FleeceBACK® Roofing Systems

G U I D E - S P E C

Sure-Seal®/Sure-White™ EPDM FleeceBACK™ Adhered Roofing System Using Flexible FAST™ Adhesive

January 2025

This **GUIDE-SPEC** is a brief outline of Carlisle's Sure-Seal/Sure-White FleeceBACK Adhered Roofing System requirements and is intended for use as a submittal with a bid package. Specifiers and the Carlisle Authorized Roofing Applicator must comply with the applicable Sections of Carlisle's Technical Manual, prior to design or bid.

PART I GENERAL

1.01 DESCRIPTION

The Sure-Seal/Sure-White FleeceBACK Adhered Roofing System incorporates 10' wide, 45, 60 or 90-mil thick Sure-Seal (black) or Sure-White (white-on-black) non-reinforced EPDM membrane laminated to a 55-mil thick non-woven polyester fleece-backing resulting in a total finished sheet thickness of 100, 115 or 145-mils. The membrane is fully adhered to an acceptable substrate with a spray or extrusion applied, two component, low rise Flexible FAST™ Adhesive. Adjoining sheets of membrane are spliced together using 3" or 6" wide Factory-Applied SecurTAPE™ in conjunction with EPDM Primer.

1.02 QUALITY ASSURANCE

A. The specified roofing system must be installed by a Carlisle Authorized Roofing Applicator in compliance with drawings and specifications as approved by Carlisle SynTec.

B. Upon request, an inspection shall be conducted by a Field Service Representative of Carlisle to ascertain that the membrane roofing system has been installed according to Carlisle'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 Carlisle's FleeceBACK Code Approval Guide, DORA (Directory of Roof Assemblies), FM Approvals or UL Fire Resistance Directory for Roofing Materials and Systems.

1.03 SUBMITTALS

A. To ensure compliance with Carlisle's minimum warranty requirements, the following projects should be forwarded to Carlisle 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 FleeceBACK 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 Carlisle by the Carlisle Authorized Roofing Applicator along with a completely executed Notice of Award (Page 1 of Carlisle's Request For Warranty form) 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 Design References DR-01-21 "Construction Generated Moisture" included in the Carlisle 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.

CARLISLE SYNTEC SYSTEMS

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. Carlisle 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 FleeceBACK Adhered Systems Warranty Options

Years	Minimum Membrane Thickness	Warranty Wind Speed			Additional Hail Coverage			
		55, 72 or 90 mph	90 or 100 mph	110 or 120 mph	1" Dia. Hail	2" Dia. Hail	3" Dia. Hail	4" Dia. Hail
5,10, or 15 year	Sure-Seal/Sure-White 100-mil	√	√	√	√	√ (1)	N/A	N/A
20 year	Sure-Seal/Sure-White 115-mil	√	√	√	√	√	√ (1)	N/A
25 year	Sure-Seal/Sure-White 145-mil	√	√	√	√	√	√	√ (2)
30 year	Sure-Seal/Sure-White 145-mil	√	√	√	√	√	√	√ (2)

Notes: N/A = Not Acceptable √= Acceptable

(1) Requires Flexible FAST in full coverage or beads spaced at 4” o.c.

(2) Require Flexible FAST in full coverage or beads spaced at 4” o.c. Contact Carlisle for underlayment 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. Job site storage temperatures in excess of 90° F may affect shelf life of curable materials (i.e., Flexible FAST Adhesive - Parts A & B, sealants, cleaners, primers, SecurTAPE, Pourable Sealer, Pressure-Sensitive Flashing and uncured flashing).

C. FleeceBACK Membrane should be stored in its original plastic wrap or be covered to protect from moisture. Any moisture absorbed by the fleece-backing must be removed by using a wet-vac system, prior to membrane adhesion.

1.07 JOB CONDITIONS

A. Refer to Carlisle 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 Carlisle or accepted by Carlisle as compatible. The installation, performance or integrity of products by others, **when selected by the specifier and accepted as compatible by Carlisle,** is not the responsibility of Carlisle and is expressly disclaimed by the Carlisle Warranty.

2.02 MEMBRANE

Sure-Seal/Sure-White FleeceBACK 100, 115 or 145 available with a selvage edge with 3" or 6" wide Factory-Applied SecurTAPE is provided along the length of the membrane for splicing. The 100-mil membranes are available in width of 10' and length of 100'. The 115-mil membranes are available in width of 10' and length of 100' or width of 5' and length of 40'. The 145-mil membrane is available in width of 10' and lengths of 50' or 100'.

2.03 RELATED MATERIALS

A. Flexible FAST Adhesive, Weathered Membrane Cleaner, Lap Sealant, Primer, SecurTAPE, Cured EPDM Flashing, Pressure-Sensitive Flashings, Termination Bars, Insulation Fasteners, Water Cut-Off Mastic and Pourable Sealer are required for use with this roofing system. Other Carlisle products, such as insulation and edgings are also required when a System Warranty is specified.

B. **Other Products:** Walkway Pads, Pre-Molded Pipe Flashings, Pressure-Sensitive Inside/Outside Corners, Pipe Flashings, LIQUISEAL Liquid Flashing 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 minimize construction traffic on completed sections. This will include completion of all flashings and terminations.

3.01 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 Carlisle Authorized Roofing Applicator shall not proceed unless the defects are corrected.

C. Refer to Carlisle Technical Manual for acceptable decks and the applicable Sure-Seal Fasteners (when mechanical attachment of insulation is specified).

3.03 SUBSTRATE REQUIREMENTS

A. The membrane may be adhered with Flexible FAST Adhesive directly over structural concrete, wood, gypsum and fibrous cement decks (new or tear-off). An existing smooth surfaced asphalt built-up roof (Type III or IV Asphalt), modified bitumen, or mineral surfaced cap sheet are also acceptable substrates. Direct application over certain types of cellular or perlite lightweight insulating concrete substrate may also be specified (contact Carlisle for acceptable lightweight insulating concretes).

B. Acceptable Carlisle insulations include all types currently approved with Design "A" Adhered Roofing Systems.

C. The substrate must be dry, relatively smooth, free of protrusions, debris, sharp edges or foreign materials and must be free of accumulated water, ice and snow. Cracks or voids in the substrate greater than 1/4" must be filled with Flexible FAST Adhesive or other suitable material.

D. 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.

3.04 INSTALLATION

Refer to the applicable Safety Data Sheets and Product Data Sheets for cautions and warnings.

A. **Insulation Attachment**

1. Carlisle Flexible FAST Adhesive may be specified for insulation securement in full spray or beads with spacing as outlined in the Carlisle Technical Manual.

2. Carlisle Fasteners may be used, when specified, to secure Carlisle Insulation at the specified density outlined in the Carlisle Technical Manual.

B. **Membrane Installation**

1. FleeceBACK Membrane shall be fully adhered to an acceptable substrate with a two component, spray applied, low-rise adhesive supplied by Carlisle. Flexible FAST Adhesive is applied to the substrate only and the membrane is rolled into the wet adhesive once it has foamed up approximately 1/8" to 3/4"and begins to "string" when touched with an HP Splice Wipe. Roll the membrane with a 30" wide, 150 pound segmented steel roller to set the membrane into the adhesive.

2. Adjoining sheets of FleeceBACK Membrane are overlapped a minimum of 3" or 6” along length of membrane (at selvage edges) in preparation for splicing. At end laps (along width of sheet), membrane shall be butted together and overlaid with 6" wide Pressure-Sensitive Cured Cover Strip or Pressure-Sensitive Overlayment Strip. For 25 and 30 year warranties, an additional layer of 12” wide Pressure-Sensitive Elastoform Flashing shall be applied.

3. Refer to Carlisle Technical Manual for alternate attachment methods.

4. **Membrane Splicing With SecurTAPE (membrane is provided with Factory-Applied SecurTAPE)**

   a. Prime the splice area with HP-250 or Low-VOC EPDM Primer and allow to properly dry.

   b. Where SecurTAPE is not Factory-Applied, apply SecurTAPE to bottom membrane sheet with edge of release film along a line marked 1/2" out from 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 splice with a 2" wide steel roller.

   d. Install Pressure-Sensitive T-Joint Covers or a 6" wide section of Pressure-Sensitive Elastoform Flashing® over all field splice intersections as per applicable Carlisle splicing details.

C. **Flashing**

1. When feasible, flash all walls/curbs, etc., with continuous deck membrane. When the use of continuous deck membrane is not feasible, a separate piece of Cured EPDM Flashing, or FleeceBACK Membrane may be utilized.

2. Pressure-Sensitive Elastoform Flashing shall be limited to overlaying vertical field seams, inside/outside corners, scuppers or other unusually shaped walls or penetrations; where the use of Cured EPDM Flashing, FleeceBACK Membrane, or Prefabricated accessories (pipe flashings, pourable sealer pockets, corners), is not practical.

3. When using Pressure-Sensitive Cured Cover Strip or Overlayment Strip to overlay metal edging flanges, etc., Sure-Seal Primer must be used to clean the membrane and metal surfaces.

4. Terminate the flashing in accordance with the appropriate Carlisle Details above anticipated slush line.

5. Copings, counterflashing and metal work, not supplied by Carlisle, shall be fastened to prevent metal from pulling free or buckling and sealed to prevent moisture from entering the roofing system or building.

Carlisle SynTec
P.O. Box 7000, Carlisle, PA 17013
800-479-6832
http://www.carlisle-syntec.com

Physical properties of FleeceBACK Membrane can be referenced in Part II, "Products” of the FleeceBACK Specification. Attach copies of the applicable Carlisle Details that pertain to the individual project to complete a bid package submittal.