DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT Housing - Federal Housing Commissioner	Series and Series Number: MATERIALS RELEASE NO: 1094L (Supersedes issue dated March 9, 2021)
TO: DIRECTORS, SINGLE FAMILY HOCs DIRECTORS, MULTIFAMILY HUBs	ISSUE DATE May 8, 2024
	REVIEW DATE May 8, 2027

SUBJECT: **1. Product** Danosa Styrene-Butadiene-Styrene (SBS) Modified Bitumen Roofing Systems

2. Name and address of Manufacturer

Danosa Caribbean, Inc.
P. O. Box 13757
Santurce Station
San Juan, PR 00908

Data on the nonstandard product described herein have been reviewed by the Department of Housing and Urban Development (HUD) and determination has been made that it is considered suitable from a technical standpoint for the use indicated herein. This Release does not purport to establish a comparative quality or value rating for this product as compared to standard products normally used in the same manner.

This Materials Release cannot be used as an indication of endorsement or approval by HUD of the described product, and any statement or representation, however made, indicating such approval or endorsement by HUD is unauthorized. See Code 18, U.S.C. 709.

Any reproduction of this Release must be in its entirety.

USE:

Danosa Modified Bitumen roofing systems designed to be hot mopped, cold adhesive, self-adhered, or heat fused (torch application) on nominally flat to steep (not to exceed 6" in 12") sloped roofs.

MATERIALS and DESCRIPTION:

Product Name	Description	Installation	ASTM-Standard	Approved Use	FM Fire Classification	UL Fire Classification
1. **GLASDAN AL-80-Plus-Polyethelene Film**	Styrene-Butadiene-Styrene (SBS) modified bitumen, scrim/ fiberglass reinforced, finished with an embossed aluminum top surface, and a polyethylene film bottom surface for torch application	Heat Welded	D-6298	Cover/Cap Sheet	Class A	Class A
2. GLASDAN AL-80-Plus SA	Styrene-Butadiene-Styrene (SBS) modified bitumen, scrim/ fiberglass reinforced, finished with an embossed aluminum top surface and a peeling back release film. Self-adhered membranes (membranes with suffix SA) are applied by means of high pressure.	Apply by peeling back release film on the underside of the sheet and apply by weighted roller pressure	D-6298	Cover/Cap Sheet	Class A	Class A
3. GLASDAN AL-80-Polyethelene Film	These consist of Styrene-Butadiene-Styrene (SBS) modified bitumen mats fiberglass reinforced, finished with an embossed aluminum top surface, and a polyethylene film bottom surface for torch application	Heat Welded	-	Cover/Cap Sheet	Class A	Class A
4. GLASDAN AL-80-White-Polyethelene Film	These consist of Styrene-Butadiene-Styrene (SBS) modified bitumen mats fiberglass reinforced, finished with a white embossed aluminum top surface, and a polyethylene film bottom surface for torch application	Heat Welded	-	Cover/Cap Sheet	Class A	Class A
5. GLASDAN R-36-4 Polyethylene Film	Fiberglass reinforced Styrene-Butadiene-Styrene (SBS) modified bitumen, finished on both surfaces with a polyethylene film for torch applications	Heat Welded	D-6163	Cover/Cap Sheet	Class A	Class A
6. GLASDAN R36-Polyethylene Film	Fiberglass reinforced Styrene-Butadiene-Styrene (SBS) modified bitumen, finished on both surfaces with a polyethylene film for torch applications	Heat Welded	D-6163	Cover/Base Sheet	Class A	Class A
7. GLASDAN-R-36 SA	Fiberglass reinforced Styrene-Butadiene-Styrene modified bitumen smooth membrane, finished on both surfaces with a peeling back release film. Self-Adhered membranes (membranes with suffix SA) are applied by means of high pressure.	Apply by peeling back release film on the underside of the sheet and apply by weighted roller pressure	D-6163	Cover/Base Sheet	Class A	Class A

8. GLASDAN R36-SC-Polyethylene Film	Fiberglass reinforced Styrene-Butadiene-Styrene (SBS) modified bitumen, finished on both surfaces with a polyethylene film for torch applications	Heat Welded	D-6163	Cover/Base Sheet	Class A	Class A
9. GLASDAN S-2-Polyethelene Film	Fiberglass reinforced Styrene-Butadiene-Styrene (SBS) modified bitumen base sheet, finished on both surfaces with a polyethylene film for torch applications	Heat Welded	D-6163	Cover/Base Sheet	Class A	Class A
10. GLASDAN S-2-SAND	Fiberglass reinforced Styrene-Butadiene-Styrene (SBS) modified bitumen base sheet, finished on both surfaces with sand surface for cold adhesive or hot mop applications	Hot- Mop; Cold Adhesive	D-6163	Cover/Base Sheet	Class A	Class A
11. GLASDAN S-2 SA	Fiberglass reinforced Styrene-Butadiene-Styrene modified bitumen smooth membrane, finished on both sides with a peeling back release film. Self-Adhered membranes (membranes with suffix SA) are applied by means of high pressure.	Apply by peeling back release film on the underside of the sheet and apply by weighted roller pressure	D-6163	Cover/Base Sheet	Class A	Class A
12. GLASDAN RM4-SC-Polyethelene Film	Styrene- Butadiene -Styrene (SBS) modified bitumen, fiber-glass reinforced, top finished with mineral granules, bottom finished with polyethylene film for torch applications	Heat Welded	D-6163	Cover/Cap Sheet	Class A	Class A
13. GLASDANRM4-Polyethelene Film	Styrene- Butadiene -Styrene (SBS) modified bitumen, fiber-glass reinforced, top finished with mineral granules, bottom finished with polyethylene film for torch applications	Heat Welded	D-6163	Cover/Cap Sheet	Class A	Class A
14. GLASDAN RM4-SA	Fiberglass reinforced Styrene-Butadiene-Styrene modified bitumen smooth membrane, finished on one side with a peeling back release film and mineral granules on the top side. Self-Adhered membranes (membranes with suffix SA) are applied by means of high pressure.	Apply by peeling back release film on the underside of the sheet and apply by weighted roller pressure	D-6163	Cover/Cap Shee)	Class A	Class A
15. GLASDAN RM5-SA	Fiberglass reinforced Styrene-Butadiene-Styrene modified bitumen smooth membrane, finished on one side with a peeling back release film and mineral granules on the top side. Self-Adhered membranes (membranes with suffix SA) are applied by means of high pressure.	Apply by peeling back release film on the underside of the sheet and apply by weighted roller pressure	D-6163	Cover/Cap Sheet	Class A	Class A

16. ESTERDAN RM-4 Polyethylene Film	Polyester reinforced Styrene-Butadiene-Styrene modified bitumen, with a mineral granule top surface and a polyethylene bottom surface for torch applications	Heat Welded	D-6164	Cover/Cap Sheet	Class A	Class A
17. ESTERDAN RM-4 SAND	Polyester reinforced Styrene-Butadiene-Styrene modified bitumen, with a mineral granule top surface and a sand bottom surface for cold adhesive or hot mop applications	Hot-Mop; Cold Adhesive	D-6164	Cover/Cap Sheet	Class A	Class A
18. ESTERDAN RM-4 SA	Polyester reinforced Styrene-Butadiene-Styrene modified bitumen smooth membrane, finished on one side with a peeling back release film and mineral granules on the top side. Self-Adhered membranes (membranes with suffix **SA**) are applied by means of high pressure.	Apply by peeling back release film on the underside of the sheet and apply by weighted roller pressure	D-6164	Cover/Cap Sheet	Class A	Class A
19. ESTERDAN RM-4-250 Polyethylene Film	Polyester reinforced Styrene-Butadiene-Styrene modified bitumen, with a mineral granule top surface and a polyethylene bottom surface for torch applications	Heat Welded	D-6164	Cover/Cap Sheet	Class A	Class A
20. ESTERDAN RM-5 Polyethylene Film	Polyester reinforced Styrene-Butadiene-Styrene modified bitumen, with a mineral granule top surface and a polyethylene bottom surface for torch applications	Heat Welded	D-6164	Cover/Cap Sheet	Class A	Class A
21. ESTERDAN RM5-SAND	Polyester reinforced Styrene-Butadiene-Styrene modified bitumen, with a mineral granule top surface and a sand bottom surface for cold adhesive or hot mop applications	Hot-Mop; Cold Adhesive	D-6164	Cover/Cap Sheet	Class A	Class A
22. ESTERDAN RM5 SA	Polyester reinforced Styrene-Butadiene-Styrene modified bitumen smooth membrane, finished on one side with a peeling back release film and mineral granules on the top side. Self-Adhered membranes (membranes with suffix **SA**) are applied by means of high pressure.	Apply by peeling back release film on the underside of the sheet and apply by weighted roller pressure	D-6164	Cover/Cap Sheet	Class A	Class A
23. ESTERDAN S-2 - Polyethylene Film	Polyester reinforced Styrene-Butadiene-Styrene modified bitumen, with a mineral granule top surface and a polyethylene bottom surface for torch applications	Heat Welded	D-6164	Cover/Base Sheet	Class A	Class A

24. ESTERDAN S-2-SAND	Polyester reinforced Styrene-Butadiene-Styrene modified bitumen, with a mineral granule top surface and a sand bottom surface for cold adhesive or hot mop applications	Hot-Mop; Cold Adhesive	D-6164	Cover/Base Sheet	Class A	Class A
25. ESTERDAN S-2 SA	Polyester reinforced Styrene-Butadiene-Styrene modified bitumen smooth membrane, finished on one side with a peeling back release film and mineral granules on the top side. Self-Adhered membranes (membranes with suffix **SA**) are applied by means of high pressure.	Apply by peeling back release film on the underside of the sheet and apply by weighted roller pressure	D-6164	Cover/Base Sheet	Class A	Class A
26. ESTERDAN RM Plus-Polyethylene Film	Polyester reinforced Styrene-Butadiene-Styrene modified bitumen, with a mineral granule top surface and a polyethylene bottom surface for torch applications	Heat Welded	D-6164	Cover/Cap Sheet	Class A	Class A
27. ESTERDAN RM Plus SAND	Polyester reinforced Styrene-Butadiene-Styrene modified bitumen, finished on both surfaces with a sand surface for cold adhesive or hot mop applications	Hot-Mop; Cold Adhesive	D-6164	Cover/Cap Sheet	Class A	Class A
28. ESTERDAN RM Plus SA	Polyester reinforced Styrene-Butadiene-Styrene modified bitumen smooth membrane, finished on both surfaces with a peeling back release film. Self-Adhered membranes (membranes with suffix **SA**) are applied by means of high pressure.	Apply by peeling back release film on the underside of the sheet and apply by weighted roller pressure	D-6164	Cover/Cap Sheet	Class A	Class A
29. WR Cap Polyester-Polyethylene Film	Styrene-Butadiene-Styrene (SBS) modified bitumen polyester reinforced cap sheets, finished with a white reflective chips as top surface, and a polyethylene film bottom surface for torch application	Heat Welded	D-6164	Cover/Cap Sheet	Class A	Class A
30. WR Cap Polyester-SAND	Styrene-Butadiene-Styrene (SBS) modified bitumen polyester reinforced cap sheets, finished with a white reflective chips as top surface and a sand for hot mop or Cold Adhesive applications	Hot-Mop; Cold Adhesive	D-6164	Cover/Cap Sheet	Class A	Class A
31. WR Cap Polyester SA	Styrene-Butadiene-Styrene (SBS) modified bitumen polyester reinforced cap sheets, finished with a white reflective chips as top surface, and with a peeling back release film. Self-Adhered membranes (membranes with suffix **SA**) are applied by means of high pressure.	Apply by peeling back release film on the underside of the sheet and apply by weighted roller pressure	D-6164	Cover/Cap Sheet	Class A	Class A

32. WR Cap-Polyethylene Film	Styrene-Butadiene-Styrene (SBS) modified bitumen fiberglass reinforced cap sheets, finished with a white reflective chips as top surface, and a polyethylene film bottom surface for torch application	Heat Welded	D-6163	Cover/Cap Sheet	Class A	Class A
33. WR Cap-SAND	Styrene-Butadiene-Styrene (SBS) modified bitumen fiberglass reinforced cap sheets, finished with a white reflective chips as top surface and sand for hot mop or Cold Adhesive applications	Hot-Mop; Cold Adhesive	D-6163	Cover/Cap Sheet	Class A	Class A
34. WR Smooth Polyester-Polyethylene Film	Styrene-Butadiene-Styrene (SBS) modified bitumen polyester reinforced cap sheets, finished with a white reflective film as top surface, and a polyethylene film bottom surface for torch application	Heat Welded	D-6164	Cover/Cap Sheet	Class A	Class A
35. WR Smooth Polyester-SAND	Styrene-Butadiene-Styrene (SBS) modified bitumen polyester reinforced cap sheets, finished with a white reflective film as top surface, and sand for hot mop or Cold Adhesive applications	Hot-Mop; Cold Adhesive	D-6164	Cover/Cap Sheet	Class A	Class A
36. WR Smooth Polyethylene Film	Styrene-Butadiene-Styrene (SBS) modified bitumen fiberglass reinforced cap sheets, finished with a white reflective film as top surface, and a polyethylene film bottom surface for torch application	Heat Welded	D-6163	Cover/Cap Sheet	Class A	Class A
37. WR Smooth-SAND	Styrene-Butadiene-Styrene (SBS) modified bitumen fiberglass reinforced cap sheets, finished with a white reflective film as top surface, and sand for hot mop or Cold Adhesive applications	Hot-Mop; Cold Adhesive	D-6163	Cover/Cap Sheet	Class A	Class A
38. WR Smooth Polyester SA	Styrene-Butadiene-Styrene (SBS) modified bitumen polyester reinforced cap sheets, finished with a white reflective film as top surface, and a peeling back release film. Self-Adhered membranes (membranes with suffix **SA**) are applied by means of high pressure.	Apply by peeling back release film on the underside of the sheet and apply by weighted roller pressure	D-6164	Cover/Cap Sheet	Class A	Class A
39. WR Smooth SA	Styrene-Butadiene-Styrene (SBS) modified bitumen fiberglass reinforced cap sheets, finished with a white reflective film as top surface, and a peeling back release film. Self-Adhered membranes (membranes with suffix **SA**) are applied by means of high pressure.	Apply by peeling back release film on the underside of the sheet and apply by weighted roller pressure	D-6163	Cover/Cap Sheet	Class A	Class A

40. ESTERDAN R-36-250 Polyethylene Film	Polyester reinforced Styrene-Butadiene-Styrene modified bitumen, finished on both surfaces with a polyethylene film for torch applications	Heat Welded	D-6164	Cover/Base Sheet	Class A	Class A
41. ESTERDAN R-36-4 Polyethylene	Polyester reinforced Styrene-Butadiene-Styrene modified bitumen, finished on both surfaces with a polyethylene film for torch applications	Heat Welded	D-6164	Cover/Base Shee)	Class A	Class A
42. ESTERDAN R-36-Polyethylene Film	Polyester reinforced Styrene-Butadiene-Styrene modified bitumen, finished on both surfaces with a polyethylene film for torch applications	Heat Welded	D-6164	Cover/Base Sheet	Class A	Class A
43. ESTERDAN R-36-SAND	Polyester reinforced Styrene-Butadiene-Styrene modified bitumen, finished on both surfaces with a sand surface for cold adhesive or hot mop applications	Hot-Mop; Cold Adhesive	D-6164	Cover/Base Sheet	Class A	Class A
44. ESTERDAN R-36 SA	Polyester reinforced Styrene-Butadiene-Styrene modified bitumen smooth membrane, finished on both surfaces with a peeling back release film. Self-Adhered membranes (membranes with suffix **SA**) are applied by means of high pressure.	Apply by peeling back release film on the underside of the sheet and apply by weighted roller pressure	D-6164	Cover/Base Sheet	Class A	Class A
45. Basedan II	Basedan II is a fiberglass reinforced, felt mat impregnated with asphalt, for the construction of built-up roofs or membrane systems	Hot-Mop; Cold Adhesive	D-4601	Base Sheet	Class A	Class A
46. Basedan IV	Basedan IV is a fiberglass reinforced, felt mat impregnated with asphalt, for the construction of built-up roofs or membrane systems	Hot-Mop; Cold Adhesive	D-2178	Separator Sheet	Class A	Class A

FIRE AND WIND CLASSIFICATION:

Each roofing system shall resist design wind forces as required by HUD or the local jurisdiction in which the products will be used but not less than those specified in the ASCE/SEI 7-16. Fire classification shall be in accordance with Underwriters Laboratories, Inc., (UL) or Factory Mutual Engineering Corporation (FM) certifications. Testing shall be performed by an independent laboratory with follow-up service and listing capability. To qualify for fire rating and uplift resistance, the system shall be in the current UL or FM Listings.

INSTALLATION REQUIREMENTS:

1. The Danosa SBS Systems shall be installed by a Danosa Caribbean, Inc., registered/Licensed Roofing Applicator.

2. The Danosa SBS Systems shall be inspected by a Danosa Caribbean, Inc., Technical Representative upon completion.

3. Consultation:

    a. Danosa Technical Services Department shall be available for consultation with respect to all deviations from current DANOSA Specifications and Details.

    b. No deviation from the Danosa Specifications and Details shall be allowed without first obtaining written approval from Danosa Technical Services Department.

4. Roof substrate preparation. Correct substrate defects:

    a. Preparation of the substrate shall comply with the latest edition of National Roofing Contractors Association (NRCA), "The NRCA Roofing & Waterproofing Manual," Danosa Specifications, and the HUD Minimum Property Standards (MPS).

    b. Bring existing conditions/defects to the attention of the general contractor in writing to be corrected before work commences.

    c. If a general contractor is not involved, the Danosa applicator shall be responsible for correcting improper conditions affecting the roofing installation.

5. Special Deck Preparation-Danosa—Special Deck Preparation Specifications shall be followed when installing an insulation layer or base sheet directly to the specified substrate.

6. Membrane installation, including placement, lap splice bonding procedure, perimeter attachment, flashing, walkways, and related work necessary to provide watertight roofing systems, shall comply with the appropriate Danosa Roofing Systems Specifications and Details.

CERTIFICATION AND PRODUCT LABELING:

Danosa Caribbean, Inc., certifies that the Danosa Styrene-Butadiene-Styrene (SBS) Modified Bitumen Roofing Systems shall be produced in conformance to this MR, and are in compliance with a validation program at Danosa Caribbean, Inc., in accordance with the Code of Federal Regulations, 24 CFR 200.935. Danosa Caribbean, Inc., shall inspect the manufacturer's facility to ensure that the quality assurance procedures are being followed.

Four samples of each product shall be selected and tested each year to validate the manufacturer's conformance to the requirements of this MR. Each roofing system certified as conforming to this MR shall be labeled with the following information:

1. Danosa Caribbean, Inc.
2. The product name as displayed by FM
3. Underwriters Laboratory
4. Factory Mutual labels
5. Production code traceable to day and shift of manufacture
6. This MR number and version

INSPECTION:

A designated representative of Danosa Caribbean, Inc. (Danosa) shall make inspections or investigation of the installation at the following intervals:

1. Prior to delivery of materials, accept or reject the roof deck to which the Danosa SBS modified bitumen roofing system is to be applied.

2. During the installation, inspect and accept the installation techniques and methods.

3. Upon completion, give final acceptance to the installation.

PRODUCTION FACILITIES:

This product will be manufactured at the following production facilities:

Danosa Caribbean, Inc.
Luchetti Industrial Park
Lot 29 C Street
Bayamon, PR 00961
PH: (787) 785-4545
Fax: (787) 787-3902
Contact: Waleska Rivera, President

WARRANTY:

A 10-year warranty shall be given to the owner by Danosa Caribbean, Inc. (Danosa) to read as follows:

Danosa Caribbean, Inc. (Danosa) hereby warrants to the owner of its roofing system, installed by an applicator approved by Danosa, that their membrane roofing system will remain in a watertight condition for a period of ten (10) years from the date of application. In the event of failure of the Danosa System to function as warranted herein, whether on account of defective materials, faulty installation, or on account of normal wear and aging, Danosa will make, or cause to be made, such repairs and maintenance necessary to enable the system to perform as warranted.

Danosa's obligations to repair or maintain the system under this warranty shall not be in force or effect unless:

1. Danosa is notified of any failure of the system covered by this warranty within thirty (30) days following observation of the failure;

2. The system is installed by an applicator approved by Danosa; and

3. No alterations or repairs to the system are made without the prior written approval of Danosa, as to the extent, methods and materials used. Danosa assumes no liability for any failure of the system resulting from winds, which exceed the design wind, Acts of God, including without limitation, lightning, hurricane, or earthquake; nor for any failure of the system caused by leakage or any other cause from an adjacent structure.

MANUFACTURER'S RESPONSIBILITIES:

Issuance of this Materials Release (MR) commits the manufacturer to fulfill, as a minimum, the following:

1. Produce, label, and certify the material, product, or system in strict accordance with the terms of this MR.

2. Provide necessary corrective action in a timely manner for all cases of justified complaint, poor performance, or failure reported by HUD.

3. When requested, provide the Office of Manufactured Housing Programs, HUD Headquarters, with a representative list of properties in which the material, product, or system has been used, including complete addresses or descriptions of locations and dates of installation.

4. Inform HUD in advance of changes in production facilities, methods, product design, company name, ownership, or mailing address.

EVALUATION:

This Materials Release shall be valid for a period of three years from the date of initial issuance or most recent renewal or revision, whichever is later. The holder of this Materials Release shall apply for renewal or revision 90 days prior to the Review Date printed on this Materials Release. Submittals for renewal or revisions must be sent electronically to HSGmps@hud.gov.

Appropriate user fee(s) for the TSP program can be submitted through the Pay.gov website at https://pay.gov/public/form/start/73881741.

The holder of this Materials Release may apply for revision at any time prior to the Review Date. Minor revisions may be in the form of a supplement to the Materials Release.

If the Department determines that a proposed renewal or supplement constitutes a revision, the appropriate user fee for a revision will need to be submitted in accordance with 24 CFR § 200.934 User fee system for the technical suitability of products program, and the current user fee schedule.

CANCELLATION:

Failure to apply for a renewal or revision shall constitute a basis for cancellation of the MR. HUD will notify the manufacturer that the MR may be canceled when:

1. conditions under which the document was issued have changed so as to affect production of, or to compromise the integrity of the accepted material, product, or system,

2. the manufacturer has changed its organizational form without notifying HUD, or

3. the manufacturer has not complied with responsibilities it assumed as a condition of HUD's acceptance.

However, before cancellation, HUD will give the manufacturer a written notice of the specific reasons for cancellation, and the opportunity to present views on why the MR should not be canceled. No refund of fees will be made on a canceled document.

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This Materials Release is issued solely for the captioned firm, and is not transferable to any person or successor entity.

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