



# VERSIGARD EPDM

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

### VersiGard® EPDM Loose Laid Ballasted Roofing System

March 2015

This **GUIDE-SPEC** is a brief outline of Versico's VersiGard EPDM Loose Laid Ballasted 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 EPDM Loose Laid Ballasted Roofing System** incorporates minimum 45-mil thick VersiGard (black) non-reinforced or minimum 60-mil VersiGard reinforced EPDM membrane. Both the EPDM membrane and an acceptable membrane underlayment or insulation are loose laid over the substrate and held in place with a minimum of 10 pounds of ballast per square foot depending upon wind load requirements. Adjoining sheets of EPDM membrane are spliced together using 3" or 6" wide QA Seam Tape and Primer OR factory-applied QA Seam Tape (VersiGard QAT) and Primer. (Membrane width limitations may apply). The maximum roof slope for this roofing system is 2" to one horizontal foot.

### 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 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, 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.

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 Non-Reinforced EPDM Membrane Systems Warranty Options**

Years	VersiGard Non-Reinforced Membranes (1)		
	55, 72 or 80 mph	Minimum Membrane Thickness	Additional Hail Coverage
	Ballasted*		
5,10, 15 or 20 year	√	VersiGard 45-mil	1” Hail with 45-mil
25 year	√	VersiGard 60-mil	2” Hail with 60-mil
30 year	√	VersiGard 90-mil	3” Hail with 90-mil

Notes: N/A = Not Acceptable √= Acceptable

(1) When VersiGard Reinforced membrane is specified, 60-mil membrane minimum is required for warranties for up to 20 year. Projects with 25 or 30 Year Warranty must incorporate 75-mil membrane.

**1.06 PRODUCT DELIVERY, STORAGE AND HANDLING**

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

**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**

A 45-mil thick VersiGard (black) non-reinforced or minimum 60-mil VersiGard reinforced EPDM membrane. Both the EPDM membrane and an acceptable membrane underlayment or insulation are loose laid over the substrate and held in place with a minimum of 10 pounds of ballast per square foot depending upon wind load requirements. Adjoining sheets of EPDM membrane are spliced together using 3” or 6” wide QA Seam Tape and Primer OR factory-applied QA Seam Tape (VersiGard QAT) and Primer. (Membrane width limitations may apply). The maximum roof slope for this roofing system is 2" to one horizontal foot.

## **2.03 RELATED MATERIALS**

- A. G200SA Yellow Substrate Adhesive, Low-VOC or Solvent-free EPDM Bonding Adhesive, Aqua Base Adhesive, EPDM or Low VOC EPDM Primer, Lap Sealant, Primer, QA Seam Tape, Cured EPDM Flashing, uncured EPDM Flashing, Quick-Applied Flashing, Seam Fastening Plates, and RTS (with the corresponding fasteners) are used with this roofing system. Other Versico products, such as, insulation, edgings and Termination Bars are required when a Total System Warranty is specified.
- B. Other Products: Versico Walkway Pads, Pre-Molded Pipe Flashings, Pressure-Sensitive Inside/Outside Corners, Pipe Flashings and Pourable Sealer Pockets.
- C. Products Supplied by Others: Rounded water-worn gravel or concrete pavers to be used as ballast for securement of the EPDM membrane and insulation.

# **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. Refer to Versico Technical Manual for acceptable decks and the applicable VersiGard 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 the specifier, and fill all voids with new insulation so that it is relatively flush.
- B. For all projects, the 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 cautions and warnings.

### **A. Membrane Installation**

1. The EPDM membrane shall be loose laid over the acceptable substrate and allowed to relax approximately 30 minutes prior to splicing. Overlap adjacent EPDM membrane sheets a minimum of 3".

## **2. Membrane Splicing with QA Seam Tape**

- a. Apply Versico EPDM Primer to the splice area. 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.
- d. Install a 6" wide section of Quick Applied Uncured Flashing or Quick Applied T-Joint Cover over all field splice intersections and seal edges of flashing with Lap Sealant. The use of Lap Sealant with tape splices is optional except at tape overlaps and cut edges of reinforced membrane and tape overlaps.

### **B. Additional Membrane Securement**

The 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 other penetrations in accordance with Versico's details. The additional membrane securement may be provided by Quick Applied RTS (Reinforced Termination Strip) or Seam Fastening Plates.

### **C. Membrane Flashing**

1. Refer to Versico Technical Manual for membrane flashing.

### **D. Ballasting**

1. The structural capability of the roof deck must be evaluated by the specifier to ensure that the design loads for the structure are not exceeded.
2. Rounded water-worn gravel, individual concrete pavers or approved lightweight interlocking pavers must be installed for adequate securement and to provide complete coverage of the loose laid EPDM membrane.
2. Ballast must be adequate to provide sufficient wind uplift protection and must be continuously distributed to maintain a minimum of 10 pounds per square foot when rounded water-worn gravel or interlocking concrete pavers are specified. Individual concrete pavers must weigh a minimum of 18 pounds per square foot. Refer to the "Design Criteria" Section of Versico's technical manual for acceptable ballast gradations and other requirements.

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**Physical properties of 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 to complete a bid package submittal.**