

**DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
Housing - Federal Housing Commissioner**

**Series and Series Number:
MATERIALS RELEASE NO: 1320**

**TO: DIRECTORS, SINGLE FAMILY HOCs
DIRECTORS, MULTIFAMILY HUBs**

ISSUE DATE

November 15, 2005

REVIEW DATE

November 15, 2008

SUBJECT:

- Product** Atactic Polypropylene (APP), Styrene Butadiene Styrene (SBS), and Thermo Plastic Olefin (TPO) Modified Bitumen Membrane Roofing Systems
- Name and address of Manufacturer** POLYGLASS® USA, Inc.
150 Lyon Drive
Fernley, NV 89408

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:

The POLYGLASS® roofing membrane products referenced within this Materials Release are intended for use in nominally flat to steep roof slopes.

DESCRIPTION:

Though POLYGLASS® Modified Bitumen Roofing Systems are applicable for many commercial, industrial, and residential roofing applications, they may not be appropriate for uses other than those contained herein. For any application or use not covered in this Materials Release, please contact the POLYGLASS® USA Technical Services Department.

POLYGLASS® materials are not to be applied, without special consideration and written approval by the POLYGLASS® USA, Technical Services Department, where any of the following conditions exist:

- a. Roofs subject to chemical or by-product discharge.
- b. Buildings with large openings in a wall (greater than 10% of the wall surface) which could be left open in a storm.
- c. Roofs subject to regular traffic.
- d. Roofs subject to positive pressure situations such as: pressurized buildings, air infiltrating decks, canopies, overhangs, airplane hangars, distribution centers, etc.
- e. Cold storage or freezer buildings or buildings with abnormally high interior temperatures.
- f. Swimming pools or other high humidity interiors (laundries, etc.) Determination of satisfactory structural conditions for supporting the load of the completed roof installation as well as any other anticipated loads are the owner's, owner's engineer and/or architect's responsibility.

Before performing work on roofs subject to specific code requirements or special job conditions, contact the POLYGLASS[®] USA, Technical Services Department, a design professional, and the local authority having jurisdiction. POLYGLASS[®] Guide Specifications are provided for the purpose of meeting the minimum requirements necessary to issue a POLYGLASS[®] Warranty. POLYGLASS[®] recommends that a design professional be consulted to assure proper design, installation, conformance to building codes or other requirements of the authority having jurisdiction.

Product Descriptions:

The following membranes are designed for use with conventional application technologies including torch (heat weld), hot asphalt, and cold process adhesive or mechanical attachment.

Atactic Polypropylene (APP) Products

<u>Polyflex HP</u> <u>Polyflex HP</u> <u>G</u>	ASTM D 6222 Type II	Heavy polyester reinforced APP modified bitumen roof membrane. These membranes are high strength, lightweight, and weather resistant. Top membrane surface is sanded or granular. For application directly over acceptable substrate, base-ply sheet.
<u>Polyflex</u> <u>Polyflex G</u>	ASTM D 6222 Type I FM and UL Listed	Polyester reinforced APP modified bitumen roof membrane. These membranes are lightweight and weather resistant. Top membrane surface is sanded or granular. For application directly over acceptable substrate, base-ply sheet.
<u>Polyflex G</u> <u>FR</u>	ASTM D 6222 Type I FM and UL Listed	Fire retardant, polyester reinforced APP modified bitumen roof membrane. These membranes are lightweight and weather resistant. Top membrane surface is granular. For application directly over acceptable substrate, base-ply sheet.
<u>Duflex</u> <u>Duflex G</u>	ASTM D 6223 Type I FM and UL Listed	Polyester and fiberglass reinforced APP modified bitumen roof membrane. These membranes are lightweight and weather resistant. Top membrane surface is sanded or granular. For application directly over acceptable substrate, base-ply sheet.
<u>Duflex G FR</u>	ASTM D 6223 Type I FM and UL Listed	Fire retardant, polyester and fiberglass reinforced APP modified bitumen roof membrane. These membranes are lightweight and weather resistant. Top membrane surface is granular. For application directly over acceptable substrate, base-ply sheet.
<u>Polybond</u> <u>Polybond G</u>	ASTM D 6222 Type I FM and UL Listed	Polyester reinforced APP modified bitumen roof membrane. These membranes are lightweight and weather resistant. Top membrane surface is sanded or granular. For application directly over acceptable substrate, base-ply sheet.
<u>Polyglass</u> <u>Base</u>	ASTM 6509 Type I FM and UL Listed	Fiberglass mat reinforced APP modified bitumen roof membrane base sheet. This membrane is saturated and coated with a polymerized asphaltic compound. For application directly over acceptable substrate.

Styrene Butadiene Styrene (SBS) Products

<u>Elastoshield HP G</u>	ASTM D 6164 Type II	Heavy polyester reinforced SBS modified bitumen roof membrane. These membranes are lightweight and weather resistant. Top membrane surface is granular. For application directly over acceptable substrate.
<u>Elastoshield TS</u> <u>Elastoshield TS G</u>	ASTM D 6164 Type I FM and UL Listed	Polyester reinforced SBS modified bitumen roof membrane. These membranes are lightweight, and weather resistant. Top membrane surface is sanded or granular. For application directly over acceptable substrate.
<u>Elastoshield TS G</u> <u>FR</u>	ASTM D 6164 Type I FM and UL Listed	Fire retardant, polyester reinforced SBS modified bitumen roof membrane. These membranes are lightweight and weather resistant. Top membrane surface is granular. For application directly over acceptable substrate.
<u>Elastoflex S6</u> <u>Elastoflex S6 G</u>	ASTM D 6164 Type I FM and UL Listed	Polyester reinforced SBS modified bitumen roof membrane. These membranes are lightweight, and weather resistant. Top membrane surface is sanded or granular. For application directly over acceptable substrate.
<u>Elastoflex S6 G</u> <u>FR</u>	ASTM D 6164 Type I FM and UL Listed	Fire retardant, polyester reinforced SBS modified bitumen roof membrane. These membranes are lightweight, and weather resistant. Top membrane surface is granular. For application directly over acceptable substrate.
<u>Elastoflex V</u> <u>Elastoflex VG</u>	ASTM D 6163 Type I FM Listed	Fiberglass reinforced SBS modified bitumen roof membrane. These membranes are lightweight, and weather resistant. Top membrane surface is sanded or granular. For application directly over acceptable substrate.
<u>Elastoflex VG FR</u>	ASTM D 6163 Type I FM and UL Listed	Fire retardant, fiberglass reinforced SBS modified bitumen roof membrane. These membranes are lightweight, and weather resistant. Top membrane surface is sanded or granular. For application directly over acceptable substrate.
<u>Elastobase Poly</u>	ASTM D 6164 Type I	Polyester mat reinforced SBS modified bitumen roof membrane base sheet. This membrane is coated with a rubberized asphaltic compound. For application directly over acceptable substrate.
<u>Elastobase V</u>	ASTM D 6163 Type I	Fiberglass mat reinforced SBS modified bitumen roof membrane base sheet. This membrane is saturated and coated with a rubberized asphaltic compound. For application directly over acceptable substrate.
<u>Modibase</u>	ASTM D 6163 Type I	Fiberglass mat reinforced SBS modified bitumen roof membrane base sheet. This membrane is saturated and coated with a rubberized asphaltic compound. For application directly over acceptable substrate.

<u>Polyglass G2 Base</u>	ASTM D 4601 Type II UL Listed	Fiberglass mat reinforced asphaltic base sheet. This membrane is saturated and coated with non-filled Type IV asphalt. For application directly over acceptable substrate.
<u>Polyram</u>	ASTM D 5147	This foil faced plastomeric roofing membrane product consists of a compound based on bitumen, modified with polypropylene and reinforced with woven glass. The top surface is protected by a stove enameled copper foil. For application directly over acceptable substrate, base-ply sheet.
<u>Polyall</u>	ASTM D 5147	Foil faced plastomeric roofing membrane. This product consists of a compound based on bitumen, modified with polypropylene and reinforced with woven glass. The top surface is protected by a stove enameled aluminum foil. For application directly over acceptable substrate, base-ply sheet.

Thermo Plastic Olefin (TPO) Products

<u>Xtraflex</u> <u>Xtraflex G</u>	ASTM D 6164 Type II ASTM D 6222 Type II FM and UL Listed	Heavy polyester mat or combination glass fiber and polyester reinforced asphaltic TPO roof membrane. These membranes are composed of distilled bitumen and selected thermoplastic polyolefinic resins. Top membrane surface is sanded or granular. For application directly over acceptable substrate.
<u>Xtraflex G</u> <u>FR</u>	ASTM D 6164 Type II ASTM D 6222 Type II FM and UL Listed	Fire retardant, heavy polyester mat or combination glass fiber and polyester reinforced asphaltic TPO roof membrane. These membranes are composed of distilled bitumen and selected thermoplastic polyolefinic resins. Top membrane surface is sanded or granular. For application directly over acceptable substrate.

The following membranes are designed for with self adhesive application technologies.

Atactic Polypropylene (APP) Products

<u>Polyflex SA P</u> <u>Polyflex SA P G</u>	ASTM D 6164 ASTM D 1970 FM and UL Listed	Polyester mat reinforced APP modified bitumen top layer roof membrane with a self adhesive compound bottom layer. Top membrane surface is granular. For application directly to a roof deck over non-living space areas. Living space requires a mechanically attached Base sheet. See Manufacturer's Requirements.
<u>Polyflex SA P G</u> <u>FR</u>	ASTM D 6164 ASTM D 1970 FM and UL Listed	Fire retardant polyester mat reinforced APP modified bitumen top layer roof membrane with a self adhesive compound bottom layer. Top membrane surface is granular. For application directly to a roof deck over non-living space areas. Living space requires a mechanically attached Base sheet. See Manufacturer's Requirements.

Styrene Butadiene Styrene (SBS) Products

	ASTM D 6164 ASTM D 1970 FM and UL Listed	Polyester mat reinforced SBS modified bitumen top layer roof membrane with a self adhesive compound bottom layer. Top membrane surface is granular. For application directly to a roof deck over non-living space areas. Living space requires a mechanically attached Base sheet. See Manufacturer's Requirements.
<u>Elastoflex SA PG</u> <u>FR</u>	ASTM D 6164 ASTM D 1970 FM and UL Listed	Fire retardant, polyester mat reinforced SBS modified bitumen top layer roof membrane with a self adhesive compound bottom layer. Top membrane surface is granular. For application directly to a roof deck over non-living space areas. Living space requires a mechanically attached Base sheet. See Manufacturer's Requirements.
<u>Elastoflex SA V</u> <u>Elastoflex SA VG</u>	ASTM D 6164 ASTM D 1970 FM and UL Listed	Fiberglass mat reinforced SBS modified bitumen top layer base sheet membrane with a self adhesive compound bottom layer. The top surfaces of these membranes are finished with a polyolefin film. For base sheet application directly to a roof deck over non-living space areas. Living space requires a mechanically attached Base sheet. See Manufacturer's Requirements.
<u>Elastoflex SA V</u> <u>FR</u> <u>Elastoflex SA VG</u> <u>FR</u>	ASTM D 6164 ASTM D 1970 FM and UL Listed	Fire retardant, fiberglass mat reinforced SBS modified bitumen top layer base sheet membrane with a self adhesive compound bottom layer. The top surfaces of these membranes are finished with a polyolefin film. For base sheet application directly to a roof deck over non-living space areas. Living space requires a mechanically attached Base sheet. See Manufacturer's Requirements.
<u>Polyram SA</u>	ASTM D 6298 ASTM D 1970	This foil faced roofing membrane product consists of top layer of a compound based on bitumen, modified with polypropylene and reinforced with woven glass, and a self adhesive bottom layer. The top surface is protected by a stove enameled copper foil. For application directly to roof deck. Living space requires a mechanically attached Base sheet. See Manufacturer's Requirements.
<u>Polyall SA</u>	ASTM D 6298 ASTM D 1970	This foil faced roofing membrane product consists of top layer of a compound based on bitumen, modified with polypropylene and reinforced with woven glass, and a self adhesive bottom layer. The top surface is protected by a stove enameled aluminum foil. For application directly to roof deck. Living space requires a mechanically attached Base sheet. See Manufacturer's Requirements.

Thermo Plastic Olefin (TPO) Products

<u>Xtraflex SA P</u> <u>Xtraflex SA P G</u>	ASTM D 6164 Type II ASTM D 6222 Type II	Heavy polyester mat or combination glass fiber and polyester reinforced asphaltic TPO top layer and a self adhesive bottom layer. These membranes are composed of distilled bitumen and selected thermoplastic polyolefinic resins. Top membrane surface is granular. For application directly to a roof deck over non-living space areas. Living space requires a mechanically attached Base sheet. See Manufacturer's Requirements.
<u>Xtraflex SA P FR</u> <u>Xtraflex SA P G</u> <u>FR</u>	ASTM D 6164 Type II ASTM D 6222 Type II	Fire retardant, heavy polyester mat or combination glass fiber and polyester reinforced asphaltic TPO top layer and a self adhesive bottom layer. These membranes are composed of distilled bitumen and selected thermoplastic polyolefinic resins. Top membrane surface is granular. For application directly to a roof deck over non-living space areas. Living space requires a mechanically attached Base sheet. See Manufacturer's Requirements.

Product and Permissible Installation Method¹

Product Name	Installation Method			
	Mechanical Fastening	Torch (Heat Weld)	Cold Adhesive	Hot Asphalt
Polyflex HP & Polyflex HP G		X	X ²	
Polyflex & Polyflex G	X	X	X ²	
Polyflex G FR		X	X ²	
Duflex & Duflex G		X	X ²	
Duflex G FR		X	X ²	
Polybond & Polybond G	X	X	X ²	
Polyglass Base	X	X	X ²	
Elastoshield HP G		X	X ²	X ²
Elastoshield TS & Elastoshield TS G	X	X	X ²	X ²
Elastoshield TS G FR		X	X ²	X ²
Elastoflex S6 & Elastoflex S6 G	X	X	X ²	X ²
Elastoflex S6 G FR		X	X ²	X ²
Elastoflex V & Elastoflex VG		X	X ²	X ²
Elastoflex VG FR		X	X ²	X ²
	X	X	X	X
	X	X	X	X
	X		X	X
Polyglass G2 Base	X		X	X
Polyram		X		
Polyall		X		
Xtraflex & Xtraflex G	X	X		
Xtraflex G FR	X	X		

Footnotes:

¹ Products designed with ADESO™ technology are identified with “SA” suffix and are designed only for self adhering installation methods.

² When sand backed

MATERIALS:

All roofing system materials shall be those specified and/or supplied by POLYGLASS® or its registered roofing contractor. Data on physical properties of the membrane (i.e. thickness, tensile strength, elongation, and low temperature flexibility, etc.) are on file at HUD Headquarters and may be obtained from the POLYGLASS® Technical Services Department.

FIRE AND WIND CLASSIFICATION:

Each roofing system shall resist design wind forces specified in ASCE 7-88. Fire classification shall be in accordance with Underwriters Laboratories, Inc. (ULI) 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. Contact the POLYGLASS® Technical Services Department for further information on classifications of specific systems.

INSTALLATION REQUIREMENTS:**General**

The POLYGLASS® APP, SBS, and TPO roofing systems shall be installed by registered roofing contractors. Installation procedures shall be in compliance with the latest edition of the POLYGLASS® specification manual. Obtain necessary data and specifications from the POLYGLASS® Technical Services Department.

Substrate design and preparation

The roof surface which is to receive the POLYGLASS® roofing system shall be smooth, clean, free from loose gravel, dirt and debris, and must be dry and structurally sound. Wherever necessary, all surfaces to receive roofing materials shall be power broomed and vacuumed to remove debris and loose matter.

Do not apply roofing membranes during inclement weather. Do not apply roofing membrane to damp, frozen, dirty, or dusty surfaces. Fasteners and plates for mechanically fastening components to the substrate must provide a minimum pull-out capacity of 300 lb. per fastener. This value may be significantly higher for concrete decks. Contact the POLYGLASS® Technical Services Department, for more information.

Base or ply sheets attached with cap nails require a minimum pull-out capacity of 40 lb. per nail. Building code requirements for fastener pull-out values apply and supersede those specified by POLYGLASS®. All deck surfaces shall be constructed in accordance with the deck manufacturer's recommendations and in a manner which will permit positive slope to drain. Prime decks where required, in accordance with requirements and recommendations of the primer & deck manufacturer (if applicable). Deck surfaces shall provide continuous support for the roofing system, provide adequate structural strength to support the loads applied. Deflection in excess of the manufacturer's tolerances and/or deflection which prevents positive drainage is not acceptable.

POLYGLASS® products may also be used for re-roofing or recovering applications. Contact the POLYGLASS® Technical Services Department for specifications and installation requirements.

Cold weather installation

POLYGLASS® advises against installing modified bitumen membranes at temperatures lower than 40-45°F. Where work is unavoidable at such temperatures POLYGLASS® recommends the following precautions be taken:

- a. Take extra care during cold weather installation to ensure adequate bonding is achieved between the surfaces to be joined, by this application method. This applies to both material seam welds and adhesion of the applied product to the appropriately prepared substrate (substrate can be affected by such temperature constraints as well).
- b. In addition, unrolling of cold materials, under very low ambient conditions must be avoided to prevent the likelihood of unnecessary stress cracking. The rolls must be at least 40°F at the time of application. Should the membrane roll become stiff or difficult to install, it should be replaced with a new roll from a heated storage area.

Base & ply sheet installation

POLYGLASS® offers a range of choices of high quality and industry standardized base and ply sheets for various applications as described above. Generic UL Type G2, as well as ply sheets meeting ASTM D 4601 Type II standards, are also acceptable for POLYGLASS® roofing systems and should be appropriately installed in a manner approved for the specific product (e.g., fully adhered as self-adhered or with asphalt/or cold adhesive, torch applied or mechanically attached per industry standard fastening pattern, as applicable, and in accordance with specifications).

Membrane installation

Commence installation of the roofing system at the lowest point of the roof (or roof area), working up the slope toward the highest point. Lap sheets shingle fashion so as to constantly shed water. For further information refer to the POLYGLASS® Spec Binder or contact Technical Services. Follow the recommendations for the specific type of material and layer as outlined below, or as specified.

Side laps for base and inter-ply side laps are typically to be 3” minimum (usually delineated by a “lay line”) for mopped, torch or mechanically attached application. End laps are typically 6” in all cases.

Methods of Installation

Mechanical Fastening	The base or ply sheet shall be fastened with Factory Mutual (FM) Approvals approved fasteners, appropriate for the specific deck type and thickness. Length to be as recommended for FM required penetration of layers and deck.
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Torch (Heat Weld)

See POLYGLASS® spec manual section on Torch applied APP membranes or Torch applied SBS membranes and cold weather installation.

Before commencing the torching operation, remove the roll wrapping tape by cutting carefully (not ripping). The procedures below shall then be followed:

1. The first roll of POLYGLASS® APP or SBS base/cap sheet shall be set and unrolled completely. It shall be re-rolled and installed to the initial alignment set.
2. Following rolls shall be unrolled approximately six feet (or half roll length if desired) to align sheets. A propane torch flame shall then be applied to the exposed, outer surface of the roll (the membrane underside), not the substrate, until the surface reaches the proper application temperature (generally 350°F to 400°F) and the “burn-off” film begins to visibly melt. The roll is then gradually unrolled, heating evenly with a smooth “L-shaped” motion, to create a continuous heat weld between the membrane, substrate and seam areas of adjoining sheets. Heat the membrane evenly and continuously, taking care to avoid excessive melting of the compound, evidenced by a pool of melted bitumen flow in front of the roll. For a short time after installation, foot traffic on the sheets should be kept to a minimum in order to avoid unnecessary damage to the membrane.
3. The remainder of the roll is re-rolled and installed in the same manner. There should be approximately ¼” to 3/8” bleed out of the melted membrane backing adhesive at the overlaps. The laps shall be top rolled using an approximate six inch wide roller, applying pressure over the laps immediately after heat weld is completed. Other methods of applying pressure to ensure consistent lap welds should be discussed with a POLYGLASS® technical services representative as well as tried on a small sample area to determine that satisfactory results are, and can consistently be, obtained.
4. All overlaps shall be checked and sealed. At all locations where the lap is not sealed, a trowel shall be used to open the lap, heat is to be applied with the torch into the lap to melt the adhesive (on the back of the top roll) and seal the lap. Any area where a satisfactory re-weld cannot be achieved shall have a piece welded over it, extending minimum six inches in all directions beyond the unwelded seam.
5. The rolls of membrane shall be installed perpendicular to the slope of the roof, starting at the lowest point of application, wherever possible. Laps of sheets should be installed so as to shed water with the slope of the roof wherever practical. At any intersection between different roof slopes, narrow valleys or gutters (less than 3’ wide) or similar details, install an additional ply of smooth membrane under the cap sheet, extending minimum three inches onto each surface.
6. At the end of POLYGLASS® granular or mineral surfaced membranes, the “FASTLap®” granule-free roll-end feature reduces the need for on-site granule embedment. However, at all cut ends and flashing areas on to granule surfaced membranes, granules are to be heated and embedded with a trowel, to provide a continuous black “coating” as a base for the seam weld. The membrane should not be overheated. This procedure requires some practice to become proficient.
7. Areas of “bleed-out” at seam edges and details (such as curb or flashing corners, etc.) of granular membrane should be treated by sprinkling additional loose granules (available from POLYGLASS®) into the fresh, hot seam area compound. Areas missed may require patching with a new piece of membrane.

Cold Adhesive	<p>Install base or ply sheet in a full coating of approved cold adhesive in accordance with the adhesive manufacturer's recommendations and installation instructions.</p> <ol style="list-style-type: none"> 1. Certain POLYGLASS® modified bitumen products may be installed with an approved cold adhesive. 2. Only those cold adhesives which meet minimum ASTM D 3019 (lap strength) shall be acceptable for side and end lap application. 3. Written approval from POLYGLASS® is required for warranted installations. 4. Written instructions of the SBS adhesive manufacturer must be followed. 5. Squeegee grade SBS adhesive is generally applied at the rate of approximately 1 ½ to 2 gallons/square on the prepared roof surface. 6. Trowel grade shall be used for setting flashing membranes. 7. All flashings are to be mechanically fastened in accordance with industry recognized standards and POLYGLASS® Details. 8. On slopes of 2" or greater, back nailing is typically required to nailers at the end of every roll; some manufacturers may require back nailing at lower slopes. At slopes of 2" or above, nailing 12" o.c. at side selvage/overlaps and end laps is required. Consult the manufacturer before proceeding. For higher slopes consult POLYGLASS® Technical Services Department. 9. Particular attention must be given to selvage edge adhesion. Manufacturer's requirements vary from requiring a "hot-plate" heat weld to re-rolling with a heavy garden roller, an hour (or two) after membrane has been set in the adhesive. 10. Excessively heavy use of adhesive must be avoided as it may soften the membrane causing it to become vulnerable to foot traffic. Excessive adhesive may also lead to unwanted solvent blisters and/or bubbles in the membrane top surface. 11. Application should be carried out at ambient temperatures above 50°F. For application in cold weather follow RECOMMENDATIONS OF THE ADHESIVE MANUFACTURER. 12. Never apply torch grade, polyolefin film backed products (SBS or APP) in cold process adhesive. For recommendations with regard to use of special APP grade materials with cold applied adhesive systems contact the POLYGLASS® Technical Services Department.
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Hot Asphalt	The base and ply sheets shall be set in a solid mopping of approved asphalt, using approx. 25 lbs/100 square feet.
<ul style="list-style-type: none"> a. The first roll of POLYGLASS® base sheet shall be set and unrolled completely. It shall then be re-rolled and installed to the initial alignment set. b. Following rolls shall be unrolled approximately six feet (or half roll length if desired) to align sheets to the lap lines (or selvage edges). c. The sheets shall then be set in a solid mopping of approved asphalt (see below) depending upon variables such as slope and substrate using approximately 25 lbs per 100 square feet. d. Where asphalt is required by specification, POLYGLASS® recommends the use of ASTM D312 Type III or IV Asphalt, installed as follows: <ul style="list-style-type: none"> 1. Asphalt should be applied at the proper EVT (Equiviscous Temperature), as recommended by the asphalt supplier/manufacturer and the NRCA manual (Technical Bulletin #2). 2. Mopping temperature should be maintained at a minimum 400°F (with a target of 425°F) at the point of application. 3. If minimum asphalt temperature (400°F) cannot be maintained at the point of application, work should be discontinued. 4. Asphalt shall be applied at the recommended minimum rate (25 lb. per ply, per square) in an even, uniform method without interruptions or voids. 5. Mopping should not progress more than 5'-7' feet in front of the roll at any time. 6. During cold temperature application, insulated equipment is recommended for maintaining minimum acceptable temperatures. Asphalt shall be applied no more than 4' feet ahead of the membrane roll. 7. Brooming of felts is recommended to ensure 100% bonding in the asphalt. 8. Never overheat asphalt to compensate for cold weather conditions. 9. Areas of asphalt "bleed-out" at seam edges and details (such as curb or flashing corners, etc.) of granular membrane should be treated by sprinkling additional loose granules (available from POLYGLASS®) into the fresh, hot asphalt. Areas missed may require patching with a new piece of membrane. 10. For a short time after installation, foot traffic on the sheets should be kept to a minimum in order to avoid unnecessary damage to the membrane. 	

<p>Self Adhesive</p>	<p>The base or ply sheet shall be installed per POLYGLASS® specifications and installation guidelines appropriate for the specific substrate type and thickness.</p> <ol style="list-style-type: none"> 1. Remove existing materials and obsolete protrusions down to an acceptable substrate, repair any voids or imperfections in the substrate. 2. Cut the POLYGLASS® SA membranes to a suitable length depending upon conditions and application, etc. 3. Measure leading edge for width of first sheet and snap straight chalk line. 4. Lay the material flat in place, starting at the lowest point. 5. Align the membrane with chalk line at the lowest edge of the roof. 6. Fold the aligned membrane in half exposing the dual release film. 7. Peel release film at a 45° angle in a constant motion, keeping weight on the outer edges as you progress. Position the next sheet by overlapping seams and line up the overlap of the top sheet edge with the inside of the bottom sheet's factory selvage SealLap® edges. Overlap and cut end laps minimum 6". 8. This is only one example of an application technique; contractors may develop their own methods of application. 9. Press the membrane into place with firm, even pressure. 10. At seam overlaps, align next sheet of application, fold sheet back and remove split release film. Remove, from the installed roll, the protective tape, SealLap® and apply even pressure to the Self-sealing SealLap® area, while overlapping the next sheet. 11. Roll seams and edges with a silicone or other suitable roller to ensure 100% adhesion. 12. Application greater than 2" to the foot should be back nailed at the seams center with ring shanked capped roofing nails 8" o.c. 13. After adhering rolls it is required that uniform pressure be applied to the entire sheet area by using an 80 lbs. (minimum) linoleum roller, water-filled lawn roller or similar weighted roller in a method suitable to the roof slope. Care must be taken to prevent injury when rolling membrane, especially on slope surfaces. 14. Details are carried out by using a hot-air welding technique or with other specifications set forth by POLYGLASS®.
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CERTIFICATION AND PRODUCT LABELING:

POLYGLASS® shall certify that each of the products listed in this report conforms to the requirements of this MR. Both Underwriters Laboratory and Factory Mutual shall validate the manufacturer's certification that the products listed in this report meet the requirements of this MR. Each certified product or its packaging, as identified in this report shall be marked with the following information:

1. POLYGLASS® USA
2. The Product Name
3. Underwriters Laboratory and/or Factory Mutual labels must appear on the label (as applicable per product)
4. Production code traceable to day and shift of manufacture.

INSPECTION:

A designated representative of POLYGLASS® shall make inspections of the installation at the following intervals:

Prior to delivery of materials, to accept or reject the roof deck to which the roofing system is to be applied.

2. During the installation, to inspect and approve the installation techniques and methods.
3. Upon completion, to give final approval to the roofing system.

PRODUCTION FACILITIES:

This product will be manufactured at the following production facilities:

Corporate Office/Facility:
POLYGLASS® USA, Inc.
150 Lyon Drive
Fernley, NV 89408
Phone: 800-222-9782
Fax: 775-575-2314
www.POLYGLASS.com

Manufacturing Facility:
POLYGLASS® USA, Inc.
Humboldt Industrial Park
555 Oakridge Road
Hazleton, PA 18202
Phone: (800) 894-4563
Fax: (570) 384-328

WARRANTY

POLYGLASS® will offer no-cost Limited Material and Material and Labor, No Dollar Limit, Warranties. These Warranties protect the owner from leaks as a result of defective material. The length of these Warranties can vary from 10 to 20 years, depending on the specific system and materials installed.

The manufacturer's warranty does not, in any way, relieve the builder of responsibility under the terms of the Builder's Warranty required by the National Housing Act or under any provisions applicable to any other housing program. A copy of the manufacturer's warranty shall be furnished by the builder to the owner upon completion of the installation.

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 actions in a timely manner for all cases of justified complaint, poor performance or failure reported to HUD.

2. When requested, provide to 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, within of normal business confidentiality practices.
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 issuance or most recent renewal or revision, whichever is later. The holder of this MR shall apply for renewal or revision 90 days prior to the Review Date printed on this MR. Submittals for renewals or revisions shall be sent to:

U. S. Department of Housing and Urban Development
Office of Manufactured Housing Programs
451 Seventh St. SW, Room 9168
Washington, DC 20410-8000

Appropriate User Fees shall be sent to:

U. S. Department of Housing and Urban Development
Technical Suitability of Products Program
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 this 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 the 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 the MR. HUD will notify the manufacturer that the MR may be cancelled when:

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

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