DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT Housing - Federal Housing Commissioner	Series and Series Number: MATERIALS RELEASE NO: 1094h (Supersedes issue dated July 8, 2003)
TO: DIRECTORS, SINGLE FAMILY HOCs DIRECTORS, MULTIFAMILY HUBs	ISSUE DATE March 21, 2006
	REVIEW DATE March 21, 2009

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, or heat fused (torch application) on nominally flat to steep (not to exceed 6" in 12") sloped roofs.

DESCRIPTION;

BASEDAN:

BASEDAN is a fiberglass reinforced, felt mat impregnated with asphalt, conforming to the requirements of ASTM D312 for the construction of built-up roofs, and with asphalt conforming to the requirements of ASTM D449, for the membrane systems.

GLASDAN AL-80 and AL-80-3:

These consist of Styrene-Butadiene-Styrene (SBS) modified bitumen mats fiberglass reinforced, finished with an 80 micron embossed aluminum top surface, and a polyethylene film bottom surface for torch application, or sand for hot mop applications.

GLASDAN R-36:

Fiberglass reinforced Styrene-Butadiene-Styrene (SBS) modified bitumen, finished on both surfaces with a polyethylene film for torch applications, and sand surface for cold adhesive or hot mop applications.

GLASDAN RM:

Styrene-Butadiene-Styrene (SBS) modified bitumen, fiber-glass reinforced, top finished with mineral granules, bottom finished with polyethylene film for torch applications, and sand for cold adhesive or hot mop applications.

ESTERDAN RM-4 AND RM-5:

Polyester reinforced Styrene-Butadiene-Styrene modified bitumen, with a mineral granule top surface and a polyethylene bottom surface for torch applications, and a sand bottom surface for cold adhesive or hot mop applications.

ESTERDAN RM-PLUS:

Polyester (250 gm/m^2) reinforced Styrene-Butadiene-Styrene modified bitumen, with a mineral granule top surface and a polyethylene bottom surface for torch applications, and a sand bottom surface for cold adhesive or hot mop applications.

ESTERDAN R-36:

Polyester reinforced Styrene-Butadiene-Styrene modified bitumen, finished on both surfaces with a polyethylene film for torch applications, and sand surface for cold adhesive or hot mop applications.

MATERIALS:

All roofing systems materials used with the DANOSA CARIBBEAN, INC., (DANOSA) system shall be those specified by DANOSA, and supplied by DANOSA or a DANOSA licensed roofing applicator. Any non-DANOSA materials supplied by an applicator shall have been accepted beforehand, in writing, by DANOSA. Data on physical properties of the membranes referenced in this document, such as tensile strength, elongation, low temperature flexibility, etc. shall be available from DANOSA CARIBBEAN, INC. Contact DANOSA Technical Services with questions and for data.

Asphalt Products:

Steep Asphalt shall be suitable for the roof slope and temperature (see Appendix X1, Slope Guidelines of ASTM D312). All asphalt shall meet ASTM D312 requirements. Asphalt primer shall meet ASTM D41.

INSTALLATION:

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 approval, in writing, 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.

WIND AND FIRE CLASSIFICATION:

In order to be in compliance with this Materials Release (MR), the DANOSA Roofing System shall be designed to, and shall resist design wind forces specified by ASCE 7-88. Fire classification shall meet the HUD Minimum Property Standards (MPS), and shall be designed and installed in accordance with Underwriter's Laboratories, Inc. (UL), or Factory Mutual Engineering Corporation (FM) classification.

NOTE: (If specified) DANOSA Roofing Systems qualified for Fire Classification with coatings shall have the coatings reapplied, as required, to maintain the Fire Classification.

CERTIFICATION:

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 assure 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 as certified as conforming to this MR, shall be labeled with the following information:

Each member certified as conforming to this MR shall be marked with the following information:

1. Manufacturer's name or logo.
2. Product name as defined in DESCRIPTION section.
3. HUD MR 1094h.
4. Manufacturing plant or identification

MANUFACTURING LOCATIONS:

The product covered under this MR will be produced at the following plant(s):

SPONSOR: PLEASE PROVIDE THE CONTACT PERSON, MANUFACTURING PLANT NAME, ADDRESS(ES), AND PHONE NUMBER(S) FOR EACH MANUFACTURING PLANT

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, to accept or reject the roof deck to which the DANOSA SBS modified bitumen roofing system is to be applied.

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

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

WARRANTY:

A ten (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, and will retain at least eighty (80%) percent of its specified aged thermal resistance value, if applicable, 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 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 FHA Standards, 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, design of the product, company name, ownership or mailing address.

EVALUATION:

This MR 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 MR shall apply for a renewal or revision 90 days prior to the Review Date printed on this MR. Submittals for renewal or revision shall be sent to:

U. S. Department of Housing and Urban Development
FHA Standards, Office of Manufactured Housing Programs
451 7th Street, SW, Room 9168
Washington,DC 20410-8000

Appropriate User Fee shall be sent to:

U .S. Department of Housing and Urban Development
Miscellaneous Income – Technical Suitability of Products Fees
Bank of America
P. O. Box 198762
Atlanta, GA 30384-8762

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

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 Code of Federal Regulations 24 CFR 200.934, "User Fee System for the Technical Suitability of Products Program," and current User Fee Schedule.

CANCELLATION:

Failure to apply for a renewal or revision shall constitute a basis for cancellation of this 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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