



SHORT FORM SPEC FULLY ADHERED ROOFING SYSTEM

July 2008

This SHORT FORM SPEC is a brief outline of Versico's VersiGard Fully Adhered Roofing System requirements and is intended for use as a submittal with a bid package. Specifiers and the Versico Authorized Roofing Applicator 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 Design "A" Fully Adhered Roofing System incorporates VersiGard (black or white-on-black) 60-mil thick **non-reinforced** or VersiGard 45-mil, 60-mil or 75-mil thick **reinforced** EPDM membrane. An acceptable insulation is mechanically fastened to the roof deck or adhered with FAST, OlyBond 500 or VersiGrip® urethane insulation adhesive or hot asphalt and the EPDM membrane is fully adhered to insulation with VersiGard Substrate Adhesive. Adjoining sheets of EPDM membrane are seamed together a minimum of 3" using or QA Seam Tape/ Primer. As an option for maximum 10 year warranty projects, Seam Adhesive, In-Seam Sealant and Lap Sealant may be used in lieu of Seam Tape/Primer.

1.02 QUALITY ASSURANCE

- A. This roofing system must be installed by a Versico Authorized Roofing Applicator in compliance with shop drawings as approved by Versico. There must be no deviations made from Versico's specifications or the approved shop drawings without the **PRIOR WRITTEN APPROVAL** of Versico.
- B. Upon completion of the installation, an inspection will be conducted by a Field Service Representative of Versico to ascertain that 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, FM Approval Guide or UL 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 the building height exceeds 250'.

3. 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).
4. Cold storage buildings and freezer facilities.
5. Projects where the 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 & 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. 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, QA flashings, and uncured flashing).
- C. When liquid adhesives and sealants are exposed to lower temperatures, restore to a minimum of 60°F before use.
- D. Do not store adhesive containers with opened lids due to loss of solvent which will occur from flash off.
- E. 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. There is no maximum slope restriction for the application of this roofing system. On VersiGard White Roofing Systems, a slope greater than 1/8" per horizontal foot is recommended to serve the long-term aesthetics.
- B. On retrofit - recover projects, existing roofing material must be investigated and wet material must be removed.
- C. Existing sprayed-in-place urethane roofs and Phenolic insulation must be removed.

- D. 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.
- E. Coordination between various trades is essential to avoid unnecessary rooftop traffic over sections of the roof and to prevent damage to the membrane.
- F. **For VersiGard White Roofing Systems**

When aesthetics are of concern, VersiGard White EPDM membrane should be protected and areas of concentrated traffic should be confined to preserve the white surface of the membrane.

Versico disclaims responsibility for the cleanliness or the discoloration of the membrane system caused by environmental conditions or resulting from initial installation.

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.

- C. Fully Adhered systems where hot asphalt is specified for insulation attachment may qualify for a 10 or 15-year Total System Warranty, Versico must be contacted regarding specific requirements prior to installation.
- D. A **20-year Total System Warranty** is available for a charge for projects utilizing minimum 60-mil thick VersiGard Non-Reinforced or Reinforced EPDM Membrane and incorporating additional design enhancements as outlined in the 20-year Warranty Design Enhancements Attachment in the VersiGard EPDM Roofing System 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

Maximum 25 foot wide **VersiGard** black 45 or 60-mil thick non-reinforced or maximum 10 feet wide 45-mil, 60-mil, or 75-mil thick reinforced EPDM (Ethylene, Propylene, Diene Terpolymer) may be used with this roofing system. **VersiGard** white-on-black, maximum 10' wide, 60-mil thick non-reinforced EPDM may also be specified. For physical properties of the membrane, refer to the "Products" Section of the Versico technical manual.

2.03 RELATED MATERIALS

- A. VersiGard Substrate Adhesive, Primer, QA Seam Tape, Seam Adhesive, In-Seam Sealant, Lap Sealant, Cured EPDM Flashing, QA Flashing, uncured QA Flashing®, Seam Fastening Plates 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: B-500 Water Based Bonding Adhesive, Walkway Pads/Rolls, Pre-Molded Pipe Flashing, Cured EPDM Flashing, 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 applicator shall not proceed unless the defects are corrected.
- C. Acceptable decks and the applicable Versico Fasteners:
 1. **Steel, 22 gauge (.75 mm) or heavier** - HPV or HPV-X Fasteners are recommended with a minimum pullout of 360 pounds per fastener.
 2. **Steel decks lighter than 22 gauge** - HPV or HPV-X Fasteners are recommended with a minimum pullout of 300 pounds per fastener.
 3. **Structural Concrete, rated 3,000 psi or greater** - Versico CD-10 or MP 14-10 Fasteners are recommended with a minimum pullout of 800 pounds per fastener.

4. **Wood Plank or minimum 15/32" thick Plywood** - HPV or HPV-X Fasteners are recommended with a minimum pullout of 360 pounds.
5. **Minimum 7/16" thick oriented strand board (OSB)** - HPV or HPV-X Fasteners are recommended with a minimum pullout of 250 pounds per fastener.
6. **Cementitious Wood Fiber and Gypsum** - NTB Fasteners are recommended with a minimum pullout of 225 pounds for cementitious wood fiber or 300 pounds for gypsum. Lite-Deck Fasteners are an acceptable alternate into gypsum decking.
7. **Lightweight Insulating Concrete** - HPV or HPV-X Fasteners may be used to fasten through the lightweight insulating concrete into the steel deck below with a minimum pullout of 360 pounds.

This roofing system may be specified directly over certain types of new cellular or perlite lightweight insulating concrete substrates. Versico must be contacted for acceptable lightweight insulating concrete substrates.

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.

Insulation Attachment

1. Versico Insulation shall be mechanically fastened to the roof deck with 1 insulation fastener and plate per every 2 square feet of insulation except as follows:
For minimum 22 gauge steel, structural concrete or minimum 15/32 plywood decks.
 - a. Versico Polyisocyanurate insulation, 1-1/2" thick or greater (used as the top layer) may be fastened at the minimum rate of 1 per 3.2 square feet (10 fasteners per 4' x 8' board).
 - b. Versico Polyisocyanurate Insulation, 2" thick or greater (used as the top layer), may be fastened at a rate of 1 fastener and plate every 4 square feet.
 - c. **On reroof/no tearoff projects** with a maximum roof height of 40 feet, Versico insulation (i.e., Versico Recovery Board or Polyisocyanurate less than 1-1/2" thick) may be secured at the minimum rate of 11 fasteners per 4' x 8' board (5 fasteners per 4' x 4' board). This option is not applicable for 15 year Total System Warranty projects or projects where extended wind speed coverage (greater than 55 mph) is desired.

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 2 square feet of insulation unless otherwise approved in writing by Hunter Panels.
3. When mechanical attachment of the insulation is not desired, an alternate insulation attachment method may be specified which incorporates the use of FAST Adhesive, OlyBond 500 or VersiGrip Insulation Adhesive or a solid mopping of hot asphalt.

B. Membrane Installation

1. Fully adhere the EPDM membrane to the acceptable substrate with VersiGard Adhesive or B-500 Water Based Bonding Adhesive at the rate specified on the container label.

Note: B-500 Water Based Bonding Adhesive can only be specified on projects to be installed when the ambient temperature is 40° F and rising.

2. Overlap adjacent EPDM membrane sheets a minimum of 3".

3. Membrane Seaming With QA Seam Tape

- a. Apply V-150 Primer to the seam area.
- b. 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".
- 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 a QA T-Joint Cover or a 6" wide section of QA Flashing over all field Seam intersections.
- e. The use of Lap Sealant with tape seams is optional except at tape overlaps and cut edges of reinforced membrane.

4. Membrane Splicing With Splicing Cement (for maximum 10-year Warranty projects only)

- a. **When using No-Dust EPDM membrane**, cleaning the Seam area is not required unless the membrane has been contaminated with field dirt, adhesive or other residue. To remove accumulated dirt, footprints, etc., scrub the membrane sheets with Weathered Membrane Cleaner or V-150 Primer.
- b. **If No-Dust (ND) membrane is not used**, the seam area on both membrane sheets must be scrubbed with Weathered Membrane Cleaner or V-150 Primer.

- c. Apply Seam Adhesive at the rate of approximately 120 linear feet per gallon. Just prior to closing seam, apply a 1/8" to 1/4" diameter bead of In-Seam Sealant 1/2" from inside edge of the bottom membrane sheet and a minimum of 2" from the lead edge.
- d. Roll the top membrane sheet onto the mating surface and roll the seam with a 2" steel roller.
- e. After adjoining membrane sheets have been seamed together, wait a minimum of 2 hours and clean exposed edge of seam (when applicable) with Weathered Membrane Cleaner or Primer. Apply a 5/16" diameter bead of Lap Sealant. Feather Lap Sealant to completely cover the seam edge.

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

D. Membrane Flashing

- 1. When feasible, flash all penetrations and walls with Cured EPDM membrane or Flashing.
- 2. QA Flashing or Uncured EPDM Flashing (for maximum 10 year warranty projects) shall be limited to overlay vertical seams (as required at angle changes) or to flash inside and outside corners, scuppers, pourable sealer pockets and other penetrations or unusually shaped walls where the use of cured membrane flashing is not practical.
- 3. Versico's prefabricated accessories (Pre-Molded Pipe Seals and QA Products; such as, Flashing, Pourable Sealer Pockets, Pipe Seals and Inside/Outside Corners) should be used, when feasible, in lieu of QA Flashing.

- 4. When using Versico Cover Strip or Overlayment Strip to overlay Fastening Plates or metal edging flanges, etc., V-150 Primer must be used to clean the membrane and metal surfaces.
- 5. Terminate the 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 membrane with QA Seam Tape/Primer. QA Walkway Pads (with QA 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 membrane or 2 layers of MP Safeguard Mat.
 - c. Versico Rubber Pavers can be placed directly over the membrane. Installation instruction sheets are available from Versico.
 - d. 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 the metal from pulling free or buckling and sealed to prevent moisture from entering the roofing system or building.

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

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