTRATE PREPARATION**

- A. On retrofit-recover projects, cut and remove wet insulation, as identified by the specifier, and fill all voids created by such removal with new insulation so that it is relatively flush.
- B. For all projects, substrate must be even without noticeable high spots or depressions and free of accumulated water, ice or snow. Clear 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 cautions and warnings.

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

1. Versico 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

**B. Membrane Placement and Attachment**

1. A minimum of one 4-1/2' or 6.5' wide perimeter membrane sheet or 6" wide RTS or 9" wide Quick Applied RTS (positioned beneath the field sheets) shall be installed at the perimeter of each roof level and 6.5', 8' or 10' wide sheets shall be installed over the field of the roof.
2. Membrane shall be Mechanically Attached with the appropriate Versico Fasteners and Polymer Seam Plates (required for steel decks) or Seam Fastening Plates spaced 6" minimum to 12" maximum on center, depending on project criteria, within the membrane splice. Refer to the "Design Criteria" section for the required number of perimeter membrane sheets, width of field sheets and required fastener spacing.
3. As an option to the use of Versico Fastening Plates, Fastening Bars may be used for membrane securement in conjunction with HPVX Fasteners.
4. Overlap adjacent EPDM membrane sheets a minimum of 6 inches at fastener locations (along the length of the membrane sheet) and 3" at end roll sections (the width of the membrane).
5. Membrane Splicing with QA Seam Tape (membrane is available with factory applied tape).
  - a. Apply Versico EPDM Primer to the splice area. When tape is not factory-applied, position QA Seam Tape onto bottom membrane sheet with the edge of the release film along a line marked 1/2" out from the top sheet. Press tape onto sheet using hand pressure, overlapping tape roll ends a minimum of 1". Remove the release film and press top sheet onto tape using hand pressure. Roll the splice with a 2" wide steel roller or Versico's Stand-Up Seam Roller.
  - b. Install a Quick Applied T-Joint Cover or a 6" wide section of Quick Applied Uncured EPDM Flashing over all field splice intersections. The use of Lap Sealant with tape splices is optional except at tape overlaps and cut edges of reinforced membrane.

**C. Additional Membrane Securement**

EPDM 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 penetrations in accordance with Versico's details published with Versico's specifications.

Additional membrane securement may be provided by Quick Applied RTS, Polymer Seam Plates (required for steel decks) or Seam Fastening Plates.

**D. Membrane Flashing**

1. Refer to Versico Technical Manual for membrane flashing.

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**Physical properties of VersiGard EPDM Membrane can be referenced in Part II, "Products" of the EPDM Specification.**

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