



ICC-ES Evaluation Report

Reissued May 2022

ESR-1388

This report is subject to renewal May 2023.

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION

Section: 07 52 00—Modified Bituminous Sheet Roofing

REPORT HOLDER:

CERTAINTEED LLC

EVALUATION SUBJECT:

CERTAINTEED FLINTLASTIC MODIFIED BITUMEN ROOF COVERING SYSTEMS

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2018, 2015, 2012 and 2009 *International Building Code*® (IBC)
- 2018, 2015, 2012 and 2009 *International Residential Code*® (IRC)

Properties evaluated:

- Fire classification
- Wind uplift resistance
- Physical properties
- Impact resistance

2.0 USES

The CertainTeed Flintlastic modified bitumen roof covering membranes are used as roof coverings in Class A, B or C roof covering systems, described in this report, on new or existing roofs.

3.0 DESCRIPTION

3.1 General:

CertainTeed roofing membranes are atactic polypropylene (APP) or styrene butadiene styrene (SBS) modified bitumen membranes complying with ASTM D6222, ASTM D6162, ASTM D6163 or ASTM D6164, as applicable. Roof covering systems utilizing CertainTeed roofing membranes consist of single-ply membranes, base sheets and ply sheets, approved insulation, flashing, asphalts, adhesives, coatings and mechanical fasteners that are installed to produce an integrated roof system.

3.2 Membranes:

3.2.1 Flintlastic FR Cap 30 (Standard or CoolStar): Flintlastic FR Cap 30 is a 0.138-inch-thick (3.5 mm),

granular-surfaced, reinforced, SBS modified bitumen roofing membrane manufactured from a glass fiber mat impregnated and covered with SBS modified bitumen. The membrane is a Type I, Grade G, membrane complying with ASTM D6163 and intended for adhesive or hot asphalt application. The membrane weighs approximately 7.2 pounds per square yard (3.9 kg/m²). The membrane is also available as a CoolStar option, which utilizes bright white granules.

3.2.2 Flintlastic FR-P (Standard or CoolStar): Flintlastic FR-P is a 0.17-inch-thick (4.3 mm), granular-surfaced, reinforced, SBS modified bitumen roofing membrane manufactured from a nonwoven polyester fabric impregnated and covered with SBS modified bitumen. The membrane is a Type I, Grade G, membrane complying with ASTM D6164 and intended for adhesive or hot asphalt application. The membrane weighs approximately 8.4 pounds per square yard (4.6 kg/m²). The membrane is also available as a CoolStar option, which utilizes bright white granules.

3.2.3 Flintlastic Premium FR-P (Standard or CoolStar): Flintlastic Premium FR-P is a 0.17-inch-thick (4.3 mm), mineral-surfaced, reinforced, SBS modified bitumen roofing membrane manufactured from a nonwoven polyester fabric impregnated and covered with SBS modified bitumen. The membrane is a Type II, Grade G, membrane complying with ASTM D6164 and intended for adhesive or hot asphalt application. The membrane weighs approximately 8.4 pounds per square yard (4.6 kg/m²). The membrane is also available as a CoolStar option, which utilizes bright white granules.

3.2.4 Flintlastic GTS (Standard or CoolStar): Flintlastic GTS is a 0.176-inch-thick (4.5 mm), granular-surfaced, reinforced, SBS modified bitumen roofing membrane manufactured from a nonwoven polyester fabric impregnated and covered with SBS modified bitumen. The membrane is a Type II, Grade G, membrane complying with ASTM D6164 and intended for torch application only. The membrane weighs approximately 9.9 pounds per square yard (5.4 kg/m²). The membrane is also available as a CoolStar option, which utilizes bright white granules.

3.2.5 Flintlastic GMS (Standard or CoolStar): Flintlastic GMS is a 0.17-inch-thick (4.3 mm), granular-surfaced, reinforced, SBS modified bitumen roofing membrane manufactured from a nonwoven polyester fabric impregnated and covered with SBS modified bitumen. The membrane is a Type I, Grade G, membrane

complying with ASTM D6164 and intended for adhesive or hot asphalt application. The membrane weighs approximately 8.0 pounds per square yard (4.4 kg/m²). The membrane is also available as a CoolStar option, which utilizes bright white granules.

3.2.6 Flintlastic Premium GMS (Standard or CoolStar): Flintlastic Premium GMS is a 0.17-inch-thick (4.3 mm), granular-surfaced, reinforced, SBS modified bitumen roofing membrane manufactured from a nonwoven polyester fabric impregnated and covered with SBS modified bitumen. The membrane is a Type II, Grade G, membrane complying with ASTM D6164 and intended for adhesive or hot asphalt application. The membrane weighs approximately 8.4 pounds per square yard (4.6 kg/m²). The membrane is also available as a CoolStar option, which utilizes bright white granules.

3.2.7 Flintlastic STA: Flintlastic STA is a 0.16-inch-thick (4 mm), smooth-talc-surfaced, reinforced, APP modified bitumen roofing membrane. Flintlastic STA is used as a cap sheet or ply sheet and is manufactured from a nonwoven polyester fabric impregnated and covered with APP modified bitumen. The membrane is a Type I, Grade S, membrane complying with ASTM D6222 and intended for torch application only. The membrane weighs approximately 7.4 pounds per square yard (4.0 kg/m²).

3.2.8 Flintlastic STA Plus: Flintlastic STA Plus is a 0.18-inch-thick (4.5 mm), smooth-talc-surfaced, reinforced, APP modified bitumen roofing membrane. The membrane is used as a cap sheet or ply sheet and is manufactured from a nonwoven polyester fabric impregnated and covered with APP modified bitumen. The membrane is a Type I, Grade S, membrane complying with ASTM D6222 and intended for torch application only. The membrane weighs approximately 8.1 pounds per square yard (4.4 kg/m²).

3.2.9 Flintlastic GTA (Standard or CoolStar): Flintlastic GTA is a 0.16-inch-thick (4 mm), granular-surfaced, reinforced, APP modified bitumen roofing membrane manufactured from a nonwoven polyester fabric impregnated and covered with APP modified bitumen. The membrane is a Type I, Grade G, membrane complying with ASTM D6222 and intended for torch application only. The membrane weighs approximately 7.8 pounds per square yard (4.2 kg/m²). The membrane is also available as a CoolStar option, which utilizes bright white granules.

3.2.10 Flintlastic GTA-FR (Standard or CoolStar): Flintlastic GTA-FR is a 0.160-inch-thick (4.1 mm), granular-surfaced, reinforced, APP modified bitumen roofing membrane manufactured from a nonwoven polyester fabric impregnated and covered with APP modified bitumen. The membrane is a Type I, Grade G, membrane complying with ASTM D6222 and intended for torch application only. The membrane weighs approximately 8.6 pounds per square yard (4.7 kg/m²). The membrane is also available as a CoolStar option, which utilizes bright white granules.

3.2.11 Flintlastic SA Cap-FR (Standard or CoolStar): Flintlastic SA Cap FR is a 0.125-inch-thick (3.2 mm), granular-surfaced, reinforced, SBS modified bitumen roofing membrane manufactured from a glass fiber mat impregnated and covered with SBS modified bitumen. The membrane is a Type I, Grade G membrane complying with ASTM D6163 and is intended for self-adhered application only. The membrane weighs approximately 7.3 pounds per square yard (4.0 kg/m²). The membrane is also available as a CoolStar option, which utilizes bright white granules.

3.2.12 Flintlastic SA Cap (Standard or CoolStar): Flintlastic SA Cap is a 0.16-inch-thick (4.0 mm), granular-surfaced, reinforced, SBS modified bitumen roofing membrane manufactured from a non-woven polyester/fiber glass scrim combination mat, impregnated and coated with a superior grade of modified bitumen compound. The membrane is a Type I, Grade G membrane complying with ASTM D6164 and is intended for self-adhered application only. The membrane weighs approximately 95 pounds per roll. The membrane is also available as a CoolStar option, which utilizes bright white granules.

3.2.13 Flintlastic FR Cap 30 T (Standard or CoolStar): Flintlastic FR Cap 30 T is a 0.15-inch-thick (3.8 mm), granular-surfaced, reinforced, SBS modified bitumen roofing membrane manufactured from a glass fiber mat impregnated and covered with SBS modified bitumen. The membrane is a Type I, Grade G membrane complying with ASTM D6163 and is intended for torch application only. The membrane weighs approximately 8.1 pounds per square yard (4.4 kg/m²). The membrane is also available as a CoolStar option, which utilizes bright white granules.

3.3 Insulation:

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 UL 723 or ASTM E84. See Tables 1A, 1C and 2A through 2F for insulations permitted for use with specific roofing systems.

3.4 Fasteners:

Fasteners and plates used to mechanically fasten insulation and base sheets must be in accordance with Table 3 unless otherwise noted.

3.5 Adhesives:

See Table 2F, footnote 5, for adhesives and coverage rates.

3.6 Impact Resistance:

The CertainTeed Flintlastic modified bitumen roof coverings described in this report meet the requirement for impact resistance in accordance with Section 4.6 of FM 4470.

4.0 INSTALLATION

4.1 General:

Installation of the CertainTeed Flintlastic membrane roof covering systems described in this report must comply with the applicable code, the manufacturer's published installation instructions and this report. The manufacturer's published installation instructions must be available at all times on the jobsite during installation. CertainTeed Flintlastic roofing membranes are components of roof covering systems that may be installed over new or existing roofs as described in Tables 1A through 1D and 2A through 2F.

The roof slope must be a minimum of 1/4:12 (2 percent slope) and must not be more than maximum slope for the particular system as specified in Tables 1A through 1D.

Penetrations and terminations of the roof covering must be flashed and made weathertight in accordance with the CertainTeed LLC's published installation instructions and the applicable code.

4.2 Fire Classification:

4.2.1 New Construction: Roof covering systems described in Tables 1A through 1D, when installed in accordance with this report, are Class A, B or C roof coverings in accordance with ASTM E108 or UL 790.

4.2.2 Reroofing: Prior to installation of new roof coverings, inspection in accordance with 2018 IBC Section 1511 [2015, 2012 and 2009 IBC Section 1510] and 2018 IRC Section R908 [2015, 2012 and 2009 IRC Section R907], and approval from the code official having jurisdiction, are required.

Class A, B or C roof covering systems may be installed over existing roof coverings without additional roof classification tests, provided the resulting classification is the lower of the new and existing roofing classifications under the following conditions:

- New uninsulated systems installed only over existing uninsulated systems
- New insulated systems installed over existing uninsulated systems only

4.3 Wind Uplift Resistance:

4.3.1 New Construction: The CertainTeed Flintlastic membrane roof covering systems described in this report have a maximum allowable wind uplift capacity as shown in Tables 2A through 2F. Metal edge securement systems must be listed in accordance with the 2011 edition of ANSI/SPRI/FM4435 ES-1, and designed and installed in accordance with 2018 and 2015 IBC Section 1504.5 and IBC Chapter 16 [2003 edition of ANSI/SPRI ES-1, and designed and installed in accordance with 2012 and 2009 IBC Section 1504.5 and 2012 and 2009 IBC Chapter 16].

4.3.2 Reroofing: Roof covering systems employing mechanical fasteners must be qualified, to the satisfaction of the code official, on adequacy of fasteners penetrating through existing roof coverings into structural substrates. Since the composition and/or condition of any particular underlying existing roofing material can vary widely, reroofing with adhered systems is outside the scope of this report.

5.0 CONDITIONS OF USE

The CertainTeed Flintlastic membrane roof covering systems described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 Installation must comply with the applicable code, the manufacturer's published installation instructions and this report. If there are any conflicts between the manufacturer's published installation instructions and this report, this report governs.
- 5.2 The roof covering systems must be installed only by authorized applicators approved by CertainTeed LLC.
- 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 and IRC Section R316.5.2, except when specifically recognized in an ICC-ES evaluation report as outlined in Footnote 3 following Table 1D.
- 5.4 For all above-deck insulations except foam plastics, the roof covering assembly, including such insulation, must have passed testing in accordance with UL 1256 or FM 4450.
- 5.5 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. Except for applications where a thermal barrier is not required, total thickness of foam plastic insulation must be limited to the lesser of the maximum thickness allowed in Tables 1A, 1C and 2A through 2F or the maximum thickness that limits the flame-spread index to not more than 75 when testing is in accordance with ASTM E84 or UL 723, subject to the approval of the code official.

- 5.6 Design wind uplift pressure on any roof area, including edge and corner zones, must not exceed the allowable wind uplift pressure for the roof covering installed in that particular area. Refer to allowable wind uplift pressure shown in Tables 2A through 2F.
- 5.7 Above-deck thermal insulation board must comply with the applicable standards listed in IBC Table 1508.2 and IRC Table R906.2.
- 5.8 The allowable wind-uplift pressures shown in Tables 2A through 2F are for the roof covering only. The deck and framing to which the roof covering is attached must be designed for the applicable components, and cladding wind loads in accordance with the applicable code.
- 5.9 Calculations demonstrating that the required wind resistance is less than the allowable wind resistance must be submitted to the code official.
- 5.10 When application is over existing roofs, documentation of the wind-uplift resistance of the composite roof construction must be submitted to the code official at the time of permit application.
- 5.11 The membranes are manufactured in Little Rock, Arkansas, under quality control programs with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Membrane Roof-covering Systems (AC75), dated July 2010 (editorially revised September 2016).

7.0 IDENTIFICATION

- 7.1 Each roll of CertainTeed Flintlastic roofing membranes covered by this report is labeled with the CertainTeed LLC name and address, product name, date code, and the evaluation report number (ESR-1388).
- 7.2 The report holder's contact information is the following:

CERTAINTEED LLC
20 MOORES ROAD
MALVERN, PENNSYLVANIA 19355
(610) 651-5847
www.certainteed.com

TABLE 1A—EXTERNAL ROOF FIRE CLASSIFICATIONS^{1,7} INSULATED NONCOMBUSTIBLE DECKS⁶

| SYSTEM NO. | CLASS | MAX. ROOF SLOPE | VAPOR BARRIER OR ANCHOR SHEET ⁴ | INSULATION ^{2,3,8} / THICKNESS | ROOF COVER | | | |
|------------------|-------|-----------------|---|---|---|---|---|--|
| | | | | | Base Sheet ⁴ | Ply Sheet ⁴ | Membrane | Surfacing |
| A-1 | A | 1:12 | (Optional) Type G2 or G2 Glasbase (MA) or (HM) | Perlite, glass fiber or wood fiber / max. 7.2-inch | Type G2 or G2 Glasbase Base Sheet (MA) or (HM) | None | Flintlastic GTA, Flintlastic GTA CoolStar, Flintlastic GTS or Flintlastic GTS CoolStar (HW), or Flintlastic GMS, Flintlastic GMS CoolStar (HM) or Flintlastic Premium GMS, Flintlastic Premium GMS CoolStar (HM) | Karnak No. 97 Fibrated Aluminum at 1½ gal/sq. |
| A-2 | A | ¾:12 | (Optional) Type G2 or G2 Glasbase Base Sheet (MA) or (HM) | Perlite, glass fiber or wood fiber / max. 7.2-inch | Type G2 or G2 Glasbase Base Sheet (MA) or (HM) | None | Flintlastic STA or Flintlastic STA Plus (HW) | Karnak No. 97 Fibrated Aluminum at 1½ gal/sq. |
| A-3 | B | 1:12 | (Optional) Type G2 or G2 Glasbase Base Sheet (MA) or (HM) | Perlite, glass fiber or wood fiber / max. 7.2-inch | Type G2 or G2 Glasbase Base Sheet (MA) or (HM) | None | Flintlastic STA or Flintlastic STA Plus (HW) | Karnak No. 97 Fibrated Aluminum at 1½ gal/sq. |
| A-4 | A | ½:12 | None | Polyisocyanurate, perlite, glass fiber or wood fiber / minimum 1 inch thick | Type G1 or G2 (MA) or (HM) | (Optional) One or more Type G1 or G2 (HM) | Flintlastic STA or Flintlastic STA Plus, Flintlastic GTA, or Flintlastic GTA CoolStar (HW) | Tropical 120AF, Karnak No. 97 AF, Henry No. 520, Grundy AIMB AF at 1½ gal/sq. or Monsey Fibrated Asphalt Emulsion or Henry No. 107 Emulsion at 3 gal/sq. |
| A-5 | A | 1½:12 | None | Polyisocyanurate, perlite, glass fiber or wood fiber / any thickness | Type G2 or G2 Glasbase Base Sheet (MA) or (HM) | (Optional) One or more Type G1 or G2 (HM) | Flintlastic GTA-FR or Flintlastic GTA-FR CoolStar (HW) | None |
| A-6 ⁵ | A | ½:12 | None | 1.5-inch min. to 4 in. max. ENRGY 3, ACfoam II or FlintBoard ISO followed by min. ¾-inch Fesco Board or Permalite or min. ½-inch DensDeck or DensDeck Prime | Glasbase Base Sheet or Flexiglas Base Sheet or Flintlastic Base 20 (MA) | (Optional) Flintlastic Poly SMS Base Sheet or Flintlastic Ultra Poly SMS Base Sheet applied with Karnak No. 81 Modified Bitumen Adhesive Brush Grade or FlintBond Brush at 1½ gal/sq. | Flintlastic FR-P, Flintlastic FR-P CoolStar, Flintlastic Premium FR-P, Flintlastic Premium FR-P CoolStar or Flintlastic FR Cap 30 or Flintlastic FR Cap 30 CoolStar applied with Karnak No. 81 Modified Bitumen Adhesive Brush Grade or FlintBond Brush at 1½ gal/sq. | None |
| A-7 | A | 1½:12 | None | Min. 4 inch Polyisocyanurate | Flintlastic Base 20 T (HW) | None | Flintlastic FR Cap 30 T or Flintlastic FR Cap 30 T CoolStar (HW) | None |
| A-8 | A | ¾:12 | None | (Optional) Polyisocyanurate, perlite, glass fiber or wood fiber / any thickness | None | Flintlastic UltraGlass SA (SA) | Flintlastic GTA-FR or Flintlastic GTA-FR CoolStar (HW) | None |
| A-9 | A | ½:12 | None | (Optional) Polyisocyanurate, perlite, glass fiber / any thickness | None | Flintlastic Ultra Glass SA (SA) | Flintlastic FR Cap 30, Flintlastic FR Cap 30 CoolStar (HM) or Flintlastic FR Cap 30 T or Flintlastic FR Cap 30 T CoolStar (HW) | None |

For SI: 1 inch = 25.4 mm, 1 gal/sq. = 0.41 l/m².

TABLE 1B—EXTERNAL ROOF FIRE CLASSIFICATIONS^{1,7} NONINSULATED NONCOMBUSTIBLE DECKS⁶

| SYSTEM NO. | CLASS | MAX. ROOF SLOPE | ROOF COVER | | | |
|------------|-------|-----------------|---|---|---|---|
| | | | Base Sheet ⁴ | Ply Sheet ⁴ | Membrane | Surfacing |
| B-1 | A | 1:12 | Type G2 or G2 Glasbase Base Sheet (MA) or (HM) | None | Flintlastic GTA, Flintlastic GTA CoolStar, Flintlastic GTS or Flintlastic GTS CoolStar (HW) or Flintlastic GMS, Flintlastic GMS CoolStar or Flintlastic Premium GMS, Flintlastic Premium GMS CoolStar, (HM) | Karnak No. 97 Fibrated Aluminum at 1½ gal/sq. |
| B-2 | A | ¾:12 | Type G2 or G2 Glasbase Base Sheet (MA) or (HM) | None | Flintlastic STA or Flintlastic STA Plus (HW) | Karnak No. 97 Fibrated Aluminum at 1½ gal/sq. |
| B-3 | B | 1:12 | Type G2 or G2 Glasbase Base Sheet (MA) or (HM) | None | Flintlastic STA or Flintlastic STA Plus (HW) | Karnak No. 97 Fibrated Aluminum at 1½ gal/sq. |
| B-4 | A | 1½:12 | Type G2 or G2 Glasbase Base Sheet (MA) or (HM) | (Optional) One or more Type G1 or G2 (HM) | Flintlastic GTA-FR or Flintlastic GTA-FR CoolStar (HW) | None |
| B-5 | A | ½:12 | Flintlastic SA NailBase (MA) | None | Flintlastic SA P-Cap-FR (SA) | None |
| B-6 | A | ½:12 | Flintlastic SA NailBase (MA) or Flintlastic SA PlyBase (SA to primed DensDeck or DensDeck DuraGuard only) | Flintlastic SA PlyBase (SA) | Flintlastic SA Cap FR, Flintlastic SA Cap FR CoolStar (SA) | None |
| B-7 | B | ½:12 | None | Flintlastic Ultra Glass SA (SA) | Flintlastic FR-P fully-adhered with FlintBond Brush Grade Adhesive at 1½ gal/sq. | None |
| B-8 | B | ½:12 | None | Flintlastic Ultra Glass SA (MA) | Flintlastic FR-P (HM) | None |
| B-9 | A | ¼:12 | None | Flintlastic SA Mid Ply (SA) | Flintlastic SA Cap FR or Flintlastic SA Cap FR CoolStar (SA) | None |
| B-10 | A | ¾:12 | Flintlastic APP Base T (MA) or (HW) | (Optional) Flintlastic APP Base T (HW) | Flintlastic GTA-FR or Flintlastic GTA-FR CoolStar (HW) | None |
| B-11 | B | ¼:12 | Flintlastic APP Base T (MA) or (HW) | (Optional) Flintlastic APP Base T (HW) | Flintlastic GTA or Flintlastic GTA CoolStar (HW) | None |

For SI: 1 inch = 25.4 mm, 1 gal/sq. = 0.41 l/m².

TABLE 1C—EXTERNAL ROOF FIRE CLASSIFICATIONS^{1,7} INSULATED COMBUSTIBLE DECKS⁶

| SYSTEM NO. | CLASS | MAX. ROOF SLOPE | VAPOR BARRIER OR ANCHOR SHEET ⁴ | INSULATION ^{2,3,8} / THICKNESS | ROOF COVER | | | |
|------------|-------|-----------------|---|--|--|--|---|--|
| | | | | | Base Sheet ⁴ | Ply Sheet ⁴ | Membrane | Surfacing |
| C-1 | A | 1:12 | Type G2 or G2 Glasbase Base Sheet (LL) or (MA) | Perlite or fiberglass / min. 1-inch, max. 1.5-inch | Type G2 or G2 Glasbase Base Sheet (MA) or (HM) | None | Flintlastic STA or Flintlastic STA Plus, Flintlastic GTA, Flintlastic GTA CoolStar, Flintlastic GTS or Flintlastic GTS CoolStar (HW) or Flintlastic GMS, Flintlastic GMS CoolStar or Flintlastic Premium GMS, Flintlastic Premium GMS CoolStar (HM) | Flood coat and gravel at 400 pounds per square |
| C-2 | A | ¼:12 | (Optional) Type G2 or G2 Glasbase Base Sheet (LL) or (MA) | Perlite, glass fiber or wood fiber / max. 7.2-inch | Type G2 or G2 Glasbase Base Sheet (LL) or (MA) | Type G2 or G2 Glasbase Base Sheet (MA) or (HM) | Flintlastic GTA, Flintlastic GTA CoolStar, Flintlastic GTS or Flintlastic GTS CoolStar (HW) or Flintlastic GMS, Flintlastic GMS CoolStar or Flintlastic Premium GMS, Flintlastic Premium GMS CoolStar (HM) | Karnak No. 97 Fibrated Aluminum at 1½ gal/sq. |

TABLE 1C—EXTERNAL ROOF FIRE CLASSIFICATIONS^{1,7} INSULATED COMBUSTIBLE DECKS⁶ (Continued)

| SYSTEM NO. | CLASS | MAX. ROOF SLOPE | VAPOR BARRIER OR ANCHOR SHEET ⁴ | INSULATION ^{2,3,8} / THICKNESS | ROOF COVER | | | |
|------------|-------|-----------------|--|--|--|---|--|--|
| | | | | | Base Sheet ⁴ | Ply Sheet ⁴ | Membrane | Surfacing |
| C-3 | A | 1/4:12 | (Optional) Type G2 or G2 Glasbase Base Sheet (LL) or (MA) | Perlite / min. 1.5-inch | Type G2 or G2 Glasbase Base Sheet (MA) or (HM) | None | Flintlastic GTA, Flintlastic GTA CoolStar, Flintlastic GTS or Flintlastic GTS CoolStar (HW) or Flintlastic GMS, Flintlastic GMS CoolStar or Flintlastic Premium GMS, Flintlastic Premium GMS CoolStar (HM) | Karnak No. 97 Fibrated Aluminum at 1 1/2 gal/sq. |
| C-4 | A | 1/2:12 | None | Polyisocyanurate, perlite, glass fiber or wood fiber / any thickness | Type G2 or G2 Glasbase Base Sheet (MA) or (HM) | None | Flintlastic FR Cap 30 or Flintlastic FR Cap 30 CoolStar (HM) | None |
| C-5 | A | 1/2:12 | None | Perlite, glass fiber / any thickness | One or more Flexiglas Base Sheet or Flintlastic Base 20 adhered with Henry 553 MBA Gold Modified Bitumen Adhesive at 1 1/2 gal/sq. | (Optional) One or more Type G1, Type G2 or Flexiglas Base Sheet or Flintlastic Base 20 or Flintlastic Poly SMS Base Sheet adhered with Henry 553 MBA Gold Modified Bitumen Adhesive at 1 1/2 gal/sq. | Flintlastic FR Cap 30 or Flintlastic FR Cap 30 CoolStar adhered with Henry 553 MBA Gold Modified Bitumen Adhesive at 1 1/2 gal/sq. | None |
| C-6 | A | 1/2:12 | None | DensDeck / min. 1/4-inch | Flintlastic SA NailBase (MA) | None | Flintlastic SA Cap-FR or Flintlastic SA Cap-FR CoolStar (SA) | None |
| C-7 | C | 2:12 | None | Polyisocyanurate, perlite, glass fiber or wood fiber / any thickness | Flintlastic SA NailBase (MA) | Flintlastic SA Mid Ply (SA) | Flintlastic SA Cap-FR or Flintlastic SA Cap-FR CoolStar (SA) | None |
| C-8 | A | 1/2:12 | None | Polyisocyanurate, perlite, glass fiber or wood fiber / any thickness DensDeck / min. 1/4-inch | Flintlastic SA NailBase (MA) or Flintlastic SA PlyBase (SA to primed DensDeck or DensDeck DuraGuard only) | Flintlastic SA PlyBase (SA) | Flintlastic SA Cap FR, Flintlastic SA Cap-FR CoolStar (SA) | None |
| C-9 | C | Unlimited | None | Perlite, glass fiber or wood fiber / any thickness | Flintlastic SA NailBase (MA) | None | Flintlastic SA Cap FR or Flintlastic SA Cap-FR CoolStar (SA) | None |
| C-10 | C | 2:12 | None | Polyisocyanurate, perlite, glass fiber or wood fiber / any thickness | Flintlastic SA NailBase (MA) | (Optional) Flintlastic SA Mid Ply (SA) or Flintlastic SA PlyBase (SA) | Flintlastic SA Cap FR or Flintlastic SA Cap-FR CoolStar (SA) | None |
| C-11 | A | 1 1/2:12 | None | Flintboard ISO / min. 1.5 inch (presecured) DensDeck / min. 1/4-inch adhered in hot asphalt | Flintlastic Base 20 T (HW) | None | Flintlastic FR Cap 30 T or Flintlastic FR Cap 30 T CoolStar (HW) | None |

For SI: 1 inch = 25.4 mm, 1 gal/sq. = 0.41 l/m².

TABLE 1D—EXTERNAL ROOF FIRE CLASSIFICATIONS^{1,7} NONINSULATED COMBUSTIBLE DECKS⁶

| SYSTEM NO. | CLASS | MAX. ROOF SLOPE | ROOF COVER | | | |
|------------|-------|-----------------|---|---|---|---|
| | | | Base Sheet ⁴ | Ply Sheet ⁴ | Membrane | Surfacing |
| D-1 | A | 1/2:12 | 1 or more layers Yosemite Venting Base Sheet (MA) or (HM) | None | Flintlastic FR-P, Flintlastic FR-P CoolStar, Flintlastic Premium FR-P or Flintlastic Premium FR-P CoolStar (HM) | Firecade 2000 or Premium Long Life Aluminum Roof Coating at 1 1/2 gal/sq. |
| D-2 | A | 1/4:12 | Type G2 or G2 Glasbase Base Sheet (LL) or (MA) | Type G2 or G2 Glasbase Base Sheet (MA) or (HM) | Flintlastic STA, Flintlastic STA Plus, Flintlastic GTA, Flintlastic GTA CoolStar, Flintlastic GTS or Flintlastic GTS CoolStar (HW) or Flintlastic GMS, Flintlastic GMS CoolStar or Flintlastic Premium GMS, Flintlastic Premium GMS CoolStar (HM) | Karnak No. 97 Fibrated Aluminum at 1 1/2 gal/sq. |
| D-3 | A | 1/2:12 | Type G2 or G2 Glasbase Base Sheet (MA) or (HM) | None | Flintlastic FR Cap 30 or Flintlastic FR Cap 30 CoolStar (HM) | None |
| D-4 | A | 1/2:12 | One or more Flexiglas Base Sheet or Flintlastic Base 20 adhered with Henry 553 MBA Gold Modified Bitumen Adhesive at 1 1/2 gallons per square | (Optional) One or more Type G1, Type G2 or Flexiglas Base Sheet or Flintlastic Base 20 or Flintlastic Poly SMS Base Sheet adhered with Henry 553 MBA Gold Modified Bitumen Adhesive at 1 1/2 gal/sq. | Flintlastic FR Cap 30 or Flintlastic FR Cap 30 CoolStar adhered with Henry 553 MBA Gold Modified Bitumen Adhesive at 1 1/2 gal/sq. | None |
| D-5 | B | 1/2:12 | Type G2 or G2 Glasbase Base Sheet (MA) | (Optional) One or more Type G2 or G2 Glasbase Base Sheet (HM) | Flintlastic GTA, Flintlastic GTA CoolStar (HW) or Flintlastic GMS, Flintlastic GMS CoolStar or Flintlastic Premium GMS, Flintlastic Premium GMS CoolStar (HM) | None |
| D-6 | A | 1/2:12 | Type G2 Glasbase Base Sheet (MA) | Flintlastic SA NailBase (MA) | Flintlastic SA Cap-FR or Flintlastic SA Cap-FR CoolStar (SA) | None |
| D-7 | C | 2:12 | Flintlastic SA NailBase (MA) | Flintlastic SA Mid Ply (SA) | Flintlastic SA Cap-FR or Flintlastic SA Cap-FR CoolStar (SA) | None |
| D-8 | C | Unlimited | Flintlastic SA NailBase (MA) | None | Flintlastic SA Cap-FR or Flintlastic SA Cap-FR CoolStar (SA) | None |
| D-9 | C | 2:12 | Flintlastic SA NailBase (MA) | (Optional) Flintlastic SA Mid Ply (SA) or Flintlastic SA PlyBase (SA) | Flintlastic SA Cap-FR or Flintlastic SA Cap-FR CoolStar (SA) | None |
| D-10 | A | 2:12 | Flintlastic SA NailBase or Flexiglas Base Sheet or Flintlastic Base 20 or Yosemite Venting Base Sheet or Glasbase Base Sheet (MA) | Flintlastic Ultra Glass SA (SA) | Flintlastic GTA-FR or Flintlastic GTA-FR CoolStar (HW) | None |
| D-11 | A | 1/2:12 | Glasbase Base Sheet Base Sheet or Flintlastic SA NailBase or Flexiglas Base Sheet or Flintlastic Base 20 or Yosemite Venting Base Sheet (MA) | Flintlastic Ultra Glass SA (SA) | Flintlastic FR Cap 30, Flintlastic FR Cap 30 CoolStar (HM) or Flintlastic FR Cap 30 T, Flintlastic FR Cap 30 T CoolStar (HW) | None |

For SI: 1 inch = 25.4 mm, 1 gal/sq. = 0.41 l/m².

Footnotes for Table 1A thru Table 1D, as applicable:

¹Unless otherwise specified (see Footnote 5), vapor barriers, anchor sheets, insulation, adhesives, base sheets, ply sheets, membranes, and surface coatings must be UL classified for roofing systems.

²Foam plastic insulation thickness is limited to the lesser of the maximum thickness specified in this table or the maximum thickness stated on the label, that limits the flame spread index to not more than 75 when tested in accordance with ASTM E84.

³Foam plastic insulation may be installed over a steel deck without a thermal barrier when installed in accordance with an ICC-ES evaluation report recognizing direct application of a specific foam plastic insulation. Reference:

⁴Type G1 and Type G2 relate to any UL classified fiberglass reinforced ply or base sheet respectively, complying with UL 55A.

⁵Insulation, adhesives, base sheets, ply sheets and membranes in system A-6 must be FM – Approved for roofing systems.

⁶Combustible wood decks must be minimum 15/32-inch-thick (11.9 mm) plywood, 7/16-inch-thick (11.1 mm) nonveneer APA rated oriented strand board or 3/4-inch-thick (19 mm) sheathing boards. Steel decks must be minimum No. 22 gage galvanized steel [0.030 inch (0.76 mm)]. Concrete decks must have a minimum compressive strength (f_c) of 2500 psi.

⁷Abbreviations:

- (MA) Mechanically Fastened
- (HM) Hot Mopped with hot roofing asphalt conforming to ASTM D312, Type III or IV.
- (HW) Heat Welded
- (LL) Loose Laid
- (SA) Self-Adhered

⁸Polyisocyanurate insulation must comply with ASTM C1289, Type I or Type II. Perlite insulation must comply with ASTM C728. Wood fiberboard insulation must comply with ASTM C208.

**TABLE 2A—WIND UPLIFT RESISTANCE: METHOD OF ATTACHMENT
MECHANICALLY ATTACHED BASE INSULATION, BONDED COVERBOARD**

| SYSTEM NO. | SUBSTRATE | INSULATION ⁶ | | COVERBOARD ⁶ | | ROOF COVER ¹ | | | ALLOWABLE UPLIFT CAPACITY (psf) 4 |
|------------|--|--|-------------------------------------|--|--|--|-----|---|--------------------------------------|
| | | Type | Attach ² | Type | Attachment Method | Base | Ply | Cap | |
| A-1 | Min. 22 ga. steel or min. 2,500 psi concrete | 1.5-inch min. to 4-inch max. FlintBoard ISO, ACFoam-II, ENRGY 3, or Multi-Max FA-3 | 1 fastener per 1.33 ft ² | Min. 3/4-inch FescoBoard | Mopped with hot asphalt | One to three plies applied in hot asphalt or heat welded | | Hot mopped with hot asphalt or heat welded | 52.5 |
| A-2 | Min. 22 ga. steel or min. 2,500 psi concrete | 1.5-inch min. to 4-inch max. FlintBoard ISO, ACFoam-II, ENRGY 3, or Multi-Max FA-3 | 1 fastener per 1.33 ft ² | Min. 1/2-inch HD Fiber Board Roof Insulation | Mopped with hot asphalt | One to three plies applied in hot asphalt or heat welded | | Hot mopped with hot asphalt or heat welded | 67.5 |
| A-3 | Min. 22 ga. steel | 2-inch min. to 4-inch max. FlintBoard ISO or ACFoam-II | 1 fastener per 3.2 ft ² | Min. 1/2-inch Armor Board HD, BP High Strength, ERS Redi-Deck, GAFTEMP HD, Roof Insulation Board, Structodek HD Fiberboard or FiberBase HD1/HD6 or min. 3/4-inch ConPerl, Fesco Board or EnergyGuard Perlite | Mopped with hot asphalt | One to three plies applied in hot asphalt or heat welded | | Hot mopped with hot asphalt or heat welded | 45.0 |
| A-4 | Min. 22 ga. steel Min. 33 ksi Steel | Min. 1.5-inch Firestone ISO 95+ GL | 1 fastener per 1.33 ft ² | Min. 1.5-inch Firestone ISO 95+ GL | Adhered with Millennium One Step Foamable Adhesive ⁵ | Flintlastic Ultra Glass SA, self-adhered | | Flintlastic GTA or Flintlastic GTA CoolStar, heat welded | 37.5 |
| A-5 | Min. 22 ga. steel | Min. 1.5-inch ACFoam-II, H-Shield, FlintBoard ISO or FlintBoard _H ISO | 1 fastener per 1.45 ft ² | Min. 1.5-inch ACFoam-II, H-Shield, FlintBoard ISO or FlintBoard _H ISO | Adhered with Millennium One Step Foamable Adhesive, Millennium PG-1 Low Viscosity Insulation Adhesive, Insta-Stik, OlyBond 500 or OlyBond 500 Green ⁵ | Base: Black Diamond Base Sheet or Flintlastic Ultra Glass SA, self-adhered Ply: Flintlastic APP Base T, heat welded | | Flintlastic GTA-FR or Flintlastic GTA-FR CoolStar, heat welded | 45.0 |
| A-6 | Min. 22 ga. steel | Min. 1.5-inch ACFoam-II, H-Shield, FlintBoard ISO or FlintBoard _H ISO | 1 fastener per 1.45 ft ² | Min. 1/4-inch SECUROCK Gypsum-Fiber Roof Board | Adhered with Millennium One Step Foamable Adhesive, Millennium PG-1 Low Viscosity Insulation Adhesive, Insta-Stik, OlyBond 500 or OlyBond 500 Green ⁵ | Flintlastic STA or Flintlastic APP Base T, heat welded | | Flintlastic GTA, Flintlastic GTA CoolStar, Flintlastic GTA-FR or Flintlastic GTA-FR CoolStar, heat welded | 75.0 |
| A-7 | Min. 15/32-inch plywood | Min. 1.5-inch ACFoam-II, H-Shield, FlintBoard ISO or FlintBoard _H ISO | 1 fastener per 1.33 ft ² | Min. 1.5-inch ACFoam-II, H-Shield, FlintBoard ISO or FlintBoard _H ISO | Adhered with Millennium One Step Foamable Adhesive, Millennium PG-1 Low Viscosity Insulation Adhesive, Insta-Stik, OlyBond 500 or OlyBond 500 Green ⁵ | Base: Black Diamond Base Sheet or Flintlastic Ultra Glass SA, self-adhered Ply: Flintlastic APP Base T, heat welded | | Flintlastic GTA-FR or Flintlastic GTA-FR CoolStar, heat welded | 67.5 |

**TABLE 2A—WIND UPLIFT RESISTANCE: METHOD OF ATTACHMENT
MECHANICALLY ATTACHED BASE INSULATION, BONDED COVERBOARD (Continued)**

| SYSTEM NO. | SUBSTRATE | INSULATION ⁶ | | COVERBOARD ⁶ | | ROOF COVER ¹ | | | ALLOWABLE UPLIFT CAPACITY (psf) 4 |
|------------|--|---|-------------------------------------|--|--|---|---|------|--------------------------------------|
| | | Type | Attach ² | Type | Attachment Method | Base | Ply | Cap | |
| A-8 | Min. 22 ga. steel or min. 2,500 psi concrete | Thermal Barrier: Min. ¼-inch DensDeck, SECUROCK Gypsum-Fiber Roof Board or GlasRoc Roof Board, loose laid followed by min. 2.0-inch ACFoam-II, H-Shield, FlintBoard ISO or FlintBoard _H ISO | 1 fastener per 2 ft ² | Min. 1.5-inch ACFoam-III, H-Shield CG, FlintBoard ISO Cold or FlintBoard _H ISO Cold OR Min. ¼-inch SECUROCK Gypsum-Fiber Roof Board | Adhered with OlyBond 500 Adhesive, applied in min. ¾-inch wide beads spaced max. 12-inch o.c. | Base: Flintlastic Poly SMS Base, Flintlastic Ultra Poly SMS or Flintlastic Base 20, adhered with Karnak No. 81 Modified Bitumen Adhesive Brush Grade or FlintBond Brush at a rate of 1 gal/sq. Ply: None | Flintlastic FR-P, Flintlastic FR-P CoolStar, Flintlastic Premium FR-P, Flintlastic Premium FR-P CoolStar, Flintlastic FR Cap 30 or Flintlastic FR Cap 30 CoolStar, adhered with Karnak No. 81 Modified Bitumen Adhesive Brush Grade or FlintBond Brush at a rate of 1 gal/sq. | 45.0 | |
| A-9 | Min. 22 ga. steel | Min. 1.5-inch ACFoam-II, H-Shield, FlintBoard ISO or FlintBoard _H ISO | 1 fastener per 1.6 ft ² | Min. ¼-inch SECUROCK Gypsum-Fiber Roof Board | Adhered with Millennium One Step Foamable Adhesive, Millennium PG-1 Low Viscosity Insulation Adhesive, Insta-Stik, OlyBond 500 or Olybond 500 Green ⁵ | Flintlastic Poly SMS Base, Flintlastic Ultra Poly SMS Base or Flintlastic Base 20 adhered with FlintBond Brush, at a rate of 1.0-1.5 gal/sq. | Flintlastic FR Cap 30, Flintlastic FR Cap 30 CoolStar, Flintlastic FR-P, Flintlastic FR-P CoolStar, adhered with FlintBond Brush, at a rate of 1.0-1.5 gal/sq. | 75.0 | |
| A-10 | Min. 15/32-inch plywood | Min. 1.5-inch ACFoam-II, H-Shield, FlintBoard ISO or FlintBoard _H ISO | 1 fastener per 1.33 ft ² | Min. ¼-inch SECUROCK Gypsum-Fiber Roof Board | Adhered with Millennium One Step Foamable Adhesive, Millennium PG-1 Low Viscosity Insulation Adhesive, Insta-Stik, OlyBond 500 or Olybond 500 Green ⁵ | Flintlastic STA or Flintlastic APP Base T, heat welded | Flintlastic GTA, Flintlastic GTA CoolStar, Flintlastic GTA-FR or Flintlastic GTA-FR CoolStar, heat welded | 90.0 | |

TABLE 2B—WIND UPLIFT RESISTANCE: METHOD OF ATTACHMENT
ALL INSULATION LAYERS MECHANICALLY ATTACHED THROUGH TOP INSULATION LAYER OR COVERBOARD

| SYSTEM NO. | SUBSTRATE | INSULATION ⁶ | | COVERBOARD ⁶ | | ROOF COVER ¹ | | | ALLOWABLE UPLIFT CAPACITY (psf) ⁴ |
|------------|--|---|---|---|-------------------------------------|--|---|---|--|
| | | Type | Attach ² | Type | Attachment ² Method | Base | Ply | Cap | |
| B-1 | Min. 22 ga. steel, min. 2,500 psi concrete or min. ¹⁹ / ₃₂ -inch plywood | Min. 1.5-inch, min. 2.0 pcf polyisocyanurate | Loose laid | Min. 1/4-inch DensDeck primed with FlintPrime SA at 0.3 gal/sq. | 1 fastener per 1.33 ft ² | Flintlastic SA Mid Ply, self-adhered | (Optional) Flintlastic SA Mid Ply, self-adhered | Self-Adhered | 45.0 |
| B-2 | Min. 22 ga. steel or min. 2,500 psi concrete | 1.5-inch min. to 4-inch max. FlintBoard ISO, ACFoam-II, ENRGY 3 or Multi-Max FA-3 | 1 fastener per 1.33 ft ² through top layer | None | N/A | Black Diamond Base Sheet or Flintlastic Ultra Glass SA, self-adhered | (Optional) One or two plies applied in hot asphalt or heat welded | Hot mopped with hot asphalt | 52.5 |
| B-3 | Min. 22 ga. steel or min. 2,500 psi concrete | 1.5-inch min. to 4-inch max. FlintBoard ISO, ACFoam-II, ENRGY 3 or Multi-Max FA-3 | 1 fastener per 1.33 ft ² through top layer | None | N/A | Black Diamond Base Sheet or Flintlastic Ultra Glass SA, self-adhered | (Optional) One or two plies applied in hot asphalt or heat welded | Heat welded | 82.5 |
| B-4 | Min. 22 ga. steel or min. 2,500 psi concrete | Max. 3-inch-thick OC FOAMULAR 350 or max. 4-inch-thick Hy-Therm AP, FlintBoard ISO, ACFoam-II, PSI 25, H-Shield, FlintBoard _H ISO, H-Shield P, H-Shield WF, FlintBoard _H ISO WF, H-Shield NB or FlintBoard _H ISO NB. | Loose laid | Min. 1/2-inch Armor Board HD, BP High Strength, ERS Redi-Deck, GAFTEMP HD, Roof Insulation Board, Structodek HD Fiberboard or FiberBase HD1/HD6 or min. ³ / ₄ -inch ConPerl, Fesco Board or EnergyGuard Perlite or min. 1/4-inch DensDeck or DensDeck Prime | 1 fastener per 2 ft ² | One to three plies in hot asphalt full-mop or spot mopped in hot asphalt in 24-inch diameter spots spaced 30-inch o.c. or heat welded | | Hot mopped with hot asphalt or heat welded | 45.0 |
| B-5 | Min. 22 ga. steel or min. 2,500 psi concrete | 1.5-inch min. to 4-inch max. Hy-Therm AP, ENRGY 3 or PSI-25 or min. 2-inch FlintBoard ISO or ACFoam-II | Loose laid | Min. 1-inch Fesco Board | 1 fastener per 1.6 ft ² | Yosemite Venting Base Sheet spot mopped in hot asphalt in 24-inch diameter spots spaced 30-inch o.c. | None | Hot mopped with hot asphalt or heat welded | 45.0 |
| B-6 | Min. 22 ga. Steel or min. 2,500 psi concrete | (Optional) Thermal Barrier: Min. 1/4-inch DensDeck, SECUROCK Gypsum-Fiber Roof Board or GlasRoc Roof Board, loose laid followed by min. 1.5-inch ACFoam-II, H-Shield, FlintBoard ISO or FlintBoard _H ISO | Loose laid | Min. 1.5-inch ACFoam-III, H-Shield CG, FlintBoard ISO Cold or Flintlastic _H ISO Cold OR Min. 1/4-inch SECUROCK Gypsum-Fiber Roof Board | 1 fastener per 2 ft ² | Flintlastic Poly SMS Base, Flintlastic Ultra Poly SMS or Flintlastic Base 20, adhered with Karnak No. 81 Modified Bitumen Adhesive Brush Grade or FlintBond Brush at a rate of 1 gal/sq. | None | Flintlastic FR-P, Flintlastic FR-P CoolStar, Flintlastic Premium FR-P, Flintlastic Premium FR-P CoolStar, Flintlastic FR Cap 30 or Flintlastic FR Cap 30 CoolStar, adhered with Karnak No. 81 Modified Bitumen Adhesive Brush Grade or FlintBond Brush at a rate of 1 gal/sq. | 45.0 |

TABLE 2B—WIND UPLIFT RESISTANCE: METHOD OF ATTACHMENT
ALL INSULATION LAYERS MECHANICALLY ATTACHED THROUGH TOP INSULATION LAYER OR COVERBOARD (Continued)

| SYSTEM NO. | SUBSTRATE | INSULATION ⁶ | | COVERBOARD ⁶ | | ROOF COVER ¹ | | | ALLOWABLE UPLIFT CAPACITY (psf) ⁴ |
|------------|---|--|-------------------------------------|---|-------------------------------------|---|---|---|--|
| | | Type | Attach ² | Type | Attachment ² Method | Base | Ply | Cap | |
| B-7 | Min. 22 ga. steel or min. 2,500 psi concrete | Thermal Barrier: Min. ¼-inch DensDeck, SECUROCK Gypsum-Fiber Roof Board or GlasRoc Roof Board, loose laid followed by min. 1.5-inch ACFoam-II, H-Shield, FlintBoard ISO or FlintBoard _H ISO | 1 fastener per 1.45 ft ² | None | N/A | Base: Flintlastic Ultra Glass SA, self-adhered | None | Flintlastic FR-P, Flintlastic FR-P CoolStar, Flintlastic GMS, Flintlastic GMS CoolStar, Flintlastic Premium FR-P, Flintlastic Premium FR-P CoolStar, Flintlastic Premium GMS or Flintlastic Premium GMS CoolStar, hot asphalt | 75.0 |
| B-8 | Min. 22 ga. steel | Min. 1.5-inch ACFoam-II, H-Shield, FlintBoard ISO or FlintBoard _H ISO | Loose laid | Min. ¼-inch SECUROCK Gypsum-Fiber Roof Board | 1 fastener per 1.45 ft ² | Flintlastic STA or Flintlastic APP Base T, heat welded | (Optional) Flintlastic STA or Flintlastic APP Base T, heat welded | Flintlastic GTA, Flintlastic GTA CoolStar, Flintlastic GTA-FR or Flintlastic GTA-FR CoolStar, heat welded | 60.0 |
| B-9 | Min. 15/32-inch plywood | Min. 1.5-inch ACFoam-II, H-Shield, FlintBoard ISO or FlintBoard _H ISO | Loose laid | Min. ¼-inch SECUROCK Gypsum-Fiber Roof Board | 1 fastener per 1.33 ft ² | Flintlastic STA or Flintlastic APP Base T, heat welded | (Optional) Flintlastic STA or Flintlastic APP Base T, heat welded | Flintlastic GTA, Flintlastic GTA CoolStar, Flintlastic GTA-FR or Flintlastic GTA-FR CoolStar, heat welded | 67.5 |
| B-10 | Min. 22 ga. steel | Min. 1.5-inch ACFoam-II, H-Shield, FlintBoard ISO or FlintBoard _H ISO | Loose laid | Min. 1.5-inch ACFoam-II, H-Shield, FlintBoard ISO or FlintBoard _H ISO | 1 fastener per 1.45 ft ² | Black Diamond Base Sheet or Flintlastic Ultra Glass SA, self-adhered | Flintlastic APP Base T, heat welded | Flintlastic GTA-FR or Flintlastic GTA-FR CoolStar, heat welded | 75.0 |
| B-11 | Min. 15/32-inch plywood | Min. 1.5-inch ACFoam-II, H-Shield, FlintBoard ISO or FlintBoard _H ISO | Loose laid | Min. 1.5-inch ACFoam-II, H-Shield, FlintBoard ISO or FlintBoard _H ISO | 1 fastener per 1.33 ft ² | Black Diamond Base Sheet or Flintlastic Ultra Glass SA, self-adhered | Flintlastic APP Base T, heat welded | Flintlastic GTA-FR or Flintlastic GTA-FR CoolStar, heat welded | 75.0 |
| B-12 | Min. 22 ga. steel | Min. 1.5-inch ACFoam-II, H-Shield, FlintBoard ISO or FlintBoard _H ISO | Loose laid | Min. ¼-inch SECUROCK Gypsum-Fiber Roof Board | 1 fastener per 1 ft ² | Flintlastic STA or Flintlastic APP Base T, heat welded | (Optional) Flintlastic STA or Flintlastic APP Base T, heat welded | Flintlastic GTA, Flintlastic GTA CoolStar, Flintlastic GTA-FR or Flintlastic GTA-FR CoolStar, heat welded | 120.0 |
| B-13 | Min. 22 ga. steel or min. 2,500 psi concrete | 1.5-inch min. to 4-inch max. Hy-Therm AP, ENRGY 3 or PSI-25 or min. 2-inch FlintBoard ISO or ACFoam II | Loose laid | Min. ½-inch Structodek, FiberBase HD1/HD6 or GP HD Roof Fiberboard | 1 fastener per 2 ft ² | Yosemite Venting Base Sheet spot mopped in hot asphalt in 24-inch diameter spots spaced 30-inch o.c. | None | Hot mopped with hot asphalt or heat welded | 45.0 |
| B-14 | Min. 19/32-inch plywood at max 24-inch spans attach 6-inch o.c. using 8d ring shank nails | (Optional) One or more layers min. 1.5" ACFoam-II, ENRGY 3, H-Shield, FlintBoard _H ISO, Mult-Max FA-3 or FlintBoard ISO | Loose laid | Min. 1.5" ACFoam-II, ENRGY 3, HShield, Mult-Max FA-3, FlintBoard ISO or FlintBoard _H ISO | 1 fastener per 1.45 ft ² | Flintlastic SA Mid Ply or Flintlastic SA PlyBase, self-adhered (Substrate Primed with Flint-Prime SA) | (Optional) Flintlastic SA Mid Ply or Flintlastic SA PlyBase, self-adhered | Self-Adhered | 60.0 |

TABLE 2B—WIND UPLIFT RESISTANCE: METHOD OF ATTACHMENT
ALL INSULATION LAYERS MECHANICALLY ATTACHED THROUGH TOP INSULATION LAYER OR COVERBOARD (Continued)

| SYSTEM NO. | SUBSTRATE | INSULATION ⁶ | | COVERBOARD ⁶ | | ROOF COVER ¹ | | | ALLOWABLE UPLIFT CAPACITY (psf) ⁴ |
|------------|--|--|----------------------------------|--|--|---|--|---|--|
| | | Type | Attach ² | Type | Attachment ² Method | Base | Ply | Cap | |
| B-15 | Min. 22 ga. steel or min. 2,500 psi concrete | Min. 1.5-inch Owens-Corning FOAMULAR, Hy-Therm AP, Hy-Therm(a) AP, FlintBoard ISO, ACFoam-II, ENRGY 3, PSI-25, H-Shield, FlintBoard _H ISO, H-Shield-P, H-Shield-WF, FlintBoard _H ISO WF, H-Shield-NB or FlintBoard _H ISO NB | Loose laid | Min. 1/4-inch DensDeck or DensDeck Prime | 1 fastener per 2 ft ² | Flintlastic Base 20 T, heat welded | None | Flintlastic FR Cap 30 T or Flintlastic FR Cap 30 T CoolStar, heat welded | 45.0 |
| B-16 | Tectum 1 Plank (install per ESR-1112) or existing substrate | Min 5/8-inch DensDeck or DensDeck Prime | 1 fastener per 4 ft ² | None | N/A | Flintlastic Base 20 T, heat welded | None | Flintlastic FR Cap 30 T or Flintlastic FR Cap 30 T CoolStar, heat welded | 45.0 |
| B-17 | Existing substrate | Min. 1/4-inch DensDeck or DensDeck Prime | 1 fastener per 2 ft ² | None | N/A | Flintlastic Base 20 T, heat welded | None | Flintlastic FR Cap 30 T or Flintlastic FR Cap 30 T CoolStar, heat welded | 45.0 |
| B-18 | Min. 22 ga. steel Min. 33 ksi Steel | Min. 1.5-inch FlintBoard ISO | Loose laid | Min. 1/4-inch DensDeck Prime | 1 fastener per 1.33 ft ² and adhered with Millennium Hurricane Force Membrane Adhesive ⁵ | Glasbase Base Sheet, adhered with Millennium Hurricane Force Membrane Adhesive | None | Flintlastic FR-P or Flintlastic FR-P CoolStar adhered with Millennium Hurricane Force Membrane Adhesive | 30.0 |
| B-19 | Min. 22 ga., steel | (Optional) One or more layers, any combination | Loose laid | Min. 1.5-inch ACFoam-II, ENRGY 3, Multi-Max FA-3, H-Shield, FlintBoard ISO or FlintBoard _H ISO | 1 fastener per 1.45 ft ² | Yosemite Venting Base, hot-asphalt in 9-inch diameter spots in 24-inch grid pattern | (Optional) Flintglas Ply Sheet Type IV, Flintglas Premium Ply Sheet Type VI, Flintlastic Base 20, Flintlastic Poly SMS Base or Flintlastic Ultra Poly SMS Base, hot-asphalt at a rate of 20-40 lbs/sq. | Hot mopped with hot asphalt | 52.5 |
| B-20 | Min. 22 ga. steel | Min. 1.5-inch ACFoam-II, ENRGY 3, Multi-Max FA-3 or FlintBoard ISO, loose-laid | Min. 1/4-inch DensDeck | 1 fastener per 1.33 ft ² Primed coverboard surface with FlintPrime SA primer, applied at a rate of 0.3 gal/sq. | Flintlastic SA Mid Ply, self-adhered | (Optional) Flintlastic SA Mid Ply, self-adhered | Flintlastic SA Cap or Flintlastic SA Cap CoolStar self-adhered | 45.0 | |
| B-21 | Min. 19/32-inch plywood | Min. 1.5-inch ACFoam-II, ENRGY 3, H-Shield, Multi-Max FA-3, FlintBoard ISO or FlintBoard _H ISO primed with FlintPrime SA | None | 1 fastener per 2 ft ² | Flintlastic SA PlyBase or Flintlastic SA Mid Ply, self-adhered | (Optional) Flintlastic SA PlyBase or Flintlastic SA Mid Ply, self-adhered | Flintlastic SA Cap, Flintlastic SA Cap CoolStar, Flintlastic SA Cap FR or Flintlastic SA Cap FR CoolStar, self-adhered | 45.0 | |

**TABLE 2C—WIND UPLIFT RESISTANCE: METHOD OF ATTACHMENT
MECHANICALLY ATTACHED BASE SHEET OVER INSULATION**

| SYSTEM NO. | SUBSTRATE | INSULATION ⁶ | | COVERBOARD ⁶ | | ROOF COVER ¹ | | | ALLOWABLE UPLIFT CAPACITY (psf) ⁴ |
|------------|---|---|------------|--|-------------------------|---|---|--|--|
| | | Type | Attach | Type | Attachment Method | Base ² | Ply | Cap | |
| C-1 | Min. 22 ga. steel or min. 2,500 psi concrete | Min. 1.5-inch, min. 2.0 pcf polyisocyanurate | Loose laid | (Optional) FM Approved min. 3/4-inch perlite min. 1/2-inch wood fiberboard or min. 1/4-inch DensDeck | Loose laid | Yosemite Venting Base Sheet, Flexiglas Base Sheet or Flintlastic Base 20 attached 6-inch o.c. in a 4-inch lap and 6-inch o.c. in two, equally spaced, staggered center rows | (Optional) Hot mopped with hot asphalt or heat welded | Hot mopped with hot asphalt or heat welded | 67.5 |
| C-2 | Min. 22 ga. steel or min. 2,500 psi concrete | Min. 1.5-inch, min. 2.0 pcf polyisocyanurate | Loose laid | (Optional) FM Approved Min. 3/4-inch perlite min. 1/2-inch wood fiberboard or min. 1/4-inch DensDeck | Loose laid | Flintlastic Poly SMS Base Sheet or Flintlastic Ultra Poly SMS Base Sheet attached 12-inch o.c. in a 4-inch lap and 12-inch o.c. in two, equally spaced, staggered center rows | (Optional) Hot mopped with hot asphalt or heat welded | Hot mopped with hot asphalt or heat welded | 120 |
| C-3 | Min. 22 ga. steel or min. 2,500 psi concrete | Min. 1.5-inch, min. 2.0 pcf polyisocyanurate | Loose laid | (Optional) FM Approved min. 3/4-inch perlite min. 1/2-inch wood fiberboard or min. 1/4-inch DensDeck | Loose laid | Flintlastic Ultra Poly SMS Base Sheet attached 12-inch o.c. in the 4-inch heat welded lap with Tru-Fast #15 EHD and Tru-Fast 2.4" Barbed Metal Seam Plates | None | Heat welded | 60 |
| C-4 | Min. 22 ga. Steel, min. 2,500 psi concrete or min. 19/32-inch plywood | Min. 1.5-inch, min. 2.0 pcf polyisocyanurate | Loose laid | (Optional) FM Approved min. 3/4-inch perlite min. 1/2-inch wood fiberboard or min. 1/4-inch DensDeck | Loose laid | Flintlastic SA NailBase attached 12-inch o.c. in a 4-inch lap and 12-inch o.c. in two, equally spaced, staggered center rows | (Optional) Flintlastic SA Mid Ply, self-adhered | Self-Adhered | 60 |
| C-5 | Min. 22 ga. steel or min. 2,500 psi concrete | Max. 3-inch-thick OC FOAMULAR 350 or max. 4-inch-thick Hy-Therm AP, FlintBoard ISO, ACFoam-II, PSI 25, H-Shield, FlintBoard _H ISO, H-Shield P, H-Shield WF, FlintBoard _H ISO WF, H-Shield NB or FlintBoard _H ISO NB. | Loose laid | Min. 1/2-inch Armor Board HD, BP High Strength, ERS Redi-Deck, GAFTEMP HD, Roof Insulation Board, Structodek HD Fiberboard or FiberBase HD1/HD6 or min. 3/4-inch ConPerl, Fesco Board or EnergyGuard Perlite or min. 1/4-inch DensDeck or DensDeck Prime | Presecured ³ | CertainTeed base sheet (except Yosemite Venting Base Sheet) attached 12-inch o.c. in a 4-inch lap and 36-inch o.c. in two, equally spaced, staggered center rows | (Optional) Hot mopped with hot asphalt or heat welded | Hot mopped with hot asphalt or heat welded | 30.0 |
| C-6 | Min. 22 ga. steel or min. 2,500 psi concrete | Max. 3-inch-thick OC FOAMULAR 350 or max. 4-inch-thick Hy-Therm AP, FlintBoard ISO, ACFoam-II, PSI 25, H-Shield, FlintBoard _H ISO, H-Shield P, H-Shield WF, FlintBoard _H ISO WF, H-Shield NB or FlintBoard _H ISO NB. | Loose laid | Min. 1/2-inch Armor Board HD, BP High Strength, ERS Redi-Deck, GAFTEMP HD, Roof Insulation Board, Structodek HD Fiberboard or FiberBase HD1/HD6 or min. 3/4-inch ConPerl, Fesco Board or EnergyGuard Perlite or min. 1/4-inch DensDeck or DensDeck Prime | Presecured ³ | CertainTeed base sheet (except Yosemite Venting Base Sheet) attached 12-inch o.c. in a 4-inch lap and 24-inch o.c. in two, equally spaced, staggered center rows | (Optional) Hot mopped with hot asphalt or heat welded | Hot mopped with hot asphalt or heat welded | 45.0 |

**TABLE 2C—WIND UPLIFT RESISTANCE: METHOD OF ATTACHMENT
MECHANICALLY ATTACHED BASE SHEET OVER INSULATION (Continued)**

| SYSTEM NO. | SUBSTRATE | INSULATION ⁶ | | COVERBOARD ⁶ | | ROOF COVER ¹ | | | ALLOWABLE UPLIFT CAPACITY (psf) ⁴ |
|------------|---|---|------------|--|-------------------------|--|--|--|--|
| | | Type | Attach | Type | Attachment Method | Base ² | Ply | Cap | |
| C-7 | Min. 22 ga. steel or min. 2,500 psi concrete | Max. 3-inch-thick OC FOAMULAR 350 or max. 4-inch-thick Hy-Therm AP, FlintBoard ISO, ACFoam-II, PSI 25, H-Shield, FlintBoard _H ISO, H-Shield P, H-Shield WF, FlintBoard _H ISO WF, H-Shield NB or FlintBoard _H ISO NB. | Loose laid | Min. 1/2-inch Armor Board HD, BP High Strength, ERS Redi-Deck, GAFTEMP HD, Roof Insulation Board, Structodek HD Fiberboard or FiberBase HD1/HD6 or min. 3/4-inch ConPerl, Fesco Board or EnergyGuard Perlite or min. 1/4-inch DensDeck or DensDeck Prime | Presecured ³ | Flintlastic Poly SMS Base Sheet or Flintlastic Ultra Poly SMS Base Sheet attached 12-inch o.c. in a 4-inch lap and 36-inch o.c. in two, equally spaced, staggered center rows or 18-inch o.c. in a 4-inch lap and 18-inch o.c. in one staggered center row | (Optional) Hot mopped with hot asphalt or heat welded | Hot mopped with hot asphalt or heat welded | 45.0 |
| C-8 | Min. 22 ga. steel or min. 2,500 psi concrete | Max. 3-inch-thick OC FOAMULAR 350 or max. 4-inch-thick Hy-Therm AP, FlintBoard ISO, ACFoam-II, PSI 25, H-Shield, FlintBoard _H ISO, H-Shield P, H-Shield WF, FlintBoard _H ISO WF, H-Shield NB or FlintBoard _H ISO NB. | Loose laid | Min. 1/2-inch Armor Board HD, BP High Strength, ERS Redi-Deck, GAFTEMP HD, Roof Insulation Board, Structodek HD Fiberboard or FiberBase HD1/HD6 or min. 3/4-inch ConPerl, Fesco Board or EnergyGuard Perlite or min. 1/4-inch DensDeck or DensDeck Prime | Presecured ³ | Flintlastic Poly SMS Base Sheet or Flintlastic Ultra Poly SMS Base Sheet attached with SFS Intec 2 in. round metal plates and #12 or #14 fasteners spaced 12-inch o.c. in a 4-inch wide, heat-welded side lap. | (Optional) Hot mopped with hot asphalt or heat welded | Hot mopped with hot asphalt or heat welded | 45.0 |
| C-9 | (Recover) Min. 22 ga. steel or min. 3/4-inch plywood | None | N/A | Min. 1/2-inch to max 1-inch Armor Board HD, BP High Strength, ERS Redi-Deck, GAFTEMP HD, Roof Insulation Board, Structodek HD Fiberboard or FiberBase HD1/HD6 or min. 3/4-inch to max. 1-inch ConPerl, Fesco Board or EnergyGuard Perlite or min. 1/4-inch to max. 1-inch DensDeck or DensDeck Prime | Presecured ³ | Flintlastic Poly SMS Base Sheet or Flintlastic Ultra Poly SMS Base Sheet attached with SFS Intec 2 in. round metal plates and #12 or #14 fasteners spaced 12-inch o.c. in a 4-inch wide, heat-welded side lap. | (Optional) Hot mopped with hot asphalt or heat welded | Hot mopped with hot asphalt or heat welded | 45.0 |
| C-10 | Min. 22 ga. steel or min. 2,500 psi concrete | 1.5-inch min. to 4-inch max. FlintBoard ISO or ACFoam-II | Loose laid | Min. 3/4-inch Fesco Board or EnergyGuard Perlite or min. 1/2-inch DensDeck or DensDeck Prime | Presecured ³ | GlasbaseBase Sheet, Flexiglas or Flintlastic Base 20 attached 6-inch o.c. in a 4-inch lap and 12-inch o.c. in two, equally spaced, staggered center rows (excludes ITW Buildex fasteners & plates) | (Optional) Flintlastic Poly SMS Base Sheet or Flintlastic Ultra Poly SMS Base Sheet applied in Karnak No. 81 Modified Bitumen Adhesive Brush Grade or FlintBond Brush at 1.5 gal/square | Flintlastic FR-P, Flintlastic FR-P CoolStar, Flintlastic Premium FR-P, Flintlastic Premium FR-P CoolStar, Flintlastic FR Cap 30 or Flintlastic FR Cap 30 CoolStar, applied in Karnak No. 81 Modified Bitumen Adhesive Brush Grade or FlintBond Brush at 1.5 gal/square | 45.0 |

**TABLE 2C—WIND UPLIFT RESISTANCE: METHOD OF ATTACHMENT
MECHANICALLY ATTACHED BASE SHEET OVER INSULATION (Continued)**

| SYSTEM NO. | SUBSTRATE | INSULATION ⁶ | | COVERBOARD ⁶ | | ROOF COVER ¹ | | | ALLOWABLE UPLIFT CAPACITY (psf) ⁴ |
|------------|--|---|------------|--|-------------------------|--|---|--|--|
| | | Type | Attach | Type | Attachment Method | Base ² | Ply | Cap | |
| C-11 | Min. 1 ⁹ / ₃₂ -inch plywood at max 24-inch spans attached 6-inches o.c. using #8 wood screws | One or more layers min. 1.5-inch ACFoam-II, ENRGY 3, HShield, Multi-Max FA-3, FlintBoard ISO or FlintBoard _H ISO | Loose laid | Min. 1/4-inch DensDeck or DensDeck Prime | Presecured ³ | Flintlastic SA NailBase attached 8-inches o.c. in a 3-inch lap and 8-inches o.c. in two, equally spaced, staggered center rows 35-inches o.c. | (Optional) Flintlastic SA Mid Ply or Flintlastic SA PlyBase, self-adhered | Self-Adhered | 82.5 |
| C-12 | Min. 22 ga. steel or min. 2,500 psi concrete | Min. 1.5-inch Owens-Corning FOAMULAR, Hy-Therm AP, Hy-Therm(a) AP, FlintBoard ISO, ACFoam-II, ENRGY 3, PSI-25, H-Shield, FlintBoard _H ISO, H-Shield-P, H-Shield-WF, FlintBoard _H ISO WF, H-Shield NB or FlintBoard _H ISO NB. | Loose laid | Min. 1/4-inch DensDeck or DensDeck Prime | Loose laid | Flintlastic Base 20 T attached 12-inches o.c. in a 4-inch lap and 12-inches o.c. in two, equally spaced, staggered center rows 35-inches o.c. | None | Flintlastic FR Cap 30 T or Flintlastic FR Cap 30 T CoolStar, heat welded | 30.0 |
| C-13 | Min. 22 ga. steel or min. 2,500 psi concrete | Min. 1.5-inch Owens-Corning FOAMULAR, Hy-Therm AP, Hy-Therm(a) AP, FlintBoard ISO, ACFoam-II, ENRGY 3, PSI-25, H-Shield, FlintBoard _H ISO, H-Shield-P, H-Shield-WF, FlintBoard _H ISO WF, H-Shield NB or FlintBoard _H ISO NB. | Loose laid | Min. 1/4-inch DensDeck or DensDeck Prime | Loose laid | Flintlastic Base 20 T attached 12-inches o.c. in a 4-inch lap and 12-inches o.c. in two, equally spaced, staggered center rows 24-inches o.c. | None | Flintlastic FR Cap 30 T or Flintlastic FR Cap 30 T CoolStar, heat welded | 45.0 |
| C-14 | Min. 22 ga. steel | Min. 1.5-inch ACFoam-II, ENRGY 3, Multi-Max FA-3, H-Shield, ISO 95+ GL, FlintBoard ISO or FlintBoard _H ISO | Loose laid | None | N/A | Flintlastic SA NailBase attached with OMG Heavy Duty fasteners with 3 in. Ribbed Galvalume Plates spaced 12-inches o.c. in a 2-inch lap and 12-inches o.c. in two, equally spaced, staggered center rows | (Optional) Flintlastic SA Mid Ply, self-adhered | Flintlastic SA Cap, Flintlastic SA Cap CoolStar, Flintlastic SA Cap FR or Flintlastic SA Cap FR CoolStar, self-adhered | 52.5 |
| C-15 | Min. 22 ga. steel | Min. 1.5-inch ACFoam-II, ENRGY 3, Multi-Max FA-3, H-Shield, ISO 95+ GL, FlintBoard ISO or FlintBoard _H ISO | Loose laid | None | N/A | Flintlastic SA NailBase attached with approved base sheet fasteners and plates spaced 12-inches o.c. in a 4-inch lap and 12-inches o.c. in two, equally spaced, staggered center rows | (Optional) Flintlastic SA Mid Ply, self-adhered | Flintlastic SA Cap or Flintlastic SA Cap CoolStar, self-adhered | 60.0 |
| C-16 | Min. 1 ⁹ / ₃₂ -inch plywood | Min. 1.5-inch ACFoam-II, ENRGY 3, Multi-Max FA-3, H-Shield, ISO 95+ GL, FlintBoard ISO or FlintBoard _H ISO | Loose laid | None | N/A | Flintlastic SA NailBase attached with Trufast #12 DP, FlintFast #12 fasteners with Trufast 3" Recessed Metal Insulation and FlintFast 3" Insulation Plates spaced 6-inches o.c. in a 3-inch lap and 6-inches o.c. in five, equally spaced, staggered center rows (plates primed with FlintPrime prior to cap installation) | (Optional) Flintlastic SA Mid Ply, self-adhered | Flintlastic SA Cap, Flintlastic SA Cap CoolStar, Flintlastic SA Cap FR or Flintlastic SA Cap FR CoolStar, self-adhered | 60.0 |

**TABLE 2D—WIND UPLIFT RESISTANCE: METHOD OF ATTACHMENT
MECHANICALLY ATTACHED ANCHOR SHEET FOLLOWED BY BONDED INSULATION**

| SYSTEM NO. | SUBSTRATE | ANCHOR SHEET | INSULATION ⁶ | | COVERBOARD ⁶ | | ROOF COVER ¹ | | | ALLOWABLE UPLIFT CAPACITY (psf) ⁴ |
|------------|--|--|---|-------------|---|-------------------|--|--|----------------------------|--|
| | | | Type | Attach | Type | Attachment Method | Base | Ply | Cap | |
| D-1 | Min. 19/32-inch plywood | Glasbase Base Sheet, or Flintglas Premium Ply Sheet Type VI attached with 11 ga. annular ring shank nails & min. 1 5/8-inch dia. tin caps spaced 8-inch o.c. in the 4-inch lap and 8-inch o.c. in three, equally spaced, staggered center rows | (Optional) One or more layers min. 1.5-inch, min. 2.0 pcf polyisocyanurate | Hot asphalt | Min. 3/4-inch FescoBoard or min. 1/2-inch High Density Fiberboard Roof Insulation | Hot asphalt | One to three plies applied in hot asphalt or heat welded | | Hot asphalt or heat welded | 60 |
| D-2 | Min. 19/32-inch plywood | Glasbase Base Sheet or Flintglas Premium Ply Sheet Type VI attached with 11 ga. annular ring shank nails & min. 1 5/8-inch dia. tin caps spaced 8-inch o.c. in the 4-inch lap and 8-inch o.c. in three, equally spaced, staggered center rows | One or more layers min. 1.5-inch FlintBoard ISO, ACFoam-II, ENRGY 3 or Multi-Max FA-3. Maximum thickness not to exceed 4 inches. | Hot asphalt | None | N/A | Black Diamond Base Sheet or Flintlastic Ultra Glass SA, self-adhered | (Optional) One or two plies in hot asphalt | Hot asphalt | 52.5 |
| D-3 | Same as System No. D-2, using Heat welded cap sheet | | | | | | | | Heat welded | 60 |
| D-4 | Tectum 1 Plank (install per ESR-1112) or Existing substrate | Glasbase Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20 or All Weather Empire Base attached with Twin Loc-Nails spaced 7-inch o.c. in the 4-inch lap and 7-inch o.c. in two, equally spaced, staggered center rows | (Optional) One or more layers min. 1.5-inch FlintBoard ISO, ACFoam-II, ENRGY 3 or Multi-Max FA-3. Maximum thickness not to exceed 4 inches. | Hot asphalt | Min. 3/4-inch FescoBoard or min. 1/2-inch High Density Fiberboard Roof Insulation | Hot asphalt | One to three plies applied in hot asphalt or heat welded | | Hot asphalt or heat welded | 60 |
| D-5 | Tectum 1 Plank (install per ESR-1112) or Existing substrate | Glasbase Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20 or All Weather Empire Base attached with Twin Loc-Nails spaced 7-inch o.c. in the 4-inch lap and 7-inch o.c. in two, equally spaced, staggered center rows | One or more layers min. 1.5-inch FlintBoard ISO, ACFoam-II, ENRGY 3 or Multi-Max FA-3. Maximum thickness not to exceed 4 inches. | Hot asphalt | None | N/A | Black Diamond Base Sheet or Flintlastic Ultra Glass SA, self-adhered | (Optional) One or two plies in hot asphalt | Hot asphalt | 52.5 |
| D-6 | Same as System No. D-5, using Heat welded cap sheet | | | | | | | | Heat welded | 60 |

**TABLE 2D—WIND UPLIFT RESISTANCE: METHOD OF ATTACHMENT
MECHANICALLY ATTACHED ANCHOR SHEET FOLLOWED BY BONDED INSULATION (Continued)**

| SYSTEM NO. | SUBSTRATE | ANCHOR SHEET | INSULATION ⁶ | | COVERBOARD ⁶ | | ROOF COVER ¹ | | | ALLOWABLE UPLIFT CAPACITY (psf) ⁴ |
|------------|---|---|---|--|---|--|---|--|---|--|
| | | | Type | Attach | Type | Attachment Method | Base | Ply | Cap | |
| D-7 | Existing substrate | Glasbase Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20 or All Weather Empire Base attached with Twin Loc-Nails spaced 9-inch o.c. in the 4-inch lap and 9-inch o.c. in two, equally spaced, staggered center rows | (Optional) One or more layers min. 1.5-inch FlintBoard ISO, ACFoam-II, ENRGY 3 or Multi-Max FA-3. Maximum thickness not to exceed 4 inches. | Hot asphalt | Min. 3/4-inch FescoBoard or min. 1/2-inch High Density Fiberboard Roof Insulation | Hot asphalt | One to three plies applied in hot asphalt or heat welded | | Hot asphalt or heat welded | 60 |
| D-8 | Existing substrate | Glasbase Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20 or All Weather Empire Base attached with Twin Loc-Nails spaced 9-inch o.c. in the 4-inch lap and 9-inch o.c. in two, equally spaced, staggered center rows | One or more layers min. 1.5-inch FlintBoard ISO, ACFoam-II, ENRGY 3 or Multi-Max FA-3. Maximum thickness not to exceed 4 inches. | Hot asphalt | None | N/A | Black Diamond Base Sheet or Flintlastic Ultra Glass SA, self-adhered | (Optional) One or two plies in hot asphalt | Hot asphalt | 52.5 |
| D-9 | Same as System No. D-8, using Heat welded cap sheet | | | | | | | | Heat welded | 60 |
| D-10 | Tectum 1 Plank (install per ESR-1112) or Existing substrate | Flintlastic Base 20 T fastened with ES Products Insuldek Loc-Nails or Twin Loc-Nails | Min. 1/4-inch DensDeck or DensDeck Prime | Hot asphalt | None | N/A | (Optional) One ply of Flintlastic Base 20 T, heat welded | (Optional) One ply of Flintlastic Base 20 T, heat welded | One ply of Flintlastic Base 20 T, heat welded (Optional provided the base sheet or ply sheet is installed as the cap sheet) | 45 |
| D-11 | Min. 19/32-inch Plywood at max 24-inch spans attach 6-inches o.c. using 8d ring shank nails | All Weather Empire, Flexiglas Base Sheet, Flintlastic Poly SMS Base Sheet or Flintlastic Ultra Poly SMS Base Sheet attached with nails & tin caps spaced 8-inches o.c. at the 3-inch lap and 8-inches o.c. in three, equally spaced center rows | Min. 1.5" ACFoam-II, ENRGY 3, HShield, Multi-Max FA-3, FlintBoard ISO or FlintBoard ISO | Insta-Stick, OlyBond 500, OlyBond Green, Plideck, ICP Adhesive CR-20 or Millennium One Step Foamable Adhesive, 4" o.c. | Min. 1/4-inch DensDeck, DensDeck Prime | Insta-Stick, OlyBond 500, OlyBond Green, Plideck, ICP Adhesive CR-20 or Millennium One Step Foamable Adhesive, 6" o.c. | One or two layers self-adhered (substrate primed with Flint-Prime SA) | None | Self-adhered | 52.5 |

**TABLE 2D—WIND UPLIFT RESISTANCE: METHOD OF ATTACHMENT
MECHANICALLY ATTACHED ANCHOR SHEET FOLLOWED BY BONDED INSULATION (Continued)**

| SYSTEM NO. | SUBSTRATE | ANCHOR SHEET | INSULATION ⁶ | | COVERBOARD ⁶ | | ROOF COVER ¹ | | | ALLOWABLE UPLIFT CAPACITY (psf) ⁴ |
|------------|---|---|--|---|--|---|---|--|-----------------------------|--|
| | | | Type | Attach | Type | Attachment Method | Base | Ply | Cap | |
| D-12 | Min. 1 ⁹ / ₃₂ -inch Plywood at max 24-inch spans attach 6-inches o.c. using 8d ring shank nails | All Weather Empire, Flexiglas Base Sheet, Flintlastic Poly SMS Base Sheet or Flintlastic Ultra Poly SMS Base Sheet attached with nails & tin caps spaced 8-inches o.c. at the 3-inch lap and 8-inches o.c. in three, equally spaced center rows | Min. 1.5" ACFoam-II, ENRGY 3, HShield, Multi-Max FA-3, FlintBoard ISO or FlintBoard _H ISO | Insta-Stick, OlyBond 500, OlyBond Green, Pliodeck, ICP Adhesive CR-20 or Millennium One Step Foamable Adhesive, 4-inches o.c. | Min. 1/4-inch SECUROCK Gypsum-Fiber Roof Board | Insta-Stick, OlyBond 500, OlyBond Green, Pliodeck, ICP Adhesive CR-20 or Millennium One Step Foamable Adhesive, 6" o.c. | One or two layers self-adhered (substrate primed with Flint-Prime SA) | None | Self-adhered | 60.0 |
| D-13 | Min. 1 ⁹ / ₃₂ -inch Plywood at max 24-inch spans attach 6-inches o.c. using 8d ring shank nails | All Weather Empire, Flexiglas Base Sheet, Flintlastic Poly SMS Base Sheet or Flintlastic Ultra Poly SMS Base Sheet attached with nails & tin caps spaced 8-inches o.c. at the 3-inch lap and 8-inches o.c. in three, equally spaced center rows | Min. 1.5" ACFoam-II, ENRGY 3, HShield, Multi-Max FA-3, FlintBoard ISO or FlintBoard _H ISO | Insta-Stick, OlyBond 500, OlyBond Green, Pliodeck, ICP Adhesive CR-20 or Millennium One Step Foamable Adhesive, 4-inches o.c. | None | N/A | One or two layers Self-Adhered (Substrate Primed with Flint-Prime SA) | None | Self-adhered | 60.0 |
| D-14 | Lightweight Cellular Concrete, min. 350 psi over structural steel, min. 22 ga., steel deck | Yosemite Venting Base Sheet attached to the deck using FM-90 fasteners spaced 7-inch o.c. in the 4-inch lap and 7-inch o.c. in two equally spaced, staggered rows in the center of the sheet | Min. 1.5-inch ACFoam-IV | Hot asphalt | None | N/A | Yosemite Venting Base Sheet spot-mopped with 9-inch wide ribbons of ASTM D312, Type IV hot asphalt spaced 18x18-inch grid | (Optional) Flintglas Ply Sheet Type IV, Flintglas Premium Ply Sheet Type VI, Flintlastic Base 20, Flintlastic Poly SMS Base or Flintlastic Ultra Poly SMS Base, hot-asphalt at a rate of 20-40 lbs/sq. | Hot mopped with hot asphalt | 52.5 |
| D-15 | Lightweight Cellular Concrete, min. 300 psi over structural steel, min. 22 ga., steel deck | Yosemite Venting Base Sheet, Flintlastic Poly SMS Base Sheet or Flintlastic Ultra Poly SMS Base Sheet attached to the deck using Twin Loc-Nails spaced 9-inch o.c. in the 4-inch lap and 9-inch o.c. in two equally spaced, staggered rows in the center of the sheet | Min. 1.5-inch ACFoam-II, ACFoam-IV or FlintBoard ISO | Hot asphalt | None | N/A | Yosemite Venting Base Sheet strip-mopped with 9-inch wide ribbons of ASTM D312, Type IV hot asphalt spaced 18-inch o.c. | (Optional) Flintglas Ply Sheet Type IV, Flintglas Premium Ply Sheet Type VI, Flintlastic Base 20, Flintlastic Poly SMS Base or Flintlastic Ultra Poly SMS Base, hot-asphalt at a rate of 20-40 lbs/sq. | Hot mopped with hot asphalt | 60.0 |

**TABLE 2E—WIND UPLIFT RESISTANCE: METHOD OF ATTACHMENT
MECHANICALLY ATTACHED BASE SHEET, NONINSULATED**

| SYSTEM NO. | SUBSTRATE | ROOF COVER ¹ | | | ALLOWABLE UPLIFT CAPACITY (psf) ⁴ |
|------------|--|---|--|---|--|
| | | Base | Ply | Cap | |
| E-1 | Min. 19/32-inch plywood | Yosemite Venting Base Sheet, Glasbase Base Sheet or Flintglas Premium Ply Sheet Type VI attached with 11 ga. annular ring shank nails & min. 15/8-inch dia. tin caps spaced 8-inch o.c. in the 4-inch lap and 8-inch o.c. in three, equally spaced, staggered center rows | (Optional) One or two plies in hot asphalt | Hot asphalt or heat welded | 60.0 |
| E-2 | Min. 7/16-inch OSB, min. 15/32-inch plywood or min. 1-inch dimensional lumber | Yosemite Venting Base Sheet, Glasbase Base Sheet or All Weather Empire Base attached with National Nail Cap Nails spaced 6-inch o.c. in the 3-inch lap and 6-inch o.c. in three, equally spaced, staggered center rows | (Optional) One or two plies in hot asphalt | Hot asphalt or heat welded | 45.0 |
| E-3 | Min. 15/32-inch OSB, min. 19/32-inch plywood or min. 1-inch dimensional lumber | Yosemite Venting Base Sheet, Glasbase Base Sheet or All Weather Empire Base attached with National Nail Cap Nails spaced 6-inch o.c. in the 3-inch lap and 6-inch o.c. in two, equally spaced, staggered center rows | (Optional) One or two plies in hot asphalt | Hot asphalt or heat welded | 45.0 |
| E-4 | Min. 15/32-inch OSB, min. 19/32-inch plywood or min. 1-inch dimensional lumber | Yosemite Venting Base Sheet, Glasbase Base Sheet or All Weather Empire Base attached with National Nail Cap Nails spaced 6-inch o.c. in the 3-inch lap and 6-inch o.c. in three, equally spaced, staggered center rows | (Optional) One or two plies in hot asphalt | Hot asphalt or heat welded | 52.5 |
| E-5 | Min. 19/32-inch OSB, min. 19/32-inch plywood or min. 1-inch dimensional lumber | Yosemite Venting Base Sheet, Glasbase Base Sheet or All Weather Empire Base attached with National Nail Cap Nails spaced 9-inch o.c. in the 3-inch lap and 9-inch o.c. in two, equally spaced, staggered center rows | (Optional) One or two plies in hot asphalt | Hot asphalt or heat welded | 30.0 |
| E-6 | Min. 19/32-inch OSB, min. 19/32-inch plywood or min. 1-inch dimensional lumber | Yosemite Venting Base Sheet, Glasbase Base Sheet or All Weather Empire Base attached with National Nail Cap Nails spaced 6-inch o.c. in the 3-inch lap and 6-inch o.c. in three, equally spaced, staggered center rows | (Optional) One or two plies in hot asphalt | Hot asphalt or heat welded | 75.0 |
| E-7 | Min. 1-inch dimensional lumber | Yosemite Venting Base Sheet, Glasbase Base Sheet or All Weather Empire Base attached with National Nail Cap Nails spaced 6-inch o.c. in the 3-inch lap and 9-inch o.c. in two, equally spaced, staggered center rows | (Optional) One or two plies in hot asphalt | Hot asphalt or heat welded | 52.5 |
| E-8 | Min. 19/32-inch plywood | Flintlastic SA NailBase attached with 11 ga. annular ring shank nails and 15/8" tin caps spaced 8-inch o.c. in the 3-inch lap and 8-inch o.c. in three, equally spaced, staggered center rows | (Optional) Flintlastic SA Mid Ply, self-adhered | Flintlastic SA Cap, Flintlastic SA Cap CoolStar or Flintlastic SA Cap-FR, Flintlastic SA Cap-FR CoolStar self-adhered | 60.0 |
| E-9 | Tectum 1 Plank (install per ESR-1112) or existing substrate | Yosemite Venting Base Sheet, Glasbase Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20 or All Weather Empire Base attached with Twin Loc-Nails spaced 7-inch o.c. in the 4-inch lap and 7-inch o.c. in two, equally spaced, staggered center rows | (Optional) One or two plies in hot asphalt | Hot asphalt or heat welded | 67.5 |
| E-10 | Tectum 1 Plank (install per ESR-1112) or existing substrate | Flintlastic SA NailBase attached with Twin Loc-Nails spaced 7-inch o.c. in the 4-inch lap and 7-inch o.c. in two, equally spaced, staggered center rows | (Optional) Flintlastic SA Mid Ply, self-adhered | Self-Adhered | 60.0 |
| E-11 | Existing substrate | Yosemite Venting Base Sheet, Glasbase Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20 or All Weather Empire Base attached with Twin Loc-Nails spaced 9-inch o.c. in the 4-inch lap and 9-inch o.c. in two, equally spaced, staggered center rows | (Optional) One or two plies in hot asphalt | Hot asphalt or heat welded | 60.0 |
| E-12 | Min. 19/32-inch plywood | Yosemite Venting Base Sheet, Glasbase Base Sheet attached with OMG 3" Galvalume Steel Plates with OMG #12 Standard screws spaced 7-inch o.c. at the 4-inch wide laps and 7-inch o.c. in two equally spaced staggered center rows. | Flintlastic Ultra Glass SA, self-adhered | Flintlastic FR Cap 30 T or Flintlastic FR Cap 30 T CoolStar, heat welded | 67.5 |
| E-13 | Min. 19/32-inch plywood | Yosemite Venting Base Sheet, Glasbase Base Sheet attached with OMG 3" Round Metal Plates with OMG #12 Fasteners spaced 7-inch o.c. at the 4-inch wide laps and 7-inch o.c. in three equally spaced staggered center rows | Black Diamond Base Sheet or Flintlastic Ultra Glass SA, self-adhered | Flintlastic FR Cap 30 T or Flintlastic FR Cap 30 T CoolStar, heat welded | 105.0 |

**TABLE 2E—WIND UPLIFT RESISTANCE: METHOD OF ATTACHMENT
MECHANICALLY ATTACHED BASE SHEET, NONINSULATED (Continued)**

| SYSTEM NO. | SUBSTRATE | ROOF COVER ¹ | | | ALLOWABLE UPLIFT CAPACITY (psf) ⁴ |
|------------|--|---|--|--|--|
| | | Base | Ply | Cap | |
| E-14 | Min. 1 ⁹ / ₃₂ -inch plywood | Yosemite Venting Base Sheet, Glasbase Base Sheet attached with FBC HVHZ Nails and Tin Caps spaced 6-inch o.c. at the 3-inch wide laps and 6-inch o.c. in four equally spaced staggered center rows | Black Diamond Base Sheet or Flintlastic Ultra Glass SA, self-adhered | Flintlastic FR Cap 30 T or Flintlastic FR Cap 30 T CoolStar, heat welded | 82.5 |
| E-15 | Min. 22 ga. steel form covered with light weight concrete | Flintlastic SA NailBase attached with ES Products FM-90 spaced 3-inch lap and 7.5-inch o.c. at two field rows equally spaced between the rows | Flintlastic SA PlyBase, self-adhered | Flintlastic SA Cap, Flintlastic SA Cap CoolStar or Flintlastic SA Cap-FR or Flintlastic SA Cap-FR CoolStar, self-adhered | 45.0 |
| E-16 | Min. 2,500 psi concrete covered with light weight concrete | Glasbase Base Sheet attached with ES Products FM-90 spaced 7-inch o.c. at 4-inch lap and 7-inch o.c. in two equally spaced staggered center rows | None | Flintlastic FR Cap 30, Flintlastic FR Cap 30 CoolStar, Flintlastic FR-P or Flintlastic FR-P CoolStar adhered with Millennium Hurricane Force Membrane Adhesive | 60.0 |
| E-17 | Min. 22 ga. steel form covered with light weight concrete | Flintlastic Base 20 attached with ES Products FM-90 spaced 7-inch o.c. at 4-inch lap and 7-inch o.c. at two equally spaced staggered center rows | None | Flintlastic FR Cap 30, Flintlastic FR Cap 30 CoolStar, Flintlastic FR-P or Flintlastic FR-P CoolStar adhered with Millennium Hurricane Force Membrane Adhesive | 45.0 |
| E-18 | Min. 22 ga. steel form covered with light weight concrete | Glasbase Base Sheet attached with ES Products FM-90 spaced 7-inch o.c. at 4-inch lap and 7-inch o.c. at two equally spaced staggered center rows | None | Flintlastic FR Cap 30, Flintlastic FR Cap 30 CoolStar, Flintlastic FR-P or Flintlastic FR-P CoolStar adhered with Millennium Hurricane Force Membrane Adhesive | 52.5 |
| E-19 | Min. 15/32-inch plywood | Glasbase Base Sheet, Yosemite Venting Base, Flexiglas Base Sheet, All Weather/Empire Base Sheet, Flintlastic Base 20 or Flintlastic Poly SMS Base attached with Simplex MAXX Cap fasteners spaced 9-inch o.c. at 2-inch lap and 18-inch o.c. at two equally spaced staggered center rows | None | (SBS Cap) Hot asphalt or heat welded | 45.0 |
| | | Flintlastic APP Base T | | (APP Cap) Heat welded | |
| E-20 | Min. 15/32-inch plywood | Glasbase Base Sheet, Yosemite Venting Base, Flexiglas Base Sheet, All Weather/Empire Base Sheet, Flintlastic Base 20 or Flintlastic Poly SMS Base attached with Simplex MAXX Cap fasteners spaced 9-inch o.c. at 2-inch lap and 12-inch o.c. at two equally spaced staggered center rows | None | (SBS Cap) Hot asphalt or heat welded | 52.5 |
| | | Flintlastic APP Base T | | (APP Cap) Heat welded | |
| E-21 | Min. 15/32-inch plywood | Glasbase Base Sheet, Yosemite Venting Base, Flexiglas Base Sheet, All Weather/Empire Base Sheet, Flintlastic Base 20 or Flintlastic Poly SMS Base attached with Simplex MAXX Cap fasteners spaced 6-inch o.c. at 2-inch lap and 6-inch o.c. at two equally spaced staggered center rows | None | (SBS Cap) Hot asphalt or heat welded | 90.0 |
| | | Flintlastic APP Base T | | (APP Cap) Heat welded | |
| E-22 | Min. 15/32-inch plywood | Glasbase Base Sheet, Yosemite Venting Base, Flexiglas Base Sheet, All Weather/Empire Base Sheet, Flintlastic Base 20 or Flintlastic Poly SMS Base attached with Simplex MAXX Cap fasteners spaced 6-inch o.c. at 2-inch lap and 6-inch o.c. at three equally spaced staggered center rows | None | (SBS Cap) Hot asphalt or heat welded | 105.0 |
| | | Flintlastic APP Base T | | (APP Cap) Heat welded | |

**TABLE 2F—WIND UPLIFT RESISTANCE: METHOD OF ATTACHMENT
ALL LAYERS BONDED, INSULATED OR NONINSULATED**

| SYSTEM NO. | SUBSTRATE | VAPOR BARRIER | INSULATION ⁶ | | COVERBOARD ⁶ | | ROOF COVER ¹ | | | ALLOWABLE UPLIFT CAPACITY (psf) ⁴ |
|------------|---|--|--|---------------------------------------|---|---------------------------------------|---|---|----------------------------|--|
| | | | Type | Attach ⁵ | Type | Attach ⁵ | Base | Ply | Cap | |
| F-1 | Min. 2,500 psi concrete primed with ASTM D41 primer | (Optional) Two plies D2178, type IV or VI in hot asphalt | (Optional) One or more layers FlintBoard ISO or ACFoam-II not to exceed 4 inches in thickness. | Hot asphalt | Min. 1/2-inch DuraBoard or min. 3/4-inch FescoBoard | Hot asphalt | One to three plies applied in hot asphalt | | Hot asphalt or heat welded | 412 |
| F-2 | Min. 2,500 psi concrete primed with ASTM D41 primer or unprimed | None | One or more layers FlintBoard ISO, ACFoam-II, ENRGY 3 or Multi-Max FA-3 not to exceed 4 inches in thickness. | Hot asphalt or ICP Adhesive CR-20 | Min. 1/4-inch DensDeck primed with FlintPrime SA at 0.3 gal/sq. | Hot asphalt or ICP Adhesive CR-20 | Flintlastic SA Mid Ply, self-adhered | (Optional) Flintlastic SA Mid Ply, self-adhered | Self-Adhered | 192.5 |
| F-3 | Min. 2,500 psi concrete primed with ASTM D41 primer or unprimed | None | One or more layers FlintBoard ISO or ACFoam-II not to exceed 4 inches in thickness | Insta-Stik or Spray-N-Grip | Min. 1/4-inch DensDeck primed with FlintPrime SA at 0.3 gal/sq. | Insta-Stik | Flintlastic SA Mid Ply, self-adhered | (Optional) Flintlastic SA Mid Ply, self-adhered | Self-Adhered | 120 |
| F-4 | Min. 2,500 psi concrete primed with ASTM D41 primer or unprimed | None | One or more layers ENRGY 3 not to exceed 4 inches in thickness | Insta-Stik or Spray-N-Grip | Min. 1/4-inch DensDeck primed with FlintPrime SA at 0.3 gal/sq. | Insta-Stik | Flintlastic SA Mid Ply, self-adhered | (Optional) Flintlastic SA Mid Ply, self-adhered | Self-Adhered | 112.5 |
| F-5 | Min. 2,500 psi concrete primed with ASTM D41 primer or unprimed | None | One or more layers Multi-Max FA-3 not to exceed 4 inches in thickness | Insta-Stik or Spray-N-Grip | Min. 1/4-inch DensDeck primed with FlintPrime SA at 0.3 gal/sq. | Insta-Stik | Flintlastic SA Mid Ply, self-adhered | (Optional) Flintlastic SA Mid Ply, self-adhered | Self-Adhered | 67.5 |
| F-6 | Min. 2,500 psi concrete | None | One or more layers FlintBoard ISO, ACFoam-II, ENRGY 3 or Multi-Max FA-3 not to exceed 4 inches in thickness | Millennium Pourable Foam Adhesive | Min. 1/4-inch DensDeck primed with FlintPrime SA at 0.3 gal/sq. | Millennium Pourable Foam Adhesive | Flintlastic SA Mid Ply, self-adhered | (Optional) Flintlastic SA Mid Ply, self-adhered | Self-Adhered | 135 |
| F-7 | Min. 2,500 psi concrete | None | One or more layers FlintBoard ISO, ACFoam-II, ENRGY 3 or Multi-Max FA-3 not to exceed 4 inches in thickness | Millennium One-Step Foamable Adhesive | Min. 1/4-inch DensDeck primed with FlintPrime SA at 0.3 gal/sq. | Millennium One-Step Foamable Adhesive | Flintlastic SA Mid Ply, self-adhered | (Optional) Flintlastic SA Mid Ply, self-adhered | Self-Adhered | 192.5 |
| F-8 | Min. 2,500 psi concrete | None | (Optional) One or more layers FlintBoard ISO or ACFoam-II not to exceed 4 inches in thickness | OlyBond 500 | Min. 1/4-inch DensDeck primed with FlintPrime SA at 0.3 gal/sq. | OlyBond 500 | Flintlastic SA Mid Ply, self-adhered | (Optional) Flintlastic SA Mid Ply, self-adhered | Self-Adhered | 150 |
| F-9 | Min. 2,500 psi concrete primed with ASTM D41 primer | None | (Optional) One or more layers FlintBoard ISO or ACFoam-II not to exceed 4 inches in thickness | OlyBond 500 | Min. 1/4-inch DensDeck primed with FlintPrime SA at 0.3 gal/sq. | OlyBond 500 | Flintlastic SA Mid Ply, self-adhered | (Optional) Flintlastic SA Mid Ply, self-adhered | Self-Adhered | 120 |

**TABLE 2F—WIND UPLIFT RESISTANCE: METHOD OF ATTACHMENT
ALL LAYERS BONDED, INSULATED OR NONINSULATED (Continued)**

| SYSTEM NO. | SUBSTRATE | VAPOR BARRIER | INSULATION ⁶ | | COVERBOARD ⁶ | | ROOF COVER ¹ | | | ALLOWABLE UPLIFT CAPACITY (psf) ⁴ |
|------------|--|---------------|--|-----------------------------|--|-----------------------------|--|---|--|--|
| | | | Type | Attach ⁵ | Type | Attach ⁵ | Base | Ply | Cap | |
| F-10 | Min. 2,500 psi concrete primed with ASTM D41 primer or FlintPrime SA | None | None | N/A | None | N/A | Flintlastic SA Mid Ply, self-adhered | (Optional) Flintlastic SA Mid Ply, self-adhered | Self-Adhered | 550 |
| F-11 | Min. 2,500 psi concrete primed with ASTM D41 primer or unprimed | None | None | N/A | None | N/A | Flintlastic Base 20 T, heat-welded | None | Flintlastic FR Cap 30 T or Flintlastic FR Cap 30 T CoolStar, heat-welded | 450.0 |
| F-12 | Min. 2,500 psi concrete primed with ASTM D41 primer or unprimed | None | Min. 1.5-inch FlintBoard ISO | Hot mopped with hot asphalt | Min. 1/4-inch DensDeck or DensDeck Prime | Hot mopped with hot asphalt | Flintlastic Base 20 T, heat-welded | None | Flintlastic FR Cap 30 T or Flintlastic FR Cap 30 T CoolStar, heat-welded | 480.0 |
| F-13 | Min. 19/32" plywood at max 24-inch spans attach 6-inches o.c. using #8 wood screws primed with FlintPrime SA | None | None | N/A | None | N/A | Flintlastic SA Mid Ply or Flintlastic PlyBase, self-adhered | None | Self-adhered | 127.5 |
| F-14 | Min. 2,500 psi concrete | None | Min. 1.5-inch min. FlintBoard ISO | Insta-Stik, 12-inch o.c. | Min. 1/4-inch DensDeck Prime | Insta-Stik, 12-inch o.c. | Glasbase Base Sheet, All Weather/Empire Base Sheet, Flexiglas Base Sheet or Flintlastic Base 20, hot asphalt | (Optional) Flintglas Ply Sheet Type IV, Mopped with hot asphalt | Hot Asphalt | 297.5 |
| F-15 | Min. 2,500 psi concrete | None | Min. 1.5-inch min. FlintBoard ISO | Pliodeck, 12-inch o.c. | Min. 1/4-inch SECUROCK Gypsum-Fiber Roof Board | Pliodeck, 12-inch o.c. | Black Diamond Base Sheet or Flintlastic Ultra Glass SA, self-adhered | None | Flintlastic FR Cap 30 T or Flintlastic FR Cap 30 T CoolStar, torched-applied | 117.5 |
| F-16 | | | | Pliodeck, 6-inch o.c. | | Pliodeck, 6-inch o.c. | | | | 217.5 |
| F-17 | Primed min. 2,500 psi concrete | None | Min. 1/2-inch Structodek High Density Fiberboard or Fesco Board | Hot asphalt | None | N/A | Glasbase Base Sheet, All Weather/Empire Base Sheet, Flexiglas Base Sheet or Flintlastic Base 20, hot asphalt | (Optional) Flintglas Ply sheet Type IV, Mopped with hot asphalt | Hot Asphalt | 437.5 |
| F-18 | Primed min. 2,500 psi concrete | | Min. 1/4-inch DensDeck, DensDeck Prime, DensDeck DuraGuard or SECUROCK Gypsum-Fiber Roof Board | | | | | | | 537.5 |
| F-19 | Primed min. 2,500 psi concrete | None | Min. 1/2-inch Structodek High Density Fiberboard | Insta-Stik, 12-inch o.c. | None | N/A | Glasbase Base Sheet, All Weather/Empire Base Sheet, Flexiglas Base Sheet or Flintlastic Base 20, hot asphalt | (Optional) Flintglas Ply Sheet Type IV, Mopped with hot asphalt | Hot Asphalt | 195.0 |
| F-20 | Primed min. 2,500 psi concrete | None | Min. 1.5-inch FlintBoard ISO | Insta-Stik, 12 inch o.c. | Min. 1/4-inch DensDeck Prime | Insta-Stik, 12-inch o.c. | Flintlastic Base 20 T, torched-applied | None | Flintlastic FR Cap 30 T or Flintlastic FR Cap 30 T CoolStar, torched-applied | 302.5 |

**TABLE 2F—WIND UPLIFT RESISTANCE: METHOD OF ATTACHMENT
ALL LAYERS BONDED, INSULATED OR NONINSULATED (Continued)**

| SYSTEM NO. | SUBSTRATE | VAPOR BARRIER | INSULATION ⁶ | | COVERBOARD ⁶ | | ROOF COVER ¹ | | | ALLOWABLE UPLIFT CAPACITY (psf) ⁴ |
|------------|---|--------------------------------------|---|---|--|---|---|--|--|--|
| | | | Type | Attach ⁵ | Type | Attach ⁵ | Base | Ply | Cap | |
| F-21 | Min. 22 ga. steel covered with light weight concrete | None | Min. 1.5-inch H-Shield CG | OMG OlyBond 500 | None | N/A | Glasbase Base Sheet adhered with Millennium Hurricane Force Membrane Adhesive | None | Flintlastic FR Cap 30, Flintlastic FR Cap 30 CoolStar, Flintlastic FR-P or Flintlastic FR-P CoolStar adhered with Millennium Hurricane Force Membrane Adhesive | 60.0 |
| F-22 | Min. 22 ga. steel fastened with Flintfast #14 fasteners and 3" Round Plates at 1:8 ft ² covered with light weight concrete | | | | | | | | | 67.5 |
| F-23 | Unprimed min. 2,500 psi concrete | None | Min. 1.5-inch Multi-Max FA-3 | Insta-Stik Roofing Adhesive | Min. 1.5-inch Firestone ISO 95+ GL | Insta-Stik Roofing Adhesive | Flintlastic Ultra Glass SA, self-adhered | None | Flintlastic FR Cap 30 or Flintlastic FR Cap 30 CoolStar, Mopped with hot asphalt | 135.0 |
| F-24 | Min. 2,500 psi concrete | None | Min. 1.5-inch ACFoam-II, ENRGY 3, Multi-Max FA-3, H-Shield, ISO 95+ GL, FlintBoard ISO or FlintBoard _H ISO | Hot asphalt | None | N/A | Yosemite Venting Base Sheet spot-mopped with 9-inch wide ribbons of ASTM D312, Type IV hot asphalt spaced 24x24-inch grid | (Optional) Flintglas Ply Sheet Type IV, Flintglas Premium Ply Sheet Type VI, Flintlastic Base 20, Flintlastic Poly SMS Base or Flintlastic Ultra Poly SMS Base, hot-asphalt at a rate of 20-40 lbs/sq. | Hot mopped with hot asphalt | 37.5 |
| F-25 | Primed min. 2,500 psi concrete | Flintlastic SA PlyBase, self-adhered | Min. 0.5-inch ACFoam-II, H-Shield, FlintBoard ISO or FlintBoard _H ISO | OlyBond 500 Adhesive or OlyBond 500 Green | Min. ¼-inch SECUROCK Gypsum-Fiber Roof Board | OlyBond 500 Adhesive or OlyBond 500 Green | Flintlastic Base 20 adhered using FlintBond Brush at 1.0 gal/sq. | (Optional) Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet or Flintlastic Base 20 adhered using FlintBond Brush at 1.0 gal/sq. | Flintlastic FR-P, Flintlastic FR-P CoolStar, Flintlastic Premium FR-P, Flintlastic Premium FR-P CoolStar, Flintlastic FR Cap 30 or Flintlastic FR Cap 30 CoolStar adhered using FlintBond Brush at 1.0 gal/sq. | 75.0 |
| F-26 | Same as System No. F-25, using Flintlastic Poly SMS Base Sheet and Flintlastic Ultra Poly SMS Base Sheet as the base sheet layer | | | | | | | | | 82.5 |
| F-27 | Min. 2,500 psi concrete | None | Min. 0.5-inch ACFoam-II, H-Shield, FlintBoard ISO or FlintBoard _H ISO | OlyBond 500 Adhesive or OlyBond 500 Green | Min. 1.5-inch ACFoam-III, H-Shield CG, FlintBoard ISO Cold or FlintBoard _H ISO Cold | OlyBond 500 Adhesive or OlyBond 500 Green | Flintlastic Base 20 adhered using FlintBond Brush at 1.0 gal/sq. | (Optional) Flintlastic Base 20 adhered using FlintBond Brush at 1.0 gal/sq. | Flintlastic FR-P, Flintlastic FR-P CoolStar, Flintlastic Premium FR-P, Flintlastic Premium FR-P CoolStar, Flintlastic FR Cap 30 or Flintlastic FR Cap 30 CoolStar adhered using FlintBond Brush at 1.0 gal/sq. | 75.0 |
| F-28 | Same as System No. F-27, using Flintlastic Poly SMS Base Sheet and Flintlastic Ultra Poly SMS Base Sheet as the base sheet layer | | | | | | | | | 82.5 |

**TABLE 2F—WIND UPLIFT RESISTANCE: METHOD OF ATTACHMENT
ALL LAYERS BONDED, INSULATED OR NONINSULATED (Continued)**

| SYSTEM NO. | SUBSTRATE | VAPOR BARRIER | INSULATION ⁶ | | COVERBOARD ⁶ | | ROOF COVER ¹ | | | ALLOWABLE UPLIFT CAPACITY (psf) ⁴ |
|------------|--|--------------------------------------|---|---|--|---|--|--|--|--|
| | | | Type | Attach ⁵ | Type | Attach ⁵ | Base | Ply | Cap | |
| F-29 | Primed min. 2,500 psi concrete | Flintlastic SA PlyBase, self-adhered | Min. 0.5-inch ACFoam-II, H-Shield, FlintBoard ISO or FlintBoard _H ISO | OlyBond 500 Adhesive or OlyBond 500 Green | Min. 1.5-inch ACFoam-III, H-Shield CG, FlintBoard ISO Cold or FlintBoard _H ISO Cold | OlyBond 500 Adhesive or OlyBond 500 Green | Flintlastic Base 20 adhered using FlintBond Brush at 1.0 gal/sq. | (Optional) Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet or Flintlastic Base 20 adhered using FlintBond Brush at 1.0 gal/sq. | Flintlastic FR-P, Flintlastic FR-P CoolStar, Flintlastic Premium FR-P, Flintlastic Premium FR-P CoolStar, Flintlastic FR Cap 30 or Flintlastic FR Cap 30 CoolStar adhered using FlintBond Brush at 1.0 gal/sq. | 75.0 |
| F-30 | Same as System No. F-29, using Flintlastic Poly SMS Base Sheet and Flintlastic Ultra Poly SMS Base Sheet as the base sheet layer | | | | | | | | | 82.5 |
| F-31 | Min. 2,500 psi concrete | None | Min. 0.5-inch ACFoam-II, H-Shield, FlintBoard ISO or FlintBoard _H ISO | OlyBond 500 Adhesive or OlyBond 500 Green | Min. ¼-inch SECUROCK Gypsum-Fiber Roof Board | OlyBond 500 Adhesive or OlyBond 500 Green | Flintlastic Base 20 adhered using FlintBond Brush at 1.0 gal/sq. | (Optional) Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet or Flintlastic Base 20 adhered using FlintBond Brush at 1.0 gal/sq. | Flintlastic FR-P, Flintlastic FR-P CoolStar, Flintlastic Premium FR-P, Flintlastic Premium FR-P CoolStar, Flintlastic FR Cap 30 or Flintlastic FR Cap 30 CoolStar adhered using FlintBond Brush at 1.0 gal/sq. | 75.0 |
| F-32 | Same as System No. F-31, using Flintlastic Poly SMS Base Sheet and Flintlastic Ultra Poly SMS Base Sheet as the base sheet layer | | | | | | | | | 105.0 |
| F-33 | Min. 2,500 psi concrete | None | Min. 1.5-inch ACFoam-II, ACFoam-IV or FlintBoard ISO | Hot asphalt | None | N/A | Yosemite Venting Base Sheet spot-mopped with 9-inch wide ribbons of ASTM D312, Type IV hot asphalt spaced 18x18-inch grid | (Optional) Flintglas Ply Sheet Type IV, Flintglas Premium Ply Sheet Type VI, Flintlastic Base 20, Flintlastic Poly SMS Base or Flintlastic Ultra Poly SMS Base, hot-asphalt at a rate of 20-40 lbs/sq. | Hot mopped with hot asphalt | 52.5 |
| F-34 | Min. 2,500 psi concrete | None | Min. 1.5-inch ACFoam-IV | Hot asphalt | None | N/A | Yosemite Venting Base Sheet strip-mopped with 9-inch wide ribbons of ASTM D312, Type IV hot asphalt spaced 18-inch o.c. | (Optional) Flintglas Ply Sheet Type IV, Flintglas Premium Ply Sheet Type VI, Flintlastic Base 20, Flintlastic Poly SMS Base or Flintlastic Ultra Poly SMS Base, hot-asphalt at a rate of 20-40 lbs/sq. | Hot mopped with hot asphalt | 60.0 |
| F-35 | Min. 19/32-inch plywood | None | None | N/A | None | N/A | Flintlastic SA NailBase fastened with 11 ga. annular ring shank nails and 1-5/8" tin caps spaced 8-inch o.c. in a 3-inch lap and 8-inch o.c. in three, equally spaced, staggered rows in the center of the sheet | Flintlastic SA Mid Ply, self-adhered | Flintlastic SA Cap or Flintlastic SA Cap CoolStar, self-adhered | 60.0 |
| F-36 | Primed min. 2,500 psi concrete | None | Min. 1.5-inch ACFoam-II, ENRGY 3, Multi-Max FA-3, H-Shield, ISO 95+ GL, FlintBoard ISO or FlintBoard _H ISO | Hot asphalt or ICP Adhesive CR-20 | Min. ¼-inch DensDeck Primed coverboard surface with FlintPrime SA primer, applied at a rate of 0.25 gal/sq. | Hot asphalt or ICP Adhesive CR-20 | Flintlastic SA Mid Ply, self-adhered | (Optional) Flintlastic SA Mid Ply, self-adhered | Flintlastic SA Cap or Flintlastic SA Cap CoolStar, self-adhered | 192.5 |

**TABLE 2F—WIND UPLIFT RESISTANCE: METHOD OF ATTACHMENT
ALL LAYERS BONDED, INSULATED OR NONINSULATED (Continued)**

| SYSTEM NO. | SUBSTRATE | VAPOR BARRIER | INSULATION ⁶ | | COVERBOARD ⁶ | | ROOF COVER ¹ | | | ALLOWABLE UPLIFT CAPACITY (psf) ⁴ |
|------------|--------------------------------|---------------|---|--|--|--|---|--|--|--|
| | | | Type | Attach ⁵ | Type | Attach ⁵ | Base | Ply | Cap | |
| F-37 | Min. 2,500 psi concrete | None | Min. 1.5-inch ACFoam-II, H-Shield, FlintBoard ISO or FlintBoard-ISO | Millennium One Step Foamable Adhesive, Millennium PG-1 Low Viscosity Insulation Adhesive, Insta-Stik, OlyBond 500 or OlyBond 500 Green | Min. ¼-inch SECUROCK Gypsum-Fiber Roof Board | Millennium One Step Foamable Adhesive, Millennium PG-1 Low Viscosity Insulation Adhesive, Insta-Stik, OlyBond 500 or OlyBond 500 Green | Flintlastic STA or Flintlastic APP Base T, heat welded | Flintlastic STA or Flintlastic APP Base T, heat welded | Flintlastic GTA, Flintlastic GTA CoolStar, Flintlastic GTA-FR or Flintlastic GTA-FR CoolStar, heat welded | 252.5 |
| F-38 | Primed min. 2,500 psi concrete | None | None | N/A | None | N/A | Flintlastic STA or Flintlastic APP Base T, heat welded | Flintlastic STA or Flintlastic APP Base T, heat welded | Flintlastic GTA, Flintlastic GTA CoolStar, Flintlastic GTA-FR or Flintlastic GTA-FR CoolStar, heat welded | 420.0 |
| F-39 | Min. 2,500 psi concrete | None | Min. 1.5-inch ACFoam-II, ACFoam-IV or FlintBoard ISO | Hot asphalt | None | N/A | Yosemite Venting Base Sheet strip-mopped with 9-inch wide ribbons of ASTM D312, Type IV hot asphalt spaced 18-inch o.c. | (Optional) Flintglas Ply Sheet Type IV, Flintglas Premium Ply Sheet Type VI, Flintlastic Base 20, Flintlastic Poly SMS Base or Flintlastic Ultra Poly SMS Base, hot-asphalt at a rate of 20-40 lbs/sq. | Hot mopped with hot asphalt | 75.0 |
| F-40 | Min. 2,500 psi concrete | None | Min. 1.5-inch ACFoam-IV | Hot asphalt | None | N/A | Yosemite Venting Base Sheet spot-mopped with 9-inch wide ribbons of ASTM D312, Type IV hot asphalt spaced 18x18-inch grid | (Optional) Flintglas Ply Sheet Type IV, Flintglas Premium Ply Sheet Type VI, Flintlastic Base 20, Flintlastic Poly SMS Base or Flintlastic Ultra Poly SMS Base, hot-asphalt at a rate of 20-40 lbs/sq. | Hot mopped with hot asphalt | 90.0 |
| F-41 | Min. 2,500 psi concrete | None | Min. 1.5-inch ACFoam-IV | Hot asphalt | None | N/A | Yosemite Venting Base Sheet strip-mopped with 9-inch wide ribbons of ASTM D312, Type IV hot asphalt spaced 18-inch o.c. | (Optional) Flintglas Ply Sheet Type IV, Flintglas Premium Ply Sheet Type VI, Flintlastic Base 20, Flintlastic Poly SMS Base or Flintlastic Ultra Poly SMS Base, hot-asphalt at a rate of 20-40 lbs/sq. | Hot mopped with hot asphalt | 112.5 |
| F-42 | Primed min. 2,500 psi concrete | None | None | N/A | None | N/A | Black Diamond Base Sheet or Flintlastic Ultra Glass SA, self-adhered | None | Flintlastic FR Cap 30 T, Flintlastic FR Cap 30 T CoolStar, Flintlastic GTS, Flintlastic GTS CoolStar, Flintlastic GTA, Flintlastic GTA CoolStar, Flintlastic GTA-FR or Flintlastic GTA-FR CoolStar, heat welded Hot mopped with hot asphalt | 150.0 |

**TABLE 2F—WIND UPLIFT RESISTANCE: METHOD OF ATTACHMENT
ALL LAYERS BONDED, INSULATED OR NONINSULATED (Continued)**

| SYSTEM NO. | SUBSTRATE | VAPOR BARRIER | INSULATION ⁶ | | COVERBOARD ⁶ | | ROOF COVER ¹ | | | ALLOWABLE UPLIFT CAPACITY (psf) ⁴ |
|------------|--------------------------------|---------------|---|---------------------|--|---------------------|---|--|---|--|
| | | | Type | Attach ⁵ | Type | Attach ⁵ | Base | Ply | Cap | |
| F-43 | Primed min. 2,500 psi concrete | None | Min. 1.5-inch AC Foam-II, H-Shield, FlintBoard ISO or FlintBoard _H ISO | Hot asphalt | None | N/A | Black Diamond Base Sheet or Flintlastic Ultra Glass SA, self-adhered | None | Flintlastic FR Cap 30 T, Flintlastic FR Cap 30 T CoolStar, Flintlastic GTS, Flintlastic GTS CoolStar, Flintlastic GTA, Flintlastic GTA CoolStar, Flintlastic GTA-FR or Flintlastic GTA-FR CoolStar, heat welded | 375.0 |
| | | | | | | | | | Hot mopped with hot asphalt | |
| F-44 | Primed min. 2,500 psi concrete | None | None | N/A | Min. ¼-inch SECUROCK Gypsum-Fiber Roof Board | Hot asphalt | Flintlastic Ultra Poly SMS Base or Flintlastic Base 20 T, heat welded | (Optional) Flintlastic Ultra Poly SMS Base or Flintlastic Base 20 T, heat welded | Flintlastic GMS or Flintlastic GMS CoolStar hot mopped with hot asphalt | 487.5 |

For SI: 1 inch = 25.4mm, 1 psf = 47.88 Pa, 1 gal/sq. = 0.41 l/m², 1 psi = 6.89 kPa.

Footnotes for Table 2A thru Table 2F, as applicable:

¹Unless otherwise noted, base sheets, ply sheets and cap sheets are as follows:

- **Base: Hot Asphalt Applied:** Glasbase Base Sheet, Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet, Flintglas Ply Sheet Type IV. **Heat Welded:** Flintlastic Base 20 T or Flintlastic Ultra Poly SMS. **Self-Adhered:** Black Diamond Base Sheet, Flintlastic Ultra Glass SA, Flintlastic SA Mid Ply, Flintlastic SA PlyBase. **Mechanically Fastened:** Flintlastic SA NailBase, Flexiglas Base Sheet, Flintlastic Base 20, All Weather/Empire Base Sheet, Flintglas Premium Ply Sheet Type VI, Yosemite Venting Base Sheet or Channel Vent.
- **Ply: Hot Asphalt Applied:** All Weather/Empire Base Sheet, Glasbase Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20, Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet, Flintglas Ply Sheet Type IV, Flintglas Premium Ply Sheet Type VI. **Heat Welded:** Flintlastic Base 20 T or Flintlastic Ultra Poly SMS. **Self-Adhered:** Black Diamond Base Sheet, Flintlastic Ultra Glass SA, Flintlastic SA Mid Ply, Flintlastic SA PlyBase.
- **Cap: Hot Asphalt Applied:** Flintlastic GMS, Flintlastic GMS CoolStar, Flintlastic Premium GMS, Flintlastic Premium GMS CoolStar, Flintlastic FR-P, Flintlastic FR-P CoolStar, Flintlastic Premium FR-P, Flintlastic Premium FR-P CoolStar, Flintlastic FR Cap 30, Flintlastic FR Cap 30 CoolStar, Flintlastic Cap 30, Flintlastic Cap 30 CoolStar. **Heat Welded:** Flintlastic STA, Flintlastic STA Plus, Flintlastic GTA, Flintlastic GTA CoolStar, Flintlastic GTA FR, Flintlastic GTA FR CoolStar, Flintlastic GTS, Flintlastic GTS CoolStar, Flintlastic FR Cap 30 T, Flintlastic FR Cap 30 T CoolStar, Flintlastic GTA, Flintlastic GTA CoolStar, **Self-Adhered:** Flintlastic FR-P, Flintlastic FR-P CoolStar, Flintlastic SA Cap-FR, Flintlastic SA Cap-FR CoolStar.

²Unless otherwise noted, fasteners and plates must be as noted in Table 3.

³Preliminary securement consists of four fasteners per board for boards having any dimension greater than 4 ft and two fasteners per board for boards having a maximum dimension of 4 ft.

⁴For mechanically fastened insulation, coverboards or base sheets the uplift capacity shall meet or exceed Zone 1 roof cladding design pressure requirements, and the fastener density shall be increased at edge strips and end zones, as defined in ASCE 7. For bonded assemblies, the uplift capacity shall meet or exceed the critical roof cladding design pressure requirements (Zone 2 or 3).

⁵Bonded polyisocyanurate insulation boards must have a maximum 4 x 4 ft dimension. Insulation Adhesive Application Rates are as follows. Consult adhesive manufacturers published installation instructions for further details.

- Hot asphalt at 25-30 lbs/square.
- Dow Chemical, Insta-Stik applied in ¾ to 1 inch diameter beads spaced max. 12" o.c.
- Adco Millennium Pourable Foam Adhesive applied in ¾ inch wide strips spaced max. 12" o.c.
- Adco Millennium One Step Foamable Adhesive applied in ¾ inch diameter beads spaced max. 12" o.c.
- Adco Millennium Hurricane Force Adhesive applied in ½ to ¾ inch wide beads spaced max. 12" o.c. (for use with membranes)
- Karnak No. 81 Modified Bitumen Adhesive Brush Grade applied in full coverage to approximately 1½ gallons per square. (for use with membranes)
- CertainTeed FlintBond Brush Grade adhesive applied in full coverage to approximately 1½ gallons per square. (for use with membranes)
- OMG OlyBond 500 applied in ¾ inch diameter beads spaced max. 12" o.c.
- ICP Adhesives & Sealants, Inc. CR-20 spray applied in continuous 3 inch wide ribbons spaced max. 12" o.c.
- Ashland Pliodeck applied at a rate of 300 to 400 ft² per gallon in ⅜ to ½ inch diameter beads spaced max. 12" o.c.
- Henry Company #903 Adhesive applied at a rate 1.5 gallons per 100 ft² (for use with membranes)

⁶Polyisocyanurate insulation must comply with ASTM C1289, Type I or Type II. Perlite insulation must comply with ASTM C728. Wood Fiberboard insulation must comply with ASTM C208.

TABLE 3—INSULATION AND BASE SHEET FASTENERS AND PLATES

| DECK TYPE | ATTACHING | FASTENER | PLATE |
|--|---------------------------------------|---|---|
| Wood or Steel | Insulation, Cover Board or Base Sheet | SFS Intec Dekfast 12, 14 or #15 | Dekfast Galvalume Steel 3" Round or Dekfast Galvalume Steel Hex |
| | | OMG Standard or Heavy Duty | OMG 3" Galvalume Steel Plate or OMG 3 in. Ribbed Galvalume Plate |
| | | OMG #12 or #14 Roofgrip | OMG AccuTrac Plate, AccuTrac Flat Bottom or Flat Bottom Metal Plate |
| | | Altenloh Trufast SIP TP Fastener, Trufast #12 DP Fastener, FlintFast #12, Trufast #14 HD Fastener | Altenloh Trufast 3" Metal Insulation Plate, FlintFast 3" Insulation Plate |
| | | Altenloh Trufast #12 DPH Fastener | Altenloh Trufast 3" Recessed Metal Insulation Plate |
| | | CertainTeed FlintFast #12 or #14 | CertainTeed FlintFast 3" Insulation Plate or FlintFast 3" Round Plates |
| | | National Nail Cap Nails | None |
| Concrete | Insulation, Cover Board or Base Sheet | SFS Intec Dekfast 14 or DekSpike | Dekfast Galvalume Steel 3" Round or Dekfast Galvalume Steel Hex |
| | | OMG Heavy Duty or CD-10 | OMG 3" Galvalume Steel Plate or OMG 3 in. Ribbed Galvalume Plate |
| | | OMG #14 Roofgrip | OMG AccuTrac Plate, AccuTrac Flat Bottom or Flat Bottom Metal Plate |
| | | Altenloh Trufast #14 HD Fastener | Altenloh Trufast 3" Metal Insulation Plate |
| | | Altenloh Trufast #12 DPH Fastener | Altenloh Trufast 3" Metal Insulation Plate |
| | | CertainTeed FlintFast #14 | CertainTeed FlintFast 3" Insulation Plate |
| Concrete or steel | Base Sheet | Altenloh Tru-Fast #15 EHD | Altenloh Tru-Fast 2.4" Barbed Metal Seam Plates |
| Concrete or steel | Base Sheet | Altenloh FM-90 Basesheet Fastener | Plate incorporated with the FM-90 Basesheet Fastener |
| Tectum I Plank (install per ESR-1112) or existing substrate | Base Sheet | Altenloh Trufast Insuldek Loc-Nails or Twin Loc-Nails | None |
| Steel | Insulation | SFS Intec Dekfast 12 | Dekfast Galvalume Steel Hex Plates |
| Steel | Cover Board | CertainTeed FlintFast #12 | CertainTeed FlintFast 3" Insulation Plates |

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION

Section: 07 52 00—Modified Bituminous Sheet Roofing

REPORT HOLDER:

CERTAINTEED LLC

EVALUATION SUBJECT:

CERTAINTEED FLINTASTIC MODIFIED BITUMEN ROOF COVERING SYSTEMS

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that CertainTeed Flintastic Modified Bitumen Roof Covering Systems, described in ICC-ES evaluation report ESR-1388, have also been evaluated for compliance with the codes noted below.

Applicable code editions:

- 2019 California Building Code (CBC)

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

- 2019 California Residential Code (CRC)

2.0 CONCLUSIONS

2.1 CBC:

The CertainTeed Flintastic Modified Bitumen Roof Covering Systems, described in Sections 2.0 through 7.0 of the evaluation report ESR-1388, comply with CBC Chapters 15 provided the design and installation are in accordance with the 2018 *International Building Code*® (IBC) provisions noted in the evaluation 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.

2.2 CRC:

The CertainTeed Flintastic Modified Bitumen Roof Covering Systems, described in Sections 2.0 through 7.0 of the evaluation report ESR-1388, comply with CRC Chapter 9, provided the design and installation are in accordance with the 2018 *International Residential Code*® (IRC) provisions noted in the evaluation report and the additional requirements of CRC Chapter 9, as applicable.

This supplement expires concurrently with the evaluation report, reissued May 2022.