



SHORT FORM SPEC MECHANICALLY ATTACHED ROOFING SYSTEM

November 2007

This SHORT FORM SPEC is a brief outline of Versico's 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 "Design Criteria" and "Application" Sections of Versico's 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 (black) 45, 60 or 75-mil thick **reinforced** EPDM membrane. An acceptable insulation is mechanically fastened to the roof deck and the membrane is mechanically attached with Fastening Plates or Fastening Bars and the appropriate Versico Fastener spaced 6" minimum to 12" maximum on center, depending on project criteria, along the center of the membrane seam.

Adjoining sheets of EPDM membrane are seamed together a minimum of 6" using QA Seam Tape and Primer. Field sheets are either 7', 8' or 10' wide, depending on wind load requirements, building height and type of roof deck. At the roof perimeter, a heavier fastening density is required using 4-1/2' wide sheets or QA RTS.

As an option, this roofing system can be specified over an existing standing seam, flat seam or corrugated metal roof with the membrane secured to the structural purlins. Refer to the Versico Metal Retrofit Roofing System Specification for requirements.

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 without **PRIOR WRITTEN APPROVAL** of Versico.
- B. Upon completion of the installation, an inspection will be conducted by a Technical Representative of Versico to ascertain the roofing system has been installed according to Versico's specifications and details.
- C. This roofing system meets **Underwriters Laboratories (UL)** and **Factory Mutual (FM)** requirements. For specific code approvals achieved with this system, refer to Versico's EPDM Code Approval Guide, Factory Mutual Approval Guide or Underwriters Laboratories Fire Resistance and Roofing Materials and Systems Directories.

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 a wind speed warranty coverage greater than 55 mph peak gusts is specified.
 2. Projects where building height exceeds 75'.
 3. Projects with fasteners specified to exceed 12".
 4. 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).
 5. Cold storage buildings and freezer facilities.
 6. Projects where EPDM 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), when fastener pullout values do not meet the requirements listed in the Versico specification, test results with the appropriate Versico fastener must be submitted by the roofing contractor for review.

- 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 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., adhesives, sealants, primers, Seam tape, pourable sealer, pressure-sensitive flashings and uncured flashing).
- 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.
- D. Insulation and underlayment must be stored so it is kept dry and is protected from the elements. Store insulation on a skid and completely cover with a breathable material such as tarp or canvas. If the insulation is lightweight, it should be weighted to prevent possible wind damage.

1.05 JOB CONDITIONS

- A. This roofing system **must not be applied** on portions of a project where **slope exceeds 18°** in one horizontal foot.
- B. On retrofit-recover projects, existing roofing material must be investigated and wet material must be removed. Existing sprayed-in-place urethane roofs and Phenolic insulation must be removed.
- C. The use of a vapor retarder to protect insulation and reduce moisture accumulation within an insulated roofing assembly should be investigated by the specifier. Consult the latest publications by ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.) and NRCA (National Roofing Contractors Association) for specific information.
- D. If this roofing system is installed during windy conditions or on projects that are not encapsulated, precautionary measures must be taken to utilize temporary ballast during installation.
- E. Coordination between 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 **5 or 10-year Membrane System Warranty** with a wind speed coverage up to 55 mph is available for a charge.
- B. A **10 or 15-year Total System Warranty** is available for a charge on projects which utilize all components manufactured or marketed by Versico. These projects will receive a standard maximum peak gust wind speed coverage up to 55 miles per hour.

Roofing systems may be eligible for a Total System Warranty with a peak gust wind speed coverage greater than 55 mph. For criteria required to obtain such coverage, refer to the 10 or 15-year Extended Wind Speed Criteria Attachment in the VersiGard EPDM Roofing System "Design Criteria" Specification.

- D. A **20-year Total System Warranty** is available for a charge for projects utilizing minimum 60-mil thick VersiGard reinforced membrane and incorporating additional design enhancements as outlined in the 20-year Warranty Design Enhancements Attachment in the VersiGard EPDM Roofing Systems Design Criteria Specification.

PART 2 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 45-mil, 60-mil or 75-mil thick reinforced EPDM (Ethylene, Propylene, Diene Terpolymer) may be used for this roof system. For physical properties of membrane, refer to the "Products" Section of the Versico Technical Manual.

Membrane is available in widths of 4-1/2', used as perimeter membrane sheets, and 7', 8' or 10', used as field membrane sheets. When greater puncture or wind uplift resistance is desired, 10' wide Sure-Tough Reinforced, may be specified.

2.03 RELATED MATERIALS

- A. VersiGard Substrate Adhesive, V-150 Primer, QA Seam Tape, Lap Sealant, Cured EPDM Flashing, QA Flashing, Versico Fasteners and Fastening Plates or Bars and QA 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: Versico Walkway Pads/Rolls, Pipe Seals, QA Inside/Outside Corners, Pipe Flashings and Pourable Sealer Pockets.

PART 3 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.
- B. Follow criteria outlined in the "Design Criteria" Section of Versico's technical manual to prepare the roof deck or the substrate prior to the 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, 22 gauge or heavier** - Versico HPV Fasteners with Polymer Plates, HPVX Fasteners with Polymer Fastening Strips or Sure-Tite Fasteners with Deck-Tite Fastening Bars are required for membrane securement with a minimum pullout of 425 pounds per fastener.
 - 2. **Lightweight Insulating Concrete over Steel** - Versico HPV Fasteners with Polymer Plates, HPVX Fasteners with Polymer Fastening Strips or Sure-Tite Fasteners and Deck-Tite Fastening Bars are required with a minimum pullout of 360 pounds into the steel deck below the lightweight concrete.
 - 3. **Structural Concrete, rated 3,000 psi or greater** - Versico CD-10 or MP 14 Fasteners are required with a minimum pullout of 800 pounds per fastener.

4. **Wood Plank or minimum 15/32" thick Plywood** - Versico HPV Fasteners are required with a minimum pullout of 360 pounds.
5. **Oriented Strand Board (OSB), minimum 7/16" thick** - Versico HPV Fasteners are required with a minimum pullout of 360 pounds.
6. **Cementitious Wood Fiber and Gypsum** - Versico NTB Fasteners are required with a minimum pullout of 300 pounds.

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 Insulation shall be mechanically fastened to the roof deck with a minimum of 1 insulation fastener and plate per every 8 square feet.

On retrofit projects where existing material is specified to remain, Versico Polyisocyanurate insulation which is less than 1-1/2" thick shall be fastened to the roof deck with 1 fastener and plate every 4 square feet.

2. Hunter Panels polyisocyanurate insulation can be used on 5 or 10 year non-total system warranty projects. The insulation shall be mechanically fastened to the roof deck with 1 insulation fastener and plate for every 4 square feet of insulation unless otherwise approved in writing by Hunter Panels.

B. Membrane Placement and Attachment

1. A minimum of one 4-1/2' wide perimeter membrane sheet or 9" wide QA RTS (positioned beneath the field sheets) shall be installed at the perimeter of each roof level and 7', 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 seam. 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 Fastening Plates, Versico Polymer Fastening Strips and HPVX Fasteners or Sure-Tite Fasteners and Deck-Tite Metal Fastening Bars may be used for membrane securement.

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 Seaming with QA Seam Tape

- a. Apply Versico V-150 Primer to Seam area.
- b. Position QA Seam Tape onto bottom membrane sheet with 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".
- c. Remove the release film and press top sheet onto tape using hand pressure. Roll the seam with a 2" wide steel roller or Versico's Stand-Up Seam Roller.
- d. Install Pressure-Sensitive T-Joint Covers or a 6" wide section of QA Uncured Flashing over all field Seam intersections.
- e. The use of Lap Sealant with tape Seams is optional except at cut edges of reinforced membrane and tape overlaps.

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 QA RTS, Polymer Fastening Strips, Deck-Tite Fastening Bars or Seam Fastening Plates.

D. Membrane Flashing

1. When feasible, flash all penetrations and walls with cured EPDM membrane or Clean Cured Flashing. Uncured or QA Uncured Flashing shall be limited to overlay vertical seams (as required at angle changes) or to flash inside/outside corners, scuppers, pourable sealer pockets and unusually shaped penetrations and walls where use of cured membrane flashing is not practical.
2. Versico's prefabricated accessories (Pre-Molded Pipe Seals and Quick-Applied Products; such as, Flashings, Pourable Sealer Pockets, Pipe Seals, and Inside/Outside Corners) should be used, when feasible, in lieu of Uncured or QA Flashing.
3. When using VersiGard Cover Strip or QA Overlayment Strip to overlay Fastening Plates or metal edging flanges, etc., Versico Primer must be used to clean the membrane and metal surfaces.
4. Terminate flashing in accordance with an appropriate Versico C-9 Termination.

E. **Other Related Work**

1. **Walkways** are required at 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. Versico Walkway Rolls must be adhered to the EPDM membrane with QA Seam Tape/Primer. QA Walkway Pads (with Seam Tape Factory-Applied to the walkway underside) are also available.

b. Smooth concrete pavers, when used, shall be loose laid over a slip-sheet of cured EPDM membrane or 2 layers of MP Safeguard Mat.

c. Versico Rubber Pavers can be placed directly over the membrane. Installation Instructions Sheets are available from Versico.

Note: Pavers are not recommended when the roof slope is greater than 2" per one horizontal foot.

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.

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

Versico, LLC
P. O. Box 1289
Carlisle, PA 17013
800-992-7663
<http://www.versico.com>