



## ICC-ES Evaluation Report ESR-2852

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**DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION**

**Section: 07 54 19—Polyvinyl-Chloride Roofing**

**REPORT HOLDER:**

**IB ROOF SYSTEMS**

**EVALUATION SUBJECT:**

**IB PVC ROOFING MEMBRANES**

### 1.0 EVALUATION SCOPE

**Compliance with the following codes:**

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

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

For evaluation for compliance with codes adopted by the Los Angeles Department of Building and Safety (LADBS), see [ESR-2852 LABC and LARC Supplement](#).

**Properties evaluated:**

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

### 2.0 USES

IB PVC roofing membranes are single-ply membranes used as roof covering in adhered and mechanically fastened Class A or Class B roof assemblies installed on combustible or noncombustible decks.

### 3.0 DESCRIPTION

#### 3.1 General:

IB Membrane Roofing Systems consist of a single-ply polyvinyl chloride (PVC) membrane, insulation (when specified), flashing, and mechanical fasteners or adhesives.

#### 3.2 IB PVC Membranes:

**3.2.1 IB PVC Single Ply Membrane:** This is a polyester fabric-reinforced PVC membrane. The membrane complies with ASTM D4434, Type III, and is manufactured in nominally 50-, 60- and 80-mil (1.27, 1.52 and 2.03 mm) thicknesses.

**3.2.2 IB PVC Single Ply Fleeceback Membrane:** This is a polyester fabric-reinforced PVC membrane with a nonwoven polyester fleece backing. The membrane complies with ASTM D4434, Type III, and is manufactured in nominally 50-, 60- and 80-mil (1.27, 1.52 and 2.03 mm) thicknesses.

**3.2.3 IB PVC:** This is a polyester fabric-reinforced PVC membrane. The membrane complies with ASTM D4434 Type III, and is manufactured in nominally 50-, 60- and 80- mil (1.27, 1.52 and 2.03 mm) thicknesses.

**3.2.4 IB PVC Fleeceback:** This is a polyester fabric-reinforced PVC membrane with a nonwoven polyester fleece backing. The membrane complies with ASTM D4434, Type III, and is manufactured in nominally 50-, 60- and 80- (1.27, 1.52 and 2.03 mm) thicknesses.

#### 3.3 Insulation:

See Tables 1 through 4 for insulations used with specific roofing systems. Foam plastic insulation, when used, must have a flame-spread index of not more than 75 when tested at the maximum thickness intended for use in accordance with ASTM E84 or UL 723. Polyisocyanurate and expanded polystyrene (EPS) foam plastic insulation boards must comply with ASTM C1289 and ASTM C578, respectively.

#### 3.4 Barrier or Coverboard:

Barrier or coverboard, when used, must be either of the following:

- Minimum 1/4-inch-thick (6.4 mm) Georgia-Pacific Gypsum LLC, DensDeck or DensDeck Prime® Roof Board.
- Minimum 1/4-inch-thick (6.4 mm) USG Corporation SECUROCK® Gypsum-Fiber Roof Board or SECUROCK® Glass-Mat Roof Board.

#### 3.5 Slip Sheet:

Slip sheet, when used, must be IB Fire Sheet 10.

### 3.6 Fasteners:

Fasteners used to mechanically fasten insulation and membranes to the roof deck must be corrosion-resistant and must be one of the fasteners specified in this section or noted in Tables 3 and 4.

**3.6.1 IB SD #12 Insulation Fastener:** A No. 12 carbon steel screw, with a proprietary, corrosion-resistant epoxy-based coating, used in combination with IB fastening plates to attach roofing insulation to steel and wood substrates. Fastener length must be sufficient to penetrate into the steel or wood deck a minimum of  $3/4$  inch (19 mm), or through the thickness of the deck, whichever is less.

**3.6.2 IB HD #14 Roofing Fastener:** A No. 14 carbon steel screw with a proprietary, corrosion-resistant epoxy-based coating, used in combination with IB fastening plates to attach roofing insulation and single-ply membrane to steel and wood substrates. Fastener length must be sufficient to penetrate into the steel or wood deck a minimum of  $3/4$  inch (19 mm), or through the thickness of the deck, whichever is less.

**3.6.3 IB CD-10 Roofing Fastener:** A nonthreaded, hammer-driven roofing fastener, with a proprietary corrosion-resistant epoxy-based coating, used with IB fastening plates to attach roofing insulation and single-ply membrane to structural concrete substrates. Fastener length must be sufficient to penetrate into the concrete deck a minimum of 1 inch (25.4 mm).

**3.6.4 IB 3-inch Round Metal Insulation Plate:** A 3-inch-diameter (76 mm) galvalume plate used in combination with IB fasteners to secure insulation to the roof deck.

**3.6.5 IB 2-inch Barbed Seam Plate:** A 2-inch-diameter (51 mm) galvanized steel plate to secure single-ply membrane to the roof deck.

**3.6.6 IB  $2^{3/8}$ -inch Barbed Seam Plate:** A  $2^{3/8}$ -inch-diameter (60 mm), 0.040-inch-thick (1.02 mm) steel disc, having an AZ55 galvalume coating, a 0.230-inch-diameter (5.84 mm) center hole and six pointed barbs projecting  $1/8$  inch (3.2 mm) downward.

**3.6.7 IB XHD #15 Roofing Fastener:** A carbon steel screw having a buttress thread design, double-edged self-drilling points, a  $7/16$ -inch-diameter (11.1 mm) truss head, a major thread diameter of 0.265 inch (6.73 mm), a minor thread diameter of 0.158 inch (4.01 mm) and a black proprietary coating.

**3.6.8 IB 3-inch isoweld® Plate:** A 3-inch-diameter (76 mm) 0.018-inch-thick (0.46 mm), galvalume steel plate with PVC coating for use in combination with isoweld systems.

**3.6.9 Dekfast 2 $1/2$ -inch HS Membrane Plate:** A 2 $1/2$ -inch-diameter (64 mm), 0.038-inch-thick (0.96 mm) steel disc having an AZ50 galvalume coating, a 0.261-inch-diameter (6.63 mm) center hole and six pointed barbs projecting  $1/8$  inch (3.2 mm) downward from the underside between two raised circular stampings.

**3.6.10 Dekfast DF-#12-PH3:** A No. 12 carbon steel screw, having a double-edge self-drilling points, a  $7/16$ -inch-diameter (11.1 mm) truss head, a major thread diameter of 0.222 inch (5.63 mm), a minor thread diameter of 0.131 inch (3.33 mm) and a black proprietary coating.

**3.6.11 Dekfast DF-#14-PH3:** A No. 14 carbon steel screw, having double-edge self-drilling points, a  $7/16$ -inch-diameter (11.1 mm) truss head, a major thread diameter of 0.238 inch (6.1 mm), a shank diameter of 0.180 inch (4.57 mm) and a black proprietary coating.

**3.6.12 Dekfast DF-#15-PH3 Fastener:** A No. 15 carbon steel screw, having double-edged self-drilling points, a  $7/16$ -inch-diameter (11.1 mm) truss head, a major thread diameter of 0.257 inch (6.53 mm), a minor thread diameter of 0.167 inch (4.24 mm) and a black proprietary coating.

**3.6.13 Dekfast PLT-R-3:** A 3-inch-diameter (76 mm), 0.018-inch-thick (0.46 mm), galvalume plate used in combination with Dekfast fasteners.

**3.6.14 SFS isoweld® FI-P-6.8 PVC:** A 3-inch-diameter (76 mm), 0.018-inch-thick (0.46 mm), galvalume steel plate with PVC coating for use in combination with Dekfast isoweld® systems.

**3.6.15 OMG Polymer Batten Strip:** A nominally 0.05-inch thick (1.27 mm), 1-inch-wide (25.4 mm) modified polymer batten bar with 0.25-inch-diameter (6.35 mm) holes spaced 3 inches (76 mm) on center. Batten strips are available in 250-foot (76 m) coils.

**3.6.16 OMG Metal Batten Strip:** An 18 gauge [0.050 inch (1.27 mm)], 1-inch-wide (25.4 mm), 10-foot-long (3 m), galvalume batten strip with 0.25-inch-diameter (6.35 mm) holes spaced 6 inches (152 mm) or 12 inches (305 mm) on center.

**3.6.17 OMG XHD (Extra Heavy Duty) Seam Plate:** A  $2^{3/8}$ -inch-diameter (60 mm), 0.040-inch-thick (1.02 mm) steel disc, having an AZ55 galvalume coating, a 0.230-inch-diameter (5.84 mm) center hole and six pointed barbs projecting  $1/8$  inch (3.2 mm) downward.

**3.6.18 OMG 3" Galvalume Steel Plate:** A 3-inch-diameter (76 mm), 0.018-inch-thick (0.46 mm), galvalume plate used in combination with OMG fasteners.

**3.6.19 OMG XHD Roofing Fastener:** A carbon steel screw having a buttress thread design, double-edged self-drilling points, a  $7/16$ -inch-diameter (11.1 mm) truss head, a major thread diameter of 0.265 inch (6.73 mm), a minor thread diameter of 0.158 inch (4.01 mm) and a black proprietary coating.

**3.6.20 OMG #12 Standard Roofgrip:** A No. 12 carbon steel screw, having double edge self-drilling points, a 0.435-inch-diameter (11.1 mm) truss head, a major thread diameter of 0.22 inch (5.6 mm), a shank diameter of 0.16 inch (4.1 mm) with a CR-10 coating.

**3.6.21 OMG #15 Roofgrip:** A No. 15 carbon steel screw, having double-edged self-drilling points, a 0.435-inch-diameter (11.1 mm) truss head, a major thread diameter of 0.265-inch (6.73 mm), a shank diameter of 0.202 inch (5.13 mm) with a CR-10 coating.

### 3.7 Adhesives:

Adhesives must be one of the adhesives described in this section or noted in Tables 3 and 4.

**3.7.1 IBond Insulation Adhesive:** A polyurethane adhesive designed for bonding insulations to substrates. The adhesive is applied to the substrate and the underside of the insulation and has a coverage rate of 300 ft<sup>2</sup> per gallon (7.38 m<sup>2</sup> per L). The adhesive is available in a 1-gallon (3.78 L) container.

**3.7.2 IB Water Borne Adhesive:** A water-based adhesive designed for bonding IB PVC membranes to substrates. The adhesive is applied only to the substrate with a coverage range between 300 to 525 ft<sup>2</sup> (27.9 to 48.8 m<sup>2</sup>) per 3-gallon (11.34 L) pail.

**3.7.3 IB Vertibond Adhesive:** An adhesive designed for bonding IB PVC membranes to substrates. The adhesive is applied to the substrate and to the underside of the

membrane and has a coverage rate of 60 ft<sup>2</sup> per gallon (1.5 m<sup>2</sup> per L) pail.

### 3.8 Impact Resistance:

The IB PVC Roofing Membranes described in this report meet the requirements for impact resistance in 2021 IBC Section 1504.8, and 2018 and 2015 IBC Section 1504.7 based on testing in accordance with Section 4.6 of FM 4470.

## 4.0 INSTALLATION

### 4.1 General:

Installation of the IB PVC membranes must comply with the applicable code, the manufacturer's published installation instructions and this report. The manufacturer's installation instructions must be available on the jobsite at all times during installation.

The slope of the roof on which the membranes are installed must be a minimum of 1/4:12 (2 percent slope) and must not be more than the maximum slope indicated for the particular assembly as listed in Tables 1 and 2.

Penetrations and terminations of the roof covering must be flashed and made weather-tight in accordance with the requirements of the membrane manufacturer and the applicable code.

### 4.2 Fire Classification:

**4.2.1 New Construction:** Roof covering systems described in Tables 1 and 2, when installed in accordance with this report, are classified as Class A or B roof covering systems in accordance with ASTM E108 or UL 790.

**4.2.2 Reroofing:** The existing deck must be inspected to verify that the structure to be reroofed is structurally sound and adequate to support and secure the roofing membrane. Prior to installation of new roof coverings, inspection in accordance with 2021 IBC Section 1512, or 2018 and 2015 IBC Section 1511 (2012, 2009 and 2006 IBC Section 1510), and approval from the code official having jurisdiction, is required.

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

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

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

### 4.3 Wind Resistance:

**4.3.1 New Construction:** The allowable wind uplift pressures for the IB membrane roof covering systems described in the report are noted in Tables 3 and 4. Metal edge securement must be listed in accordance with ANSI/SPRI/FM 4435 ES-1 (dated 2003, 2011 or 2017, as applicable), and designed and installed in accordance with 2021 IBC Section 1504.6, (2018, 2015, 2012, 2009 and 2006 IBC Section 1504.5) and IBC Chapter 16.

As an alternative, the edge securement for mechanically attached membranes may be IB 2 to 4-inch Drip Edge PVC Clad Metal System with a 2.5 inch cleat, IB 2 to 4-inch

Gravel Stop PVC Clad Metal System with a 2.5-inch cleat, IB 5 to 7-inch Drip Edge PVC Clad Metal System with a 2.5-inch cleat or IB 5 to 7-inch Gravel Stop PVC Clad Metal System with a 2.5-inch cleat. When tested in accordance with Test RE-2 of ANSI/SPRI ES-1, the maximum allowable wind uplift at the roof edge is 275 psf (13 167 N/m<sup>2</sup>) for 2 to 4-inch Drip Edge PVC Clad Metal System and 2 to 4-inch Gravel Stop PVC Clad Metal System; and 185 psf (8 857.4 N/m<sup>2</sup>) for IB 5 to 7-inch Drip Edge PVC Clad Metal System and IB 5 to 7-inch Drip Edge PVC Metal System.

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

## 5.0 CONDITIONS OF USE

The IB PVC membranes 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 of the membranes must comply with the applicable code, the manufacturer's published installation instructions and this report. If there are any conflicts between the manufacturer's installation instructions and this report, this report governs.
- 5.2** The membranes must be installed by authorized applicators approved by IB Roof Systems.
- 5.3** Foam plastic must be separated from the interior of the building by an approved thermal barrier in accordance with IBC Section 2603.4.1.5 or IRC Section R316.4, as applicable.
- 5.4** Foam plastic insulation, when used, must bear the label of an approved testing and listing 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.
- 5.5** Above-deck thermal insulation board must comply with the applicable standard listed in IBC Table 1508.2 or IRC Table R906.2, as applicable.
- 5.6** Wind uplift pressure on any roof area, including edge and corner zones, must not exceed the allowable wind pressure for the roof covering installed in that particular area. Refer to Tables 3 and 4.
- 5.7** The allowable wind uplift pressures listed in Tables 3 and 4 are for the roof covering only. The deck and framing to which the roof covering is attached must be designed for the applicable components and cladding wind loads in accordance with the applicable code.
- 5.8** When application is over an existing roof, documentation of the wind uplift resistance of the composite roof construction must be submitted to the code official.
- 5.9** IB PVC Single Ply and IB PVC Single Ply Fleeceback membranes are manufactured at Cambridge, Ontario, Canada, under a quality control program with inspections by ICC-ES.
- 5.10** IB PVC and IB PVC Fleeceback membranes are manufactured at Mountain Top, Pennsylvania, under a quality control program 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 April 2021).

**7.0 IDENTIFICATION**

Product labeling shall include, the name of the report holder or listee, and the ICC-ES mark of conformity. The listing or evaluation report number (ICC-ES ESR-2852) may be used in lieu of the mark of conformity.

**7.1** Each roll of roofing membrane has a label bearing the IB Roof Systems name and address, the product name, and the evaluation report number (ESR-2852).

Fasteners are identified by the company name and by the size.

Foam plastic insulation must be identified with the manufacturer's name, the surface burning characteristics, and, where applicable, with wording that indicates compliance with IBC Section 2603.4.1.5.

**7.2** The report holder's contact information is the following:

**IB ROOF SYSTEMS**  
**506 EAST DALLAS ROAD, SUITE 300**  
**GRAPEVINE, TEXAS 76051**  
**(800) 426-1626**  
[www.ibroof.com](http://www.ibroof.com)

**TABLE 1—FIRE CLASSIFICATION ASSEMBLIES—ADHERED ROOFING SYSTEMS**

SYSTEM NO.	ROOF CLASS	SUBSTRATE <sup>2</sup>	MAX. ROOF SLOPE	INSULATION <sup>1,3</sup>	BARRIER OR COVER BOARD <sup>4</sup>	MEMBRANE <sup>4</sup>	
						TYPE	ADHESIVE <sup>4,5</sup>
1	A	Noncombustible	1:12	Min. 1-inch-thick to max. 4-inch-thick, Firestone Bldg. Products "ISO 95+GL" or Johns Manville "ENRGY 3"	---	IB PVC Single-Ply	IB Water Borne Adhesive
2	A	Noncombustible	1 1/2:12	Min. 1-inch-thick to max. 4-inch-thick, IB Roof "IB Energy Board II", Atlas Roofing "ACFoam-II" or "ACFoam-III"	---	IB PVC Single-Ply	IB Water Borne Adhesive
3	A	Noncombustible	1:12	Min. 2-inch-thick to max. 4-inch-thick, IB Roof "IB Energy Board II", Atlas Roofing "ACFoam-II", Johns Manville "ENRGY 3", Rmax "Multi-Max FA-3" or Dow Chemical Co. "HY-THERM AP", mechanically fastened to deck	---	IB PVC Single-Ply or IB PVC Single-Ply Fleeceback	IB Water Borne Adhesive or IB Vertibond Adhesive
4	A	Noncombustible	1:12	Min. 2-inch-thick to max. 4-inch-thick, IB Roof "IB Energy Board II", Atlas Roofing "ACFoam-II", Johns Manville "ENRGY 3", Rmax "Multi-Max FA-3" or Dow Chemical Co. "HY-THERM AP",	1/4-inch-thick Georgia Pacific "DensDeck", mechanically fastened through insulation to deck	IB PVC Single-Ply or IB PVC Single-Ply Fleeceback	IB Water Borne Adhesive or IB Vertibond Adhesive
5	A	Noncombustible	1:12	---	---	IB PVC Single-Ply or IB PVC Single-Ply Fleeceback	IB Water Borne Adhesive or IB Vertibond Adhesive
6	A	Combustible	Unlimited	Min. 1-inch-thick to max. 4-inch-thick, Atlas Roofing "ACFoam-II", or IB Roof "IB Energy Board II"	1/4-inch-thick Georgia Pacific "DensDeck" or USG "SECUROCK Gypsum-Fiber Roof Board", mechanically fastened through insulation to deck	IB PVC Fleeceback	ICP CR-20
7	A	Noncombustible	1:12	Min. 1-inch thick to max. 4-inch-thick, Atlas Roofing "ACFoam-II", or IB Roof "IB Energy Board II"	1/4-inch-thick Georgia Pacific "DensDeck" or USG "SECUROCK Gypsum-Fiber Roof Board", mechanically fastened through insulation to deck	IB PVC Fleeceback	ICP CR-20

<sup>1</sup>All foam plastic insulation must be UL-classified foam plastic for roofing systems, and must be limited to the maximum thickness noted in Section 5.4 of this report.

<sup>2</sup>Steel deck must be minimum No. 22 gage galvanized steel [0.030 inch (0.76 mm)]. Concrete must have a minimum compressive strength ( $f_c$ ) of 2500 psi.

<sup>3</sup>Polyisocyanurate insulation must comply with ASTM C1289. Expanded polystyrene (EPS) and extruded polystyrene (XPS) insulation must comply with ASTM C578.

<sup>4</sup>Barrier or cover boards, membranes and adhesives must be UL-classified for roofing systems.

<sup>5</sup>IB Water Borne Adhesive to be applied at a rate of 100-175 ft<sup>2</sup> per gallon (300-525 ft<sup>2</sup> per 3-gallon pail).

<sup>6</sup>IB Vertibond Adhesive to be applied at a rate of 60 ft<sup>2</sup> per gallon.

**TABLE 2—FIRE CLASSIFICATION ASSEMBLIES—MECHANICALLY FASTENED ROOFING SYSTEMS**

SYSTEM NO.	ROOF CLASS	SUBSTRATE <sup>2</sup>	MAX. ROOF SLOPE	BARRIER BOARD/ INSULATION <sup>1,3</sup>	SLIP SHEET <sup>4</sup>	MEMBRANE TYPE <sup>4</sup>
1	A	Noncombustible	3:12	Min. 1-inch-thick to max. 4-inch-thick, Any UL-classified polyisocyanurate insulation, mechanically fastened to deck.	---	IB PVC Single-Ply
2	A	Noncombustible	2:12	Min. 1-inch-thick to max. 4-inch-thick, Johns Manville "ENRGY 3", Rmax "Multi-Max FA-3" or Firestone Bldg. Products" ISO 95+GL"	---	IB PVC Single-Ply
3	A	Noncombustible	2 <sup>1</sup> / <sub>2</sub> :12	Min. 1-inch-thick to max. 4-inch thick, IB Roof "IB Energy Board II" "IB Energy Board III", Atlas Roofing "ACFoam-II" or "ACFoam-III"	---	IB PVC Single-Ply
4	A	Noncombustible	2:12	Min. 2-inch-thick to max. 4-inch-thick, IB Roof "IB Energy Board II" "IB Energy Board III", Atlas Roofing "ACFoam-II", Rmax "Multi-Max FA-3" or Dow Chemical Co. "HY-THERM AP", mechanically fastened per FM preliminary fastening requirements	---	IB PVC Single-Ply
5	B	Noncombustible	2:12	Min. 2-inch-thick to max. 4-inch-thick, Johns Manville "ENRGY 3", mechanically fastened per FM preliminary fastening requirements <sup>5</sup>	---	IB PVC Single-Ply
6	A	Noncombustible	2:12	Min. 1-inch-thick to max. 4-inch-thick, IB Roof "IB Energy Board II" "IB Energy Board III", Atlas Roofing "ACFoam-II" or Johns Manville "ENRGY 3", or min. 1.3-inch-thick to max. 4-inch-thick, IB Roof "IB Energy Board II" "IB Energy Board III", Atlas Roofing "ACFoam-III", mechanically fastened per FM preliminary fastening requirements <sup>5</sup>	---	IB PVC Single-Ply
7	A	Combustible	Unlimited	---	Four layers of "IB Fire Sheet FR-10"	IB PVC Single-Ply or IB PVC
8	A	Noncombustible	2:12	---	Three layers of IB Fire Sheet FR-10"	IB PVC Single Ply or IB PVC
9	A	Combustible	3 <sup>3</sup> / <sub>4</sub> :12	---	Two layers of IB Fire Sheet FR-10	IP PVC Single Ply
10	A	Combustible	Unlimited	<sup>1</sup> / <sub>4</sub> -inch-thick Georgia Pacific "DensDeck" or USG "SECUROCK Gypsum-Fiber Roof Board"	---	IB PVC Single Ply
11	A	Combustible	2:12	(Optional) Min. 1-inch-thick to max. 4-inch- thick, Atlas Roofing "ACFoam-II", or IB Roof "IB Energy Board II"	Three layers of IB Fire Sheet FR-10	IB PVC Single Ply or IB PVC
12	A	Combustible	3:12	(Optional) Min. 1-inch-thick to max. 4-inch- thick, Atlas Roofing "ACFoam-II", or IB Roof "IB Energy Board II"	Three layers of IB Fire Sheet FR-10	IB PVC Single Ply or IB PVC

<sup>1</sup>All foam plastic insulation must be UL-classified foam plastic for roofing systems, and must be limited to the maximum thickness noted in Section 5.4 of this report.

<sup>2</sup>Wood deck must be minimum <sup>15</sup>/<sub>32</sub>-inch-thick (11.9 mm) plywood. Steel deck must be minimum No. 22 gage galvanized steel [0.030 inch (0.76 mm)]. Concrete must have a minimum compressive strength (*f<sub>c</sub>*) of 2500 psi.

<sup>3</sup>Polyisocyanurate insulation must comply with ASTM C1289. Expanded polystyrene (EPS) and extruded polystyrene (XPS) insulation must comply with ASTM C578.

<sup>4</sup>Slip sheets, membranes and adhesives must be UL-classified for roofing systems.

<sup>5</sup>FM preliminary fastening requirements to consist of IB SD #12 Insulation fastener (for steel substrate) or IB CD-10 Roofing fastener (for concrete substrate) with IB 3-inch Round Metal Insulation Plate at 1 fastener per 8 ft<sup>2</sup>.

TABLE 3—WIND RESISTANCE—ADHERED ROOFING SYSTEMS

SYSTEM NO.	DECK <sup>3</sup>	INSULATION BASE LAYER OR BARRIER BOARD		INSULATION TOP LAYER OR COVER BOARD		MEMBRANE		ALLOWABLE WIND UPLIFT PRESSURE (psf)
		Type <sup>1,2</sup>	Attachment <sup>1,4</sup>	Type <sup>1</sup>	Attachment <sup>1,4</sup>	Type	Attachment <sup>1</sup>	
W-1	Wood	(Optional) Any polyisocyanurate insulation or barrier board	---	Min. 1 1/2-inch-thick Rmax "Multi-Max FA-3", IB Roof "IB Energy Board II" Atlas Roofing Corp. "ACFoam II" or 1/2-inch-thick SECUROCK Gypsum-Fiber Roof Board	IB SD #12 Insulation Fastener with IB 3-inch Galvalume Insulation Plate at 1.6 ft <sup>2</sup> per fastener	IB PVC Single-Ply or IB PVC Single-Ply Fleeceback	IB Water Borne Adhesive at 280 ft <sup>2</sup> /gal or IB Veribond Adhesive at 60 ft <sup>2</sup> /gal	45
W-2	Wood	Min. 1/4-inch-thick DensDeck	Mechanically fastened per FM preliminary fastening requirements <sup>5</sup>	Min. 2-inch-thick Rmax "Multi-Max FA-3", IB Roof "IB Energy Board II" Atlas Roofing Corp. "ACFoam II", Johns Manville "ENRGY 3-inch or Dow Chemical "HY-THERM AP"	IB SD #12, IB HD #14 Roofing Fasteners with IB 3-inch Round Insulation plates or OMG #12 Standard or #14 Heavy-duty Fastener, with OMG 3-inch Galvalume Insulation Plate at 2 ft <sup>2</sup> per fastener	IB PVC Single-Ply, IB PVC Single-Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 250 ft <sup>2</sup> /gal or IB Vertibond Adhesive at 60 ft <sup>2</sup> /gal	45
W-3	Wood	Min. 2-inch-thick Rmax "Multi-Max FA-3", IB Roof "IB Energy Board II", Atlas Roofing Corp. "ACFoam II", Johns Manville "ENRGY 3" or Dow Chemical "HY-THERM AP"	Mechanically fastened per FM preliminary fastening requirements <sup>5</sup>	Min. 1/4-inch-thick DensDeck	IB SD #12, IB HD #14 Roofing Fasteners with IB 3-inch Round Insulation plates or OMG #12 Standard or #14 Heavy-duty Fastener, with OMG 3-inch Galvalume Insulation Plate at 2 ft <sup>2</sup> per fastener	IB PVC Single-Ply, IB PVC Single-Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 250 ft <sup>2</sup> /gal or IB Vertibond Adhesive at 60 ft <sup>2</sup> /gal	45
W-4	Min. 15/32-inch thick Plywood	<p><b>Thermal Barrier:</b> 1/2 -inch-thick DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board mechanically attached to the wood deck followed by a primed Vapor Barrier. Primed with Elastocol Stick or Elastocol Stick Zero at a rate of 0.5 gal/sq.</p>	<p>Thermal Barrier fastened with Dekfast DF-#12-PH3, Dekfast DF-#14-PH3, Dekfast DF-#15-PH3 with Dekfast PLT-R-3 plates or IB SD #12, IB HD #14 or IB XHD #15 Roofing Fasteners with IB 3-inch Round Insulation plates or OMG #12 Standard Roofgrip, #14 Roofgrip, #15 Roofgrip, OMG XHD Fasteners with OMG 3" Galvalume Steel Plates at a fastener density of 1 per 1.6 ft<sup>2</sup></p>	Min. 1/4-inch-thick DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board, ACFoam-HD Coverboard	OMG OlyBond 500, Millennium One Step Foamable Adhesive or IB Rapid Set Insulation Adhesive	IB PVC Single Ply	IB Water Borne Adhesive at 1 gal/125 – 175 ft <sup>2</sup> or IB Vertibond Adhesive at 1 gal/50 – 70 ft <sup>2</sup>	45
		<p><b>Vapor Barrier:</b> Sopravap'r, self-adhered to the Thermal Barrier followed by a min. 1-inch-thick ACFoam-II, IB EnergyBoard II, ACFoam-III, IB EnergyBoard III, H-Shield, H-Shield CG</p>	<p>Insulation adhered with OMG OlyBond 500, Millennium One Step Foamable Adhesive or IB Rapid Set Insulation Adhesive</p>				IB PVC Single Ply Fleeceback or IB PVC Fleeceback	

TABLE 3—WIND RESISTANCE—ADHERED ROOFING SYSTEMS (Continued)

SYSTEM NO.	DECK <sup>3</sup>	INSULATION BASE LAYER OR BARRIER BOARD		INSULATION TOP LAYER OR COVER BOARD		MEMBRANE		ALLOWABLE WIND UPLIFT PRESSURE (psf)
		Type <sup>1,2</sup>	Attachment <sup>1,4</sup>	Type <sup>1</sup>	Attachment <sup>1,4</sup>	Type	Attachment <sup>1</sup>	
W-5	Min. 15/32-inch thick Plywood	Min. 2.0-inch-thick H-Shield, ACFoam-II, IB EnergyBoard II, ACFoam-III, IB EnergyBoard III, H-Shield CG	Dekfast DF-#12-PH3, Dekfast DF-#14-PH3, Dekfast DF-#15-PH3 with Dekfast PLT-R-3 plates or IB SD #12, IB HD #14, IB XHD #15 Roofing Fasteners with IB 3-inch Round Insulation plates or OMG #12 Standard Roofgrip, #14 Roofgrip, #15 Roofgrip, OMG XHD Fasteners with OMG 3" Galvalume Steel Plates at a fastener density of 1 per 1.6 ft <sup>2</sup>	Min. 1/4-inch-thick DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board, ACFoam-HD Coverboard	OMG OlyBond 500, Millennium One Step Foamable Adhesive or IB Rapid Set Insulation Adhesive	IB PVC Single Ply	IB Water Borne Adhesive at 1 gal/125 – 175 ft <sup>2</sup> or IB Vertibond Adhesive at 1 gal/50 – 70 ft	45.0
						IB PVC Single Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 1 gal/100 – 160 ft <sup>2</sup> or IB Vertibond Adhesive at 1 gal/45 – 60 ft <sup>2</sup>	
W-6	Min. 15/32-inch thick Plywood	Min. 1 1/2-inch-thick ACFoam-III, IB EnergyBoard III, H-Shield, H-Shield CG	Dekfast DF-#12-PH3, Dekfast DF-#14-PH3, Dekfast DF-#15-PH3 with Dekfast PLT-R-3 plates or IB SD #12, IB HD #14, IB XHD #15 Roofing Fasteners with IB 3-inch Round Insulation plates or OMG #12 Standard Roofgrip, #14 Roofgrip, #15 Roofgrip, OMG XHD Fasteners with OMG 3" Galvalume Steel Plates at a fastener density of 1 per 1.6 ft <sup>2</sup>	Min. 1/4-inch-thick SECUROCK Gypsum-Fiber Roof Board	OMG OlyBond 500, Millennium One Step Foamable Adhesive or IB Rapid Set Insulation Adhesive	IB PVC Single Ply	IB Water Borne Adhesive at 1 gal/125 – 175 ft <sup>2</sup> or IB Vertibond Adhesive at 1 gal/50 – 70 ft <sup>2</sup>	45.0
						IB PVC Single Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 1 gal/100 – 160 ft <sup>2</sup> or IB Vertibond Adhesive at 1 gal/45 – 60 ft <sup>2</sup>	
W-7	Min. 15/32-inch thick Plywood	(Optional) Min. 1 1/2-inch-thick ACFoam-II, IB EnergyBoard II, ACFoam-III, EnergyBoard III, H-Shield, H-Shield CG	Loose Laid	Min. 1 1/2-inch-thick ACFoam-II, IB EnergyBoard II, ACFoam-III, EnergyBoard III, H-Shield, H-Shield CG or Min. 1/2-inch-thick ACFoam-HD Coverboard or Min. 1/2-inch-thick DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board or Min. 1 1/2-inch-thick InsulFoam HD Composite	Dekfast DF-#12-PH3, Dekfast DF-#14-PH3, Dekfast DF-#15-PH3 with Dekfast PLT-R-3 plates or IB SD #12, IB HD #14, IB XHD #15 Roofing Fasteners with IB 3-inch Round Insulation plates or OMG #12 Standard Roofgrip, #14 Roofgrip, #15 Roofgrip, OMG XHD Fasteners with OMG 3" Galvalume Steel Plates at a fastener density of 1 per 1.6ft <sup>2</sup>	IB PVC Single Ply	IB Water Borne Adhesive at 1 gal/125 – 175 ft <sup>2</sup> or IB Vertibond Adhesive at 1 gal/50 – 70 ft <sup>2</sup>	45.0
				IB PVC Single Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 1 gal/100 – 160 ft <sup>2</sup> or IB Vertibond Adhesive at 1 gal/45 – 60 ft <sup>2</sup>			
W-8	Wood	Min. 1 1/2-inch-thick Rmax "Multi-Max FA-3", IB Roof "IB Energy Board II" Atlas Roofing Corp. "ACFoam II", 1/4-inch-thick DensDeck or 1/2-inch-thick SECUROCK Gypsum-Fiber Roof Board	ICP Adhesives CR-20	(Optional) Min. 1 1/2-inch-thick Rmax "Multi-Max FA-3, IB Roof "IB Energy Board II", Atlas Roofing Corp. "ACFoam II", 1/4-inch-thick DensDeck or 1/2-inch-thick SECUROCK Gypsum-Fiber Roof Board	ICP Adhesives CR-20	IB PVC Single-Ply or IB PVC Single-Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 280 ft <sup>2</sup> /gal	52

TABLE 3—WIND RESISTANCE—ADHERED ROOFING SYSTEMS (Continued)

SYSTEM NO.	DECK <sup>3</sup>	INSULATION BASE LAYER OR BARRIER BOARD		INSULATION TOP LAYER OR COVER BOARD		MEMBRANE		ALLOWABLE WIND UPLIFT PRESSURE (psf)
		Type <sup>1,2</sup>	Attachment <sup>1,4</sup>	Type <sup>1</sup>	Attachment <sup>1,4</sup>	Type	Attachment <sup>1</sup>	
S-1	Min. 22 ga., Type B, Grade 33 Steel	Min. 2.0-inch-thick H-Shield, ACFoam-II, IB EnergyBoard II, ACFoam-III, IB EnergyBoard III, H-Shield CG	Dekfast DF-#12-PH3, Dekfast DF-#14-PH3, Dekfast DF-#15-PH3 with Dekfast PLT-R-3 plates or IB SD #12, IB HD #14 or IB XHD #15 Roofing Fasteners with IB 3-inch Round Metal Insulation Plates or OMG #12 Standard Roofgrip, #14 Roofgrip, #15 Roofgrip, OMG XHD Fasteners with OMG 3" Galvalume Steel Plates at a fastener density of 1 per 2.9 ft <sup>2</sup>	Min. 1/4-inch-thick DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board, ACFoam-HD Coverboard	OMG OlyBond 500, Millennium One Step Foamable Adhesive or IB Rapid Set Insulation Adhesive	IB PVC Single Ply	IB Water Borne Adhesive at 1 gal/125 – 175 ft <sup>2</sup> or IB Vertibond Adhesive at 1 gal/50 – 70 ft <sup>2</sup>	45.0
						IB PVC Single Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 1 gal/100 – 160 ft <sup>2</sup> or IB Vertibond Adhesive at 1 gal/45 – 60 ft <sup>2</sup>	
S-2	Min. 22 ga., Type B, Grade 33 Steel	Min. 1 1/2-inch-thick ACFoam-III, IB EnergyBoard III, H-Shield, H-Shield CG	Dekfast DF-#12-PH3, Dekfast DF-#14-PH3, Dekfast DF-#15-PH3, with Dekfast PLT-R-3 plates or IB SD #12, IB HD #14, IB XHD #15 Roofing Fasteners with IB 3-inch Round Metal Insulation Plates or OMG #12 Standard Roofgrip, #14 Roofgrip, #15 Roofgrip, OMG XHD Fasteners with OMG 3" Galvalume Steel Plates at a fastener density of 1 per 2 ft <sup>2</sup>	Min. 1/4-inch-thick SECUROCK Gypsum-Fiber Roof Board	OMG OlyBond 500, Millennium One Step Foamable Adhesive or IB Rapid Set Insulation Adhesive	IB PVC Single Ply	IB Water Borne Adhesive at 1 gal/125 – 175 ft <sup>2</sup> or IB Vertibond Adhesive at 1 gal/50 – 70 ft <sup>2</sup>	45.0
						IB PVC Single Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 1 gal/100 – 160 ft <sup>2</sup> or IB Vertibond Adhesive at 1 gal/45 – 60 ft <sup>2</sup>	
S-3	Min. 22 ga., Type B, Grade 33 Steel	Min. 1/2-inch-thick DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board  <b>NOTE:</b> Shall be primed with Elastocol Stick or Elastocol Stick Zero at a rate of 0.5 gal/sq, and followed by Soprapav'r, self-adhered	Dekfast DF-#12-PH3, Dekfast DF-#14-PH3, Dekfast DF-#15-PH3 with Dekfast PLT-R-3 plates or IB SD #12, IB HD #14 or IB XHD #15 Roofing Fasteners with IB 3-inch Round Metal Insulation Plates or OMG #12 Standard Roofgrip, #14 Roofgrip, #15 Roofgrip, OMG XHD Fasteners with OMG 3" Galvalume Steel Plates With a fastener density of 1 per 4 ft <sup>2</sup>	Min. 1.0-inch-thick ACFoam-II, IB EnergyBoard II, ACFoam-III, IB EnergyBoard III, H-Shield, H-Shield CG  Followed by min. 1/4-inch-thick DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board, ACFoam-HD Coverboard	OMG OlyBond 500, Millennium One Step Foamable Adhesive or IB Rapid Set Insulation Adhesive	IB PVC Single Ply	IB Water Borne Adhesive at 1 gal/125 – 175 ft <sup>2</sup> or IB Vertibond Adhesive at 1 gal/50 – 70 ft <sup>2</sup>	45.0
						IB PVC Single Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 1 gal/100 – 160 ft <sup>2</sup> or IB Vertibond Adhesive at 1 gal/45 – 60 ft <sup>2</sup>	



TABLE 3—WIND RESISTANCE—ADHERED ROOFING SYSTEMS (Continued)

SYSTEM NO.	DECK <sup>3</sup>	INSULATION BASE LAYER OR BARRIER BOARD		INSULATION TOP LAYER OR COVER BOARD		MEMBRANE		ALLOWABLE WIND UPLIFT PRESSURE (psf)
		Type <sup>1,2</sup>	Attachment <sup>1,4</sup>	Type <sup>1</sup>	Attachment <sup>1,4</sup>	Type	Attachment <sup>1</sup>	
S-4	Min. 22 ga., Type B, Grade 33 Steel	Min. 1/2-inch-thick DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board  <b>NOTE:</b> Shall be primed with Elastocol Stick or Elastocol Stick Zero at a rate of 0.5 gal/sq, and followed by Soprapap'r, self-adhered	Dekfast DF-#12-PH3, Dekfast DF-#14-PH3, Dekfast DF-#15-PH3 with Dekfast PLT-R-3 plates or IB SD #12 Insulation Fasteners, IB HD #14 Roofing Fasteners, IB XHD #15 Roofing Fasteners with IB 3-inch Round Metal Insulation Plates or OMG #12 Standard Roofgrip, #14 Roofgrip, #15 Roofgrip, OMG XHD Fasteners with OMG 3" Galvalume Steel Plates With a fastener density of 1 per 4 ft <sup>2</sup>	Min. 1 1/2-inch-thick InsulFoam HD Composite	OMG OlyBond 500	IB PVC Single Ply	IB Water Borne Adhesive at 1 gal/125 – 175 ft <sup>2</sup> or IB Vertibond Adhesive at 1 gal/50 – 70 ft <sup>2</sup>	45.0
						IB PVC Single Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 1 gal/100 – 160 ft <sup>2</sup> or IB Vertibond Adhesive at 1 gal/45 – 60 ft <sup>2</sup>	
S-5	Min. 22 ga., Type B, Grade 33 Steel	(Optional) Min. 1.5-inch-thick ACFoam-II, IB EnergyBoard II, ACFoam-III, EnergyBoard III, H-Shield, H-Shield CG	Loose laid	Min. 1/2-inch-thick ACFoam-HD Coverboard or Min. 1/4-inch-thick DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board or Min. 1 1/2-inch-thick ACFoam-II, IB EnergyBoard II, ACFoam-III, EnergyBoard III, H-Shield, H-Shield CG	Dekfast DF-#12-PH3, Dekfast DF-#14-PH3, Dekfast DF-#15-PH3 with Dekfast PLT-R-3 plates or IB SD #12, IB HD #14 or IB XHD #15 Roofing Fasteners with IB 3-inch Round Metal Insulation Plates or OMG #12 Standard Roofgrip, #14 Roofgrip, #15 Roofgrip, OMG XHD Fasteners with OMG 3" Galvalume Steel Plates With a fastener density of 1 per 2 ft <sup>2</sup>	IB PVC Single Ply	IB Water Borne Adhesive at 1 gal/125 – 175 ft <sup>2</sup> or IB Vertibond Adhesive at 1 gal/50 – 70 ft <sup>2</sup>	45.0
						IB PVC Single Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 1 gal/100 – 160 ft <sup>2</sup> or IB Vertibond Adhesive at 1 gal/45 – 60 ft <sup>2</sup>	
S-6	Min. 22 ga., Type B, Grade 33 Steel	(Optional) Min. 1 1/2-inch-thick ACFoam-II, IB EnergyBoard II, ACFoam-III, EnergyBoard III, H-Shield, H-Shield CG	Loose laid	Min. 1 1/2-inch-thick InsulFoam HD Composite	Dekfast DF-#12-PH3, Dekfast DF-#14-PH3, Dekfast DF-#15-PH3 with Dekfast PLT-R-3 plates or IB SD #12, IB HD #14 or IB XHD #15 Roofing Fasteners with IB 3-inch Round Metal Insulation Plates or OMG #12 Standard Roofgrip, #14 Roofgrip, #15 Roofgrip, OMG XHD Fasteners with OMG 3" Galvalume Steel Plates With a fastener density of 1 per 2 ft <sup>2</sup>	IB PVC Single Ply	IB Water Borne Adhesive at 1 gal/125 – 175 ft <sup>2</sup> or IB Vertibond Adhesive at 1 gal/50 – 70 ft <sup>2</sup>	45.0
						IB PVC Single Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 1 gal/100 – 160 ft <sup>2</sup> or IB Vertibond Adhesive at 1 gal/45 – 60 ft <sup>2</sup>	

TABLE 3—WIND RESISTANCE—ADHERED ROOFING SYSTEMS (Continued)

SYSTEM NO.	DECK <sup>3</sup>	INSULATION BASE LAYER OR BARRIER BOARD		INSULATION TOP LAYER OR COVER BOARD		MEMBRANE		ALLOWABLE WIND UPLIFT PRESSURE (psf)
		Type <sup>1,2</sup>	Attachment <sup>1,4</sup>	Type <sup>1</sup>	Attachment <sup>1,4</sup>	Type	Attachment <sup>1</sup>	
S-7	Steel	Min. 2-inch-thick to max. 4-inch-thick, Rmax "Multi-Max FA-3", IB Roof "IB Energy Board II", Atlas Roofing Corp. "ACFoam II", Johns Manville "ENRGY 3" or Dow Chemical "HY-THERM AP"	IB SD #12 or IB HD #14 Roofing Fasteners with IB 3-inch Round Insulation plates or OMG #12 Standard or #14 Heavy-duty Fastener, with OMG 3-inch Galvalume Insulation Plate at 2 ft <sup>2</sup> per fastener	---	---	IB PVC Single-Ply, IB PVC Single-Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 250 ft <sup>2</sup> /gal or IB Vertibond Adhesive at 60 ft <sup>2</sup> /gal	45
S-8	Steel	Min. 2-inch-thick to max. 4-inch-thick, Rmax "Multi-Max FA-3" IB Roof "IB Energy Board II", Atlas Roofing Corp. "ACFoam II", Johns Manville "ENRGY 3" or Dow Chemical "HY-THERM AP"	Mechanically fastened per FM preliminary fastening requirements <sup>5</sup>	Min. 1/4-inch-thick DensDeck	IB SD #12 or IB HD #14 Roofing Fasteners with IB 3-inch Round Insulation plates or OMG #12 Standard or #14 Heavy-duty Fastener, with OMG 3-inch Galvalume Insulation Plate at 2 ft <sup>2</sup> per fastener	IB PVC Single-Ply, IB PVC Single-Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 250 ft <sup>2</sup> /gal or IB Vertibond Adhesive at 60 ft <sup>2</sup> /gal	45
SC-1	Min. 22 ga Grade 40 Steel or Min. 2,500 psi concrete	Min. 2.0-inch-thick Atlas Roofing "ACFoam-III", IB Roof "IB Energy Board III", Hunter Panels "H-Shield", "H-Shield CG"	Dekfast DF-#12-PH3, Dekfast DF-#14-PH3, Dekfast DF-#15-PH3 with Dekfast PLT-R-3 plates	Min. 1/4-inch-thick USG "SECUROCK Gypsum-Fiber Roof Board"	OMG OlyBond 500, Millennium One Step Foamable Adhesive or IB Rapid Set Insulation Adhesive in 3/4" ribbons spaced 6" o.c.	IB PVC Single Ply	IB Water Borne Adhesive at 1 gal/125 – 175 ft <sup>2</sup> or IB Vertibond Adhesive at 1 gal/50 – 70 ft <sup>2</sup>	75
			IB SD #12, IB HD #14 or IB XHD #15 Roofing Fasteners with IB 3-inch Round Metal Insulation Plates or OMG #12 Standard Roofgrip, #14 Roofgrip, #15 Roofgrip, OMG XHD Fasteners with OMG 3" Galvalume Steel Plates at 1.6 ft <sup>2</sup>			IB PVC Single Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 1 gal/100 – 160 ft <sup>2</sup> or IB Vertibond Adhesive at 1 gal/45 – 60 ft <sup>2</sup>	
SC-2	Min. 22 ga. Grade 40 Steel, Min. 2,500 psi concrete or min. 19/32-inch-thick plywood	Min. 1 1/2-inch-thick Atlas Roofing "ACFoam-II", "ACFoam-III", IB Roof "IB Energy Board II", "IB Energy Board III", Hunter Panels "H-Shield", "H-Shield CG" or Insulfoam "Insulfoam HD Composite"	Dekfast DF-#15 HP-3 Fastener with Dekfast PLT-R-3 plates or OMG XHD, OMG #15 Roofgrip or OMG #14 Roofgrip fasteners with OMG 3" Galvalume Steel Plates or IB XHD #15 Roofing Fasteners with IB 3-inch Round Insulation Plates at 1.33 ft <sup>2</sup>	---	---	IB PVC or IB PVC Single Ply	IB Water Borne Adhesive at 1 gal. per 125-175 ft <sup>2</sup> to substrate or IB Vertibond Adhesive at 1 gal. at 50-70 ft <sup>2</sup> to both sides.	75
SC-3	Min. 22 ga. Grade 40 Steel, Min. 2,500 psi concrete or min. 19/32-inch-thick plywood	Min. 1 1/2-inch-thick Atlas Roofing "ACFoam-II", "ACFoam-III", IB Roof "IB Energy Board II", "IB Energy Board III", Hunter Panels "H-Shield", "H-Shield CG" or Insulfoam "Insulfoam HD Composite"	SFS DF-#15 HP-3 Fastener with Dekfast PLT-R-3 plates or OMG XHD, OMG #15 Roofgrip or OMG #14 Roofgrip fasteners with OMG 3" Galvalume Steel Plates or IB XHD #15 Roofing Fasteners with IB 3-inch Round Insulation Plates at 1.33 ft <sup>2</sup>	---	---	IB PVC Single Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 1 gal. per 100-160 ft <sup>2</sup> to substrate, IB Vertibond Adhesive at 1 gal. at 45-60 ft <sup>2</sup> to both sides, or ICP Adhesives CR-20 spatter-applied at 3.75 lb/sq.	75

TABLE 3—WIND RESISTANCE—ADHERED ROOFING SYSTEMS (Continued)

SYSTEM NO.	DECK <sup>3</sup>	INSULATION BASE LAYER OR BARRIER BOARD		INSULATION TOP LAYER OR COVER BOARD		MEMBRANE		ALLOWABLE WIND UPLIFT PRESSURE (psf)
		Type <sup>1,2</sup>	Attachment <sup>1,4</sup>	Type <sup>1</sup>	Attachment <sup>1,4</sup>	Type	Attachment <sup>1</sup>	
SC-4	Min. 22 ga. Grade 40 Steel, Min. 2,500 psi concrete or Min. 1 <sup>9</sup> / <sub>32</sub> -inch-thick plywood	(Optional) Min. 1 <sup>1</sup> / <sub>2</sub> -inch-thick Atlas Roofing "ACFoam-II", "ACFoam-III", IB Roof "IB Energy Board II", "IB Energy Board III", Hunter Panels "H-Shield", "H-Shield CG" or Insulfoam "Insulfoam HD Composite"	Loose Laid	Min. 1/4-inch-thick Georgia Pacific "DensDeck Prime" or USG "SECUROCK Gypsum-Fiber Roof Board"	Dekfast DF-#15 HP-3 Fastener with Dekfast PLT-R-3 plates or OMG XHD, OMG #15 Roofgrip or OMG #14 Roofgrip fasteners with OMG 3" Galvalume Steel Plates or IB XHD #15 Roofing Fasteners with IB 3-inch Round Insulation Plates at 1.33 ft <sup>2</sup>	IB PVC or IB PVC Single Ply	IB Water Borne Adhesive at 1 gal. per 125-175 ft <sup>2</sup> to substrate or IB Vertibond Adhesive at 1 gal. at 50-70 ft <sup>2</sup> to both sides.	75
SC-5	Min. 22 ga. Grade 40 Steel, Min. 2,500 psi concrete or Min. 1 <sup>9</sup> / <sub>32</sub> -inch-thick plywood	(Optional) Min. 1 <sup>1</sup> / <sub>2</sub> -inch-thick Atlas Roofing "ACFoam-II", "ACFoam-III", IB Roof "IB Energy Board II", "IB Energy Board III", Hunter Panels "H-Shield", "H-Shield CG" or Insulfoam "Insulfoam HD Composite"	Loose Laid	Min. 1/4-inch-thick Georgia Pacific "DensDeck Prime" or USG "SECUROCK Gypsum-Fiber Roof Board"	Dekfast DF-#15 HP-3 Fastener with Dekfast PLT-R-3 plates or OMG XHD, OMG #15 Roofgrip or OMG #14 Roofgrip fasteners with OMG 3" Galvalume Steel Plates or IB XHD #15 Roofing Fasteners with IB 3-inch Round Insulation Plates at 1.33 ft <sup>2</sup>	IB PVC Single Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 1 gal. per 100-160 ft <sup>2</sup> to substrate, IB Vertibond Adhesive at 1 gal. at 45-60 ft <sup>2</sup> to both sides, or ICP Adhesives CR-20 spatter-applied at 3.75 lb/sq.	75
SC-6	Min. 22 ga., Grade 40 Steel, Min. 2,500 psi concrete	Min. 2.0-inch-thick Atlas Roofing "ACFoam-III", IB Roof "IB Energy Board III", Hunter Panels "H-Shield", "H-Shield CG", Rmax "Multi-Max FA-3" or Insulfoam "Insulfoam HD Composite"	Dekfast DF-#15 HP-3 Fastener with Dekfast PLT-R-3 plates or OMG XHD, OMG #15 Roofgrip or OMG #14 Roofgrip fasteners with OMG 3" Galvalume Steel Plates or IB XHD #15 Roofing Fasteners with IB 3-inch Round Insulation Plates at 1.33 ft <sup>2</sup>	Min. 1/4-inch thick Georgia Pacific "DensDeck Prime" or USG "SECUROCK Gypsum-Fiber Roof Board"	OMG OlyBond 500 Adhesive, ICP Adhesives CR-20, Millennium One-Step Foamable Adhesive or Millennium PG-1 Pump Grade Adhesive	IB PVC or IB PVC Single Ply	IB Water Borne Adhesive at 1 gal. per 125-175 ft <sup>2</sup> to substrate or IB Vertibond Adhesive at 1 gal. at 50-70 ft <sup>2</sup> to both sides.	97.5
SC-7	Min. 22 ga., Grade 40 Steel, Min. 2,500 psi concrete	Min. 2.0-inch-thick Atlas Roofing "ACFoam-III", IB Roof "IB Energy Board III", Hunter Panels "H-Shield", "H-Shield CG", Rmax "Multi-Max FA-3" or Insulfoam "Insulfoam HD Composite"	Dekfast DF-#15 HP-3 Fastener with Dekfast PLT-R-3 plates or OMG XHD, OMG #15 Roofgrip or OMG #14 Roofgrip fasteners with OMG 3" Galvalume Steel Plates or IB XHD #15 Roofing Fasteners with IB 3-inch Round Insulation Plates at 1.33 ft <sup>2</sup>	Min. 1/4-inch thick Georgia Pacific "DensDeck Prime" or USG "SECUROCK Gypsum-Fiber Roof Board"	OMG OlyBond 500 Adhesive, ICP Adhesives CR-20, Millennium One-Step Foamable Adhesive or Millennium PG-1 Pump Grade Adhesive	IB PVC Single Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 1 gal. per 100-160 ft <sup>2</sup> to substrate, IB Vertibond Adhesive at 1 gal. at 45-60 ft <sup>2</sup> to both sides, or ICP Adhesives CR-20 spatter-applied at 3.75 lb/sq.	97.5
C-1	Concrete	Min. 2-inch-thick to max. 4-inch-thick, InsulFoam IX	OMG OlyBond 500 Adhesive	Min. 1/4-inch-thick DensDeck or SECUROCK Gypsum-Fiber Roof Board	OMG OlyBond 500 Adhesive, ICP Adhesives CR-20, Millennium One-Step Foamable Adhesive or Millennium PG-1 Pump Grade Adhesive	IB PVC Single-Ply, IB PVC Single-Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 250 ft <sup>2</sup> /gal	52
C-2	Concrete	Min. 1 <sup>1</sup> / <sub>2</sub> -inch-thick to max. 4-inch-thick, Rmax "Multi-Max FA-3"	Dow Chemical Insta Stik Quik Set Insulation Adhesive	(Optional) Min. 1/4-inch-thick DensDeck or SECUROCK Gypsum-Fiber Roof Board	Dow Chemical Insta Stik Quik Set Insulation Adhesive	IB PVC Single-Ply, IB PVC Single-Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 280 ft <sup>2</sup> /gal	68

TABLE 3—WIND RESISTANCE—ADHERED ROOFING SYSTEMS (Continued)

SYSTEM NO.	DECK <sup>3</sup>	INSULATION BASE LAYER OR BARRIER BOARD		INSULATION TOP LAYER OR COVER BOARD		MEMBRANE		ALLOWABLE WIND UPLIFT PRESSURE (psf)
		Type <sup>1,2</sup>	Attachment <sup>1,4</sup>	Type <sup>1</sup>	Attachment <sup>1,4</sup>	Type	Attachment <sup>1</sup>	
C-3	Concrete, primed with ASTM D41 primer with cold applied ASTM D6163 or D6164, Type I, Grade G sheet	Min 1 1/2-inch-thick AC Foam-II, IB EnergyBoard II, AC Foam-III, IB EnergyBoard III, Multi-Max FA-3, H-Shield, ISO 95+ GL	ICP Adhesive CR-20	(Optional) Min. 1/4-inch-thick DensDeck, SECUROCK Gypsum-Fiber Roof Board	ICP Adhesive CR-20	IB Single-Ply, IB PVC Single Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 0.357 gal/sq.	68
						IB Single-Ply or IB PVC Single Ply Fleeceback	IB Vertibond Adhesive at 0.357 gal/sq.	
C-4	Concrete (Optional) primed with Soprema's Elastocol Stick followed by Sopravap'r, self-adhered to the deck	(Optional) Min. 1.0-inch-thick H-Shield, AC Foam-II, IB EnergyBoard II, AC Foam-III, IB EnergyBoard III, H-Shield CG	OMG OlyBond 500, Millennium One Step Foamable Adhesive or IB Rapid Set Insulation Adhesive	Min. 1 1/2-inch-thick InsulFoam HD Composite	OMG OlyBond 500	IB PVC Single Ply	IB Water Borne Adhesive at 1 gal/125 – 175 ft <sup>2</sup> or with IB Vertibond Adhesive at 1 gal/50 – 70 ft <sup>2</sup>	103
						IB PVC Single Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 1 gal/100 – 160 ft <sup>2</sup> or IB Vertibond Adhesive at 1 gal/45 – 60 ft <sup>2</sup>	
C-5	Concrete, primed with Soprema "Elastocol Stick" and "Sopravap'r" self-adhered	Min. 1 1/2-inch-thick Insulfoam EPS	Millennium PG-1 Pump Grade Adhesive	Min. 1/4-inch-thick DensDeck Prime (Only with Olybond Adhesive), SECUROCK Gypsum-Fiber Roof Board	Insta Stik™ Quik Set Insulation Adhesive, Millennium PG-1 Pump Grade Adhesive or OMG OlyBond Adhesive	IB PVC Single-Ply, IB PVC Single Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 0.357 gal/sq.	105
						IB PVC Single-Ply or IB PVC Single Ply Fleeceback	IB Vertibond Adhesive at 0.357 gal/sq.	
C-6	Concrete	Min. 1 1/2-inch-thick Insulfoam EPS	Insta Stik™ Quik Set Insulation Adhesive, Millennium PG-1 Pump Grade Adhesive or OMG OlyBond Adhesive	Min. 1/4-inch-thick DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board	Insta Stik™ Quik Set Insulation Adhesive, Millennium PG-1 Pump Grade Adhesive or OMG OlyBond Adhesive	IB PVC Single-Ply, IB PVC Single Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 0.357 gal/sq.	105
						IB PVC Single-Ply or IB PVC Single Ply Fleeceback	IB Vertibond Adhesive at 0.357 gal/sq.	
C-7	Concrete, primed with Soprema "Elastocol Stick" and "Sopravap'r" self-adhered	Min. 1 1/2-inch-thick Insulfoam EPS	Insta Stik™ Quik Set Insulation Adhesive	Min. 1/4-inch-thick DensDeck Prime (Only with Olybond Adhesive), SECUROCK Gypsum-Fiber Roof Board	Insta Stik™ Quik Set Insulation Adhesive, Millennium PG-1 Pump Grade Adhesive or OMG OlyBond Adhesive	IB PVC Single-Ply, IB PVC Single Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 0.357 gal/sq.	113
						IB PVC Single-Ply or IB PVC Single Ply Fleeceback	IB Vertibond Adhesive at 0.357 gal/sq.	
C-8	Concrete primed with Soprema's Elastocol Stick followed by Sopravap'r, self-adhered to the deck	(Optional) Min. 1.0-inch-thick H-Shield, AC Foam-II, IB EnergyBoard II, AC Foam-III, IB EnergyBoard III, H-Shield CG	OMG OlyBond 500, Millennium One Step Foamable Adhesive or IB Rapid Set Insulation Adhesive	Min. 1 1/2-inch-thick InsulFoam HD Composite	OMG OlyBond 500, Millennium One Step Foamable Adhesive or IB Rapid Set Insulation Adhesive	IB PVC Single Ply	IB Water Borne Adhesive at 1 gal/125 – 175 ft <sup>2</sup> or with IB Vertibond Adhesive at 1 gal/50 – 70 ft <sup>2</sup>	115
						IB PVC Single Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 1 gal/100 – 160 ft <sup>2</sup> or IB Vertibond Adhesive at 1 gal/45 – 60 ft <sup>2</sup>	
C-9	Concrete	One or more layers, min. 2-inch-thick polystyrene insulation	OMG OlyBond 500 Adhesive	Min. 1/4-inch-thick DensDeck or SECUROCK Gypsum-Fiber Roof Board	OMG OlyBond 500 Adhesive	IB PVC Single-Ply, IB PVC Single-Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 280 ft <sup>2</sup> /gal	120
C-10	Concrete	Min. 1 1/2-inch-thick to max. 4-inch-thick, IB Roof "IB Energy Board II", Atlas Roofing Corp. "ACFoam II" or UL-classified polystyrene insulation	Dow Chemical Insta Stik Quik Set Insulation Adhesive	(Optional) Min. 1/4-inch-thick DensDeck or SECUROCK Gypsum-Fiber Roof Board	Dow Chemical Insta-Stik Roofing Adhesive	IB Single-Ply or Single-Ply Fleece Back	IB Water Borne Adhesive at 280 ft <sup>2</sup> /gal	120

TABLE 3—WIND RESISTANCE—ADHERED ROOFING SYSTEMS (Continued)

SYSTEM NO.	DECK <sup>3</sup>	INSULATION BASE LAYER OR BARRIER BOARD		INSULATION TOP LAYER OR COVER BOARD		MEMBRANE		ALLOWABLE WIND UPLIFT PRESSURE (psf)
		Type <sup>1,2</sup>	Attachment <sup>1,4</sup>	Type <sup>1</sup>	Attachment <sup>1,4</sup>	Type	Attachment <sup>1</sup>	
C-11	Concrete	One or more layers, min. 1.5-inch-thick polystyrene insulation	IBond Insulation Adhesive at 12 inches o.c.	Min. 1/4-inch-thick DensDeck or SECUROCK Gypsum-Fiber Roof Board	IBond Insulation Adhesive at 12 inches o.c., perpendicular to bottom layer	IB PVC Single-Ply, IB PVC Single-Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 280 ft <sup>2</sup> /gal	142
C-12	Concrete	Min. 1.5-inch-thick to max. 4-inch-thick, IB Roof "IB Energy Board II", Atlas Roofing Corp. "ACFoam II"	OMG OlyBond 500 adhesive	Min. 1/4-inch-thick DensDeck or SECUROCK Gypsum-Fiber Roof Board	OMG OlyBond 500 Adhesive	IB PVC Single-Ply, or IB PVC Single-Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 280 ft <sup>2</sup> /gal	150
C-13	Concrete, primed with ASTM D41 primer with torch applied ASTM D6163 or D6222 sheet	Min 1.5-inch-thick ACFoam-II, IB EnergyBoard II, ACFoam-III, IB EnergyBoard III, Multi-Max FA-3, H-Shield, ISO 95+ GL	ICP Adhesive CR-20	(Optional) Min. 0.25-inch-thick DensDeck, SECUROCK Gypsum-Fiber Roof Board	ICP Adhesive CR-20	IB Single-Ply, IB PVC Single Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 0.357 gal/sq.	169
C-14	Concrete, primed with ASTM D41 primer with torch applied ASTM D6163 or D6222 sheet	Min. 1.5-inch-thick Insulfoam EPS	ICP Adhesive CR-20	Min. 0.25-inch-thick DensDeck, SECUROCK Gypsum-Fiber Roof Board	ICP Adhesive CR-20	IB PVC Single Ply	IB Water Borne Adhesive at 1 gal/125 – 175 ft <sup>2</sup> or with IB Vertibond Adhesive at 1 gal/50 – 70 ft <sup>2</sup>	169
						IB PVC Single Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 1 gal/100 – 160 ft <sup>2</sup> or IB Vertibond Adhesive at 1 gal/45 – 60 ft <sup>2</sup>	
C-15	Concrete, primed with ASTM D41 primer with asphalt applied ASTM D6163 or D6164, Type I, Grade G sheet	Min. 1.5-inch-thick Insulfoam EPS	ICP Adhesive CR-20	Min. 0.25-inch-thick DensDeck, SECUROCK Gypsum-Fiber Roof Board	ICP Adhesive CR-20	IB PVC Single Ply	IB Water Borne Adhesive at 1 gal/125 – 175 ft <sup>2</sup> or with IB Vertibond Adhesive at 1 gal/50 – 70 ft <sup>2</sup>	180
						IB PVC Single Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 1 gal/100 – 160 ft <sup>2</sup> or IB Vertibond Adhesive at 1 gal/45 – 60 ft <sup>2</sup>	
C-16	Concrete, primed with ASTM D41 primer followed by a self-adhering ASTM D6163 or D6164, Type I, Grade G sheet	Min. 1.5-inch-thick Insulfoam EPS	ICP Adhesive CR-20	Min. 0.25-inch-thick DensDeck, SECUROCK Gypsum-Fiber Roof Board	ICP Adhesive CR-20	IB PVC Single Ply	IB Water Borne Adhesive at 1 gal/125 – 175 ft <sup>2</sup> or with IB Vertibond Adhesive at 1 gal/50 – 70 ft <sup>2</sup>	180
						IB PVC Single Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 1 gal/100 – 160 ft <sup>2</sup> or IB Vertibond Adhesive at 1 gal/45 – 60 ft <sup>2</sup>	
C-17	Concrete	One or more layers, min. 1.5-inch-thick polystyrene insulation	Polyfoam Products Tite-Set Insulation Adhesive or 3M CR-20	Min. 1/4-inch-thick DensDeck or SECUROCK Gypsum-Fiber Roof Board	Polyfoam Products Tite-Set Insulation Adhesive or 3M CR-20	IB Single-Ply or Single-Ply Fleece Back	IB Water Borne Adhesive at 280 ft <sup>2</sup> /gal	180

TABLE 3—WIND RESISTANCE—ADHERED ROOFING SYSTEMS (Continued)

SYSTEM NO.	DECK <sup>3</sup>	INSULATION BASE LAYER OR BARRIER BOARD		INSULATION TOP LAYER OR COVER BOARD		MEMBRANE		ALLOWABLE WIND UPLIFT PRESSURE (psf)
		Type <sup>1,2</sup>	Attachment <sup>1,4</sup>	Type <sup>1</sup>	Attachment <sup>1,4</sup>	Type	Attachment <sup>1</sup>	
C-18	Concrete	Min. 1.5-inch-thick Insulfoam EPS	Millennium PG-1 Pump Grade Adhesive or OMG OlyBond Adhesive	Min. 0.25-inch-thick DensDeck Prime (Only with Olybond Adhesive), SECUROCK Gypsum-Fiber Roof Board	Insta Stik™ Quik Set Insulation Adhesive, Millennium PG-1 Pump Grade Adhesive, OMG OlyBond Adhesive	IB PVC Single-Ply, IB PVC Single Ply Fleeceback or IB PVC Fleeceback IB PVC Single-Ply or IB PVC Single Ply Fleeceback	IB Water Borne Adhesive at 0.357 gal/sq. IB Vertibond Adhesive at 0.357 gal/sq.	188
C-19	Concrete	One or more layers, min. 1.5-inch-thick polystyrene insulation	IBond Insulation Adhesive at 6 inches o.c.	Min. 1/4-inch-thick DensDeck or SECUROCK Gypsum-Fiber Roof Board	IBond Insulation Adhesive at 6 inches o.c., perpendicular to bottom layer	IB PVC Single-Ply, IB PVC Single-Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 280 ft <sup>2</sup> /gal	188
C-20	Concrete	One or more layers, min. 1.5-inch-thick, Rmax "Multi-Max FA-3", IB Roof "IB Energy Board II" or Atlas Roofing Corp. "ACFoam II"	Hot asphalt, ICP Adhesive CR-20, or Millennium One-Step Foamable Adhesive	---	---	IB PVC Single-Ply, IB PVC Single-Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 280 ft <sup>2</sup> /gal	215
C-21	Concrete	Min. 1.5-inch-thick to max. 4-inch-thick, Rmax "Multi-Max FA-3", IB Roof "IB Energy Board II" or Atlas Roofing Corp. "ACFoam II"	Millennium One-Step Foamable Adhesive	Min. 1/4-inch-thick DensDeck or SECUROCK Gypsum-Fiber Roof Board	Millennium One-Step Foamable Adhesive	IB PVC Single-Ply, IB PVC Single-Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 280 ft <sup>2</sup> /gal	232
C-22	Concrete	One or more layers, min. 1-inch-thick Atlas Roofing "ACFoam-II", "ACFoam-III", IB Roof "IB Energy Board II", "IB Energy Board III" Hunter Panels "H-Shield", "H-Shield CG", Rmax "Multi-Max FA-3", "UltraMax"	ICP Adhesives CR-20	---	---	IB PVC, IB PVC Single Ply, IB PVC Single Ply Fleeceback or IB PVC Fleeceback	IB Vertibond Adhesive at 60 ft <sup>2</sup> /gal, IB Water Borne Adhesive at 250 ft <sup>2</sup> /gal or ICP Adhesives CR-20 (fleeceback only) spatter-applied at 3.75 lb/sq.	250
C-23	Concrete	One or more layers, min. 1.5-inch-thick, Rmax "Multi-Max FA-3", IB Roof "IB Energy Board II" or Atlas Roofing Corp. "ACFoam II"	Hot asphalt, ICP Adhesives CR-20	Min. 1/4-inch-thick DensDeck or SECUROCK Gypsum-Fiber Roof Board	Hot asphalt, Polyfoam Products Tite-Set Insulation Adhesive or 3M CR-20	IB PVC Single-Ply, IB PVC Single-Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 280 ft <sup>2</sup> /gal	255
C-24	Concrete	Min. 1.0-inch-thick Thermapink 25	OMG OlyBond 500 Adhesive	Min. 0.25-inch-thick DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board	OMG OlyBond 500 Adhesive	IB PVC Single-Ply, IB PVC Single Ply Fleeceback or IB PVC Fleeceback IB PVC Single-Ply or IB PVC Single Ply Fleeceback	IB Water Borne Adhesive at 0.357 gal/sq. IB Vertibond Adhesive at 0.357 gal/sq.	255
C-25	Concrete	Min. 1.0-inch-thick Thermapink 25	OMG OlyBond 500 Adhesive	Min. 0.25-inch-thick DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board	OMG OlyBond 500 Adhesive	IB PVC Single Ply IB PVC Single Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 1 gal/125 – 175 ft <sup>2</sup> or with IB Vertibond Adhesive at 1 gal/50 – 70 ft <sup>2</sup> IB Water Borne Adhesive at 1 gal/100 – 160 ft <sup>2</sup> or IB Vertibond Adhesive at 1 gal/45 – 60 ft <sup>2</sup>	255

TABLE 3—WIND RESISTANCE—ADHERED ROOFING SYSTEMS (Continued)

SYSTEM NO.	DECK <sup>3</sup>	INSULATION BASE LAYER OR BARRIER BOARD		INSULATION TOP LAYER OR COVER BOARD		MEMBRANE		ALLOWABLE WIND UPLIFT PRESSURE (psf)
		Type <sup>1,2</sup>	Attachment <sup>1,4</sup>	Type <sup>1</sup>	Attachment <sup>1,4</sup>	Type	Attachment <sup>1</sup>	
C-26	Concrete, primed with ASTM D41 primer with asphalt applied ASTM D6163 or D6164, Type I, Grade G sheet	Min 1.5-inch-thick AC Foam-II, IB EnergyBoard II, AC Foam-III, IB EnergyBoard III, Multi-Max FA-3, H-Shield, ISO 95+ GL	ICP Adhesive CR-20	Min. 0.25-inch-thick DensDeck, SECUROCK Gypsum-Fiber Roof Board	ICP Adhesive CR-20	IB PVC Single Ply	IB Water Borne Adhesive at 1 gal/125 – 175 ft <sup>2</sup> or with IB Vertibond Adhesive at 1 gal/50 – 70 ft <sup>2</sup>	255
						IB PVC Single Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 1 gal/100 – 160 ft <sup>2</sup> or IB Vertibond Adhesive at 1 gal/45 – 60 ft <sup>2</sup>	
C-27	Concrete	Min. 1.0-inch-thick H-Shield, AC Foam-II, IB EnergyBoard II, AC Foam-III, IB EnergyBoard III, H-Shield CG	OMG OlyBond 500, Millennium One Step Foamable Adhesive or IB Rapid Set Insulation Adhesive	Min. 0.25-inch-thick DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board, AC Foam-HD Coverboard	OMG OlyBond 500, Millennium One Step Foamable Adhesive or IB Rapid Set Insulation Adhesive	IB PVC Single Ply	IB Water Borne Adhesive at 1 gal/125 – 175 ft <sup>2</sup> or IB Vertibond Adhesive at 1 gal/50 – 70 ft <sup>2</sup>	258
						IB PVC Single Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 1 gal/100 – 160 ft <sup>2</sup> or IB Vertibond Adhesive at 1 gal/45 – 60 ft <sup>2</sup>	
C-28	Concrete, primed with ASTM D41 primer with asphalt applied ASTM D6163 or D6164, Type I, Grade G sheet	Min 1.5-inch-thick AC Foam-II, IB EnergyBoard II, AC Foam-III, IB EnergyBoard III, Multi-Max FA-3, H-Shield, ISO 95+ GL	ICP Adhesive CR-20	N/A	N/A	IB PVC Single Ply	IB Water Borne Adhesive at 1 gal/125 – 175 ft <sup>2</sup> or with IB Vertibond Adhesive at 1 gal/50 – 70 ft <sup>2</sup>	263
						IB PVC Single Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 1 gal/100 – 160 ft <sup>2</sup> or IB Vertibond Adhesive at 1 gal/45 – 60 ft <sup>2</sup>	
C-29	Concrete, primed with ASTM D41 primer followed by a self-adhering ASTM D6163 or D6164, Type I, Grade G sheet	Min 1.5-inch-thick AC Foam-II, IB EnergyBoard II, AC Foam-III, IB EnergyBoard III, Multi-Max FA-3, H-Shield, ISO 95+ GL	ICP Adhesive CR-20	N/A	N/A	IB PVC Single-Ply, IB PVC Single Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 0.357 gal/sq.	263
						IB PVC Single-Ply or IB PVC Single Ply Fleeceback	IB Vertibond Adhesive at 0.357 gal/sq.	
C-30	Concrete, primed with ASTM D41 primer	Min 1.5-inch-thick AC Foam-II, IB EnergyBoard II, AC Foam-III, IB EnergyBoard III, Multi-Max FA-3, H-Shield, ISO 95+ GL	ICP Adhesive CR-20	N/A	N/A	IB PVC Single-Ply, IB PVC Single Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 0.357 gal/sq.	263
						IB PVC Single-Ply or IB PVC Single Ply Fleeceback	IB Vertibond Adhesive at 0.357 gal/sq.	
C-31	Concrete, primed with ASTM D41 primer with asphalt applied ASTM D6163 or D6164, Type I, Grade G sheet	Min 1.5-inch-thick AC Foam-II, IB EnergyBoard II, AC Foam-III, IB EnergyBoard III, Multi-Max FA-3, H-Shield, ISO 95+ GL	ICP Adhesive CR-20	N/A	N/A	IB PVC Single-Ply, IB PVC Single Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 0.357 gal/sq.	263
						IB PVC Single-Ply or IB PVC Single Ply Fleeceback	IB Vertibond Adhesive at 0.357 gal/sq.	

TABLE 3—WIND RESISTANCE—ADHERED ROOFING SYSTEMS (Continued)

SYSTEM NO.	DECK <sup>3</sup>	INSULATION BASE LAYER OR BARRIER BOARD		INSULATION TOP LAYER OR COVER BOARD		MEMBRANE		ALLOWABLE WIND UPLIFT PRESSURE (psf)
		Type <sup>1,2</sup>	Attachment <sup>1,4</sup>	Type <sup>1</sup>	Attachment <sup>1,4</sup>	Type	Attachment <sup>1</sup>	
C-32	Concrete	(Optional) Min. 1.0-inch-thick H-Shield, ACFoam-II, IB EnergyBoard II, ACFoam-III, IB EnergyBoard III, H-Shield CG	OMG OlyBond 500, Millennium One Step Foamable Adhesive or IB Rapid Set Insulation Adhesive	Min. 0.25-inch-thick SECUROCK Gypsum-Fiber Roof Board	OMG OlyBond 500, Millennium One Step Foamable Adhesive or IB Rapid Set Insulation Adhesive	IB PVC Single Ply	IB Water Borne Adhesive at 1 gal/125 – 175 ft <sup>2</sup> or IB Vertibond Adhesive at 1 gal/50 – 70 ft <sup>2</sup>	268
						IB PVC Single Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 1 gal/100 – 160 ft <sup>2</sup> or IB Vertibond Adhesive at 1 gal/45 – 60 ft <sup>2</sup>	
C-33	Concrete	One or more layers, min. 1-inch-thick Atlas Roofing “ACFoam-II”, “ACFoam-III”, IB Roof “IB Energy Board II”, “IB Energy Board III”, Hunter Panels “H-Shield”, “H-Shield CG”, Rmax “Multi-Max FA-3”, “UltraMax”	ICP Adhesive CR-20	Min. 1/4-inch-thick Georgia Pacific “DensDeck Prime” or USG “SECUROCK Gypsum-Fiber Roof Board”	ICP Adhesives CR-20	IB PVC, IB PVC Single Ply, IB PVC Single Ply Fleeceback, IB PVC Fleeceback	IB Vertibond Adhesive at 60 ft <sup>2</sup> /gal, IB Water Borne Adhesive at 250 ft <sup>2</sup> /gal or ICP Adhesives CR-20 (fleeceback only) spatter-applied at 3.75 lb/sq	273
C-34	Concrete, primed with Elastocol Stick or Elastocol Stick Zero at a rate of 0.5 gal/sq.	Sopravap'r, self-adhered to the concrete deck followed by a min. 1.0-inch-thick H-Shield, ACFoam-II, IB EnergyBoard II, ACFoam-III, IB EnergyBoard III, H-Shield CG	OMG OlyBond 500, Millennium One Step Foamable Adhesive or IB Rapid Set Insulation Adhesive	N/A	N/A	IB PVC Single Ply	IB Water Borne Adhesive at 1 gal/125 – 175 ft <sup>2</sup> or IB Vertibond Adhesive at 1 gal/50 – 70 ft <sup>2</sup>	290
						IB PVC Single Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 1 gal/100 – 160 ft <sup>2</sup> or IB Vertibond Adhesive at 1 gal/45 – 60 ft <sup>2</sup>	
C-35	Concrete, primed with Elastocol Stick or Elastocol Stick Zero. Followed by Sopravap'r, self-adhered to deck	Min. 1.0-inch-thick H-Shield, ACFoam-II, IB EnergyBoard II, ACFoam-III, IB EnergyBoard III, H-Shield CG	OMG OlyBond 500, Millennium One Step Foamable Adhesive or IB Rapid Set Insulation Adhesive	Min. 0.25-inch-thick DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board	OMG OlyBond 500, Millennium One Step Foamable Adhesive or IB Rapid Set Insulation Adhesive	IB PVC Single Ply	IB Water Borne Adhesive at 1 gal/125 – 175 ft <sup>2</sup> or IB Vertibond Adhesive at 1 gal/50 – 70 ft <sup>2</sup>	308
						IB PVC Single Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 1 gal/100 – 160 ft <sup>2</sup> or IB Vertibond Adhesive at 1 gal/45 – 60 ft <sup>2</sup>	
C-36	Concrete	Min. 1.0-inch-thick H-Shield, ACFoam-II, IB EnergyBoard II, ACFoam-III, IB EnergyBoard III, H-Shield CG	OMG OlyBond 500, Millennium One Step Foamable Adhesive or IB Rapid Set Insulation Adhesive	N/A	N/A	IB PVC Single Ply	IB Water Borne Adhesive at 1 gal/125 – 175 ft <sup>2</sup> or IB Vertibond Adhesive at 1 gal/50 – 70 ft <sup>2</sup>	328
						IB PVC Single Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 1 gal/100 – 160 ft <sup>2</sup> or IB Vertibond Adhesive at 1 gal/45 – 60 ft <sup>2</sup>	
C-37	Concrete	---	---	---	---	IB PVC Single-Ply Fleeceback	IB Water Borne Adhesive at 250 ft <sup>2</sup> /gal or IB Vertibond Adhesive at 60 ft <sup>2</sup> /gal	420
C-38	Concrete	---	---	---	---	IB PVC Single-Ply, IB PVC Single-Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 280 ft <sup>2</sup> /gal	512



TABLE 3—WIND RESISTANCE—ADHERED ROOFING SYSTEMS (Continued)

SYSTEM NO.	DECK <sup>3</sup>	INSULATION BASE LAYER OR BARRIER BOARD		INSULATION TOP LAYER OR COVER BOARD		MEMBRANE		ALLOWABLE WIND UPLIFT PRESSURE (psf)
		Type <sup>1,2</sup>	Attachment <sup>1,4</sup>	Type <sup>1</sup>	Attachment <sup>1,4</sup>	Type	Attachment <sup>1</sup>	
LC-1	Elastizell lightweight concrete, min. 200 psi	One or more layers, min. 1.5-inch-thick polystyrene insulation	IBond Insulation Adhesive at 12 inches o.c.	Min. 1/4-inch-thick DensDeck or SECUROCK Gypsum-Fiber Roof Board	IBond Insulation Adhesive at 12 inches o.c., perpendicular to bottom layer	IB PVC Single-Ply, IB PVC Single-Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 280 ft <sup>2</sup> /gal	52
LC-2	Elastizell lightweight concrete, min. 200 psi	One or more layers, min. 1.5-inch-thick polystyrene insulation	ICP Adhesive CR-20	(Optional) Min. 1/4-inch-thick DensDeck or SECUROCK Gypsum-Fiber Roof Board	ICP Adhesive CR-20	IB PVC Single-Ply, IB PVC Single-Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 280 ft <sup>2</sup> /gal	128
LC-3	Elastizell lightweight concrete, min. 200 psi	One or more layers, min. 1.5-inch-thick polystyrene insulation	IBond Insulation Adhesive at 6 inches o.c.	Min. 1/4-inch-thick DensDeck or SECUROCK Gypsum-Fiber Roof Board	IBond Insulation Adhesive at 6 inches o.c., perpendicular to bottom layer	IB PVC Single-Ply, IB PVC Single-Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 280 ft <sup>2</sup> /gal	165
LC-4	Elastizell lightweight concrete, min. 200 psi	One or more layers, min. 1.5-inch-thick, Rmax "Multi-Max FA-3", IB Roof "IB Energy Board II" or Atlas Roofing Corp. "ACFoam II"	ICP Adhesives CR-20	(Optional) Min. 1/4-inch-thick DensDeck or SECUROCK Gypsum-Fiber Roof Board	ICP Adhesive CR-20	IB PVC Single-Ply, IB PVC Single-Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 280 ft <sup>2</sup> /gal	180
LC-5	Elastizell lightweight concrete, min. 200 psi	One or more layers, min. 1.5-inch-thick, Rmax "Multi-Max FA-3", IB Roof "IB Energy Board II", or Atlas Roofing Corp. "ACFoam II"	IBond Insulation Adhesive at 6 inches o.c. or OMG OlyBond 500 Adhesive; subsequent layer perpendicular to bottom layer	---	---	IB PVC Single-Ply, IB PVC Single-Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 280 ft <sup>2</sup> /gal	215
LC-6	Elastizell lightweight concrete, min. 200 psi	One or more layers, min. 1.5-inch-thick, Rmax "Multi-Max FA-3", IB Roof "IB Energy Board II", or Atlas Roofing Corp. "ACFoam II"	IBond Insulation Adhesive at 6 inches o.c.	Min. 1/4-inch-thick DensDeck or SECUROCK Gypsum-Fiber Roof Board	IBond Insulation Adhesive at 6 inches o.c., perpendicular to bottom layer	IB PVC Single-Ply, IB PVC Single-Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 280 ft <sup>2</sup> /gal	218
LC-7	Elastizell lightweight concrete, min. 200 psi	One or more layers, min. 1.5-inch-thick, Rmax "Multi-Max FA-3", IB Roof "IB Energy Board II", or Atlas Roofing Corp. "ACFoam II"	OMG OlyBond 500 Adhesive	Min. 1/4-inch-thick DensDeck or SECUROCK Gypsum-Fiber Roof Board	OMG OlyBond 500 Adhesive, perpendicular to bottom layer	IB PVC Single-Ply, IB PVC Single-Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 280 ft <sup>2</sup> /gal	225
LC-8	Elastizell lightweight concrete, min. 200 psi	---	---	---	---	IB PVC Single-Ply, IB PVC Single-Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 280 ft <sup>2</sup> /gal	242
CWF-1	"Tectum 1" cementitious wood fiber	One or more layers, min. 1.5-inch-thick, Rmax "Multi-Max FA-3" IB Roof "IB Energy Board II", or Atlas Roofing Corp. "ACFoam II"	OMG OlyBond 500 Adhesive	(Optional) Min. 1/4-inch-thick DensDeck or SECUROCK Gypsum-Fiber Roof Board	OMG OlyBond 500 Adhesive	IB PVC Single-Ply, IB PVC Single-Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 280 ft <sup>2</sup> /gal	45

TABLE 3—WIND RESISTANCE—ADHERED ROOFING SYSTEMS (Continued)

SYSTEM NO.	DECK <sup>3</sup>	INSULATION BASE LAYER OR BARRIER BOARD		INSULATION TOP LAYER OR COVER BOARD		MEMBRANE		ALLOWABLE WIND UPLIFT PRESSURE (psf)
		Type <sup>1,2</sup>	Attachment <sup>1,4</sup>	Type <sup>1</sup>	Attachment <sup>1,4</sup>	Type	Attachment <sup>1</sup>	
CWF-2	"Tectum 1" cementitious wood fiber	One or more layers, min. 1.5-inch-thick, Rmax "Multi-Max FA-3", IB Roof "IB Energy Board II", Atlas Roofing Corp. "ACFoam II" or ACFoam III", Firestone "ISO95+GL", Hunter Panels "H-Shield" or Johns Manville "ENRGY 3"	ICP Adhesives CR-20	(Optional) Min. 1/4-inch-thick DensDeck or SECUROCK Gypsum-Fiber Roof Board	ICP Adhesives CR-20	IB PVC Single-Ply, IB PVC Single-Ply Fleeceback or IB PVC Fleeceback	IB Water Borne Adhesive at 280 ft <sup>2</sup> /gal	52

For SI: 1 inch = 25.4 mm; 1 ft. = 0.305 m; 1 psf = 47.88 Pa; 1 gal = 3.785 L.

<sup>1</sup>Insulation, adhesives and fasteners must be FM-approved or Trinity/ERD-approved.

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

<sup>3</sup>Wood deck must be minimum 15/32-inch-thick (11.9 mm) plywood. Steel deck must be minimum No. 22 gage galvanized steel [0.030 inch (0.76 mm)]. Concrete must have a minimum compressive strength (*f<sub>c</sub>*) of 2500 psi, unless otherwise noted. See Section 5.7 of this report.

<sup>4</sup>Application rate for the following insulation adhesives are as follows:

Hot asphalt – 25 lbs. per 100 ft<sup>2</sup>

IBond Insulation Adhesive in continuous 1/2-inch beads spaced 6 inches or 12 inches o.c. as noted in tables.

IB Rapid Set Insulation Adhesive in continuous 3/4 to 1-inch ribbons spaced 12 inches o.c.

Dow Chemical Company Insta-Stick Roofing Adhesive in continuous 3/4 to 1-inch beads spaced 12 inches o.c.

H.B. Fuller Millennium One Step Foamable Adhesive in continuous 3/4 to 1-inch ribbons spaced 12 inches o.c.

H.B. Fuller Millennium PG-1 Pump Grade Adhesive in continuous 3/4 to 1-inch ribbons spaced 12 inches o.c.

OMG OlyBond 500 Adhesive in continuous 3/4 to 1-inch ribbons spaced 12 inches o.c.

ICP Adhesives CR-20 in continuous 3 to 3 1/2-inch ribbons spaced 12 inches o.c.

<sup>5</sup>FM preliminary fastening requirements to consist of IB SD#12 Insulation Fastener with IB 3-inch Round Metal Galvalume Insulation Plate at 1 fastener per 8 ft<sup>2</sup>.

TABLE 4—WIND RESISTANCE – WELDED ROOFING SYSTEMS<sup>1,2</sup>

SYSTEM NO.	DECK <sup>3</sup>	INSULATION		MEMBRANE		ALLOWABLE WIND UPLIFT PRESSURE (psf)
		Type <sup>1,2</sup>	Attachment <sup>1,4</sup>	Type	Attachment <sup>1</sup>	
W-1	<sup>19</sup> / <sub>32</sub> -inch Wood	Min. 1-inch-thick to max. 4-inch-thick, Atlas Roofing “ACFoam-II”, “ACFoam-III”, IB Roof “IB Energy Board II”, “IB Energy Board III”, Hunter Panels “H-Shield”, “H-Shield CG”, Rmax “Multi-Max FA-3” or Min. <sup>1</sup> / <sub>4</sub> -inch-thick Georgia Pacific “DensDeck” or USG “SECUROCK Gypsum-Fiber Roof Board”	IB XHD #15 with IB 3” isoweld Plates or Dekfast DF-#15-PH3 with SFS <i>isoweld</i> ® FI-P-6.8-PVC plates at 1 fastener per 4 ft <sup>2</sup>	IB PVC or IB PVC Single-Ply	Membrane is bonded to <i>isoweld</i> ® plates with <i>isoweld</i> ® bonding tool.	45
W-2	<sup>7</sup> / <sub>16</sub> -inch OSB	Min. 1-inch-thick to max. 4-inch-thick, Atlas Roofing “ACFoam-II”, “ACFoam-III”, IB Roof “IB Energy Board II”, “IB Energy Board III”, Hunter Panels “H-Shield”, “H-Shield CG”, Rmax “Multi-Max FA-3” or Min. <sup>1</sup> / <sub>4</sub> -inch-thick Georgia Pacific “DensDeck” or USG “SECUROCK Gypsum-Fiber Roof Board”	IB XHD #15 with IB 3” isoweld Plates or Dekfast DF-#15-PH3 with SFS <i>isoweld</i> ® FI-P-6.8-PVC plates are fastened through to deck spaced 12-inch o.c. in rows spaced 48-inch. o.c.	IB PVC or IB PVC Single-Ply	Membrane is bonded to <i>isoweld</i> ® plates with <i>isoweld</i> ® bonding tool.	67.5
W-3	<sup>7</sup> / <sub>16</sub> -inch OSB	Min. 1-inch-thick to max. 4-inch-thick, Atlas Roofing “ACFoam-II”, “ACFoam-III”, IB Roof “IB Energy Board II”, “IB Energy Board III”, Hunter Panels “H-Shield”, “H-Shield CG”, Rmax “Multi-Max FA-3” or Min. <sup>1</sup> / <sub>4</sub> -inch-thick Georgia Pacific “DensDeck” or USG “SECUROCK Gypsum-Fiber Roof Board”	IB XHD #15 with IB 3” isoweld Plates or Dekfast DF-#15-PH3 with SFS <i>isoweld</i> ® FI-P-6.8-PVC plates are fastened through to deck spaced 9-inch o.c. in rows spaced 48-inch. o.c.	IB PVC or IB PVC Single-Ply	Membrane is bonded to <i>isoweld</i> ® plates with <i>isoweld</i> ® bonding tool.	97.5

TABLE 4—WIND RESISTANCE – WELDED ROOFING SYSTEMS<sup>1,2</sup> (Continued)

SYSTEM NO.	DECK <sup>3</sup>	INSULATION		MEMBRANE		ALLOWABLE WIND UPLIFT PRESSURE (psf)
		Type <sup>1,2</sup>	Attachment <sup>1,4</sup>	Type	Attachment <sup>1</sup>	
SC-1	Grade 80 Steel, Min. 2,500 psi concrete	Min. 1.5-inch-thick polyisocyanurate insulation	IB SD #12 (steel only), IB HD #14 (concrete only) or IB XHD #15 with IB 3" isoweld Plates or Dekfast DF-#12-PH3 (steel only), Dekfast DF-#14 PH-3 (concrete only) or Dekfast DF-#15 PH-3 with SFS <i>isoweld</i> ® FI-P-6.8-PVC plates at 1 fastener per 6 ft <sup>2</sup>	IB PVC or IB PVC Single-Ply	Membrane is bonded to <i>isoweld</i> ® plates with <i>isoweld</i> ® bonding tool.	38
SC-2	Grade 40 Steel, Min. 2,500 psi concrete	Min. 1.5-inch-thick polyisocyanurate insulation	IB HD #14 (concrete only) or IB XHD #15 with IB 3" isoweld Plates or Dekfast DF-#14 PH-3 (concrete only), Dekfast DF-#15-PH3 with SFS <i>isoweld</i> ® FI-P-6.8-PVC plates at 1 fastener per 6 ft <sup>2</sup>	IB PVC or IB PVC Single-Ply	Membrane is bonded to <i>isoweld</i> ® plates with <i>isoweld</i> ® bonding tool.	38
SC-3	Grade 80 Steel, Min. 2,500 psi concrete	Min. 1.5-inch-thick polyisocyanurate insulation	IB SD #12 (steel only), IB HD #14 (concrete only) or IB XHD #15 with IB 3" isoweld Plates or Dekfast DF-#12-PH3 (steel only), Dekfast DF-#14 PH-3 (concrete only) or Dekfast DF-#15 PH-3 with SFS <i>isoweld</i> ® FI-P-6.8-PVC plates at 12-inch in rows spaced 60"	IB PVC or IB PVC Single-Ply	Membrane is bonded to <i>isoweld</i> ® plates with <i>isoweld</i> ® bonding tool.	45
SC-4	Grade 40 Steel, Min. 2,500 psi concrete	Min. 1.5-inch-thick polyisocyanurate insulation	IB HD #14 (concrete only) or IB XHD #15 with IB 3" isoweld Plates or Dekfast DF-#14 PH-3 (concrete only), Dekfast DF-#15-PH3 with SFS <i>isoweld</i> ® FI-P-6.8-PVC plates at 1 fastener per 4 ft <sup>2</sup>	IB PVC or IB PVC Single-Ply	Membrane is bonded to <i>isoweld</i> ® plates with <i>isoweld</i> ® bonding tool.	53
SC-5	Grade 40 Steel, Min. 2,500 psi concrete	Min. 1.5-inch-thick polyisocyanurate insulation	IB HD #14 (concrete only) or IB XHD #15 with IB 3" isoweld Plates or Dekfast DF-#14 PH-3 (concrete only), Dekfast DF-#15-PH3 with SFS <i>isoweld</i> ® FI-P-6.8-PVC plates at 1 fastener per 3 ft <sup>2</sup>	IB PVC or IB PVC Single-Ply	Membrane is bonded to <i>isoweld</i> ® plates with <i>isoweld</i> ® bonding tool.	83
SC-6	Grade 40 Steel, Min. 2,500 psi concrete	Min. 1.5-inch-thick polyisocyanurate insulation	IB HD #14 (concrete only) or IB XHD #15 with IB 3" isoweld Plates or Dekfast DF-#14 PH-3 (concrete only), Dekfast DF-#15-PH3 with SFS <i>isoweld</i> ® FI-P-6.8-PVC plates at 6-inch in rows spaced 60"	IB PVC or IB PVC Single-Ply	Membrane is bonded to <i>isoweld</i> ® plates with <i>isoweld</i> ® bonding tool.	90

For SI: 1 inch = 25.4 , 1 psf=47.88 Pa

<sup>1</sup>Insulation and fasteners must be FM-approved. Foam plastic insulation must be UL-classified foamed plastic for roofing systems, and must be limited to the maximum thickness in accordance with Section 5.4 of this report or the maximum thickness in accordance with this table, whichever is less. Polyisocyanurate insulation boards must comply with ASTM C1289 Type I or II.

<sup>2</sup>Steel deck must be minimum No. 22 gage galvanized steel [0.030 inch (0.76 mm)]. Concrete must have a minimum compressive strength ( $f_c$ ) of 2500 psi [minimum of 24 MPa is required under ADIBC Appendix L, Section 5.1.1]. See Section 5.6.

**TABLE 5—WIND RESISTANCE – MECHANICALLY FASTENED ROOFING SYSTEMS**

SYSTEM NO.	DECK <sup>3</sup>	INSULATION		MEMBRANE		ALLOWABLE WIND UPLIFT PRESSURE (psf)
		Type <sup>1,2</sup>	Attachment <sup>1</sup>	Type	Attachment <sup>1,4</sup>	
MW-1	Wood	1.5-inch-thick polyisocyanurate insulation	IB SD #12 Insulation Fastener with IB 3-inch Round Metal Insulation Plate at 1 fastener per 8 ft <sup>2</sup>	IB PVC Single-Ply	IB HD #14 Heavy Duty Roofing Fasteners with 2-inch Barbed Seam Plates, 12 inches o.c. along min. 5-inch side laps, in rows 5 ft-7 inches o.c.	30
MW-2	Wood	1.5-inch-thick polyisocyanurate insulation	IB SD #12 Insulation Fastener with IB 3-inch Round Metal Insulation Plate at 1 fastener per 5.3 ft <sup>2</sup>	IB PVC Single-Ply	IB HD #14 Heavy Duty Roofing Fasteners with 2-inch Barbed Seam Plates, 6 inches o.c. along min. 5-inch side laps, in rows 5 ft-7 inches o.c.	45
MW-3	<sup>19</sup> / <sub>32</sub> -inch Wood	Min. 1-inch-thick to max. 4-inch-thick, Atlas Roofing "ACFoam-II", "ACFoam-III", IB Roof "IB Energy Board II", "IB Energy Board III", Hunter Panels "H-Shield", "H-Shield CG", Rmax "Multi-Max FA-3", Firestone Bldg. Products "ISO 95+GL" or Johns Manville "ENRGY 3"	IB SD #12 Insulation Fastener with IB 3-inch Round Metal Insulation Plate at 1 fastener per 8 ft <sup>2</sup>	IB PVC or IB PVC Single-Ply	IB XHD #15 Roofing Fastener with IB 2-3/8" Barbed Seam Plates, Dekfast DF-#15-PH3 with Dekfast Galvalume Steel Round 2-3/8" Barbed Plates, OMG XHD with OMG 2-3/8 XHD Barbed Stress Plates or OMG Metal Batten Strips or Trufast #15 EHD with Trufast 2.4" Barbed Metal Seam Plates 6-inch o.c. along 6.5-inch side laps, in rows 6 ft-4 inches o.c.	45
MW-4	Wood	Min. 1-inch-thick polyisocyanurate insulation	IB SD #12 Insulation Fastener with IB 3-inch Round Metal Insulation Plate at 1 fastener per 8 ft <sup>2</sup>	IB PVC Single-Ply	IB HD #14 Heavy Duty Roofing Fasteners with 2-inch Barbed Seam Plates, 4 inches o.c. along min. 5-inch side laps, in rows 5 ft-7 inches o.c.	52
MW-5	Wood	Min. 1-inch-thick polyisocyanurate insulation	IB SD #12 Insulation Fastener with IB 3-inch Round Metal Insulation Plate at 1 fastener per 8 ft <sup>2</sup>	IB PVC Single-Ply	IB HD #14 Heavy Duty Roofing Fasteners with 2-inch Barbed Seam Plates, 3 inches o.c. along min. 5-inch side laps, in rows 5 ft-7 inches o.c.	60
MW-6	<sup>19</sup> / <sub>32</sub> -inch Wood	Min. 1-inch-thick to max. 4-inch-thick, Atlas Roofing "ACFoam-II", "ACFoam-III", IB Roof "IB Energy Board II", "IB Energy Board III", Hunter Panels "H-Shield", "H-Shield CG", Rmax "Multi-Max FA-3", Firestone Bldg. Products "ISO 95+GL" or Johns Manville "ENRGY 3"	IB SD #12 Insulation Fastener with IB 3-inch Round Metal Insulation Plate at 1 fastener per 8 ft <sup>2</sup>	IB PVC or IB PVC Single-Ply	IB XHD #15 Roofing Fastener with IB 2-3/8" Barbed Seam Plates, Dekfast DF-#15-PH3 with Dekfast Galvalume Steel Round 2-3/8" Barbed Plates, OMG XHD with OMG 2-3/8 XHD Barbed Stress Plates or OMG Metal Batten Strips or Trufast #15 EHD with Trufast 2.4" Barbed Metal Seam Plates 6-inch o.c. along 5-inch side laps, in rows 5 ft-7 inches o.c.	67.5
MW-7	<sup>19</sup> / <sub>32</sub> -inch Wood	Min. ½-inch-thick Georgia Pacific "DensDeck Prime" or USG "SECUROCK Gypsum-Fiber Roof Board"	IB SD #12 Insulation Fastener with IB 3-inch Round Metal Insulation Plate at 1 fastener per 8 ft <sup>2</sup>	IB PVC or IB Single-Ply	IB XHD #15 Roofing Fastener with IB 2-3/8" Barbed Seam Plates, Dekfast DF-#15-PH3 with Dekfast Galvalume Steel Round 2-3/8" Barbed Plates, OMG XHD with OMG 2-3/8 XHD Barbed Stress Plates or OMG Metal Batten Strips or Trufast #15 EHD with Trufast 2.4" Barbed Metal Seam Plates 6-inch o.c. along 5-inch side laps, in rows 2 ft-7 inches o.c.	127.5
MS-1	Steel	Min. 1-inch-thick to max. 4-inch-thick, Rmax "Multi-Max FA-3", IB Roof "IB Energy Board II", Atlas Roofing Corp. "ACFoam II", Dow Chemical Co. "Hy-Therm AP" or Johns Manville "ENRGY 3"	IB SD #12 Insulation Fastener with IB 3-inch Round Metal Insulation Plate at 1 fastener per 8 ft <sup>2</sup>	IB PVC Single-Ply or IB PVC Single-Ply Fleeceback	OMG XHD Fasteners with OMG Barbed Seam Plates, 18 inches o.c. along min. 5-inch side laps, in rows 5 ft-6½ inches o.c.	30
MS-2	Steel	Min. 1.3-inch-thick polyisocyanurate insulation	IB SD #12 Insulation Fastener with IB 3-inch Round Metal Insulation Plate at 1 fastener per 8 ft <sup>2</sup>	IB PVC Single-Ply	OMG XHD Fasteners with OMG Barbed Seam Plates or Dekfast DF-#15-PH3 Fasteners with Dekfast 2½ inches HS Membrane Plates, 12 inches o.c. along min. 5-inch side laps, in rows, 5 ft-7 inches o.c.	45

TABLE 5—WIND RESISTANCE – MECHANICALLY FASTENED ROOFING SYSTEMS (Continued)

SYSTEM NO.	DECK <sup>3</sup>	INSULATION		MEMBRANE		ALLOWABLE WIND UPLIFT PRESSURE (psf)
		Type <sup>1,2</sup>	Attachment <sup>1</sup>	Type	Attachment <sup>1,4</sup>	
MS-3	Steel	Min. 1.5-inch-thick polyisocyanurate insulation	IB SD #12 Insulation Fastener with IB 3-inch Round Metal Insulation Plate at 1 fastener per 8 ft <sup>2</sup>	IB PVC Single-Ply	OMG XHD Fasteners with OMG Barbed Seam Plates or Dekfast DF-#15-PH3 Fasteners with Dekfast 2 1/2 inches HS Membrane Plates, 6 inches o.c. along min. 5-inch side laps, in rows, 5 ft-7 inches o.c.	68
MS-4	Steel	Min. 1.5-inch-thick polyisocyanurate insulation	IB SD #12 Insulation Fastener with IB 3-inch Round Metal Insulation Plate at 1 fastener per 8 ft <sup>2</sup>	IB PVC Single-Ply	OMG XHD Fasteners, 6 inches o.c. along OMG Polymer Batten Bar, installed 8 ft. o.c.	68
MS-5	Steel	Min. 1.5-inch-thick polyisocyanurate insulation	IB SD #12 Insulation Fastener with IB 3-inch Round Metal Insulation Plate at 1 fastener per 8 ft <sup>2</sup>	IB PVC Single-Ply	OMG XHD Fasteners, 6 inches o.c. along OMG Metal Batten Bar, installed 8 ft. o.c.	75
MS-6	Min. 22 ga., Grade 33 steel, or min. 2,500 psi concrete	Min. 1.5-inch-thick polyisocyanurate insulation	Preliminary fastened	IB PVC or IB PVC Single Ply	IB XHD #15 Roofing Fastener with IB 2-3/8" Barbed Seam Plates or OMG XHD Fasteners with OMG 2-3/8" XHD Barbed Stressed Plates, 6 inches o.c. along min. 5-inch side laps, in rows, 5 ft-7 inches o.c.	67.5
MS-7	Min. 22 ga. Grade 40 Steel, Min. 2,500 psi concrete	Min. 3/4-inch-thick Georgia Pacific "DensDeck" or USG "SECUROCK Gypsum-Fiber Roof Board"	IB SD #12 Insulation Fastener with IB 3-inch Round Metal Insulation Plate at 1 fastener per 8 ft <sup>2</sup>	IB PVC or IB PVC Single-Ply	IB XHD #15 Roofing Fastener with IB 2-3/8" Barbed Seam Plates, Dekfast DF-#15-PH3 with Dekfast Galvalume Steel Round 2-3/8" Barbed Plates, OMG XHD with OMG 2-3/8 XHD Barbed Stress Plates or OMG Metal Batten Strips or Trufast #15 EHD with Trufast 2.4" Barbed Metal Seam Plates 6-inch o.c. along 5-inch side laps, in rows 2 ft-7 inches o.c.	127.5
MC-1	Concrete	Min. 1-inch-thick IB Roof "IB Energy Board II", Atlas Roofing Corp. "ACFoam II" or Johns Manville "ENRGY 3" or min. 1.3-inch-thick IB Roof "IB Energy Board III", Atlas Roofing Corp. "ACFoam III"	IB CD-10 Roofing Fastener with IB 3-inch Round Metal Insulation Plate at 1 fastener per 8 ft <sup>2</sup>	IB PVC Single-Ply	OMG CD-10 Fasteners with OMG XHD Seam Plates or Dekfast DF-#15-PH3 Fasteners with Dekfast 2 1/2-inch HS Membrane Plates, 12 inches o.c. along min. 5-inch side laps, in rows, 5 ft-7 inches o.c.	45
MC-2	Concrete	Min. 1-inch-thick IB Roof "IB Energy Board II", Atlas Roofing Corp. "ACFoam II" or Johns Manville "ENRGY 3" or min. 1.3-inch-thick IB Roof "IB Energy Board III", Atlas Roofing Corp. "ACFoam III"	IB CD-10 Roofing Fastener with IB 3-inch Round Metal Insulation Plate at 1 fastener per 8 ft <sup>2</sup>	IB PVC Single-Ply	OMG CD-10 Fasteners with OMG XHD Seam Plates or Dekfast DF-#15-PH3 HS Fasteners or with Dekfast 2 1/2-inch HS Membrane Plates, 6 inches o.c. along min. 5-inch side laps, in rows, 5 ft-7 inches o.c.	60

For SI: 1 inch = 25.4 mm; 1 ft. = 0.305 m; 1 psf = 47.88 Pa; 1 gal = 3.785 L.

<sup>1</sup>Insulation and fasteners must be FM-approved.

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

<sup>3</sup>Wood deck must be minimum 15/32-inch-thick (11.9 mm) plywood. Steel deck must be minimum No. 22 gage galvanized steel [0.030 inch (0.76 mm)]. Concrete must have a minimum compressive strength (*f<sub>c</sub>*) of 2500 psi, unless otherwise noted. See Section 5.7 of this report.

<sup>4</sup>Fastener row spaces shown are for field of roof only. See Section 4.3.1 for recognized edge securement systems for mechanically fastened roof assemblies. The maximum allowable load for IB 2 to 4-inch " Drip Edge PVC Clad Metal System is 275 psf (13 167 N/m<sup>2</sup>). The maximum allowable load for IB 5 to 7-inch Gravel Stop PVC Clad Metal System is 185 psf (8 857.5 N/m<sup>2</sup>). Distance between the edge of the roof and the first row of fasteners must be determined accordingly.

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION  
Section: 07 54 19—Polyvinyl-Chloride Roofing

**REPORT HOLDER:****IB ROOF SYSTEMS****EVALUATION SUBJECT:****IB PVC ROOFING MEMBRANES****1.0 REPORT PURPOSE AND SCOPE****Purpose:**

The purpose of this evaluation report supplement is to indicate that IB PVC roofing membranes, described in ICC-ES evaluation report [ESR-2852](#), has/have also been evaluated for compliance with the codes noted below as adopted by the Los Angeles Department of Building and Safety (LADBS).

**Applicable code editions:**

- 2020 *City of Los Angeles Building Code* (LABC)
- 2020 *City of Los Angeles Residential Code* (LARC)

**2.0 CONCLUSIONS**

The IB PVC roofing membranes, described in Sections 2.0 through 7.0 of the evaluation report [ESR-2852](#), complies/comply with the LABC Chapter 19, and the LARC, and is/are subject to the conditions of use described in this supplement.

**3.0 CONDITIONS OF USE**

The IB PVC roofing membranes described in this evaluation report supplement must comply with all the following conditions:

- All applicable sections in the evaluation report [ESR-2852](#).
- The design, installation, conditions of use and identification of the **IB PVC roofing membranes** are in accordance with the 2018 *International Building Code*® (IBC) provisions noted in the evaluation report [ESR-2852](#).
- The design, installation and inspection are in accordance with additional requirements of LABC Chapters 16 and 17, as applicable.
- Under the LARC, an engineered design in accordance with LARC Section R301.1.3 must be submitted.

This supplement expires concurrently with the evaluation report, reissued February 2022 and revised April 2022.

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION

Section: 07 54 19—Polyvinyl-Chloride Roofing

## REPORT HOLDER:

IB ROOF SYSTEMS

## EVALUATION SUBJECT:

IB PVC ROOFING MEMBRANES

## 1.0 REPORT PURPOSE AND SCOPE

## Purpose:

The purpose of this evaluation report supplement is to indicate that IB PVC roofing membranes, described in ICC-ES evaluation report ESR-2852, has/have also been evaluated for compliance with the code(s) noted below.

## Applicable code edition(s):

- 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 IB PVC roofing membranes, described in Sections 2.0 through 7.0 of the evaluation report ESR-2852, complies/comply with CBC Chapter 15, provided the design and installation are in accordance with the 2018 *International Building Code*® (IBC) provisions noted in the evaluation report and the additional requirements of CBC Chapters 15, 16 and 26, 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 IB PVC roofing membranes, described in Sections 2.0 through 7.0 of the evaluation report ESR-2852, complies 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 February 2022 and revised April 2022.