Sure-Seal® EPDM Roofing Systems

G U I D E - S P E C

Sure-Seal® EPDM Loose Laid Ballasted Roofing System

July 2026

This **GUIDE-SPEC** is a brief outline of Carlisle's Sure-Seal EPDM Loose Laid Ballasted 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 Carlisle Technical Manual prior to design or bid. The "Products" Section included in the Carlisle technical manual and Carlisle's Product Data Sheets contain information on proper usage of Carlisle 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 a minimum 45-mil thick Sure-Seal (black) non-reinforced or minimum 60-mil Sure-Tough 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 SecurTAPE and Primer OR Factory-Applied TAPE (FAT) 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 Carlisle Authorized Roofing Applicator in compliance with shop drawings 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 30 year warranty projects the applicator must submit pictures showing the use of EPDM Primer for perimeter RUSS securement or allow random test cuts to confirm the use of EPDM Primer.

D. For specific code approvals achieved with this system, refer to Carlisle's EPDM 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 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 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 Reference 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.

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.

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

Notes: N/A = Not Acceptable √= Acceptable

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

1.06 PRODUCT DELIVERY, STORAGE AND HANDLING

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

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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 by Carlisle**, is not the responsibility of Carlisle and is expressly disclaimed by the Carlisle Warranty.

2.02 MEMBRANE

A 45-mil thick Sure-Seal (black) non-reinforced or minimum 60-mil Sure-Tough 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 SecurTAPE and Primer OR Factory-Applied TAPE (FAT) 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. 90-8-30A, Low-VOC EPDM Bonding Adhesive, Aqua Base Adhesive, EPDM or Low VOC EPDM Primer, Lap Sealant, Primer, SecurTAPE™, Cured EPDM Flashing, uncured Elastoform Flashing®, Pressure-Sensitive Flashing, Seam Fastening Plates, and RUSS (with the corresponding fasteners) are used with this roofing system. Other Carlisle products, such as, insulation, edgings and Termination Bars are required when a Total System Warranty is specified.

B. Other Products: Carlisle Walkway Pads, Pre-Molded Pipe Flashings, Pressure-Sensitive Inside/Outside Corners, Pipe Flashings. LIQUISEAL Liquid Flashing 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 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 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 Safety Data Sheets and Product Data Sheets 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. Place adjoining membrane sheets in the same manner, overlapping edges appropriately to provide for the minimum splice

width (2-1/2” or 5-1/2” depending on warranty duration).

2. **Membrane Splicing with SecurTAPE™**

a. Refer to Carlisle Technical Manual for membrane splicing.

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 Carlisle's details. The additional membrane securement may be provided by Pressure-Sensitive RUSS™ (Reinforced Universal Securement Strip) or Seam Fastening Plates.

C. **Membrane Flashing**

1. Refer to Carlisle 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.

3. 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 Carlisle'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 Carlisle Details that pertain to the individual project to complete a bid package submittal.