

# ICC-ES Evaluation Report

ESR-2018

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This report also contains:

- [CA Supplement](#)

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<p><b>DIVISION: 07 00 00 - THERMAL AND MOISTURE PROTECTION</b></p> <p><b>Section: 07 52 00—Modified Bituminous Sheet Roofing</b></p>	<p><b>REPORT HOLDER:</b></p> <p><b>POLYGLASS USA, INC.</b></p> <p><b>ADDITIONAL LISTEE:</b></p> <p><b>MULE-HIDE PRODUCTS CO., INC.</b></p>	<p><b>EVALUATION SUBJECT:</b></p> <p><b>MODIFIED BITUMEN ROOFING MEMBRANES:</b></p> <p><b>APP CONVENTIONAL, APP SELF-ADHERED, SBS CONVENTIONAL AND SBS SELF-ADHERED</b></p>	
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## 1.0 EVALUATION SCOPE

**Compliance with the following code:**

- 2021, 2018, 2015, 2012, 2009 and 2006 [International Building Code® \(IBC\)](#)
- 2013 *Abu Dhabi International Building Code (ADIBC)*<sup>†</sup>

<sup>†</sup>The ADIBC is based on the 2009 IBC. 2009 IBC code sections referenced in this report are the same sections in the ADIBC.

**Properties evaluated:**

- Weather resistance
- Fire classification
- Wind uplift resistance
- Impact resistance

## 2.0 USES

Polyglass USA, Inc., modified bitumen roofing membranes are used as roof coverings in Class A, B or C membrane roofing systems.

## 3.0 DESCRIPTION

### 3.1 General:

The Polyglass USA, Inc., modified bitumen roofing systems consist of a Polyglass single-ply membrane (with or without multiple underlayments), insulation where used, barrier board where used, flashing, mechanical fasteners, and asphalt that are installed on a combustible or noncombustible deck. See [Table 1](#) for Polyglass USA product trade names with corresponding product names for Mule-Hide Products Co.

### 3.2 Membranes:

#### 3.2.1 APP Conventional:

**3.2.1.1 Polyflex:** Polyflex, Polyflex G, and Polyflex G FR (Fire Retardant) comply with ASTM D6222, Type I, and are modified bitumen membranes utilizing atactic polypropylene (APP) as the modifier and polyester as the reinforcement. Material thickness is nominally 157 mils [0.16 inch (4.0 mm)] for Polyflex and 177 mils [0.18 inch (4.5 mm)] for Polyflex G and Polyflex G FR. For Polyflex G and Polyflex G FR, the top surface is coated with mineral granules, and for Polyflex it is smooth; the bottom surface of both membranes is burn-off

polyethylene. Nominal weight of the membranes per 100 square feet (9.3 m<sup>2</sup>) of coverage is 90 pounds for Polyflex, 105 pounds for Polyflex G, and 110 pounds for Polyflex G FR. Roll size is 32.67 feet by 3.28 feet (10 m by 1 m). **Polyfresko G:** Polyfresko G and Polyfresko G FR are identical to the Polyflex G and Polyflex G FR, respectively, except that the top surfaces of both the Polyfresko G and Polyfresko G FR are colored white.

**3.2.1.2 Polybase V:** Polybase V complies with ASTM D6509 and is an APP modified bitumen membrane with a fiberglass reinforcement. The top and bottom surfaces are finished with polyolefin film and have a nominal thickness of 80 mils [0.08 inch (2 mm)]. Nominal weight of the membranes is 80 pounds per 100 square feet (9.3 m<sup>2</sup>). Roll size is 65.67 feet by 3.28 feet (20 m by 1 m).

### 3.2.2 APP Self-adhered:

**3.2.2.1 Polyflex SA (Self-adhered):** Polyflex SA P and Polyflex SA P FR, comply with ASTM D6222, Type I, and are modified bitumen membranes utilizing an APP modified compound on the top, a self-adhesive compound on the bottom, and a polyester reinforcement. Polyflex SA P and Polyflex SA P FR are Grade G products that are finished on the top surface with mineral granules and have a nominal thickness of 140 mils [0.14 inch (3.6 mm)]. All Polyflex SA P products are finished on the bottom surface with a split/perforated release film, which protects the underside adhesive compound and is removed during installation. Nominal weight of the membranes is 95 pounds per 100 square feet (9.3 m<sup>2</sup>). Roll size is 32.80 feet by 3.28 feet (10 m by 1 m).

**3.2.2.2 Polyflex SA Base:** Polyflex SA Base complies with ASTM D4601 and is a fiberglass reinforced mineral surfaced APP modified bitumen membrane with a self-adhesive compound on the bottom, and has a nominal thickness of 60 mils [0.06 inch (1.5 mm)]. Nominal weight of 70 lbs per 100 square feet (9.3 m<sup>2</sup>). Roll size is 66.7 feet by 3.28 feet (20 m by 1 m).

**3.2.2.3 Polyfresko G SA:** Polyfresko G SA and Polyfresko G SA FR are identical to the Polyflex SA P and Polyflex SA P FR, respectively, except the top surfaces of both the Polyfresko G SA and Polyfresko G SA FR are colored white.

**3.2.2.4 PolyKool:** PolyKool complies with ASTM D6222, Type I, and is a modified bitumen membrane utilizing an APP modified compound on the top, a self-adhesive compound on the bottom, and a polyester reinforcement. PolyKool is a Grade S product that is finished on the top surface with a reflective white film and has a nominal thickness of 140 mils [0.14 inch (3.6 mm)]. PolyKool is finished on the bottom surface with a split/perforated release film which protects the underside adhesive compound and is removed during installation. Nominal weight of the membrane per 100 square feet (9.3 m<sup>2</sup>) of coverage is 85 pounds. Roll size is 32.80 feet by 3.28 feet (10 m by 1 m).

**3.2.2.5 Polybianko:** Polybianko is identical to the PolyKool, except the top surface of the Polybianko is colored white.

### 3.2.3 SBS Conventional:

**3.2.3.1 Elastoflex S6 and Elastoflex VP:** Elastoflex S6 and Elastoflex VP membranes comply with ASTM D6164, Type I, and is a bituminous membrane utilizing an SBS modified compound and a polyester reinforcement. The membrane consists of a sanded top surface and a bottom surface that is either sand-backed for use with hot asphalt and cold process adhesive applications or a burn-off polyethylene layer for torch applications. Material thickness is nominally 120 mils [0.12 inch (3 mm)]. Nominal weight of the membrane is 80 pounds per 100 square feet (9.3 m<sup>2</sup>). Roll size is 32.83 feet by 3.28 feet (10 m by 1 m).

**3.2.3.2 Elastoflex S6 G:** Elastoflex S6 G and Elastoflex S6 G FR membranes comply with ASTM D6164, Type I, and are bituminous membranes utilizing an SBS modified compound and a polyester reinforcement. The membrane consists of a sanded top surface and a bottom surface that is either sand-backed for hot asphalt and cold process adhesive applications or burn-off polyethylene for torch applications. Material thickness is nominally 138 mils [0.14 inch (3.5 mm)]. Nominal weight of the membranes per 100 square feet (9.3 m<sup>2</sup>) of coverage is 110 pounds. Roll size is 32.83 feet by 3.28 feet (10 m by 1 m).

**3.2.3.3 Elastoflex V:** Elastoflex V membrane complies with ASTM D6163, Type I, and is a bituminous membrane utilizing an SBS modified compound and a fiberglass reinforcement. The top surface consists of sand and the bottom surface is either sand-backed for hot asphalt and cold process adhesive applications or burn-off polyethylene for torch applications. Material thickness is nominally 90 mils [0.09 inch (2.2 mm)]. Nominal weight of the membrane per 100 square feet (9.3 m<sup>2</sup>) of coverage is 85 pounds. Roll size is 49.2 feet by 3.28 feet (15 m by 1 m).

**3.2.3.4 Elastoflex V G:** Elastoflex V G and Elastoflex V G FR membranes comply with ASTM D6163, Type I, and are bituminous membranes utilizing an SBS modified compound and a fiberglass reinforcement. The top surface is coated with mineral granules, and the bottom surface is either sand-backed for hot asphalt and cold process adhesive applications or burn-off polyethylene for torch applications. Material thickness is nominally 138 mils [0.14 inch (3.5 mm)]. Nominal weight of the membranes per 100 square feet (9.3 m<sup>2</sup>) of coverage is 98 pounds. Roll size is 32.83 feet by 3.28 feet (10 m by 1 m).

**3.2.3.5 Polyfresko G SBS:** Polyfresko G SBS and Polyfresko G SBS FR are identical to the Elastoflex S6 G and Elastoflex S6 G FR, respectively, except the top surfaces of both the Polyfresko G SBS and Polyfresko G SBS FR are colored white.

**3.2.3.6 Elastoshield TS G:** Elastoshield TS G and Elastoshield TS G FR membranes comply with ASTM D6164, Type I, and are bituminous membranes utilizing an SBS modified compound and a polyester reinforcement. The top surface is coated with mineral granules, and the bottom surface is either smooth or finished with fine sand. Material thickness is nominally 177 mils [0.18 (4.5 mm)]. Nominal weight of the membranes per 100 square feet (9.3 m<sup>2</sup>) of coverage is 108 pounds. Roll size is 32.83 feet by 3.28 feet (10 m by 1 m).

**3.2.3.7 Elastobase V / Elastobase P:** Elastobase V complies with ASTM D6163, Type I and is a fiberglass reinforced SBS modified bituminous membrane. Elastobase P complies with ASTM D6164, Type I and is a polyester reinforced SBS modified bituminous membrane. The top and bottom surfaces are finished with either fine sand or polyolefin film. The roll thickness is 79 mils [0.08 inch (2 mm)]. Nominal weight of the membranes per 100 square feet (9.3 m<sup>2</sup>) is 50 pounds. The roll dimension is 65.67 feet by 3.28 feet (20 m by 1 m) with an approximate coverage of 200 ft<sup>2</sup>.

### **3.2.4 SBS SA Self-adhered:**

**3.2.4.1 Elastoflex SA (Self-adhered):** Elastoflex SA V PLUS, Elastoflex SA V PLUS FR, and Elastoflex SA V, Elastoflex SA V FR, are modified bitumen base sheet or ply sheet membranes utilizing a styrene butadiene styrene (SBS) modified compound on the top, a self-adhesive compound on the bottom, and a fiberglass reinforcement. Elastoflex SA V PLUS, and Elastoflex SA V PLUS FR, comply with ASTM D6163 as Grade S (smooth surface) products and are finished on the top surface with a polyolefin film, and have a nominal thickness of 80 mils [0.08 inch (2 mm)] and a nominal weight of 48 pounds per 100 square feet (9.3 m<sup>2</sup>). Elastoflex SA V and Elastoflex SA V FR base sheets comply with ASTM D6163 and have a nominal thickness of 60 mils [0.60 inch (1.5 mm)] and a nominal weight of 45 pounds per 100 square feet (9.3 m<sup>2</sup>). All Elastoflex SA V products are finished on the bottom surface with a split/perforated release film, which protects the underside adhesive compound and is removed during installation. Roll size is 66.7 feet by 3.28 feet (20 m by 1 m).

**3.2.4.2 Elastoflex SA P:** Elastoflex SA P and Elastoflex SA P FR, membranes comply with ASTM D6164, Type I, and are modified bitumen membranes utilizing an SBS modified compound on the top, a self-adhesive compound on the bottom, and a polyester reinforcement. Elastoflex SA P and Elastoflex SA P FR are Grade G (granule surface) products that are finished on the top surface with mineral granules and have a nominal thickness of 130 mils [0.13 inch (3.3 mm)]. Elastoflex SA P membrane products are finished on the bottom surface with a split/perforated release film, which protects the underside adhesive compound and is removed during installation. Nominal weight of the membranes per 100 square feet (9.3 m<sup>2</sup>) of coverage is 95 pounds. Roll size is 32.80 feet by 3.28 feet (10 m by 1 m).

**3.2.4.3 Polyfresko G SBS SA:** Polyfresko G SBS SA and Polyfresko G SBS SA FR are identical to the Elastoflex SA P and Elastoflex SA P FR, respectively, except the top surfaces of both the Polyfresko G SBS SA and Polyfresko G SBS SA FR are colored white.

### **3.3 Insulation Boards:**

See [Tables 2](#) through [4](#) for insulations for use with specific roofing systems. Foam plastic insulation, where used, must have a flame-spread index of not more than 75 when tested at the maximum thickness intended for use in accordance with ASTM E84 or UL 723. Polyisocyanurate and polystyrene foam plastic insulation boards must comply with ASTM C1289 and ASTM C578, respectively. Wood fiberboard insulation boards must comply with ASTM C208. Perlite insulation boards must comply with ASTM C728.

### 3.4 Barrier or Cover Board:

Barrier or cover board, where used, must be either minimum  $\frac{1}{4}$ -inch-thick (6.35 mm) DensDeck or DensDeck Prime® Roof Board manufactured by Georgia-Pacific Gypsum LLC,  $\frac{1}{4}$ -inch-thick (6.35 mm) SECUROCK® Gypsum-Fiber Roof Board manufactured by USG Corporation,  $\frac{1}{2}$ -inch-thick (13 mm) Structodek® High Density Fiberboard manufactured by Blue Ridge Fiberboard, Inc. or minimum  $\frac{5}{8}$ -inch-thick (15.8 mm) Type X gypsum board unless otherwise stated in [Table 2](#), [3](#) or [4](#) of this report.

### 3.5 Base Sheet, Slip Sheet and Ply Sheet:

Unless otherwise stated in [Table 2](#), [3](#) or [4](#), the base, slip and ply sheets must be either Elastobase V or Elastobase P as described in Section 3.2.3.6; a membrane described in Section 3.2; any ASTM D4601, Type II, base sheet; or any UL-classified Type G2 base sheet.

### 3.6 Fasteners:

Fasteners and plates, used to mechanically fasten insulation and membranes to the roof deck, must be corrosion-resistant and must be one of the fasteners listed in Sections 3.6.1 through 3.6.9 or noted in [Tables 3](#) and [4](#). The length of fasteners varies and must be sufficient for the fastener to protrude through steel and wood decks a minimum of  $\frac{3}{4}$  inch (19.1 mm). For concrete decks,  $\frac{3}{16}$ -inch-diameter (5 mm) holes must be predrilled and at least 1 inch (25.4 mm) of the screw must penetrate into the concrete deck.

**3.6.1 Polygrip #12:** These are corrosion-resistant, Senti-coated, carbon steel, self-drilling screws with a 0.167-inch (4.2 mm) shank diameter, 0.448-inch (11.3 mm) head diameter and a No. 3 Phillips recess. The screws are for installation in wood and steel decks and for use with Polygrip Hex Plates, IF/IG-70×70 plates or IF-50 plates.

**3.6.2 Polygrip #14:** These are corrosion-resistant, Senti-coated, carbon steel, self-drilling screws with a 0.181-inch (4.6 mm) shank diameter, 0.448-inch (11.3 mm) head diameter and a No. 3 Phillips recess. The screws are for installation in wood, steel and structural concrete decks and for use with Polygrip Hex Plates, Polygrip 2 $\frac{1}{2}$ -inch HS Membrane Plates, IF/IG-70×70 plates or IF-50 plates.

**3.6.3 Polygrip #15:** These are corrosion-resistant, Senti-coated, carbon steel, self-drilling screws with a 0.204-inch (5.2 mm) shank diameter, 0.448-inch (11.3 mm) head diameter and a No. 3 Phillips recess. The screws are for installation in steel and structural concrete decks and for use with Polygrip 2 $\frac{1}{2}$ -inch HS Membrane Plates.

**3.6.4 Isofast IF2:** These are corrosion-resistant, coated, carbon steel, self-drilling screws with a 0.153-inch (3.9 mm) shank diameter, 0.448-inch (11.3 mm) head diameter and a No. 3 Phillips recess. The screws are for installation in wood and steel decks and for use with IF/IG-70×70 plates.

**3.6.5 ITW Buildex Lite Weight Concrete Fasteners:** These are 1.75-inch-long-by-1.1-inch-wide (44.5 mm by 28 mm), painted galvanized (G90) steel fasteners with an integral 2.7-inch-diameter (68.8 mm) AZ55 Galvalume plate. They are designed for use in lightweight concrete decks.

**3.6.6 Polygrip Hex Plates:** These are 2 $\frac{7}{8}$ -inch-by-3 $\frac{1}{4}$ -inch (73 mm by 83 mm), 0.018-inch-thick (0.46 mm) hexagonal steel and have an AZ-50 Galvalume coating complying with ASTM A792.

**3.6.7 Polygrip 2 $\frac{1}{2}$ " HS Membrane Plates:** These are 2 $\frac{1}{2}$ -inch-diameter (64 mm), 0.036-inch-thick (0.9 mm) steel and have an AZ-50 Galvalume coating complying with ASTM A792.

**3.6.8 IF/IG 70×70 Plates:** These are 2 $\frac{3}{4}$ -inch-by-2 $\frac{3}{4}$ -inch (70 mm by 70 mm), 0.042-inch-thick (1.1 mm) steel and have an AZ50 Galvalume coating complying with ASTM A792.

**3.6.9 IF-50 Plates:** These are 2-inch-diameter (51 mm) nylon with 16 barbs on the underside.

### 3.7 Asphalt:

The asphalt primer must meet ASTM D41 specifications. The asphalt must meet ASTM D312, Type III or IV, specifications.

### 3.8 Impact Resistance:

The modified bitumen roofing membrane roof coverings described in this report meet requirements for impact resistance based on testing in accordance with Section 4.6 of FM 4470.

## 4.0 INSTALLATION

### 4.1 General:

Installation of the Polyglass USA, Inc., modified bitumen roofing membranes must comply with the IBC, the report holder's published installation instructions and this report. The report holder's published installation instructions must be available at all times on the job site during installation.

The slope of the roof on which the Polyglass USA, Inc. modified bitumen roofing membrane is installed must be minimum  $\frac{1}{4}$ :12 (2-percent slope) and must not be more than the maximum slope indicated for the particular assembly as listed in [Table 2](#).

Penetrations and terminations of the roof covering must be flashed and made weather tight in accordance with the requirements of the membrane manufacturer and IBC Section 1503.2.

### 4.2 Fire Classification:

The Polyglass USA, Inc., modified bitumen membrane roofing systems installed in accordance with this report are classified as Class A, B or C roof covering systems in accordance with ASTM E108 or UL790, as noted in [Table 2](#).

### 4.3 Wind Resistance:

The allowable wind uplift pressures for the Polyglass USA, Inc., modified bitumen roofing systems described in this report are noted in [Table 3](#) and [4](#). Metal edge securement systems must be listed in accordance with 2011 edition of ANSI/SPRI/FM 4435 ES-1, and designed and installed for wind loads in accordance with IBC Section 1504.5 and IBC Chapter 16.

### 4.4 Reroofing:

Prior to installation of new roof coverings, inspection in accordance with 2021 IBC Section 1512 [2018 and 2015 IBC Section 1511 or (2012, 2009 or 2006 IBC Section 1510)]. Roof covering systems employing mechanical fasteners must be qualified to the satisfaction of the code official as to the adequacy of fasteners penetrating through existing roof coverings into structural substrates.

Since the composition and/or condition of any particular underlying existing roofing material may vary widely, roof recovery, or installing the adhered systems in this report over an existing roof covering, without removing the existing roof covering, is outside the scope of this report.

## 5.0 CONDITIONS OF USE:

The Polyglass USA, Inc. modified bitumen roofing membranes described in this report comply with, or are suitable alternatives to what is specified in, the code indicated in Section 1.0 of this report, subject to the following conditions:

- 5.1 Installation and application of the Polyglass modified bitumen roofing membranes must comply with the IBC, the manufacturer's published installation instructions, and this report. If there are any conflicts between the report holder's installation instructions and this report, this report governs.
- 5.2 Polyglass USA, Inc. modified bitumen roofing membranes must be installed by professional roofing contractors trained and approved by the report holder.
- 5.3 Foam plastic insulation must be separated from the interior of the building by an approved thermal barrier in accordance with IBC Section 2603.4.1.5, except when specifically recognized in an ICC-ES evaluation report as outlined in Footnote 3 to [Table 2](#).
- 5.4 Any foam plastic insulation, where used, must bear the label of an approved agency indicating that the foam plastic has a flame-spread index of not more than 75 when tested at the maximum thickness intended for use in accordance with ASTM E84 or UL 723, subject to the approval of the code official.
- 5.5 Above-deck thermal insulation board must comply with the applicable standards listed in IBC Table 1508.2.
- 5.6 Design wind uplift pressure on any roof area, including edge and corner zones, must not exceed the allowable wind uplift pressure listed for the system installed in that particular area. Refer to allowable wind uplift pressure for systems as listed in [Tables 3](#) and [4](#).
- 5.7 The allowable wind uplift pressures listed in [Tables 3](#) and [4](#) are for the roof covering only. The deck and framing to which the system is attached must be designed for the applicable components and cladding wind loads in accordance with the IBC.
- 5.8 Calculations demonstrating that the required wind resistance is less than the allowable wind resistance must be submitted to the code official for approval.



- 5.9 Where gypsum board is used as barrier board in the roofing assembly, weather protection must be provided to prevent damage to the gypsum board prior to application of the roofing membrane.
- 5.10 The membranes are manufactured at Polyglass facilities in Fernley, Nevada, Hazleton, Pennsylvania, Waco, Texas and Winter Haven, Florida, under a quality control program with inspections by ICC-ES.

## 6.0 EVIDENCE SUBMITTED

Data in accordance with [ICC-ES Acceptance Criteria for Membrane Roof-covering Systems \(AC75\)](#), dated July 2010 (editorially revised April 2021).

## 7.0 IDENTIFICATION

- 7.1 The ICC-ES mark of conformity, electronic labeling, or the evaluation report number (ICC-ES ESR-2018) along with the name, registered trademark, or registered logo of the report holder and/or listee must be included on in the product label.
- 7.2 In addition, each roll of the membranes, base sheets and ply sheets described in this report is identified with a label noting the product name (refer to [Table 1](#)); the manufacturer's name (Polyglass USA, Inc.) or the name of the additional listee (Mule-Hide Products Co., Inc.); the manufacturer's address or the address of the additional listee.
- 7.3 The report holder's contact information is the following:  
**POLYGLASS USA, INC.**  
**1111 WEST NEWPORT CENTER DRIVE**  
**DEERFIELD BEACH, FLORIDA 33442**  
**(800)-894-4563**  
[www.polyglass.com](http://www.polyglass.com)
- 7.4 The Additional Listees' contact information is the following:  
**MULE-HIDE PRODUCTS CO., INC.**  
**POST OFFICE BOX 1057**  
**BELOIT, WISCONSIN 53512**  
**(800) 786-1492**  
[www.mulehide.com](http://www.mulehide.com)

TABLE 1—PRODUCT TRADE NAMES

POLYGLASS USA, INC.		ADDITIONAL LISTEE
POLYGLASS PRODUCTS	XTRAFLEX PRODUCTS	MULE-HIDE PRODUCTS CO., INC.
Elastobase V	XtraFlex SBS Glass Base	Mule-Hide Nail Base
Elastobase P	-	-
Elastoflex S6 (base/ply sheet)	XtraFlex SBS Poly Base	-
Elastoflex VP (base/ply sheet)		
Elastoflex S6 G	-	-
Elastoflex S6 G FR	XtraFlex SBS Poly G	-
Elastoflex SA P	-	Mule-Hide SA-SBS Cap Sheet
Elastoflex SA P FR	XtraFlex SBS G SA	Mule-Hide SA-SBS Cap Sheet (FR)
Elastoflex SA V (base sheet)	-	Mule-Hide SA-Base Sheet
Elastoflex SA V FR (base sheet)	-	Mule-Hide SA-Base Sheet (FR)
Elastoflex SA V PLUS (base sheet)	XtraFlex SBS Base SA	-
Elastoflex SA V PLUS FR (base sheet)	-	-
Elastoflex V	XtraFlex SBS Glass Interply	-
Elastoflex V G	=	-
Elastoflex V G FR	XtraFlex SBS Glass G-	-
Elastoshield TS G	-	-
Elastoshield TS G FR	-	-
Polybianko	-	-
Polyflex	XtraFlex APP S	Mule-Hide APP Torch S
Polyflex G	-	Mule-Hide APP Torch G
Polyflex G FR	XtraFlex APP G	Mule-Hide APP Torch G FR
Polyflex SA Base	-	-
Polyflex SA P	-	Mule-Hide SA-APP Cap Sheet
Polyflex SA P FR	XtraFlex APP G SA	Mule-Hide SA-APP Cap Sheet (FR)
Polyfresko G	XtraFlex Kool APP G	Mule-Hide APP Torch KoolCap <sup>®</sup> G
Polyfresko G FR	-	Mule-Hide APP Torch KoolCap <sup>®</sup> G FR
Polyfresko G SA	-	Mule-Hide SA-APP KoolCap <sup>®</sup>
Polyfresko G SA FR	-	Mule-Hide SA-APP KoolCap <sup>®</sup> FR
Polyfresko G SBS	-	-
Polyfresko G SBS FR	-	-
Polyfresko G SBS SA	-	Mule-Hide SA-SBS KoolCap <sup>®</sup>
Polyfresko G SBS SA FR	-	Mule-Hide SA-SBS KoolCap (FR)-
Polybase V	-	Mule-Hide APP Torch Base
Polykool	-	

TABLE 2—FIRE CLASSIFICATIONS<sup>6</sup>

SYSTEM NO.	ROOF CLASS <sup>1</sup>	ROOF DECK <sup>2,7</sup>	MAX. SLOPE	INSULATION / BARRIER BOARDS			ROOF COVERING APPLICATION		
				Barrier Board <sup>5</sup>	Insulation/ Thickness <sup>3,4</sup>	Attachment	Base Sheet or Slip Sheet	Ply Sheet	Membrane
1	A	Noncombustible	1/2:12	None	Min. 1-inch-thick, polyisocyanurate or urethane.	Mechanically attached or loose	Elastobase V or Type G2, mechanically attached	(Optional) One or more plies of Polyglass Ply 4 or Ply 6, applied in hot asphalt	Polyflex or Polyflex G, torch-applied. Surface with Kokem "Sunguard Acrylic Roof Coating" at 1 gal./sq., or Karnak No. 97 Fibrated Aluminum Asphalt Roof Coating, or Karnak No. 97 Asbestos Free Aluminum Roof Coating at 1 to 2 gal./square
2	A	Combustible (plywood)	1/2:12	None	Min. 1-inch-thick, 2 or more layers (joints staggered a min. of 6 inches from plywood joints), polyisocyanurate or urethane.	Mechanically attached or loose	Elastobase V or Type G2, mechanically attached	None	Polyflex or Polyflex G, torch-applied. Surface with Kokem "Sunguard Acrylic Roof Coating" at 1 gal./sq., or Karnak No. 97 Fibrated Aluminum Asphalt Roof Coating, or Karnak No. 97 Asbestos Free Aluminum Roof Coating at 1 to 2 gal./square
3	A	Noncombustible	1:12	None	(Optional) Any thickness, polyisocyanurate.	Mechanically attached or applied in hot asphalt	Elastobase V or Type G2, mechanically attached or applied in hot asphalt	(Optional) One or more applies of Polyglass Ply 4 or Ply 6, applied in hot asphalt	Polyflex or Polyflex G, torch-applied. Surface with Grundy Industries "a1 MB Aluminum Roof Coating" at 1 to 2 gal./square
4	A	Noncombustible	1:12	None	Min. 1-inch-thick, polyisocyanurate or urethane.	Mechanically attached	Elastobase V or Type G2, mechanically attached	(Optional) One or more plies of Polyglass Ply 4 or Ply 6, applied in hot asphalt	Polyflex G FR, torch-applied
5	A	Combustible (plywood)	1/2:12	None	None	N/A	One or more layers Elastobase V or Type G2, mechanically attached or applied in hot asphalt	One or more layers Elastobase V or Type G2, mechanically attached or applied in hot asphalt	Polyflex G FR, torch-applied
6	A	Combustible (plywood)	1/2:12	None	Min. 2-inch-thick polyisocyanurate.	Mechanically attached	Elastobase V or Type G2, mechanically attached or applied in hot asphalt	Elastobase V or Type G2, mechanically attached or applied in hot asphalt	Polyflex G FR, torch-applied

For SI: 1 inch = 25.4 mm; 1 ft = 0.305 m; 1 square = 9.29 m<sup>2</sup>; 1 gal = 3.785 L.



TABLE 2—FIRE CLASSIFICATIONS<sup>6</sup> (Continued)

SYSTEM NO.	ROOF CLASS <sup>1</sup>	ROOF DECK <sup>2,7</sup>	MAX. SLOPE	INSULATION / BARRIER BOARDS			ROOF COVERING APPLICATION		
				Barrier Board <sup>5</sup>	Insulation/ Thickness <sup>3,4</sup>	Attachment	Base Sheet or Slip Sheet	Ply Sheet	Membrane
7	A	Noncombustible (excluding steel)	1:12	None	None	N/A	None	(Optional) One or more plies of Polyglass Ply 4 or Ply 6, applied in hot asphalt	Deck shall be primed with asphalt primer followed by Polyflex or Polyflex G, torch-applied. Surface with Monsey "Endure Aluminum Roof Coating" at 1.5 gal./square or Grundy Industries "a1 MB Aluminum Roof Coating" at 1-2 gal./square or Polyflex G FR, torch applied (no surfacing)
8	A	Noncombustible (excluding steel)	1:12	None	Min. 1-inch-thick, polyisocyanurate.	Mechanically attached	One or more layers Elastobase V or Type G2, mechanically attached or applied in hot asphalt	(Optional) One or more plies of Polyglass Ply 4 or Ply 6, applied in hot asphalt	Polyflex or Polyflex G, torch-applied. Surface with Fields "F530 Heat Shield Aluminum Coating" or "F630 Heat Shield Fibered Aluminum Coating" at 1½ gal./square
9	A	Combustible (plywood)	2½:12	¼-inch-thick Georgia-Pacific "DensDeck"	(Optional) Any thickness polyisocyanurate.	Mechanically attached	Elastobase V or Type G2, mechanically attached	None	Polyflex G FR, torch-applied
10	A	Noncombustible	½:12	None	(Optional) Any thickness, polyisocyanurate.	Mechanically attached or applied in hot asphalt	Elastobase V or Type G2 mechanically attached or applied in hot asphalt	(Optional) One or more plies of Polyglass Ply 4 or Ply 6, applied in hot asphalt	Polyflex, torch-applied. Surfaced with "300 AFX" Aluminum Roof Coating at 1½ gal./square
11	A	Combustible (plywood)	2:12	Min. ¼-inch-thick Georgia-Pacific "DensDeck"	(Optional) Any thickness, polyisocyanurate.	Mechanically attached	Elastobase V (poly/sand) mechanically attached; or Elastoflex SA V FR or SA V PLUS FR, self-adhered	(Optional) Elastoflex SA V FR or SA V PLUS FR, self-adhered	Polyflex SA P FR or Elastoflex SA P FR, self-adhered; or Polyflex G FR
12	A	Combustible (plywood)	½:12	None	(Optional) Min. 1½-inch thick polyisocyanurate	Mechanically attached	Type G2 followed by Elastobase V (poly/sand), mechanically attached	(Optional) Elastoflex SA V FR or SA V PLUS FR, self-adhered	Polyflex SA P FR or Elastoflex SA P FR, self-adhered; or Polyflex G FR

For SI: 1 inch = 25.4 mm; 1 ft = 0.305 m; 1 square = 9.29 m<sup>2</sup>; 1 gal = 3.785 L.

TABLE 2—FIRE CLASSIFICATIONS<sup>6</sup> (Continued)

SYSTEM NO.	ROOF CLASS <sup>1</sup>	ROOF DECK <sup>2,7</sup>	MAX. SLOPE	INSULATION / BARRIER BOARDS			ROOF COVERING APPLICATION		
				Barrier Board <sup>5,6</sup>	Insulation/ Thickness <sup>3,4</sup>	Attachment	Base Sheet or Slip Sheet	Ply Sheet	Membrane
13	A	Noncombustible	2:12	None	Min. 1-inch thick to max. 4-inch-thick, Atlas "ACFoam III" or Hunter Panels "H-Shield"	Mechanically attached or loose laid	Elastobase V (poly/sand) mechanically attached; or Elastoflex SA V FR or SA V PLUS FR, self-adhered	None	Polyflex SA P FR or Elastoflex SA P FR self-adhered; or Polyflex G FR
14	A	Noncombustible	3:12	None	Min. 1-inch thick to max. 4-inch-thick, Atlas "ACFoam III" or Hunter Panels "H-Shield"	Mechanically attached	Elastoflex SA V FR, SA V PLUS FR, self-adhered.	None	Polyflex SA P FR or Elastoflex SA P FR, self-adhered
15	A	Noncombustible	1:12	None	(Optional) Min. 1½-inch-thick polyisocyanurate	Mechanically attached or adhered	Elastoflex SA V or SA V PLUS self-adhered	None	Polyflex SA P self-adhered
16	A	Noncombustible	½:12	None	1½-inch-thick Hunter Panels "H-Shield"	Mechanically attached	Elastoflex SA V FR, self-adhered	None	Elastoflex SA P FR, self-adhered
17	A	Noncombustible	1¼:12	None	(Optional) Any thickness, polyisocyanurate.	Mechanically attached or adhered	Elastoflex SA V FR or SA V PLUS FR, self-adhered	None	PolyKool, self-adhered
18	A	Combustible (plywood)	½:12	None	(Optional) Any thickness, polyisocyanurate.	Mechanically attached	Type G2, mechanically attached	Elastoflex SA V FR or SA V PLUS FR, self-adhered.	PolyKool, self-adhered
19	B	Combustible (plywood)	½:12	None	(Optional) Any thickness, one or more layers, polyisocyanurate.	Mechanically attached	One or more layers Elastobase V or Type G2, mechanically attached or applied in hot asphalt	None	Polyflex or Polyflex G, torch-applied. Surface with Fields "F530 Heat Shield Aluminum Coating" or "F630 Heat Shield Fibered Aluminum Coating" at 1½ gal./sq., or Monsey "Endure Aluminum Roof Coating," "Weather Check" or "Pro-Grade Aluminum Roof Coating" at 1.5 gal./sq.

For SI: 1 inch = 25.4 mm; 1 ft = 0.305 m; 1 square = 9.29 m<sup>2</sup>; 1 gal = 3.785 L.

TABLE 2—FIRE CLASSIFICATIONS<sup>6</sup> (Continued)

SYSTEM NO.	ROOF CLASS <sup>1</sup>	ROOF DECK <sup>2,7</sup>	MAX. SLOPE	INSULATION / BARRIER BOARDS			ROOF COVERING APPLICATION		
				Barrier Board <sup>5</sup>	Insulation/ Thickness <sup>3,4</sup>	Attachment	Base Sheet or Slip Sheet	Ply Sheet	Membrane
20	B	Noncombustible	1:12	None	(Optional) Any thickness, polyisocyanurate	Mechanically attached or adhered	Elastobase V (poly/sand) mechanically attached or Elastoflex SA V PLUS or SA V self-adhered	None	Polyflex SA P or Elastoflex SA P, self-adhered or Polyflex G, heat-fused
21	B	Combustible (plywood)	1/4:12	None	None	N/A	Elastobase V (poly/sand) mechanically attached	Elastoflex SA V PLUS or SA V self-adhered.	Polyflex SA P or Elastoflex SA P, self-adhered or Polyflex G, heat-fused
22	C	Noncombustible	1/2:12	None	1 1/2-inch-thick Hunter Panels "H-Shield"	Mechanically attached	Elastobase V (poly/sand), mechanically attached	None	Polyflex SA P self-adhered

For SI: 1 inch = 25.4 mm; 1 ft = 0.305 m; 1 square = 9.29 m<sup>2</sup>; 1 gal = 3.785 L.

**FOOTNOTES:**

<sup>1</sup> Noncombustible deck classifications are applicable for use over combustible decks (min. 15/32-inch-thick plywood), when minimum 1/2-inch-thick Type X gypsum board or minimum 1/4-inch-thick Georgia-Pacific Gypsum LLC "DensDeck" Roof Board or minimum 1/4-inch thick USG "SECUROCK" Gypsum-Fiber Roof Board is used directly over the combustible deck with all joints staggered a minimum of 6 inches from plywood joints.

<sup>2</sup> Unless otherwise noted, noncombustible substrates include concrete, lightweight concrete, and steel decks.

<sup>3</sup> Foam plastic insulation is permitted to be installed over a steel deck without a thermal barrier when there is an ICC-ES evaluation report on the specific foam plastic for direct-to-deck applications. See Section 5.3 and 5.4 of this report for conditions of use.

<sup>4</sup> All foam plastic insulation must be UL classified foamed plastic and must be limited to the maximum thickness in accordance with Section 5.4 of this report or the maximum thickness in accordance with this table whichever is less.

<sup>5</sup> The barrier board must be mechanically fastened to the deck with all joints staggered 6 inches from plywood joints.

<sup>6</sup> Unless otherwise specified, the barrier board, insulation, base, slip and ply sheets, membranes and coatings must be UL-Classified for roofing system applications.

<sup>7</sup> Unless otherwise specified, combustible wood decks must be minimum 15/32-inch-thick (11.9 mm) plywood or minimum 7/16-inch-thick (11.1 mm) oriented strand board (OSB). Unless otherwise specified, steel decks must be minimum No. 22 gage galvanized steel [0.030 inch (0.76 mm)]. Unless otherwise specified, concrete decks must have a minimum compressive strength ( $f_c$ ) of 2500 psi.

TABLE 3—WIND UPLIFT RESISTANCE – MECHANICALLY FASTENED BASE SHEET ASSEMBLIES

SYSTEM NO.	ROOF DECK <sup>5, 10</sup>	VAPOR BARRIER	BARRIER BOARD AND/OR INSULATION <sup>2, 6</sup>		COVER BOARD		ROOF COVER			ALLOWABLE UPLIFT CAPACITY (psf) <sup>5</sup>
			Type	Attachment <sup>1, 4</sup>	Type	Attachment <sup>1, 4</sup>	Base Sheet	Ply Sheet	Cap Membrane	
W-1	Plywood or OSB	None	Atlas Roofing "ACFoam II" or "ACFoam III", Johns Manville "ENRGY 3", Hunter Panels "H-Shield" and "H-Shield CG" or RMax, Inc. "Multi-Max FA3"	Millennium One Step Insulation Adhesive	None	N/A	Elastobase V fastened with nails/tin caps 8 inches o.c. in laps and 8 inches o.c. in two equally spaced staggered rows	Elastoflex SA V, or SA V PLUS self-adhered	Self-adhered <sup>7c</sup> or Polyflex G torch-welded	30
W-2	Min. <sup>15</sup> / <sub>32</sub> -inch BCX plywood or Min. <sup>15</sup> / <sub>32</sub> " OSB	None	None	N/A	None	N/A	(Optional) ASTM D4601, Type II base sheet loose laid followed by Elastobase V or Elastobase P attached with min. 11 ga. ring shank cap nails with a min. 1-inch dia. round cap 6 inches o.c. in the 3-inch laps and 6 inches o.c. in two staggered rows in the field of the sheet	(Optional) Elastoflex SA V FR or SA V PLUS FR self-adhered	Elastoflex SA P FR or Polyflex SA P FR self-adhered or Polyflex G or Polyflex G FR torch-welded	37
W-3	Min. <sup>15</sup> / <sub>32</sub> -inch CDX plywood	None	None	N/A	None	N/A	Elastobase V fastened with Simplex MAXX Cap fasteners spaced 9 inches o.c. in 2-inch laps and 18 inches o.c. in two equally spaced staggered rows in the center of the sheet	(Optional) Torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup> ply sheet	Torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup>	45
W-4	Min. <sup>15</sup> / <sub>32</sub> -inch CDX plywood	None	None	N/A	None	N/A	Elastobase V fastened with Simplex MAXX Cap fasteners spaced 9 inches o.c. in 2-inch laps and 12 inches o.c. in two equally spaced staggered rows in the center of the sheet	(Optional) Torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup> ply sheet	Torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup>	53
W-5	Min. <sup>15</sup> / <sub>32</sub> -inch plywood	None	None	N/A	None	N/A	Polybase V fastened with Simplex Cap Nails spaced 6 inches o.c. in 3-inch laps and 6 inches o.c. in four equally spaced staggered rows	(Optional) Self-adhered <sup>7b</sup> or torch-applied (APP) <sup>8</sup> ply sheet	Self-adhered <sup>7c</sup> or torch-applied (APP) <sup>8</sup>	53

TABLE 3—WIND UPLIFT RESISTANCE- MECHANICALLY FASTENED BASE SHEET ASSEMBLIES (Continued)

SYSTEM NO.	ROOF DECK <sup>5, 10</sup>	VAPOR BARRIER	BARRIER BOARD AND/OR INSULATION <sup>2, 6</sup>		COVER BOARD		ROOF COVER			ALLOWABLE UPLIFT CAPACITY (psf) <sup>5</sup>
			Type	Attachment <sup>1,4</sup>	Type	Attachment <sup>1,4</sup>	Base Sheet	Ply Sheet	Cap Membrane	
W-6	Min. <sup>15</sup> / <sub>32</sub> -inch plywood	None	None	N/A	None	N/A	Elastobase V fastened with Simplex Cap Nails spaced 6 inches o.c. in 3-inch laps and 6 inches o.c. in four equally spaced staggered rows	(Optional) Self-adhered <sup>7b</sup> , torch-applied <sup>8</sup> , or hot asphalt-applied <sup>9</sup> ply sheet	Self-adhered <sup>7c</sup> , or torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup>	53
W-7	Plywood or OSB	None	Atlas Roofing "ACFoam II" or "ACFoam III", Johns Manville "ENRGY 3", Hunter Panels "H-Shield" and "H-Shield CG" or RMax, Inc. "Multi-Max FA3"	Millennium One Step Insulation Adhesive	None	N/A	Elastobase V fastened with nails/tin caps 6 inches o.c. in laps and 6 inches o.c. in four equally spaced staggered rows	Elastoflex SA V, or SA V PLUS, self-adhered	Self-adhered <sup>7c</sup> or Polyflex G torch-applied <sup>8</sup>	60
W-8	Min. <sup>15</sup> / <sub>32</sub> -inch CDX plywood	None	None	N/A	None	N/A	Elastobase V fastened with Simplex MAXX Cap fasteners spaced 6 inches o.c. in 2-inch laps and 6 inches o.c. in two equally spaced staggered rows in the center of the sheet	(Optional) Torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup> ply sheet	Torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup>	90
W-9	Min. <sup>15</sup> / <sub>32</sub> -inch plywood	None	None	N/A	None	N/A	Polybase V fastened with OMG #12 Standard Roofgrip or #14 OMG Heavy Duty fasteners with OMG 3-inch Round Metal Plates or OMG Flat Bottom Metal Plates spaced 6 inches o.c. in 4-inch laps and 6 inches o.c. in three equally spaced staggered rows	(Optional) Torch-applied (APP) <sup>8</sup> ply sheet	Torch applied (APP) <sup>8</sup>	90

TABLE 3—WIND UPLIFT RESISTANCE- MECHANICALLY FASTENED BASE SHEET ASSEMBLIES (Continued)

SYSTEM NO.	ROOF DECK <sup>5, 10</sup>	VAPOR BARRIER	BARRIER BOARD AND/OR INSULATION <sup>2, 6</sup>		COVER BOARD		ROOF COVER			ALLOWABLE UPLIFT CAPACITY (psf) <sup>5</sup>
			Type	Attachment <sup>1,4</sup>	Type	Attachment <sup>1,4</sup>	Base Sheet	Ply Sheet	Cap Membrane	
W-10	Min. <sup>15</sup> / <sub>32</sub> -inch plywood	None	None	N/A	None	N/A	Elastobase V fastened with OMG #12 Standard Roofgrip or OMG #14 Heavy Duty fasteners and OMG 3-inch Round Metal Plates or OMG Flat Bottom Metal Plates spaced 6 inches o.c. in 4-inch laps and 6 inches o.c. in three equally spaced staggered rows	(Optional) Torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup> ply sheet	Torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup>	90
W-11	Min. <sup>15</sup> / <sub>32</sub> -inch plywood	None	None	N/A	None	N/A	Elastobase V fastened with Trufast #12 DP or Trufast #14 HD fasteners with Trufast 3-inch Metal Insulation Plate spaced 6 inches o.c. in 4-inch laps and 6 inches o.c. in three equally spaced staggered rows	(Optional) Hot asphalt-applied <sup>9</sup> ply sheet	Hot-asphalt-applied <sup>9</sup>	90
W-12	Plywood or OSB	None	None	N/A	None	N/A	Elastobase V fastened with nails/tin caps spaced 6 inches o.c. at 4-inch laps and 6 inches o.c. at four equally spaced staggered rows, ASTM D41 primer applied to tin caps only	Elastoflex SA V or SA V FR self-adhered	Self-adhered <sup>7c</sup>	98
W-13	Min. <sup>15</sup> / <sub>32</sub> -inch CDX plywood	None	None	N/A	None	N/A	Elastobase V fastened with Simplex MAXX Cap fasteners spaced 6 inches o.c. in 2-inch laps and 6 inches o.c. in three equally spaced staggered rows in the center of the sheet	(Optional) Torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup> ply sheet	Torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup>	105



TABLE 3—WIND UPLIFT RESISTANCE- MECHANICALLY FASTENED BASE SHEET ASSEMBLIES (Continued)

SYSTEM NO.	ROOF DECK <sup>5, 10</sup>	VAPOR BARRIER	BARRIER BOARD AND/OR INSULATION <sup>2, 6</sup>		COVER BOARD		ROOF COVER			ALLOWABLE UPLIFT CAPACITY (psf) <sup>5</sup>
			Type	Attachment <sup>1,4</sup>	Type	Attachment <sup>1,4</sup>	Base Sheet	Ply Sheet	Cap Membrane	
W-14	Plywood or OSB	None	None	N/A	None	N/A	Elastobase V fastened with nails/tin caps 6 inches o.c. in 4-inch laps and 6 inches o.c. in four equally spaced staggered rows	---	Self-adhered <sup>7c</sup>	113
W-15	Min. <sup>15</sup> / <sub>32</sub> -inch plywood	None	None	N/A	None	N/A	Polybase V fastened with OMG #12 Standard Roofgrip or #14 OMG Heavy Duty fasteners and OMG 3-inch Round Metal Plates or OMG Flat Bottom Metal Plates spaced 6 inches o.c. in 4-inch laps and 6 inches in five equally spaced staggered rows	(Optional) Torch-applied (APP) <sup>8</sup> ply sheet	Torch applied (APP) <sup>8</sup>	120
W-16	Min. <sup>15</sup> / <sub>32</sub> -inch plywood	None	None	N/A	None	N/A	Elastobase V fastened with OMG #12 Standard Roofgrip or #14 OMG Heavy Duty fasteners and OMG 3-inch Round Metal Plates or OMG Flat Bottom Metal Plates spaced 6 inches o.c. in 4-inch laps and 6 inches o.c. in five equally spaced staggered rows	(Optional) Torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup> ply sheet	Torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup>	120
W-17	Min. <sup>15</sup> / <sub>32</sub> -inch plywood	None	None	N/A	None	N/A	Elastobase V fastened with Trufast #12 DP or Trufast #14 HD fasteners with Trufast 3-inch Metal Insulation Plate spaced 6 inches o.c. in 4-inch laps and 6 inches o.c. in five equally spaced staggered rows	(Optional) Hot asphalt-applied <sup>9</sup> ply sheet	Hot asphalt-applied <sup>9</sup>	120

TABLE 3—WIND UPLIFT RESISTANCE- MECHANICALLY FASTENED BASE SHEET ASSEMBLIES (Continued)

SYSTEM NO.	ROOF DECK <sup>5, 10</sup>	VAPOR BARRIER	BARRIER BOARD AND/OR INSULATION <sup>2, 6</sup>		COVER BOARD		ROOF COVER			ALLOWABLE UPLIFT CAPACITY (psf) <sup>5</sup>
			Type	Attachment <sup>1,4</sup>	Type	Attachment <sup>1,4</sup>	Base Sheet	Ply Sheet	Cap Membrane	
S-1	Min. 22ga., Type B, Grade 40 Steel	None	Min. 1-inch Hunter Panels "H-Shield"	Loose laid	None	N/A	Elastoflex S6 or Elastoflex VP fastened with Trufast #14 HD fasteners with Trufast 2-inch Barbed Seam Plate 18 inches o.c. within 4-inch wide, torched side laps	---	Elastoflex S6 G torch-applied	30
S-2	Min. 22 ga., Type B, Grade 40 steel	None	Min. 1-inch Hunter Panels "H-Shield"	Preliminary Securement <sup>3</sup>	None	N/A	Elastoflex S6 or Elastoflex VP fastened with Trufast #15 EHD fasteners with Trufast 2.4-inch Scoop Plate 12 inches o.c. within 5-inch wide, torched side laps	---	Elastoflex S6 G or S6 G FR torch-applied	45
SCW-1	Min. 22 ga. steel, min. 2,500 psi concrete or min. <sup>3</sup> / <sub>4</sub> -inch-thick plywood	N/A	Min. 1 <sup>1</sup> / <sub>2</sub> -inch, min. 2.0 pcf polyisocyanurate, min. <sup>1</sup> / <sub>4</sub> -inch Georgia-Pacific Gypsum "DensDeck" or min. <sup>5</sup> / <sub>8</sub> -inch Type X gypsum	Loose laid	None	None	Elastobase P, Elastobase V or Perma-Ply No. 28 attached with Dekfast DF-#14-PH3 with Dekfast PLT-H-2 <sup>7</sup> / <sub>8</sub> plates spaced 12 inches o.c. in a 4-inch lap and 18 inches o.c. in two staggered rows in the center of the sheet	(Optional) One ply of Elastobase V, PermaPly No. 28 or GAFGLAS #75 or one to three plies of Polyglass Ply 4 or Ply 6 in hot asphalt	Torch applied <sup>8</sup>	45
SCW-2	Min. 22 ga. steel, min. 2,500 psi concrete or min. <sup>3</sup> / <sub>4</sub> -inch-thick plywood	N/A	Min. 1 <sup>1</sup> / <sub>2</sub> -inch, min. 2.0 pcf polyisocyanurate, min. <sup>1</sup> / <sub>4</sub> -inch Georgia-Pacific Gypsum "DensDeck" or min. <sup>5</sup> / <sub>8</sub> -inch Type X gypsum	Loose laid	None	None	Elastobase P, Elastobase V or Perma-Ply No. 28 attached with Dekfast DF-#14-PH3 with Dekfast PLT-H-2 <sup>7</sup> / <sub>8</sub> plates spaced 12 inches o.c. in a 4-inch lap and 18 inches o.c. in one center row	(Optional) One ply of Elastobase V, PermaPly No. 28 or GAFGLAS #75 or one to three plies of Polyglass Ply 4 or Ply 6 in hot asphalt	Torch applied <sup>8</sup>	30
SCW-3	Min. 22 ga. steel, min. 2,500 psi concrete or min. <sup>3</sup> / <sub>4</sub> -inch thick plywood	N/A	Min. 1 <sup>1</sup> / <sub>2</sub> -inch, min. 2.0 pcf polyisocyanurate, min. <sup>1</sup> / <sub>4</sub> -inch Georgia-Pacific Gypsum "DensDeck" or min. <sup>5</sup> / <sub>8</sub> -inch Type X gypsum	Preliminary Securement <sup>3</sup>	None	N/A	Polyflex attached with Dekfast DF-#14-PH3 with Dekfast PLT-R-2 <sup>3</sup> / <sub>8</sub> -6B 18 inches o.c. in 5inch wide, heat welded lap.	None	Torch applied <sup>8</sup>	45

TABLE 3—WIND UPLIFT RESISTANCE- MECHANICALLY FASTENED BASE SHEET ASSEMBLIES (Continued)

SYSTEM NO.	ROOF DECK <sup>5, 10</sup>	VAPOR BARRIER	BARRIER BOARD AND/OR INSULATION <sup>2, 6</sup>		COVER BOARD		ROOF COVER			ALLOWABLE UPLIFT CAPACITY (psf) <sup>5</sup>
			Type	Attachment <sup>1,4</sup>	Type	Attachment <sup>1,4</sup>	Base Sheet	Ply Sheet	Cap Membrane	
SCW-4	Min. 2,500 psi concrete or min. <sup>3</sup> / <sub>4</sub> -inch-thick plywood	N/A	Min. 1 <sup>1</sup> / <sub>2</sub> -inch, min. 2.0 pcf polyisocyanurate, min. <sup>1</sup> / <sub>4</sub> -inch Georgia-Pacific Gypsum "DensDeck" or min. <sup>5</sup> / <sub>8</sub> -inch Type X gypsum	Preliminary Securement <sup>3</sup>	None	N/A	Polyflex attached with Dekfast DF-#14-PH3 with Dekfast PLT-R-2 <sup>3</sup> / <sub>8</sub> -6B 12-inches o.c. in 6-inch wide, heat welded lap.	None	Torch applied <sup>8</sup>	82
SCW-5	Min. 2,500 psi concrete or min. <sup>3</sup> / <sub>4</sub> -inch-thick plywood	N/A	(Optional) <sup>1</sup> / <sub>4</sub> -inch Georgia-Pacific Gypsum "DensDeck" or <sup>5</sup> / <sub>8</sub> -inch Type X gypsum board	Loose laid	None	N/A	Elastobase P, Elastobase V or PermaPly No. 28 attached with Dekfast DF-#14-PH3 with Dekfast PLT-H-2 <sup>7</sup> / <sub>8</sub> plates spaced 12 inches o.c. in a 4-inch lap and 18 inches o.c. in two staggered rows.	(Optional) One ply of Elastobase V, PermaPly No. 28 or GAFGLAS #75 or one to three plies of Polyglass Ply 4 or Ply 6 in hot asphalt	Torch applied <sup>8</sup>	45
SCW-5a	Min. 2,500 psi concrete or min. <sup>3</sup> / <sub>4</sub> -inch-thick plywood	N/A	(Optional) <sup>1</sup> / <sub>4</sub> -inch Georgia-Pacific Gypsum "DensDeck" or <sup>5</sup> / <sub>8</sub> -inch Type X gypsum board	Loose laid	None	N/A	Elastobase P, Elastobase V or PermaPly No. 28 attached with Dekfast DF-#14-PH3 with Dekfast PLT-H-2 <sup>7</sup> / <sub>8</sub> plates spaced 12 inches o.c. in a 4-inch lap and 18 inches o.c. in one center row	(Optional) One ply of Elastobase V, PermaPly No. 28 or GAFGLAS #75 or one to three plies of Polyglass Ply 4 or Ply 6 in hot asphalt	Torch applied <sup>8</sup>	30
SCW-6	Min. 2,500 psi concrete or min. <sup>3</sup> / <sub>4</sub> -inch-thick plywood	N/A	(Optional) <sup>1</sup> / <sub>4</sub> -inch Georgia-Pacific Gypsum "DensDeck" or <sup>5</sup> / <sub>8</sub> -inch Type X gypsum board	Loose laid	None	N/A	Polyflex attached with Dekfast DF-#14-PH3 with Dekfast PLT-R-2 <sup>3</sup> / <sub>8</sub> -6B 18-inches o.c. in 5-inch wide, heat welded lap.	None	Torch applied <sup>8</sup>	45
SCW-7	Min. 2,500 psi concrete or min. <sup>3</sup> / <sub>4</sub> -inch-thick plywood	N/A	(Optional) <sup>1</sup> / <sub>4</sub> -inch Georgia-Pacific Gypsum "DensDeck" or <sup>5</sup> / <sub>8</sub> -inch Type X gypsum board	Loose laid	None	N/A	Polyflex attached with Dekfast DF-#14-PH3 with Dekfast PLT-R-2 <sup>3</sup> / <sub>8</sub> -6B 12-inches o.c. in 6-inch wide, heat welded lap	None	Torch applied <sup>8</sup>	82

TABLE 3—WIND UPLIFT RESISTANCE- MECHANICALLY FASTENED BASE SHEET ASSEMBLIES (Continued)

SYSTEM NO.	ROOF DECK <sup>5, 10</sup>	VAPOR BARRIER	BARRIER BOARD AND/OR INSULATION <sup>2, 6</sup>		COVER BOARD		ROOF COVER			ALLOWABLE UPLIFT CAPACITY (psf) <sup>5</sup>
			Type	Attachment <sup>1,4</sup>	Type	Attachment <sup>1,4</sup>	Base Sheet	Ply Sheet	Cap Membrane	
LWC-1	Min. 200 psi lightweight <sup>10</sup> concrete decks over min. 2500 psi structural concrete	N/A	None	N/A	None	N/A	GAFLAS #75 attached with Buildex Lite Weight Concrete Fasteners 7-inches o.c. in a 4-inch lap and 7-inches o.c. in two staggered rows in the center of the sheet	(Optional) One ply of Elastobase V, PermaPly No. 28 or GAFLAS #75 or one to three plies of Polyglass Ply 4 or Ply 6 in hot asphalt	Torch applied <sup>8c</sup>	45
LWC-2	Light weight insulating concrete min. compressive strength 350 psi, with supplemental attachment using Roofgrip #21 screws and 3-inch Flat Bottom plates at 1 per 8ft <sup>2</sup>	None	None	N/A	None	N/A	Elastobase V fastened with Trufast Twin Loc-Nail Base sheet fastener 6 inches o.c. in laps and 6 inches o.c. in three equally spaced	Elastoflex SA V or SA V PLUS self-adhered	Self-adhered <sup>7c</sup> or Polyflex G torch-applied	60

For SI: 1 inch = 25.4 mm; 1 ft = 0.305 m; 1 lb = 0.454 kg; 1 psf = 47.88 Pa; 1 pcf = 16.02 kg/m<sup>3</sup>.

<sup>1</sup>Unless otherwise noted, insulation fasteners and plates must be Polygrip Fastener #12 or Dekfast DF-#12-PH3 (steel or wood only), Polygrip Fastener or Dekfast DF-#14-PHF, Polygrip Fastener #15 HS or Dekfast DF-#15-PH3 with Polygrip Hex Plate or Dekfast PLT-H-2<sup>7/8</sup>. Polygrip parts may be used in lieu of Dekfast parts

<sup>2</sup>All foam plastic insulation must be limited to the maximum thickness in accordance with Section 5.4 of this report or the maximum thickness in accordance with this table, whichever is less.

<sup>3</sup>Preliminary securement consists of four fasteners per board for a board having any dimension less than 4 ft and two fasteners per board for a board having a maximum dimension of 4 ft.

<sup>4</sup>Insulation adhesive application rates are as follows (Consult adhesive manufacturer's published installation instructions for further details):

- Hot asphalt at 25-30 lbs./square
- H.B. Fuller Company, Millennium One Step Insulation Adhesive applied in 3/4-inch-diameter beads spaced max 12 inches o.c.

<sup>5</sup>See Section 5.7.

<sup>6</sup>Insulation, fasteners, adhesives, base sheets, ply sheets and membranes must be FM-approved.

<sup>7</sup>Self-Adhered systems include:

- Base Membranes: Polyflex SA P, Polyflex SA Base, Elastoflex SA P, Elastoflex SA V, Elastoflex SA V FR, Elastoflex SA V PLUS, or Elastoflex SA V PLUS FR; .
- Ply Membranes: Polyflex SA P, Elastoflex SA P FR, Elastoflex SA V, Elastoflex SA V FR, Elastoflex SA V PLUS or Elastoflex SA V PLUS FR;
- Cap Membranes: Polyflex SA P, Polyflex SA P FR, Polyfresko G SA, Polyfresko G SA FR, Elastoflex SA P, Elastoflex SA P FR, Polyfresko G SBS SA, Polyfresko G SBS SA FR, Polykool and Polybianko.

<sup>8</sup>Torch-applied membranes include: Torch-applied (SBS) Base Membranes: Elastoflex S6 G, Elastoflex S6 G FR, Elastoflex V G, Elastoflex V G FR, Polyfresko G SBS, Polyfresko G SBS FR, Elastoshield TS G and Elastoshield TS G FR; **Torch-applied (APP)** – Polyflex, Polyflex G, Polyflex G FR, Polyfresko G, Polyfresko G FR

<sup>9</sup>Hot-asphalt membranes include Elastobase V, Elastobase P, Elastoflex S6 G, Elastoflex S6 G FR, Elastoshield TS G, Elastoshield TS G FR, Polyfresko G SBS, Polyfresko G SBS FR, Elastoflex V G and Elastoflex V G FR.

<sup>10</sup>Unless otherwise specified, combustible wood decks must be minimum 15/32-inch-thick (11.9 mm) plywood or minimum 7/16-inch-thick (11.1 mm) oriented strand board (OSB). Unless otherwise specified, steel decks must be minimum No. 22 gage galvanized steel [0.030 inch (0.76 mm)]. Unless otherwise specified, concrete decks must have a minimum compressive strength ( $f_c$ ) of 2500 psi. Light weight concrete must be recognized by FM Approvals.

TABLE 4—WIND UPLIFT RESISTANCE – ADHERED ASSEMBLIES

SYSTEM NO.	ROOF DECK <sup>5,10</sup>	VAPOR BARRIER	BARRIER BOARD AND/OR INSULATION <sup>2, 6</sup>		COVER BOARD		ROOF COVER			ALLOWABLE UPLIFT CAPACITY (psf)
			Type	Attachment <sup>1, 4</sup>	Type	Attachment <sup>1, 4</sup>	Base Sheet	Ply Sheet	Cap Membrane	
W-1	Plywood primed with asphalt primer	None	None	N/A	None	N/A	Elastoflex; SA V; SA V FR; SA V PLUS; SA V PLUS FR or SA P or Polyflex SA P, self-adhered	(Optional) Elastoflex SA V; SA V FR; SA V PLUS; SA V PLUS FR or SA P or Polyflex SA P, self-adhered or torch-applied <sup>8</sup> ply sheet	Self-adhered <sup>7c</sup> or torch-applied <sup>8</sup>	45
W-2	Plywood or OSB	None	Min. 1½-inch-thick, Atlas Roofing “ACFoam II” or “ACFoam III”, Johns Manville “ENRGY 3”, Hunter Panels “H-Shield” and “H-Shield CG” or RMax, Inc. “Multi-Max FA3”, one or more layers	ICP Adhesives CR-20	(Optional) additional layer(s) of base insulation	ICP Adhesives CR-20	Self-adhered <sup>7a</sup>	---	Self-adhered <sup>7c</sup>	52
W-3	Min. 15/32-inch plywood	4-inch strips of Elastoflex SA V or SA V PLUS used to cover plywood joints.	None	N/A	None	N/A	Elastoflex SA V or SA V PLUS, self-adhered	---	Elastoflex SA P or Polyflex SA P, self-adhered	135
S-1	Min. 22 ga., Type B, Grade 33 steel	None	(Optional) one or more layers foam plastic insulation	Loose laid	Min. 1/4-inch USG “SECUROCK Gypsum Fiber Roof Board”	OMG HD with OMG Std. Metal Plates or Dekfast DF #14-PH3 with Dekfast PLT H-27/8 plates at 1 per 3.2 ft <sup>2</sup>	Self-adhered <sup>7a</sup>	---	Self-adhered <sup>7c</sup>	30
S-2	Min. 22 ga., Type B, Grade 33 steel	None	(Optional) one or more layers foam plastic insulation	Loose laid	Min. 1/4-inch USG “SECUROCK Gypsum Fiber Roof Board”	OMG Std. Metal Plates or Dekfast DF #14-PH3 with Dekfast PLT H-27/8 plates 1 per 4 ft <sup>2</sup>	Torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup>	---	Torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup>	45

TABLE 4—WIND UPLIFT RESISTANCE – ADHERED ASSEMBLIES (Continued)

SYSTEM NO.	ROOF DECK <sup>5,10</sup>	VAPOR BARRIER	BARRIER BOARD AND/OR INSULATION <sup>2, 6</sup>		COVER BOARD		ROOF COVER			ALLOWABLE UPLIFT CAPACITY (psf)
			Type	Attachment <sup>1, 4</sup>	Type	Attachment <sup>1, 4</sup>	Base Sheet	Ply Sheet	Cap Membrane	
S-3	Min. 22 ga., Type B, Grade 33 steel	None	Min. 2-inch-thick, Atlas Roofing "ACFoam II" or Firestone Building Products "ISO 95+ GL"	OMG Std. with OMG Std. Metal Plates or Dekfast DF-#12-PH3 with Dekfast PLT-H-2 <sup>7</sup> / <sub>8</sub> Plates at 1 per 4 ft <sup>2</sup> (8 per 4 x 8 ft board)	Min. 1/4-inch USG "SECUROCK Gypsum Fiber Roof Board"	Hot asphalt or Insta-Stik, OlyBond, OlyBond 500, Millennium One Step Insulation Adhesive, ICP Adhesives CR-20	Torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup>	---	Torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup>	45
S-4	Min. 22 ga. Type B, Grade 33 steel	None	Min. 2-inch-thick, Atlas Roofing "ACFoam II" or Firestone Building Products "ISO 95+ GL"	OMG Std. with OMG Std. Metal Plates or Dekfast DF-#12-PH3 with Dekfast PLT-H-2 <sup>7</sup> / <sub>8</sub> Plates at 1 per 4 ft <sup>2</sup> (8 per 4 x 8 ft board)	Min. 1/4-inch USG "SECUROCK Gypsum Fiber Roof Board", primed with D41 primer	Hot asphalt or Insta-Stik, OlyBond, OlyBond 500, Millennium One Step Insulation Adhesive, ICP Adhesives CR-20	Self-adhered <sup>7a</sup>	---	Self-adhered <sup>7c</sup>	45
S-5	22 ga. Type B, Grade 33 steel	None	Min. 1 1/2-inch-thick, Atlas Roofing "ACFoam II," one or more layers	OlyBond 500 Insulation Adhesive	(Optional) additional layer(s) of base insulation	OlyBond 500 Insulation adhesive	Self-adhered <sup>7a</sup>	---	Self-adhered <sup>7c</sup>	45
S-6	22 ga. Type B, Grade 33 steel	None	Min. 1 1/2-inch-thick, Atlas Roofing "ACFoam II," one or more layers	ICP Adhesives CR-20	(Optional) additional layer(s) of base insulation	ICP Adhesives CR-20	Self-adhered <sup>7a</sup>	---	Self-adhered <sup>7c</sup>	52
S-7	22 ga. Type B, Grade 33 steel	None	Min. 1 1/2-inch Georgia-Pacific Gypsum "DensDeck"	ICP Adhesives CR-20	Min. 1 1/2-inch ACFoam II	ICP Adhesives CR-20	Self-adhered <sup>7a</sup>	---	Self-adhered <sup>7c</sup>	60
S-8	22 ga., Type B, Grade 80 steel	None	(Optional) one or more layers foam plastic insulation	Loose laid	Min. 1/2-inch USG "SECUROCK Gypsum Fiber Roof Board"	OMG HD with OMG Std. Metal Plates at 1 per 1.78 ft <sup>2</sup> (18 per 4 x 8 ft board)	Torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup>	---	Torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup>	75
S-9	Min. 22 ga. steel	None	Min. 1 1/2-inch Johns Manville "ENRGY 3"	Dekfast DF #14-PH3 with Isofast PLT-S-2 <sup>3</sup> / <sub>4</sub> X 2 <sup>3</sup> / <sub>4</sub> plates at 1 per 1.3 ft <sup>2</sup>	None	N/A	Elastoflex; SA V; SA V FR; SA V PLUS; SA V PLUS FR or SA P or Polyflex SA P, self-adhered	(Optional) Elastoflex SA V; SA V FR; SA V PLUS; SA V PLUS FR or SA P or Polyflex SA P, self-adhered or torch applied <sup>8</sup> ply sheet	Self-adhered <sup>7c</sup> or torch applied <sup>8</sup>	82



TABLE 4—WIND UPLIFT RESISTANCE – ADHERED ASSEMBLIES (Continued)

SYSTEM NO.	ROOF DECK <sup>5,10</sup>	VAPOR BARRIER	BARRIER BOARD AND/OR INSULATION <sup>2, 6</sup>		COVER BOARD		ROOF COVER			ALLOWABLE UPLIFT CAPACITY (psf)
			Type	Attachment <sup>1, 4</sup>	Type	Attachment <sup>1, 4</sup>	Base Sheet	Ply Sheet	Cap Membrane	
SC-1	Min. 22 ga. steel, min. 2,500 psi concrete	None	Min. 1½-inch-thick Hunter Panels "H-Shield" and "H-Shield P", Polyglass "Polytherm or Polytherm Composite P"	1 per 2 ft <sup>2</sup>	None	N/A	(Optional) Elastoflex SA V FR or SA V PLUS FR, self-adhered	None	Elastoflex SA P FR, self-adhered or Polyflex G, torch-applied	60
C-1	Min. 2,500 psi structural concrete	None		None	Min. ¼-inch USG "SECUROCK Gypsum Fiber Roof Board"	OMG HD with OMG Std. Metal Plates or Dekfast DF #14-PH3 with Dekfast PLT-H-2⅞ Plates at 1 per 3.2 ft <sup>2</sup>	Self-adhered <sup>7a</sup>	---	Self-adhered <sup>7c</sup>	30
C-2	Min. 2,500 psi concrete, primed with asphalt primer	(Optional) Elastoflex SA V; SA V FR; SA V PLUS; SA V PLUS FR or SA P or Polyflex SA P, followed by torch or SA cap sheet	One or more layers, Atlas Roofing "ACFoam II", Johns Manville "ENRGY 3" or RMax Inc. "Multi-Max FA3"	Hot asphalt, Insta-Stik, Spray-N-Grip, Millennium One Step Insulation Adhesive, OlyBond, OlyBond 500, or ICP Adhesives CR-20	Min. ¼-inch Georgia-Pacific Gypsum "DensDeck" primed with asphalt primer	Hot asphalt, Insta-Stik, Spray-N-Grip, Millennium One Step Insulation Adhesive, OlyBond, OlyBond 500 ICP Adhesives CR-20	Elastoflex; SA V; SA V FR; SA V PLUS; SA V PLUS FR or SA P or Polyflex SA P, self-adhered	(Optional) Elastoflex SA V; SA V FR; SA V PLUS; SA V PLUS FR or SA P or Polyflex SA P, self-adhered or torch applied <sup>8</sup> ply sheet	Self-adhered <sup>7c</sup> or torch-applied <sup>8</sup>	37
C-3	Min. 2,500 psi concrete	N/A	Min. 1½-inch-thick min. 2.0 pcf polyisocyanurate	1 per 4 ft <sup>2</sup>	Min. ¾-inch-thick FM-approved perlite	Asphalt applied	(Optional) Elastobase V, PermaPly No. 28 or GAF GAFGLAS #75 in hot asphalt	(Optional) One ply of Elastobase V, PermaPly No. 28 or GAF GAFGLAS #75 or one to three plies of Polyglass Ply 4 or Ply 6 in hot asphalt	Torch applied <sup>8</sup>	45
C-4	Min. 2,500 psi structural concrete	None	(Optional) Min. 2-inch Atlas Roofing "ACFoam II", Hunter Panels H-Shield, or Firestone Building Products "ISO 95+GL"	Loose laid	Min. ¼-inch USG "SECUROCK Gypsum Fiber Roof Board"	OMG HD with OMG Std. Metal Plates or Dekfast DF #14-PH3 with Dekfast PLT-H-2⅞ Plates at 1 per 4 ft <sup>2</sup>	Torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup>	---	Torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup>	45

TABLE 4—WIND UPLIFT RESISTANCE – ADHERED ASSEMBLIES (Continued)

SYSTEM NO.	ROOF DECK <sup>5,10</sup>	VAPOR BARRIER	BARRIER BOARD AND/OR INSULATION <sup>2, 6</sup>		COVER BOARD		ROOF COVER			ALLOWABLE UPLIFT CAPACITY (psf)
			Type	Attachment <sup>1, 4</sup>	Type	Attachment <sup>1, 4</sup>	Base Sheet	Ply Sheet	Cap Membrane	
C-5	Min. 2,500 psi structural concrete	None	Min. 2-inch-thick, Atlas Roofing "ACFoam II" or Firestone Building Products "ISO 95+ GL"	OMG HD #14 with OMG Std. Metal Plates or Dekfast DF #14-PH3 with Dekfast PLT-H-2 <sup>7</sup> / <sub>8</sub> Plates at 1 per 4 ft <sup>2</sup> (8 per 4 x 8 ft board)	Min. <sup>1</sup> / <sub>4</sub> -inch USG "SECUROCK Gypsum Fiber Roof Board"	Hot asphalt or Insta-Stik Quik Set Insulation Adhesive, OlyBond, OlyBond 500, Millennium One Step Insulation Adhesive, or ICP Adhesives CR-20	Torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup>	---	Torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup>	45
C-6	Min. 2,500 psi structural concrete	None	Min. 2-inch-thick, Atlas Roofing "ACFoam II" or Firestone Building Products "ISO 95+ GL"	OMG HD #14 with OMG Std. Metal Plates or Dekfast DF #14-PH3 with Dekfast PLT-H-2 <sup>7</sup> / <sub>8</sub> Plates at 1 per 4 ft <sup>2</sup> (8 per 4 x 8 ft board)	Min. <sup>1</sup> / <sub>4</sub> -inch USG "SECUROCK Gypsum Fiber Roof Board", primed with D41 primer	Hot asphalt or Insta-Stik Quik Set Insulation Adhesive, OlyBond, OlyBond 500, Millennium One Step Insulation Adhesive, or ICP Adhesives CR-20	Self-adhered <sup>7a</sup>	---	Self-adhered <sup>7c</sup>	45
C-7	Min. 2,500 psi structural concrete, primed with ASTM D41 primer	None	None	N/A	None	N/A	Polyflex SA Base, self-adhered	(Optional) Polyflex SA Base, self-adhered	Elastoflex SA P, self-adhered	52.5
C-8	Concrete primed with asphalt primer	Elastoflex SA V, SA V PLUS or SA P, self-adhered	Min. 1 <sup>1</sup> / <sub>2</sub> -inch ASTM C578 Type IX expanded polystyrene	Insta-Stik Quik Set Insulation Adhesive, or ICP Adhesives CR-20	Min. <sup>1</sup> / <sub>4</sub> -inch Georgia-Pacific Gypsum "DensDeck Prime" or USG "SECUROCK Gypsum Fiber Roof Board", primed with ASTM D41 primer	Insta-Stik Quik Set Insulation Adhesive, or ICP Adhesives CR-20	Self-adhered <sup>7a</sup> or torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup>	---	Self-adhered <sup>7c</sup> or torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup>	60
C-9	Concrete	(Optional) ASTM D41 complying asphalt primer	Min. 1 <sup>1</sup> / <sub>2</sub> -inch-thick, RMax, Inc. Multi-Max FA3," one or more layers	Insta-Stik Quik Set Insulation Adhesive	(Optional) additional layer(s) of base insulation	Insta-Stik Quik Set Insulation Adhesive	Self-adhered <sup>7a</sup>	---	Self-adhered <sup>7c</sup>	67

TABLE 4—WIND UPLIFT RESISTANCE – ADHERED ASSEMBLIES (Continued)

SYSTEM NO.	ROOF DECK <sup>5,10</sup>	VAPOR BARRIER	BARRIER BOARD AND/OR INSULATION <sup>2, 6</sup>		COVER BOARD		ROOF COVER			ALLOWABLE UPLIFT CAPACITY (psf)
			Type	Attachment <sup>1, 4</sup>	Type	Attachment <sup>1, 4</sup>	Base Sheet	Ply Sheet	Cap Membrane	
C-10	Concrete	ASTM D41 complying asphalt primer / Elastoflex VG in 1000 MB Adhesive at 1.5 gal/square	One or more layers Min. 1 1/2-inch-thick, Atlas Roofing "ACFoam II" or "ACFoam III", Johns Manville "ENRGY 3", Hunter Panels "H-Shield" and "H-Shield CG" or RMax, Inc. "Multi-Max FA3"	ICP Adhesives CR-20	(Optional) additional layers(s) of base insulation	ICP Adhesives CR-20	Self-adhered <sup>7a</sup>	---	Self-adhered <sup>7c</sup>	68
C-11	Min. 2,500 psi structural concrete	None	(Optional) Min. 2-inch Atlas Roofing "ACFoam II", Hunter Panels H-Shield, or Firestone Building Products "ISO 95+GL"	Loose laid	Min. 1/2-inch USG "SECUROCK Gypsum Fiber Roof Board"	OMG HD with OMG Std. Metal Plates at 1 per 1.78 ft <sup>2</sup> (18 per 4 x 8 ft board)	Torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup>	---	Torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup>	75
C-12	Concrete, primed with asphalt primer	Polybase V, torch-applied or Elastoflex SA P, self-adhered	Min. 1 1/2-inch Type IX expanded polystyrene	Insta-Stik Quik Set Insulation Adhesive, or ICP Adhesives CR-20	Min. 1/4-inch Georgia-Pacific Gypsum "DensDeck Prime" or USG "SECUROCK Gypsum Fiber Roof Board" primed with ASTM D41 complying asphalt primer	Insta-Stik Quik Set Insulation Adhesive or, ICP Adhesives CR-20	Elastoflex SA V or SA V PLUS, self-adhered	---	Elastoflex SA P, Polyflex SA P self-adhered	75
C-13	Min. 2,500 psi concrete, primed with asphalt primer	(Optional) Elastoflex SA V; SA V FR; SA V PLUS; SA V PLUS FR or SA P or Polyflex SA P, followed by torch or SA cap sheet	One or more layers, Atlas Roofing "ACFoam II", Johns Manville "ENRGY 3" or RMax Inc. "Multi-Max FA-3"	Hot asphalt, Insta-Stik Quik Set Insulation Adhesive, Spray-N-Grip, Millennium One Step Insulation Adhesive, OlyBond, OlyBond 500, or ICP Adhesives CR-20	None	N/A	Elastoflex SA V; SA V FR, SA V PLUS, SA V PLUS FR or SA P or Polyflex SA P, self-adhered	(Optional) Elastoflex; SA V, SA V FR, SA V PLUS, SA V PLUS FR or SA P or Polyflex SA P, self-adhered or torch applied <sup>8</sup> ply sheet	Self-adhered <sup>7c</sup> or torch applied <sup>8</sup>	100
C-14	Concrete	None	Min. 1 1/2-inch, min. 2.0 pcf EPS insulation board, one or more layers	OlyBond Insulation Adhesive	(Optional) additional layers of base insulation	OlyBond 500 Insulation Adhesive	Self-adhered <sup>7a</sup>	---	Self-adhered <sup>7c</sup>	120

TABLE 4—WIND UPLIFT RESISTANCE – ADHERED ASSEMBLIES (Continued)

SYSTEM NO.	ROOF DECK <sup>5,10</sup>	VAPOR BARRIER	BARRIER BOARD AND/OR INSULATION <sup>2, 6</sup>		COVER BOARD		ROOF COVER			ALLOWABLE UPLIFT CAPACITY (psf)
			Type	Attachment <sup>1, 4</sup>	Type	Attachment <sup>1, 4</sup>	Base Sheet	Ply Sheet	Cap Membrane	
C-15	Concrete	None	Min. 1½-inch-thick, Johns Manville “ENRGY 3”, one or more layers	OlyBond Insulation Adhesive	(Optional) additional layers(s) of base insulation	OlyBond 500 Insulation Adhesive	Self-adhered <sup>7a</sup>	---	Self-adhered <sup>7c</sup>	127
C-16	Concrete	None	Min. ¾-inch, min. 1.0 pcf EPS insulation board	ICP Adhesives CR-20	Min. ½-inch Structodek High Density Fiberboard	ICP Adhesives CR-20	Elastoflex V, hot asphalt-applied	Elastoflex S6 or Elastoflex VP hot asphalt-applied	Torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup>	135
C-17	Concrete	(Optional) ASTM D41 complying asphalt primer	Min. 1½-inch-thick, Atlas Roofing “ACFoam II” or Johns Manville “ENRGY 3”, one or more layers	Insta-Stik Quik Set Insulation Adhesive	(Optional) additional layers(s) of base insulation	Insta-Stik Quik Set Insulation Adhesive	Self-adhered <sup>7a</sup>	---	Self-adhered <sup>7c</sup>	135
C-18	Concrete	None	Min. 1½-inch, min. 2.0 pcf EPS insulation board, one or more layers	Insta-Stik Quik Set Insulation Adhesive	(Optional) additional layers of base insulation	Insta-Stik Quik Set Insulation Adhesive	Self-adhered <sup>7a</sup>	---	Self-adhered <sup>7c</sup>	135
C-19	Concrete	None	Min. 1½-inch-thick, Atlas Roofing “ACFoam II”, or Hunter Panels “H-Shield”, one or more layers	OlyBond 500 Insulation Adhesive	(Optional) additional layers(s) of base insulation	OlyBond 500 Insulation Adhesive	Self-adhered <sup>7a</sup>	---	Self-adhered <sup>7c</sup>	150
C-20	Concrete	None	Min. 2.0-inch-thick Atlas Roofing “ACFoam IV” or min. 1½-inch-thick RMax, Inc. “Multi-Max FA3” or min. 1.3-inch-thick Atlas Roofing “ACFoam III” or min. 1.0-inch-thick Firestone Building Products “ISO 95+GL”, Hunter Panels “H-Shield” and “H-Shield CG” or Johns Manville “ENRGY 3”	ICP Adhesives CR-20	Min. ½-inch “Structodek High Density Fiberboard”	ICP Adhesives CR-20	Elastoflex V, hot asphalt-applied	Elastoflex S6 or Elastoflex VP, hot asphalt-applied <sup>9</sup>	Torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup>	180

TABLE 4—WIND UPLIFT RESISTANCE – ADHERED ASSEMBLIES (Continued)

SYSTEM NO.	ROOF DECK <sup>5,10</sup>	VAPOR BARRIER	BARRIER BOARD AND/OR INSULATION <sup>2, 6</sup>		COVER BOARD		ROOF COVER			ALLOWABLE UPLIFT CAPACITY (psf)
			Type	Attachment <sup>1, 4</sup>	Type	Attachment <sup>1, 4</sup>	Base Sheet	Ply Sheet	Cap Membrane	
C-21	Min. 2,500 psi concrete, primed with asphalt primer	None	None	N/A	None	N/A	Elastoflex SA, SA V FR, SA V PLUS, SA V PLUS FR or SA P or Polyflex SA P, self-adhered	(Optional) Elastoflex; SA V, SA V FR, SA V PLUS, SA V PLUS FR or SA P or Polyflex SA P, self-adhered or torch applied <sup>8</sup> ply sheet	Self-adhered <sup>7c</sup> or torch applied <sup>8</sup>	200
C-22	Concrete	None	Min. 1½-inch-thick, Atlas Roofing “ACFoam II”, Johns Manville “ENRGY 3”, Hunter Panels “H-Shield” or RMax, Inc. “Multi-Max FA3”, one or more layers	Millennium One Step Insulation Adhesive	(Optional) additional layers(s) of base insulation	Millennium One Step Insulation Adhesive	Self-adhered <sup>7a</sup>	---	Self-adhered <sup>7c</sup>	232
C-23	Concrete	(Optional) ASTM D41 complying asphalt primer / Elastoflex SA V G	Min. 1½-inch, min. 2.0 pcf EPS insulation board, one or more layers	ICP Adhesives CR-20	(Optional) additional layers of base insulation	ICP Adhesives CR-20	Self-adhered <sup>7a</sup>	---	Self-adhered <sup>7c</sup>	240
C-24	Concrete	None	Min. 2.0-inch thick Atlas Roofing “ACFoam IV” or min. 1½-inch-thick RMax, Inc. “Multi-Max FA3” or min. 1.3-inch-thick Atlas Roofing “ACFoam III” or min. 1.0-inch-thick Firestone Building Products “ISO 95+ GL”, Hunter Panels “H-Shield” and “H-Shield CG” or Johns Manville “ENRGY 3”	ICP Adhesives CR-20	(Optional) Min. ¼-inch USG “SECUROCK Gypsum Fiber Roof Board” or Georgia-Pacific Gypsum “DensDeck” or “DensDeck Prime”	ICP Adhesives CR-20	Self-adhered <sup>7a</sup>	-	Self-adhered <sup>7c</sup>	240

TABLE 4—WIND UPLIFT RESISTANCE – ADHERED ASSEMBLIES (Continued)

SYSTEM NO.	ROOF DECK <sup>5,10</sup>	VAPOR BARRIER	BARRIER BOARD AND/OR INSULATION <sup>2, 6</sup>		COVER BOARD		ROOF COVER			ALLOWABLE UPLIFT CAPACITY (psf)
			Type	Attachment <sup>1, 4</sup>	Type	Attachment <sup>1, 4</sup>	Base Sheet	Ply Sheet	Cap Membrane	
C-25	Concrete	None	Min. 2.0-inch thick Atlas Roofing "ACFoam IV" or min. 1½-inch-thick RMax, Inc. "Multi-Max FA3" or min. 1.3-inch-thick Atlas Roofing "ACFoam III" or min. 1.0-inch-thick Firestone Building Products "ISO 95+ GL", Hunter Panels "H-Shield" and "H-Shield CG" or Johns Manville "ENRGY 3"	ICP Adhesives CR-20	Min. ¼-inch USG "SECUROCK Gypsum Fiber Roof Board" or Georgia-Pacific Gypsum "DensDeck" or "DensDeck Prime"	ICP Adhesives CR-20	Torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup>	-	Torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup>	240
C-26	Concrete	ASTM D41 / Elastoflex SA V G	Min. 1½-inch-thick, Atlas Roofing "ACFoam II" or "ACFoam III", Johns Manville "ENRGY 3", Hunter Panels "H-Shield" and "H-Shield CG" or RMax, Inc. "Multi-Max FA3", one or more layers	ICP Adhesives CR-20	(Optional) additional layers(s) of base insulation	ICP Adhesives CR-20	Self-adhered <sup>7a</sup>	---	Self-adhered <sup>7c</sup>	250
C-27	Concrete	None	Min. ¾-inch, min. 1.0 pcf EPS insulation board	ICP Adhesives CR-20	Min. ¼-inch USG "SECUROCK Gypsum Fiber Roof Board" or Georgia-Pacific Gypsum "DensDeck"	ICP Adhesives CR-20	Self-adhered <sup>7a</sup> or torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup>	---	Self-adhered <sup>7c</sup> or torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup>	255



TABLE 4—WIND UPLIFT RESISTANCE – ADHERED ASSEMBLIES (Continued)

SYSTEM NO.	ROOF DECK <sup>5,10</sup>	VAPOR BARRIER	BARRIER BOARD AND/OR INSULATION <sup>2, 6</sup>		COVER BOARD		ROOF COVER			ALLOWABLE UPLIFT CAPACITY (psf)
			Type	Attachment <sup>1, 4</sup>	Type	Attachment <sup>1, 4</sup>	Base Sheet	Ply Sheet	Cap Membrane	
C-28	Concrete	None	Min. 1½-inch-thick, Atlas Roofing “ACFoam II” or “ACFoam III”, Johns Manville “ENRGY 3”, Hunter Panels “H-Shield” and “H-Shield CG” or RMax, Inc. “Multi-Max FA3”, one or more layers	ICP Adhesives CR-20	(Optional) additional layer(s) of base insulation	ICP Adhesives CR-20	Self-adhered <sup>7a</sup>	---	Self-adhered <sup>7c</sup>	270
C-29	Concrete, primed with asphalt primer	None	None	N/A	Min. ¾-inch Johns Manville “FrescoBoard”	Hot asphalt	Elastoflex V, or hot asphalt-applied <sup>9</sup>	Elastoflex S6 or Elastoflex VP, hot asphalt-applied <sup>9</sup>	Torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup>	278
C-30	Min. 2,500 psi concrete, primed with asphalt primer	(Optional) Elastoflex SA V, SA V FR, SA V PLUS, SA V PLUS FR, SA P or Polyflex SA P, followed by torch or SA cap sheet	One or more layers, 1-inch-thick, Atlas Roofing “ACFoam II”	Hot asphalt	Min. ¾-inch FM approved perlite	Hot asphalt	Elastobase V or ASTM D4601, Type II base sheet in hot asphalt	(Optional) torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup> ply sheet	Torch-applied <sup>8</sup>	280
C-31	Concrete primed with asphalt primer	None	None	N/A	Min. ¾-inch “Structodek High Density Fiberboard Roof Insulation”	Hot asphalt	Elastoflex V hot asphalt-applied	Elastoflex S6 or Elastoflex VP or hot asphalt-applied <sup>9</sup>	Torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup>	285
C-32	Min. 2,500 psi concrete, primed with asphalt primer	None	None	N/A	None	N/A	Elastoflex SA V FR, or SA V PLUS FR, self-adhered	None	Elastoflex SA P FR, self-adhered or Polyflex G, torch-applied	315
C-33	Min. 2,500 psi structural concrete	None	(Optional) Min. 2-inch-thick, Atlas Roofing “ACFoam II”	Insta-Stik Quik Set Insulation Adhesive, OlyBond 500, or Millennium One Step Insulation Adhesive, ICP Adhesives CR-20	Min. ¼-inch USG “SECUROCK Gypsum Fiber Roof Board”	Hot asphalt or Insta-Stik, OlyBond 500, Millennium One Step Insulation Adhesive, ICP Adhesives CR-20	Torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup>	---	Torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup>	442

TABLE 4—WIND UPLIFT RESISTANCE – ADHERED ASSEMBLIES (Continued)

SYSTEM NO.	ROOF DECK <sup>5,10</sup>	VAPOR BARRIER	BARRIER BOARD AND/OR INSULATION <sup>2, 6</sup>		COVER BOARD		ROOF COVER			ALLOWABLE UPLIFT CAPACITY (psf)
			Type	Attachment <sup>1, 4</sup>	Type	Attachment <sup>1, 4</sup>	Base Sheet	Ply Sheet	Cap Membrane	
C-34	Min. 2,500 psi structural concrete	None	(Optional) Min. 2-inch-thick, Atlas Roofing "ACFoam II"	Insta-Stik Quik Set Insulation Adhesive, OlyBond 500, Millennium One Step Insulation Adhesive, ICP Adhesives CR-20	Min. 1/4-inch USG "SECUROCK Gypsum Fiber Roof Board", primed with D41 primer	Hot asphalt or Insta-Stik Quik Set Insulation Adhesive, OlyBond 500, Millennium One Step Insulation Adhesive, ICP Adhesives CR-20	Self-adhered <sup>7a</sup>	---	Self-adhered <sup>7c</sup>	442
C-35	Concrete	ASTM D41 complying asphalt primer	Min. 1 1/2-inch-thick, Atlas Roofing "ACFoam II" or "ACFoam III", Johns Manville "ENRGY 3", Hunter Panels "H-Shield" and "H-Shield CG" or RMax, Inc. "Multi-Max FA3", one or more layers	Hot asphalt	(Optional) additional layer(s) of base insulation	Hot asphalt	Self-adhered <sup>7a</sup>	---	Self-adhered <sup>7c</sup>	480
C-36	Min. 2,500 psi structural concrete (primed with asphalt primer if using hot asphalt)	None	(Optional) Min. 2-inch-thick, Atlas Roofing "ACFoam II"	Hot asphalt or OlyBond Insulation Adhesive	Min. 1/4-inch USG "SECUROCK Gypsum Fiber Roof Board"	Hot asphalt or OlyBond Insulation Adhesive	Hot asphalt-applied <sup>9</sup>	---	Hot asphalt-applied <sup>9</sup>	495
C-37	Concrete	None	None	N/A	Min. 1/4-inch G-P Gypsum "DensDeck"	Hot asphalt	Torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup>	---	Torch-applied <sup>8</sup> or asphalt-applied <sup>9</sup>	510
C-38	Min. 2,500 psi structural concrete (primed with asphalt primer if using hot asphalt)	None	(Optional) Min. 2-inch-thick, Atlas Roofing "ACFoam II"	Hot asphalt or OlyBond Insulation Adhesive	Min. 1/4-inch USG "SECUROCK Gypsum Fiber Roof Board"	Hot asphalt or OlyBond Insulation Adhesive	Torch-applied <sup>8</sup>	---	Torch-applied <sup>8</sup>	536
C-39	Min. 2,500 psi structural concrete	None	(Optional) Min. 2-inch-thick, Atlas Roofing "ACFoam II"	OlyBond Insulation Adhesive	Min. 1/4-inch USG "SECUROCK Gypsum Fiber Roof Board", primed with D41 complying asphalt primer	OlyBond Insulation Adhesive	Self-adhered <sup>7a</sup>	---	Self-adhered <sup>7c</sup>	543

TABLE 4—WIND UPLIFT RESISTANCE – ADHERED ASSEMBLIES (Continued)

SYSTEM NO.	ROOF DECK <sup>5,10</sup>	VAPOR BARRIER	BARRIER BOARD AND/OR INSULATION <sup>2, 6</sup>		COVER BOARD		ROOF COVER			ALLOWABLE UPLIFT CAPACITY (psf)
			Type	Attachment <sup>1, 4</sup>	Type	Attachment <sup>1, 4</sup>	Base Sheet	Ply Sheet	Cap Membrane	
C-40	Min. 2,500 psi structural concrete (primed with asphalt primer if using hot asphalt)	None	(Optional) Min. 2-inch-thick, Atlas Roofing "ACFoam II"	Hot asphalt	Min. 1/4-inch USG "SECURROCK Gypsum Fiber Roof Board", primed with D41 complying asphalt primer	Hot asphalt	Self-adhered <sup>7a</sup>	---	Self-adhered <sup>7c</sup>	545
C-41	Min. 2,500 psi concrete	N/A	None	N/A	None	N/A	(Optional when a ply sheet is installed) Elastobase V, PermaPly No. 28 or GAFGLAS #75 in hot asphalt	(Optional when a base sheet is installed) One ply of Elastobase V, PermaPly No. 28 or GAFGLAS #75 or one to three plies of Polyglass Ply 4 or Ply 6 in hot asphalt	Torch applied to the base sheet or the ply sheet <sup>8</sup>	622
C-42	Min. 2,500 psi concrete	N/A	None	N/A	None	N/A	Polyflex, torch applied	None	Torch applied <sup>8c</sup>	622
LWC-1	Min. 200 psi Lightweight insulating concrete cast over min 2500 psi structural concrete	N/A	Min. 2.0-inch thick Atlas Roofing "ACFoam IV" or min. 1 1/2-inch-thick RMax, Inc. "Multi-Max FA3" or min. 1.3-inch-thick Atlas Roofing "ACFoam III" or min. 1.0-inch-thick Firestone Building Products "ISO 95+GL", Hunter Panels "H-Shield" and "H-Shield CG" or Johns Manville "ENRGY 3" or min. 3/4 inch, min. 1.0 pcf EPS insulation board	ICP Adhesives CR-20	Min. 1/2-inch "Structodek High Density Fiberboard Roof Insulation"	ICP Adhesives CR-20	Elastoflex V, hot asphalt-applied	Elastoflex S6 or Elastoflex VP, hot asphalt-applied	Torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup>	75

TABLE 4—WIND UPLIFT RESISTANCE – ADHERED ASSEMBLIES (Continued)

SYSTEM NO.	ROOF DECK <sup>5,10</sup>	VAPOR BARRIER	BARRIER BOARD AND/OR INSULATION <sup>2, 6</sup>		COVER BOARD		ROOF COVER			ALLOWABLE UPLIFT CAPACITY (psf)
			Type	Attachment <sup>1, 4</sup>	Type	Attachment <sup>1, 4</sup>	Base Sheet	Ply Sheet	Cap Membrane	
LWC-2	Min. 200 psi Lightweight insulating concrete cast over min 2500 psi structural concrete	N/A	Min. 2.0-inch thick Atlas Roofing "ACFoam IV" or min. 1½-inch-thick RMax, Inc. "Multi-Max FA3" or min. 1.3-inch-thick Atlas Roofing "ACFoam III" or min. 1.0-inch-thick Firestone Building Products "ISO 95+GL", Hunter Panels "H-Shield" and "H-Shield CG" or Johns Manville "ENRGY 3" or min. ¾ inch, min. 1.0 pcf EPS insulation board	ICP Adhesives CR-20	Min. ½-inch "Structodek High Density Fiberboard Roof Insulation"	ICP Adhesives CR-20	Self-adhered <sup>7</sup> or torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup>	-	Self-adhered <sup>7</sup> , torch-applied <sup>8</sup> , or hot asphalt-applied <sup>9</sup>	75
LWC-3	200 Lightweight insulating concrete cast over min 2500 psi structural concrete	N/A	Min. 2.0-inch thick Atlas Roofing "ACFoam IV" or min. 1½-inch-thick RMax, Inc. "Multi-Max FA3" or min. 1.3-inch-thick Atlas Roofing "ACFoam III" or min. 1.0-inch-thick Firestone Building Products "ISO 95+GL", Hunter Panels "H-Shield" and "H-Shield CG" or Johns Manville "ENRGY 3" or min. ¾ inch, min. 1.0 pcf EPS insulation board	ICP Adhesives CR-20	Min. ¼-inch Georgia-Pacific Gypsum "DensDeck Prime"	ICP Adhesives CR-20	Torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup>	-	Torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup>	75
LWC-4	Min. 200 psi Lightweight insulating concrete cast over min. 2500 psi structural concrete	None	Min. 1½-inch, min. 2.0 pcf EPS insulation board	OlyBond 500 Insulation Adhesive	(Optional) additional layers of base insulation	OlyBond Insulation Adhesive	Self-adhered <sup>7</sup>	---	Self-adhered <sup>7</sup>	120

TABLE 4—WIND UPLIFT RESISTANCE – ADHERED ASSEMBLIES (Continued)

SYSTEM NO.	ROOF DECK <sup>5,10</sup>	VAPOR BARRIER	BARRIER BOARD AND/OR INSULATION <sup>2, 6</sup>		COVER BOARD		ROOF COVER			ALLOWABLE UPLIFT CAPACITY (psf)
			Type	Attachment <sup>1, 4</sup>	Type	Attachment <sup>1, 4</sup>	Base Sheet	Ply Sheet	Cap Membrane	
LWC-5	Min. 200 psi Lightweight insulating concrete cast over min. 2500 psi structural concrete	None	Min. 2.0-inch-thick Atlas Roofing "ACFoam IV" or min. 1 1/2-inch-thick RMax, Inc. "Multi-Max FA3" or min. 1.3-inch-thick Atlas Roofing "ACFoam III" or min. 1.0-inch-thick Firestone Building Products "ISO 95+ GL", Hunter Panels "H-Shield" and H-Shield CG" or Johns Manville "ENRGY 3" or min. 3/4-inch min. 3/4-inch, min. 1.0 pcf EPS insulation board	ICP Adhesives CR-20	Min. 1/2-inch Structodek High Density Fiberboard Roof insulation	ICP Adhesives CR-20	Elastoflex V, hot asphalt-applied <sup>9</sup>	Elastoflex S6 or Elastoflex VP, hot asphalt-applied <sup>9</sup>	Torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup>	128
LWC-6	Min 200 psi Lightweight insulating concrete cast over min. 2500 psi structural concrete	None	Min. 2.0-inch-thick Atlas Roofing "ACFoam IV" or min. 1 1/2-inch-thick RMax, Inc. "Multi-Max FA3" or min. 1.3-inch-thick Atlas Roofing "ACFoam III" or min. 1.0-inch-thick Firestone Building Products "ISO 95+ GL", Hunter Panels "H-Shield" and H-Shield CG" or Johns Manville "ENRGY 3" or min. 3/4-inch min. 3/4-inch, min. 1.0 pcf EPS insulation board	ICP Adhesives CR-20	Min. 1/4-inch USG "SECURROCK Gypsum Fiber Roof Board" or Georgia-Pacific Gypsum "DensDeck"	ICP Adhesives CR-20	Self-adhered <sup>7a</sup> , torch-applied <sup>8</sup> -or hot asphalt-applied <sup>9</sup>	-	Self-adhered <sup>7c</sup> , torch-applied <sup>8</sup> , or hot asphalt-applied <sup>9</sup>	128

TABLE 4—WIND UPLIFT RESISTANCE – ADHERED ASSEMBLIES (Continued)

SYSTEM NO.	ROOF DECK <sup>5,10</sup>	VAPOR BARRIER	BARRIER BOARD AND/OR INSULATION <sup>2, 6</sup>		COVER BOARD		ROOF COVER			ALLOWABLE UPLIFT CAPACITY (psf)
			Type	Attachment <sup>1, 4</sup>	Type	Attachment <sup>1, 4</sup>	Base Sheet	Ply Sheet	Cap Membrane	
LWC-7	Min 200 psi Lightweight insulating concrete cast over min. 2500 psi structural concrete	None	Min. 2.0-inch-thick Atlas Roofing "ACFoam IV" or min. 1 1/2-inch-thick RMax, Inc. "Multi-Max FA3" or min. 1.3-inch-thick Atlas Roofing "ACFoam III" or min. 1.0-inch-thick Firestone Building Products "ISO 95+ GL", Hunter Panels "H-Shield" and H-Shield CG" or Johns Manville "ENRGY 3" or min. 3/4-inch min. 3/4-inch, min. 1.0 pcf EPS insulation board	ICP Adhesives CR-20	Min. 1/4-inch Georgia-Pacific Gypsum "DensDeck Prime	ICP Adhesives CR-20	Torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup>	-	Torch-applied <sup>8</sup> or hot asphalt-applied <sup>9</sup>	128
LWC-8	Min. 300 psi Lightweight insulating concrete cast over min 2500 psi structural concrete	None	Min. 1 1/2-inch-thick, Atlas Roofing "ACFoam II" or "ACFoam III", Johns Manville "ENRGY 3", Hunter Panels "H-Shield" and "H-Shield CG", RMax, Inc. "Multi-Max FA3" or min. 2.0 pcf EPS insulation board, one or more layers	ICP Adhesives CR-20	(Optional) additional layer(s) of base insulation	ICP Adhesives CR-20	Self-adhered <sup>7a</sup>	---	Self-adhered <sup>7c</sup>	180

TABLE 4—WIND UPLIFT RESISTANCE – ADHERED ASSEMBLIES (Continued)

SYSTEM NO.	ROOF DECK <sup>5,10</sup>	VAPOR BARRIER	BARRIER BOARD AND/OR INSULATION <sup>2, 6</sup>		COVER BOARD		ROOF COVER			ALLOWABLE UPLIFT CAPACITY (psf)
			Type	Attachment <sup>1, 4</sup>	Type	Attachment <sup>1, 4</sup>	Base Sheet	Ply Sheet	Cap Membrane	
LWC-9	Min. 300 psi Light weight insulating concrete cast over min. 2500 psi structural concrete	None	Min. 1 1/2-inch-thick, Atlas Roofing “ACFoam II” or “ACFoam III”, Johns Manville “ENRGY 3”, Hunter Panels “H-Shield” and “H-Shield CG”, RMax, Inc. “Multi-Max FA3” or min. 2.0 pcf EPS insulation board, one or more layers	ICP Adhesives CR-20	(Optional) additional layers(s) of base insulation	ICP Adhesives CR-20	Self-adhered <sup>7a</sup>	---	Self-adhered <sup>7c</sup>	222
LWC-10	Min. 200 psi Lightweight insulating concrete cast over min. 2500 psi structural concrete	None	Min. 1 1/2-inch-thick, Atlas Roofing “ACFoam II”, or Hunter Panels “H-Shield”, one or more layers	OlyBond 500 Insulation Adhesive	(Optional) additional layers(s) of base insulation	OlyBond 500 Insulation Adhesive	Self-adhered <sup>7a</sup>	---	Self-adhered <sup>7c</sup>	225
LWC-11	Min. 300 psi Lightweight insulating concrete cast over min 2500 psi structural concrete	None	Min. 1 1/2-inch-thick, Atlas Roofing “ACFoam II” or “ACFoam III”, Johns Manville “ENRGY 3”, Hunter Panels “H-Shield” and “H-Shield CG”, RMax, Inc. “Multi-Max FA3” or min. 2.0 pcf EPS insulation board, one or more layers	ICP Adhesives CR-20	(Optional) additional layers(s) of base insulation	ICP Adhesives CR-20	Self-adhered <sup>7a</sup>	---	Self-adhered <sup>7c</sup>	240
CWF-1	Tectum	None	Min. 1 1/2-inch-thick, Atlas Roofing “ACFoam II”, Johns Manville “ENRGY 3”, Hunter Panels “H-Shield”, one or more layers	OlyBond 500 Insulation Adhesive	(Optional) additional layers(s) of base insulation	OlyBond Insulation Adhesive	Self-adhered <sup>7a</sup>	---	Self-adhered <sup>7c</sup>	45

TABLE 4—WIND UPLIFT RESISTANCE – ADHERED ASSEMBLIES (Continued)

SYSTEM NO.	ROOF DECK <sup>5,10</sup>	VAPOR BARRIER	BARRIER BOARD AND/OR INSULATION <sup>2, 6</sup>		COVER BOARD		ROOF COVER			ALLOWABLE UPLIFT CAPACITY (psf)
			Type	Attachment <sup>1, 4</sup>	Type	Attachment <sup>1, 4</sup>	Base Sheet	Ply Sheet	Cap Membrane	
CWF-2	Tectum	None	Min. 1½-inch-thick, Atlas Roofing “ACFoam II” or “ACFoam III”, Johns Manville “ENRGY 3”, Hunter Panels “H-Shield” and “H-Shield CG” or RMax, Inc. “Multi-Max FA3”, one or more layers	ICP Adhesives CR-20	(Optional) additional layer(s) of base insulation	ICP Adhesives CR-20	Self-adhered <sup>7a</sup>	---	Self-adhered <sup>7c</sup>	52

For **SI**: 1 inch = 25.4 mm; 1 ft = 0.305 m; 1 lb = 0.454 kg; 1 psf = 47.88 Pa; 1 pcf = 16.02 kg/m<sup>3</sup>.

<sup>1</sup>Unless otherwise noted, insulation fasteners and plates must be Polygrip Fastener #12 or Dekfast DF- #12-PH3 (steel or wood only), Polygrip Fastener #14 or Dekfast DF-#14-PH3, Polygrip Fastener #15 or Dekfast DF- #15-PH3 with Polygrip Hex Plate or Dekfast PLT-H-2<sup>7/8</sup>. Polygrip parts may be used in lieu of Dekfast parts.

<sup>2</sup>All foam plastic insulation must be limited to the maximum thickness in accordance with Section 5.4 of this report or the maximum thickness in accordance with this table, whichever is less.

<sup>3</sup>Preliminary securement consists of four fasteners per board for a board having any dimension less than 4 ft and two fasteners per board for a board having a maximum dimension of 4 ft.

<sup>4</sup>Insulation adhesive application rates are as follows (Consult adhesive manufacturer's published installation instructions for further details):

- Hot asphalt at 25-30 lbs/square.
- Dow Chemical, Insta-Stik Quik Set Insulation Adhesive applied in ¾- to 1-inch-diameter beads spaced maximum 12 inches o.c.
- Dow Chemical, Spray-N-Grip spray applied in full coverage to approximately 1 gallon per square.
- H.B. Fuller Company: Millennium One Step Insulation Adhesive applied in ¾-inch-diameter beads spaced maximum 12 inches o.c.
- OMG OlyBond spray applied in full coverage to approximately 1 gallon per square.
- OMG OlyBond 500 applied in ¾-inch-diameter beads spaced maximum 12 inches o.c.
- ICP Adhesives CR-20 sprays applied in continuous 3-inch-wide ribbons spaced maximum 12 inches o.c.

<sup>5</sup>See Section 5.7.

<sup>6</sup>Insulation, fasteners, adhesives, base sheets, ply sheets and membranes must be FM-approved.

<sup>7</sup>Self-Adhered systems include:

- Base Membranes: Polyflex SA P, Polyflex SA Base, Elastoflex SA P, Elastoflex SA V, Elastoflex SA V FR, Elastoflex SA V PLUS, or Elastoflex SA V PLUS FR;
- Ply Membranes: Polyflex SA P, Elastoflex SA P, Elastoflex SA V, Elastoflex SA V FR, Elastoflex SA V PLUS or Elastoflex SA V PLUS FR;
- Cap Membranes: Polyflex SA P, Polyflex SA P FR, Polyfresko G SA , Polyfresko G SA FR, Elastoflex SA P, Elastoflex SA P FR, Polyfresko G SBS SA , Polyfresko G SBS SA FR, Polykool and Polybiano.

<sup>8</sup>Torch-applied membranes include: Torch-applied (SBS) Base Membranes: Elastoflex S6 G, Elastoflex S6 G FR, Elastoflex V G, Elastoflex V G FR, Polyfresko G SBS, Polyfresko G SBS FR, Elastoshield TS G and Elastoshield TS G FR; **Torch-applied (APP)** – Polyflex, Polyflex G, Polyflex G FR, Polyfresko G, Polyfresko G FR

<sup>9</sup>Hot-asphalt membranes include Elastobase V, Elastobase P, Elastoflex S6 G, Elastoflex S6 G FR, Elastoshield TS 4, Elastoshield TS 4 FR, Polyfresko G SBS, Polyfresko G SBS FR, Elastoflex V G and Elastoflex V G FR.

<sup>10</sup>Unless otherwise specified, combustible wood decks must be minimum 15/32-inch-thick (11.9 mm) plywood or minimum 7/16-inch-thick (11.1 mm) oriented strand board (OSB). Unless otherwise specified, steel decks must be minimum No. 22 gage galvanized steel [0.030 inch (0.76 mm)]. Unless otherwise specified, concrete decks must have a minimum compressive strength ( $f_c$ ) of 2500 psi. Lightweight concrete must be recognized by FM Approvals.



DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION  
Section: 07 52 00—Modified Bituminous Sheet Roofing

**REPORT HOLDER:**

POLYGLASS USA, INC.

**EVALUATION SUBJECT:**

**MODIFIED BITUMEN ROOFING MEMBRANES: APP CONVENTIONAL, APP SELF-ADHERED, SBS CONVENTIONAL AND SBS SELF-ADHERED**

**1.0 REPORT PURPOSE AND SCOPE****Purpose:**

The purpose of this evaluation report supplement is to indicate that the Polyglass USA, Inc. Modified Bitumen Roofing Membranes, described in ICC-ES evaluation report [ESR-2018](#), have also been evaluated for compliance with the code noted below.

**Applicable code edition:**

- 2019 *California Building Code* (CBC)

For evaluation of applicable chapters adopted by the California Office of Statewide Health Planning and Development (OSHPD) AKA: California Department of Health Care Access and Information (HCAI) and Division of State Architect (DSA), see Sections 2.1.1 and 2.1.2 below.

**2.0 CONCLUSIONS****2.1 CBC:**

The Polyglass USA, Inc. Modified Bitumen Roofing Membranes, described in Sections 2.0 through 7.0 of the evaluation report [ESR-2018](#), comply with CBC Chapter 15, provided the design and installation are in accordance with the 2018 *International Building Code*® (IBC) provisions noted in the evaluation report and the additional requirements of CBC Chapter 15, as applicable.

**2.1.1 OSHPD**

The applicable OSHPD Sections and Chapters of the CBC are beyond the scope of this supplement.

**2.1.2 DSA**

The applicable DSA Sections and Chapters of the CBC are beyond the scope of this supplement.

This supplement expires concurrently with the evaluation report, reissued September 2025.