

UL Evaluation Report



UL ER14751-01

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DIVISION: 07 00 00 THERMAL AND MOISTURE PROTECTION
Sub-level 2: 07 30 00 - Steep Slope Roofing
Sub-level 3: 07 41 00 – Roof Panels
Sub-level 4: 07 41 13 – Metal Roof Panels

COMPANY:

FIRESTONE METAL PRODUCTS, LLC.
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**1. SUBJECT: UNA-CLAD® Standing Seam Metal Roof Panels, UC-3, UC-4, UC-6, UC-6HD,
and UC-14**

**For the purpose of this report, the products will be referred to as UNA-CLAD® Metal
Roof Panels unless indicated otherwise.**

2. SCOPE OF EVALUATION

- 2015, 2012, 2009 and 2006 *International Building Code*® (IBC)
- 2015, 2012, 2009 and 2006 *International Residential Code*® (IRC)
- ICC ES Acceptance Criteria for Metal Roof Coverings (AC166), Dated October 2012
- ICC ES Acceptance Criteria for Quality Documentation (AC10), Dated June 2014

The products were evaluated for the following properties:

- Roofing Systems for Exterior Fire Exposure (ANSI/UL 790)
- Roofing Systems, Wind Uplift Resistance (ANSI/UL 1897)
- Roof Deck Construction (ANSI/UL 580)
- Wind and Wind Driven Rain Resistance (TAS)

3. REFERENCED DOCUMENTS

- ANSI/UL 790 Seventh Edition, Standard Test Methods for Fire Tests of Roof Coverings
- ANSI/UL 1897 Fourth Edition, Standard for Uplift Tests for Roof Covering Systems
- ANSI/UL 580 Fifth Edition, Standard for Tests for Uplift Resistance of Roof Assemblies
- ICC ES Acceptance Criteria for Metal Roof Coverings (AC166), Dated October 2012
- ICC ES Acceptance Criteria for Quality Documentation (AC10), Dated June 2014

4. USES

UNA-CLAD[®] Metal Roof Panels are used as roof coverings in Class A or B roof covering systems on combustible and noncombustible decks for new and existing roofs when installed in accordance with this report and the manufacturer's published installation instructions.

5. PRODUCT DESCRIPTION

UNA-CLAD[®] Metal Roof Panels are metal roof coverings complying with [Section 1507.4](#) of the 2015, 2012, 2009 and 2006 IBC and [Section R905.10](#) of the 2015, 2012, 2009 and 2006 IRC.

UNA-CLAD[®] Metal Roof Panels are formed from one of the following:

- Minimum 0.032 aluminum complying with ASTM B209 and having a minimum yield strength of 20 ksi,
- Minimum 24 gauge galvanized steel complying with ASTM A653 G90 and having a minimum yield strength of 50 ksi,
- Minimum 24 gauge galvalume (Aluminum-zinc alloy coated) steel complying with ASTM A792 AZ50 and having a minimum yield strength of 50 ksi,
- Minimum 16 oz. copper complying with ASTM B370 and having minimum yield strength of 38 ksi.

5.1 UC-3:

Panels are formed into 8-inch to 20-inch-wide (203 mm to 508 mm) panels, with 1.5-inch-high (25 mm or 38 mm) mechanically locking seams. See Figure 1 for additional details.

5.2 UC-4:

Panels are formed into 9.75-inch to 17.75-inch-wide (248 mm to 451 mm) panels, with 1.5-inch-high (38 mm) snap-locking seams. See Figure 2 for additional details.

5.3 UC-6:

Panels are formed into 8-inch to 24-inch-wide (203 mm to 610 mm) panels, with 2.0-inch-high (38 mm or 51 mm) mechanically locking seams. See Figure 3 for further details.

5.4 UC-6 HD

Panels are formed into 12-inch to 22-inch-wide (305 mm to 559 mm) panels, with 2.0-inch-high (38 mm or 51 mm) mechanically locking seams. See Figure 4 for further details.

5.5 UC-14

Panels are formed into 8-inch to 18-inch-wide (203 mm to 457 mm) panels, with 1.75-inch-high (44 mm) mechanically locking seams. See Figure 5 for further details.

Fire Classification: The UNA-CLAD® Metal Roof Panels covered under this Report have been tested for fire classification in accordance with ANSI/UL 790 complying with [Section 1505.1](#) of the 2015, 2012, 2009 and 2006 IBC and [Section R902.1](#) of the 2015, 2012, 2009 and 2006 IRC.

Wind Resistance: The UNA-CLAD® Metal Roof Panels covered under this Report have been tested for wind resistance in accordance with ANSI/UL 580 and ANSI/UL 1897 complying with [Section 1504.3](#) of the 2015, 2012, 2009 and 2006 IBC.

The roofing assemblies shall be designed to resist the design wind load pressures for components and cladding in accordance with [Chapter 16](#) and [Section 1504.3](#) of the 2015, 2012, 2009 and 2006 IBC and [Section R905.1](#) of the 2015, 2012, 2009 and 2006 IRC.

Wind-Driven Rain Resistance: The UNA-CLAD® Metal Roof Panels covered under this Report have been tested for wind-driven rain resistance in accordance with section 4.2 of AC 166.

6. INSTALLATION

The UNA-CLAD® Metal Roof Panels must be installed in accordance with the applicable code, this report and the manufacturer's published installation instructions. Installation must be in accordance with [Section 1507.4](#) of the 2015, 2012, 2009 and 2006 IBC or [Section R905.10](#) of the 2015, 2012, 2009 and 2006 IRC, as applicable, except as noted in this report.

The manufacturer's published installation instructions must be available at all times on the jobsite during installation.

The UNA-CLAD® Metal Roof Panels must be installed on solid or closely fitted decking or steel decking as specified in Section 7.1 on roofs with minimum slopes of 3:12 (25-percent slope). Penetrations and terminations of the panels must be flashed and made weather tight in accordance with the manufacturer's published installation instructions and [Section 1503.2](#) of the 2015, 2012 IBC or [Section R903.2](#) of the 2012 IRC as applicable.

7. COMPONENTS

7.1 Roof Deck:

The roof deck must be code-compliant, minimum 15/32 inch-thick (11.9 mm) exterior plywood sheathing or minimum 7/16 inch-thick (11.1 mm) oriented strand board (OSB) complying with Section 2304.8.2 of the 2015 IBC, [Section 2304.7.2](#) of the 2012 IBC or [Section R803](#) of the 2015 and 2012 IRC, or minimum No. 22 gauge [0.030 inch thick (0.76 mm)] steel complying with [Section 2210.1.1.2](#) of the 2015 and 2012 IBC.

Refer to Section 8 for specific construction requirements for Uplift Resistance assemblies.

7.2 Clips:

Clips used to fasten the panels, flashing and accessories to the sheathing are formed as described below.

7.2.1 UC-3 Fixed Clip: ASTM A653 G90, minimum 24 gauge [0.024 inch thick (0.61 mm)]; or 300 series stainless steel, minimum No. 26 gauge [0.018 inch thick (0.46 mm)].

7.2.2 UC-3 Expansion Clip: 300 series stainless steel, minimum No. 28 gauge [0.016 inch thick (0.41 mm)].

7.2.3 UC-3 Super Clip: ASTM A653 G90 or 300 series stainless steel; G90, minimum No. 22 gauge [0.031 inch thick (0.79 mm)] base with 24 gauge [0.025 (0.64 mm)] tab. Stainless steel, minimum No. 24 gauge [0.024 inch thick (0.61 mm)] base with 26 gauge [0.018 inch thick (0.46 mm)] tab.

7.2.4 UC-6 Fixed Clip: ASTM 653 G90 steel, minimum No. 24 gauge [0.023 inch thick (0.58 mm)].

7.2.5 UC-6 Low-Float Clip: ASTM 653 G90 or 300 series stainless steel; G90, minimum No. 16 gauge [0.058 inch thick (1.47 mm)] base with No. 22 gauge [0.031 inch thick (0.79 mm)] tab. Stainless steel, minimum No. 22 gauge [0.031 inch thick (0.79 mm)] tab.

7.2.6 UC-6 Super Clip: ASTM A653 G90 or 300 series stainless steel; G90, minimum No. 22 gauge [0.031 inch thick (0.79 mm)] base with No. 24 gauge [0.025 inch (0.64 mm)] tab. Stainless steel, minimum No. 24 gauge [0.024 inch thick (0.61 mm)] base with 26 gauge [0.018 inch thick (0.46 mm)] tab.

7.2.7 UC-14 Clip: ASTM A653 G90 or 30 series stainless steel minimum No. 18 gauge [0.050 inch thick (1.27 mm)].

7.2.8 UC Bearing Plate: ASTM A653 G90 or 300 series stainless steel; minimum No. 20 gauge [0.037 inch thick (0.94 mm)] and No. 22 gauge [0.032 inch thick (0.82 mm)], respectively.

Refer to Section 8 for specific steel clips requirements for Uplift Resistance assemblies.

7.3 Fasteners:

7.3.1 Tru-Fast Corp T-17: # 10-12 by min. 1-inch self-drilling fasteners with a 0.435-inch-diameter (11 mm) pancake head are available in galvanized and stainless steel.

7.3.2 Firestone Drill Point Fasteners: # 12-13 self-drilling fasteners with 0.435-inch-diameter (11 mm) pancake head. Firestone Drill Point Fasteners, as specified in the manufacturer's published installation instructions, are made from carbon steel and have a red epoxy coating.

Refer to Section 8 for specific construction requirements for Uplift Resistance assemblies.

7.4 Underlayment and Flashing:

Where specified in Tables 1-14, CLAD-GARD SA-FR is an acceptable alternate to the underlayment specified in [Section 1507.4.5](#) of the 2015, 2012, 2009 and 2006 IBC and specified in [Section R905.10.5](#) of the 2012, 2009, 2006 IRC. Flashing must be installed in accordance with [Section 1503.2](#) of the 2012, 2009 and 2006 IBC or [Section R903.2](#) of the 2012, 2009, 2006 IRC, as applicable.

7.5 Insulation:

Foam plastic insulation, where used, must have a flame-spread index of not more than 75 in accordance with ASTM E84 or UL 723 when tested at the maximum thickness intended for use. Polyisocyanurate foam plastic insulation must comply with ASTM C1289. See Tables 1-14 for insulations used with specific roof systems.

8. WIND RESISTANCE:

Wind Resistance: Roofing assemblies shall be designed to resist the design wind load pressures for components and cladding in accordance with [Section 1609.5](#) and [Section 1504.3](#) of the 2015, 2012, 2009 and 2006 IBC and [Section R905.1](#) of the 2012, 2009 and 2006 IRC.

9. FIRE CLASSIFICATION:

9.1 New Construction – Installation as Class A, and B Prepared Roof Coverings:

The UNA-CLAD[®] Metal Roof Panels covered by this report are components of roof assemblies classified as Class A roof assemblies in accordance with ASTM E108 or UL 790 when installed as specified in Tables 1-14.

Refer to the UL Certification Category for Roofing Systems ([TGFU](#)) (ANSI/UL 790), and Roof Deck Constructions ([TJPV](#)) (ANSI/UL 580), File R14751 for applicable coverage and details of the roof assembly.

Under the 2015 and 2012 IBC, or 2012 IRC, copper and steel roof panels are considered Class A roof coverings when installed without insulation as described in Section 6 of this report on steel roof decks in accordance with Exception 2 to IBC [Section 1505.2](#) and Exception 2 to IRC [Section R902.1](#). The copper roof panels are considered Class A roof coverings when installed without insulation described in section 6 of this report in accordance with Exception 3 to IBC [Section 1505.2](#) and Exception 3 to IRC [Section R902.1](#).

9.2 Reroofing – Installation as Class A Prepared Roof Coverings:

The existing roof shall be inspected in accordance with the provisions and limitations of [Section 1510](#) of the 2012, 2009 and 2006 IBC, [Section R908](#) of the 2015 IBC, and [Section R907](#) of the 2012, 2009 and 2006 IRC, as applicable. Prior to the reroofing, hip and ridge coverings must be removed.

Flashing and edging must comply with Section 7.2 and with Section 1511.5 and 1511.6 of the 2015 IBC, [Sections 1510.5](#) and [1510.6](#) of the 2012, 2009 and 2006 IBC, [Sections R908.5](#) and [R908.6](#) of the 2015 IRC, and [Sections R907.5](#) and [R907.6](#) of the 2012, 2009 and 2006 IRC, as applicable.

10. CONDITIONS OF USE

The UNA-CLAD[®] Metal Roof Panels described in this Report comply with, or are suitable alternatives to, what is specified in those codes listed in Section 2 of this Report, subject to the following conditions:

- 10.1** Materials and methods of installation shall comply with this Report and the manufacturer's published installation instructions. In the event of a conflict between the installation instructions and this Report, this Report governs.
- 10.2** Only UNA-CLAD[®] metal accessories and specified fasteners shall be used in the installation of the roof covering system.

10.3 For a listing of applicable UL Certifications for UNA-CLAD® Metal Roof Panels, see the Online Certifications Directory for the following categories.

- Metal Roof Deck Panels for Use in roof deck constructions ([TJPV](#))
- Metal Roof Deck Panels for use in roof-ceiling designs ([CETW](#))
- Roof Covering Materials Certified for Impact Resistance – ANSI/UL 2218 ([TGAM](#))
- Roofing Systems Certified for fire resistance – ANSI/UL 790 ([TGFU](#))
- Roofing systems Certified for uplift resistance – ANSI/UL 1897 ([TGIK](#))

10.4 Wind uplift pressures on any roof area, including edges and corner zones shall not exceed the allowable wind pressure for the roof covering installed in that particular area. The allowable wind uplift pressure for the roof assembly shall be based on a minimum factor of safety of 2.0 as shown in the Classification for uplift resistance (TGIK). The allowable wind uplift pressure is for the roof system only. The deck and framing to which the roofing system is attached shall be designed for the applicable component and cladding, wind loads in accordance with the applicable code.

10.5 When application is over an existing roof, documentation of the wind uplift resistance of the composite roof construction shall be submitted to the code official.

10.6 The UNA-CLAD® Metal Roof Panels covered under this report are produced by Firestone Metal Products, LLC. in Anoka, MN; College Park, GA; Las Vegas, NV; and Warren, MI under the UL LLC Listing/Classification and Follow-Up Service Program, which includes audits in accordance with quality elements of ICC-ES Acceptance Criteria for Quality Documentation, AC 10.

11. SUPPORTING EVIDENCE

11.1 Data in accordance with ICC-ES Acceptance Criteria for Metal Roof Coverings, AC166.

11.2 Manufacturer's descriptive product literature, including installation instructions.

11.3 UL Listing Reports in accordance with ANSI/UL 790. See UL Product Certification Category for Roofing Systems Certified for Fire Resistance ([TGFU](#)), File R14751.

11.4 UL Classification Reports in accordance with ANSI/UL 1897. See UL Product Certification Category for Roofing Systems, Uplift ([TGIK](#)), File R14751.

11.5 UL Classification Reports in accordance with ANSI/UL 580. See UL Product Certification Category for Roof Deck Constructions, Metal Roof Deck Panels ([TJPV](#)), File R14751.

11.6 Documentation of quality system elements described in ICC-ES Acceptance Criteria for Quality Documentation, AC10.

12. IDENTIFICATION

The UNA-CLAD® Metal Roof Panels described in this evaluation report are identified by a marking bearing the report holder's name (Firestone Metal Products, LLC.), the plant identification (if required), the product name, the UL Listing Mark, and the evaluation report number UL ER14751-01. The validity of the evaluation report is contingent upon this identification appearing on the product or UL Listing Mark certificate.

13. USE OF UL EVALUATION REPORT

13.1 The approval of building products, materials or systems is under the responsibility of the applicable authorities having jurisdiction.

13.2 UL Evaluation Reports shall not be used in any manner that implies an endorsement of the product, material or system by UL.

13.3 The current status of this report, as well as a complete directory of UL Evaluation Reports may be found at UL.com via our On-Line Certifications Directory at www.ul.com/erdirectory.

Assemblies

| Table | Profile | Material | Thickness |
|--------------------|----------------|-----------------|------------------|
| 1 | UC-3 | Steel | 24 Gauge |
| 2 | UC-3 | Aluminum | .032 inches |
| 3 | UC-3 | Aluminum | .040 inches |
| 4 | UC-3 | Copper | 16 ounce |
| 5 | UC-4 | Steel | 24 Gauge |
| 6 | UC-4 | Aluminum | .032 inches |
| 7 | UC-4 | Aluminum | .040 inches |
| 8 | UC-4 | Copper | 16 ounce |
| 9 | UC-6 | Steel | 24 Gauge |
| 10 | UC-6 | Aluminum | .032 inches |
| 11 | UC-14 | Steel | 24 Gauge |
| 12 | UC-14 | Aluminum | .032 inches |

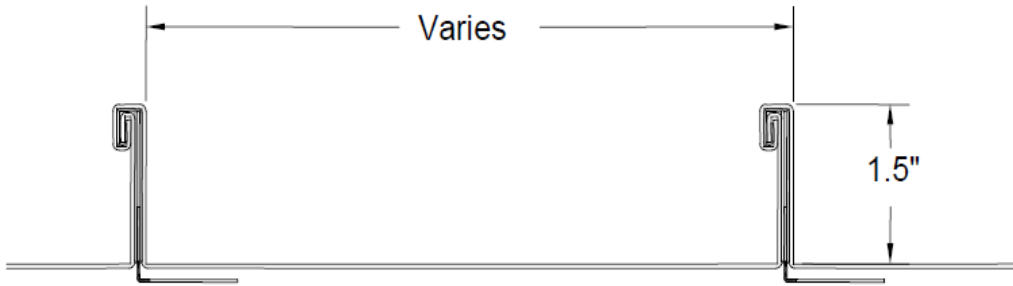


Figure 1 – UC-3 Panel Profile

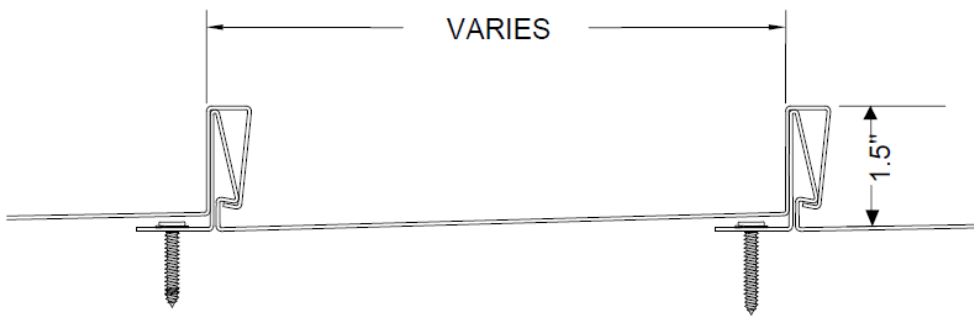


Figure 2 – UC-4 Panel Profile

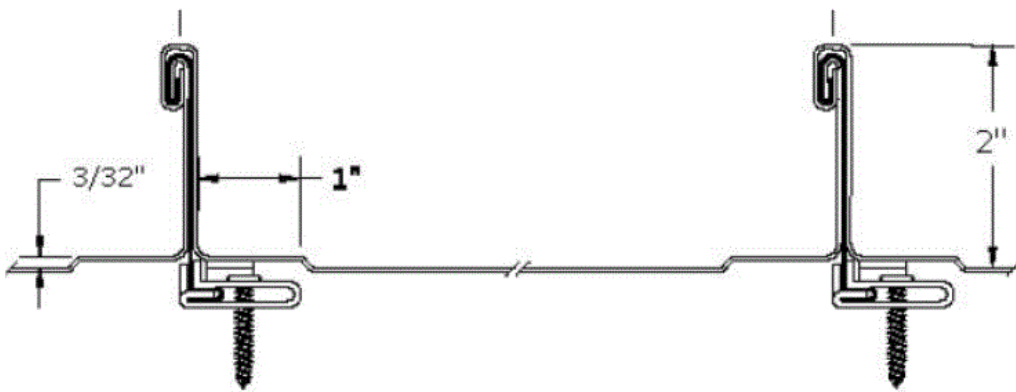


Figure 3 – UC-6 Panel Profile

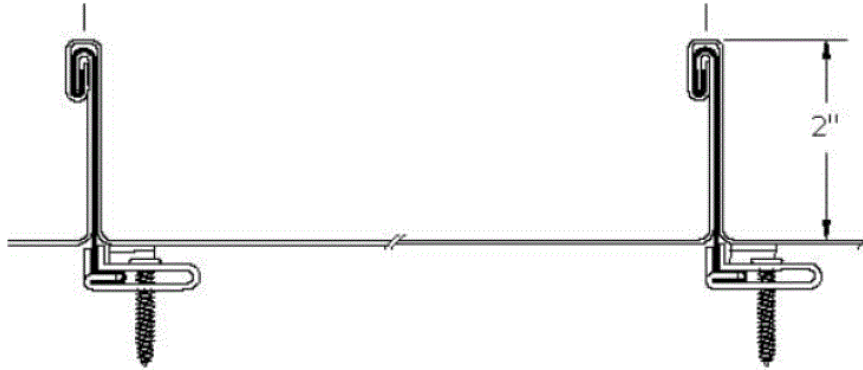


Figure 4 – UC-6 HD Panel Profile

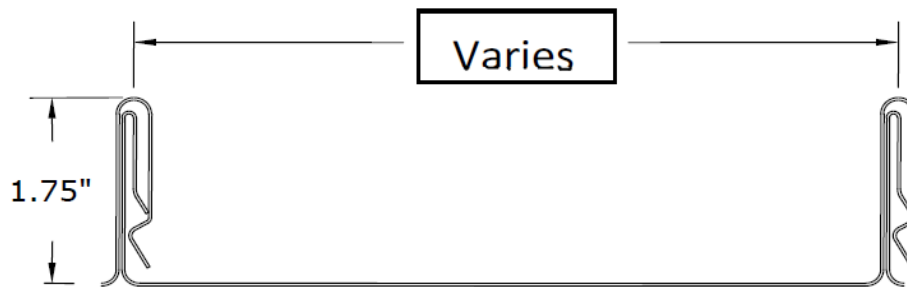


Figure 5 – UC-14 Panel Profile

Table 1

Panel - UC-3 24 gauge steel 16 inches wide

Class A Fire Rated – Unlimited Slope

| Assembly Number | Deck¹ | Attachment^{2,3,4} | Insulation | Barrier Product⁵ | Ply Sheet | Allowable Uplift Pressure |
|------------------------|-------------------------|---|---|---|---|----------------------------------|
| 1 | Plywood | UC-3 Expansion clip at 18 inches o.c. attached with two #10-12 Pancake Head wood screws | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD or ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, Clad-GARD SA-S, Clad-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -79 |
| 2 | | | Optional: HailGard | | CLAD-GARD SA-FR Underlayment | -79 |
| 3 | | UC-3 Expansion clip at 12 inches o.c. attached with two #10-12 Pancake Head wood screws | Optional: Any thickness ISO 95+ GL, RESISTA, ISOAGATD HD or ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, Clad-GARD SA-S, Clad-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -86 |
| 4 | | | Optional: HailGard | | CLAD-GARD SA-FR Underlayment | -86 |
| 5 | | UC-3 Expansion clip at 8 inches o.c. attached with two #10-12 Pancake Head wood screws | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, Clad-GARD SA-S, Clad-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -101 |
| 6 | | | | | | |

Table 1 (continued)

Panel - UC-3 24 gauge steel 16 inches wide

Class A Fire Rated – Unlimited Slope

| Assembly Number | Deck¹ | Attachment^{2,3,4} | Insulation | Barrier Product⁵ | Ply Sheet | Allowable Uplift Pressure |
|------------------------|-------------------------|--|--|---|---|----------------------------------|
| 7 | Plywood | UC-3 Super Clip at 6 inches o.c. attached with two #10-12 Pancake Head wood screws | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD or ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, Clad-GARD SA-S, Clad-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -129 |
| 8 | | | Optional: HailGard | | CLAD-GARD SA-FR Underlayment | -129 |

Table 1 (continued)

Panel - UC-3 24 gauge steel 16 inches wide

Class A Fire Rated – Unlimited Slope

| Assembly Number | Deck¹ | Attachment^{2,3,4} | Insulation | Barrier Product⁵ | Ply Sheet | Allowable Uplift Pressure |
|------------------------|-------------------------|---|--|---|---|----------------------------------|
| 9 | OSB or Plywood | UC-3 Expansion clip at 24 inches o.c. attached with two #10-12 Pancake Head wood screws | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD or ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, Clad-GARD SA-S, Clad-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -75 |
| 10 | | | Optional: HailGard | | CLAD-GARD SA-FR Underlayment | -75 |
| 11 | | UC-3 Super Clip at 30 inches o.c. attached with two #10-12 Pancake Head wood screws | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD or ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, Clad-GARD SA-S, Clad-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -68 |
| 12 | | | Optional: HailGard | | CLAD-GARD SA-FR Underlayment | -68 |
| 13 | | UC-3 Super Clip at 36 inches o.c. attached with two #10-12 Pancake Head wood screws | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD or ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, Clad-GARD SA-S, Clad-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -30 |
| 14 | | | Optional: HailGard | | CLAD-GARD SA-FR Underlayment | -30 |

Table 1 (continued)

Panel - UC-3 24 gauge steel 16 inches wide

Class A Fire Rated – Unlimited Slope

| Assembly Number | Deck¹ | Attachment^{2,3,4} | Insulation | Barrier Product | Ply Sheet | Allowable Uplift Pressure |
|------------------------|-------------------------|--|--|---|---|----------------------------------|
| 15 | Steel | UC-3 Super Clip at 12 inches o.c. attached with two #12-13 Drill Point fasteners | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD or ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, Clad-GARD SA-S, Clad-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -81 |
| 16 | | | Optional: HailGard | | CLAD-GARD SA-FR Underlayment | -81 |
| 17 | | UC-3 Super Clip at 30 inches o.c. attached with two #12-13 Drill Point fasteners | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD or ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, Clad-GARD SA-S, Clad-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -53 |
| 18 | | | Optional: HailGard | | CLAD-GARD SA-FR Underlayment | -53 |

Table 1 (continued)

Panel - UC-3 24 gauge steel 20 inches wide

Class A Fire Rated – Unlimited Slope

| Assembly Number | Deck¹ | Attachment^{2,3,4} | Insulation | Cover Board, Barrier Product | Ply Sheet | Allowable Uplift Pressure |
|------------------------|-------------------------|---|--|--|---|----------------------------------|
| 19 | Steel | UC-3 Expansion Clip at 12 inches o.c. attached with two #12-13 Drill Point fasteners | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, Clad-GARD SA-S, Clad-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -53 |
| 20 | | | | | | |
| 21 | | | | | | |
| 22 | | UC-3 Expansion Clip at 12 inches o.c. attached with two #10-12 Pancake Head wood screws, secured to the cover board | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | Min 7/16 in. OSB or min 1-½ in. HailGard Composite Board installed with HD HailGard Fasteners at a rate of 24 per 4 ft x 8 ft board. | CLAD-GARD SA-FR Underlayment | -53 |
| 23 | | | | Min. 7/16 in. OSB or min. 1-½ in. HailGard Composite Board installed with Firestone All-Purpose Fasteners and Insulation Fastening Plates at a rate of 16 per 4 ft x 8 ft board. | | -60 |

[Table 2](#)

Panel - UC-3 .032 Aluminum 16 inches wide

Class A Fire Rated – Unlimited Slope

| Assembly Number | Deck ¹ | Attachment ^{2,3,4} | Insulation | Barrier Product ⁵ | Ply Sheet | Allowable Uplift Pressure |
|-----------------|-------------------|---|--|---|---|---------------------------|
| 24 | Plywood or OSB | UC-3 Expansion clip at 18 inches o.c. attached with two #10-12 Pancake Head wood screws | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, Clad-GARD SA-S, Clad-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -75 |
| 25 | | | Optional: HailGard | | CLAD-GARD SA-FR Underlayment | -75 |
| 26 | | UC-3 Super clip at 24 inches o.c. attached with two #10-12 Pancake Head wood screws | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, Clad-GARD SA-S, Clad-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -53 |
| 27 | | | Optional: HailGard | | CLAD-GARD SA-FR Underlayment | -53 |
| 28 | | UC-3 Expansion clip at 24 inches o.c. attached with two #10-12 Pancake Head wood screws | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, Clad-GARD SA-S, Clad-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -45 |
| 29 | | | Optional: HailGard | | CLAD-GARD SA-FR Underlayment | -45 |

[Table 2](#) (continued)

Panel - UC-3 .032 Aluminum 16 inches wide

Class A Fire Rated – Unlimited Slope

| Assembly Number | Deck¹ | Attachment^{2,3,4} | Insulation | Cover Board | Ply Sheet | Allowable Uplift Pressure |
|------------------------|-------------------------|---|--|--|------------------------------|----------------------------------|
| 30 | Steel | UC-3 Expansion Clip at 18 inches o.c. attached with two #10-12 Pancake Head wood screws, fastened to HailGard | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | Min 1-½ in. HailGard Composite Board installed with HD HailGard Fasteners at a rate of 12 per 4 ft x 8 ft board. | CLAD-GARD SA-FR Underlayment | -68 |
| 31 | | | | Min. 1-½ in. HailGard Composite Board installed with HD HailGard Fasteners at a rate of 8 per 4 ft x 8 ft board. | | -53 |
| 32 | | UC-3 Expansion Clip at 24 inches o.c. attached with two #10-12 Pancake Head wood screws, secured to HailGard | | -45 | | |

Table 2 (continued)

Panel - UC-3 .032 Aluminum 20 inches wide

Class A Fire Rated – Unlimited Slope

| Assembly Number | Deck¹ | Attachment^{2,3,4} | Insulation | Cover Board, Barrier Product⁵ | Ply Sheet | Allowable Uplift Pressure |
|------------------------|-------------------------|---|--|--|---|----------------------------------|
| 33 | Plywood | UC-3 Super Clip at 12 inches o.c. attached with two #10-12 Pancake Head wood screws | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, CLAD-GARD SA-S, CLAD-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -129 |
| 34 | | | Optional: HailGard | | CLAD-GARD SA-FR Underlayment | -129 |
| 35 | Steel | UC-3 Expansion Clip at 12 inches o.c. attached with two #12-13 Drill Point fasteners | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or 1/2 in thick min UL Classified Gypsum board with joints in barrier board offset 6 in. with joints in deck or CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, CLAD-GARD SA-S, CLAD-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | 53 |
| 36 | | | Optional: HailGard | | CLAD-GARD SA-FR Underlayment | -53 |
| 37 | | UC-3 Expansion Clip at 12 inches o.c. attached with two #10-12 Pancake Head wood screws, secured to the cover board | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | Min. 7/16 in. OSB or min. 1-½ in. HailGard Composite Board installed with HD HailGard Fasteners at a rate of 24 per 4 ft x 8 ft board. | CLAD-GARD SA-FR Underlayment | -53 |

Table 3

Panel - UC-3 .040 Aluminum 12 inches wide

Class A Fire Rated – Unlimited Slope

| Assembly Number | Deck¹ | Attachment^{2,3,4} | Insulation | Barrier Product | Ply Sheet | Allowable Uplift Pressure |
|------------------------|-------------------------|--|--|---|---|----------------------------------|
| 38 | Steel | UC-3 Super Clip at 12 inches o.c. attached with two #12-13 Drill Point fasteners | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, Clad-GARD SA-S, Clad-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -150 |
| 39 | | | Optional: HailGard | | CLAD-GARD SA-FR Underlayment | -150 |
| 40 | | UC-3 Super Clip at 18 inches o.c. attached with two #12-13 Drill Point fasteners | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, Clad-GARD SA-S, Clad-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -134 |
| 41 | | | Optional: HailGard | | CLAD-GARD SA-FR Underlayment | -134 |

Table 4

Panel - UC-3 16 oz. copper 20 inches wide

Class A Fire Rated – Unlimited Slope

| Assembly Number | Deck¹ | Attachment^{2,3,4} | Insulation | Barrier Product⁵ | Ply Sheet | Allowable Uplift Pressure |
|------------------------|-------------------------|--|--|---|---|----------------------------------|
| 42 | Plywood | UC-3 Super Clips at 12 inches o.c. attached with two #10-12 Pancake Head wood screws | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, Clad-GARD SA-S, Clad-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -77 |
| 43 | | | Optional: HailGard | | CLAD-GARD SA-FR Underlayment | -77 |
| 44 | Steel | UC-3 Super clip at 8 inches o.c. attached with two #12-13 Drill Point fasteners | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, Clad-GARD SA-S, Clad-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -84 |

[Table 5](#)

Panel - UC-4 24 gauge steel 9 3/4 inches wide

Class A Fire Rated – Unlimited Slope

| Assembly Number | Deck¹ | Attachment^{2,3,4} | Insulation | Cover Board, Barrier Product⁵ | Ply Sheet | Allowable Uplift Pressure |
|------------------------|-------------------------|---|--|---|---|----------------------------------|
| 45 | 5/8 inch plywood | Two #10-12 Pancake Head wood screws with washers at 12 inches o.c. | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, CLAD-GARD SA-S, CLAD-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -53 |
| 46 | | | Optional: HailGard | | CLAD-GARD SA-FR Underlayment | -53 |
| 47 | Steel | Two #10-12 Pancake head wood screws with washers at 12 inches o.c. secured to the cover board | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | Min. 7/16 in. OSB or min 1-1/2 in. HailGard Composite Board installed with Firestone All-Purpose Fasteners and Insulation Fastening Plates at a rate of 16 per 4 ft x 8 ft board. | CLAD-GARD SA-FR Underlayment | -53 |

Table 5 (continued)

Panel - UC-4 24 gauge steel 9 ¾ inches wide

Class A Fire Rated – Unlimited Slope

| Assembly Number | Deck¹ | Attachment^{2,3,4} | Insulation | Barrier Product | Ply Sheet | Allowable Uplift Pressure |
|------------------------|-------------------------|---|--|---|---|----------------------------------|
| 48 | Steel | Two #12-13 Drill Point Fasteners with washers at 12 inches o.c. | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, CLAD-GARD SA-S, CLAD-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -83 |
| 49 | | | | | | -83 |
| 50 | | | Optional: HailGard | | CLAD-GARD SA-FR Underlayment | -83 |

Table 5 (continued)

Panel - UC-4 24 gauge steel 18 inches wide

Class A Fire Rated – Unlimited Slope

| Assembly Number | Deck¹ | Attachment^{2,3,4} | Insulation | Barrier Product⁵ | Ply Sheet | Allowable Uplift Pressure |
|------------------------|-------------------------|--|--|---|--|----------------------------------|
| 51 | Plywood or OSB | Two #10-12 Pancake Head wood screws with washers at 18 inches o.c. | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, CLAD-GARD SA-S, CLAD-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -90 |
| 52 | | | Optional: HailGard | | CLAD-GARD SA-FR Underlayment | -90 |
| 53 | | Two #10-12 Pancake Head wood screws with washers at 24 inches o.c. | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, CLAD-GARD SA-S, CLAD-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -75 |
| 54 | | | Optional: HailGard | | CLAD-GARD SA-FR Underlayment | -75 |
| 55 | | Two #10-12 Pancake Head wood screws with washers at 30 inches o.c. | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, CLAD-GARD SA-S, CLAD-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -45 |
| 56 | | | Optional: HailGard | | CLAD-GARD SA-FR Underlayment | -45 |

Table 5 (continued)

Panel - UC-4 24 gauge steel 18 inches wide

Class A Fire Rated – Unlimited Slope

| Assembly Number | Deck¹ | Attachment^{2,3,4} | Insulation | Barrier Product | Ply Sheet | Allowable Uplift Pressure |
|------------------------|-------------------------|---|--|---|---|----------------------------------|
| 57 | Steel | Two #12-13 Drill Point fasteners with washers at 18 inches o.c. | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, CLAD-GARD SA-S, CLAD-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -53 |
| 58 | | | Optional: HailGard | | CLAD-GARD SA-FR Underlayment | -53 |

[Table 6](#)

Panel - UC-4 .032 aluminum 9 ¾ inches wide

Class A Fire Rated – Unlimited Slope

| Assembly Number | Deck¹ | Attachment^{2,3,4} | Insulation | Barrier Product⁵ | Ply Sheet | Allowable Uplift Pressure |
|------------------------|-------------------------|--|--|---|---|----------------------------------|
| 59 | Plywood | Two #10-12 Pancake Head wood screws with washers at 12 inches o.c. | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, CLAD-GARD SA-S, CLAD-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -109 |
| 60 | | | Optional: HailGard | | CLAD-GARD SA-FR Underlayment | -109 |

[Table 6](#) (continued)

Panel - UC-4 .032 aluminum 18 inches wide

Class A Fire Rated – Unlimited Slope

| Assembly Number | Deck¹ | Attachment^{2,3,4} | Insulation | Barrier Product⁵ | Ply Sheet | Allowable Uplift Pressure |
|------------------------|-------------------------|--|--|---|--|----------------------------------|
| 61 | Plywood or OSB | Two #10-12 Pancake Head wood screws with washers at 18 inches o.c. | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, CLAD-GARD SA-S, CLAD-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -67.5 |
| 62 | | | Optional: HailGard | | CLAD-GARD SA-FR Underlayment | -67.5 |
| 63 | | Two #10-12 Pancake Head wood screws with washers at 24 inches o.c. | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, CLAD-GARD SA-S, CLAD-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -45 |
| 64 | | | Optional: HailGard | | CLAD-GARD SA-FR Underlayment | -45 |
| 65 | Steel | Two #10-12 Pancake Head wood screws with washers at 18 inches o.c. secured to HailGard | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | 1-½ in. HailGard Composite Board installed with HD HailGard Fasteners at a rate of 8 per 4 ft x 8 ft board. | CLAD-GARD SA-FR Underlayment | -60 |
| 66 | Steel | Two #10-12 Pancake Head wood screws with washers at 18 inches o.c. secured to HailGard | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | 1-½ in. HailGard Composite Board installed with HD HailGard Fasteners at a rate of 8 per 4 ft x 8 ft board. | CLAD-GARD SA-FR Underlayment | -60 |

Table 7

| Panel - UC-4 .040 aluminum 18 inches wide | | | | | | |
|--|-------------------------|---|--|---|---|----------------------------------|
| Class A Fire Rated – Unlimited Slope | | | | | | |
| Assembly Number | Deck¹ | Attachment^{2,3,4} | Insulation | Barrier Product | Ply Sheet | Allowable Uplift Pressure |
| 67 | Steel | Two #12-13 Drill Point fasteners with washers at 18 inches o.c. | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, CLAD-GARD SA-S, CLAD-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -53 |
| 68 | | | Optional: HailGard | | CLAD-GARD SA-FR Underlayment | -53 |

Table 8

| Panel - UC-4 16 oz. copper 14 inches wide | | | | | | |
|--|-------------------------|---|---|---|---|----------------------------------|
| Class A Fire Rated – Unlimited Slope | | | | | | |
| Assembly Number | Deck¹ | Attachment^{2,3,4} | Insulation | Barrier Product⁵ | Ply Sheet | Allowable Uplift Pressure |
| 69 | 3/4 inch plywood | Two #10-12 Pancake Head wood screws with washers at 9 inches o.c. | Optional: Any thickness ISO 95+ GL, RESISTA ISOGARD HD, ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, CLAD-GARD SA-S, CLAD-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -53 |
| 70 | | | Optional: HailGard | | CLAD-GARD SA-FR Underlayment | -53 |

[Table 9](#)

Panel - UC-6 24 gauge steel 18 inches wide

Class A Fire Rated – Unlimited Slope

| Assembly Number | Deck¹ | Attachment^{2,3,4} | Insulation | Cover Board, Barrier Product | Ply Sheet | Allowable Uplift Pressure |
|------------------------|-------------------------|---|--|---|---|----------------------------------|
| 71 | Steel | UC-6 Super Clips at 12 inches o.c. attached with two #12-13 Drill Point Fasteners. | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, CLAD-GARD SA-S, CLAD-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -68 |
| 72 | | | Optional: HailGard | | CLAD-GARD SA-FR Underlayment | -68 |
| 73 | | UC-6 Low-Float Clip at 12 inches o.c. attached with two #10-12 pancake Head wood screws, secured to the cover board | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | Min. 7/16 in. OSB or min 1-½ in. HailGard Composite Board installed with HD HailGard Fasteners at a rate of 24 per 4 ft x 8 ft board. | CLAD-GARD SA-FR Underlayment | -53 |
| 74 | | UC-6 Super Clip at 12 inches o.c. attached with two #10-12 Pancake Head wood screws secured to the cover board | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | Min. 7/16 in. OSB or min 1-½ in. HailGard Composite Board installed with Firestone All-Purpose Fasteners and Insulation Fastening Plates at a rate of 16 per 4 ft x 8 ft board. | CLAD-GARD SA-FR Underlayment | -45 |

Table 9 (continued)

Panel - UC-6 24 gauge steel 18 inches wide

Class A Fire Rated – Unlimited Slope

| Assembly Number | Deck¹ | Attachment^{2,3,4} | Insulation | Barrier Product⁵ | Ply Sheet | Allowable Uplift Pressure |
|------------------------|-------------------------|---|---|---|---|----------------------------------|
| 75 | Plywood or OSB | UC-6 Low-Float Clip at 24-inches o.c. attached with two #10-12 Pancake Head wood screws | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, CLAD-GARD SA-S, CLAD-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -60 |
| 76 | | | Optional: HailGard | | CLAD-GARD SA-FR Underlayment | -60 |
| 77 | | UC-6 Low-Float Clip at 30 inches o.c. attached with two #10-12 Pancake Head wood screws | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, CLAD-GARD SA-S, CLAD-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -42 |
| 78 | | | Optional: HailGard | | CLAD-GARD SA-FR Underlayment | -42 |

Table 9 (continued)

Panel - UC-6 24 gauge steel 18 inches wide

Class A Fire Rated – Unlimited Slope

| Assembly Number | Deck¹ | Attachment^{2,3,4} | Insulation | Barrier Product⁵ | Ply Sheet | Allowable Uplift Pressure |
|------------------------|-------------------------|--|--|---|---|----------------------------------|
| 79 | 5/8 inch plywood | UC-6 Super Clips at 36 inches o.c. attached with two #10-12 Pancake Head wood screws | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGAR HD, ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, CLAD-GARD SA-S, CLAD-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -53 |
| 80 | | | Optional: HailGard | | CLAD-GARD SA-FR Underlayment | -53 |
| 81 | Steel | UC-6 Low Float Clip or UC-6 Super Clip at 30 inches o.c. with two #14-13 screws | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, CLAD-GARD SA-S, CLAD-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -53 |
| 82 | | | Optional: HailGard | | CLAD-GARD SA-FR Underlayment | -53 |

Table 10

Panel - UC-6 .032 aluminum 18 inches wide

Class A Fire Rated – Unlimited Slope

| Assembly Number | Deck¹ | Attachment^{2,3,4} | Insulation | Cover Board, Barrier Product⁵ | Ply Sheet | Allowable Uplift Pressure |
|------------------------|-------------------------|--|--|---|---|----------------------------------|
| 83 | Plywood or OSB | UC-6 Low Float Clip at 24 inches o.c. attached with two #10-12 Pancake Head wood screws | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, CLAD-GARD SA-S, CLAD-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -53 |
| 84 | | | Optional: HailGard | | CLAD-GARD SA-FR Underlayment | -53 |
| 85 | | UC-6 Low Float Clip at 30 inches o.c. attached with two #10-12 Pancake Head wood screws | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, CLAD-GARD SA-S, CLAD-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -45 |
| 86 | | | Optional: HailGard | | CLAD-GARD SA-FR Underlayment | -45 |
| 87 | Steel | UC-6 Low-Float Clip at 18 inches o.c. attached with two #10-12 Pancake Head wood screws, secured to HailGard | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | 1-½ in. HailGard Composite Board installed with HD HailGard Fasteners at a rate of 8 per 4 ft x 8 ft board | CLAD-GARD SA-FR Underlayment | -53 |
| 88 | | UC-6 Low-Float Clip at 24 inches o.c. attached with two #10-12 Pancake Head wood screws, secured to HailGard | | | | -45 |

Table 10 (continued)

Panel - UC-6 .032 aluminum 18 inches wide

Class A Fire Rated – Unlimited Slope

| Assembly Number | Deck¹ | Attachment^{2,3,4} | Insulation | Barrier Product⁵ | Ply Sheet | Allowable Uplift Pressure |
|------------------------|-------------------------|---|--|---|---|----------------------------------|
| 89 | 5/8 inch plywood | UC-6 Low-Float Clip or UC-6 Super Clip at 30 inches o.c. attached with two #12-13 Drill Point fasteners | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, CLAD-GARD SA-S, CLAD-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -53 |
| 90 | | | | | | |
| 91 | | | Optional: HailGard | | CLAD-GARD SA-FR Underlayment | -53 |

[Table 11](#)

Panel - UC-14 24 gauge steel 16 inches wide

Class A Fire Rated – Unlimited Slope

| Assembly Number | Deck¹ | Attachment^{2,3,4} | Insulation | Barrier Product⁵ | Ply Sheet | Allowable Uplift Pressure |
|------------------------|-------------------------|--|---|---|---|----------------------------------|
| 92 | 5/8 inch plywood | UC-14 Clip at 6 inches o.c. attached with two #10-12 Pancake Head wood screws | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, CLAD-GARD SA-S, CLAD-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -100 |
| 93 | | | Optional: HailGard | | CLAD-GARD SA-FR Underlayment | -100 |
| 94 | | UC-14 Clip at 12 inches o.c. attached with two #10-12 Pancake Head wood screws | Optional: Any thickness ISO 95+ GL, RRESISTA, ISOGARD HD, ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, CLAD-GARD SA-S, CLAD-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -79 |
| 95 | | | Optional: HailGard | | CLAD-GARD SA-FR Underlayment | -79 |

Table 11 (continued)

Panel - UC-14 24 gauge steel 18 inches wide

Class A Fire Rated – Unlimited Slope

| Assembly Number | Deck¹ | Attachment^{2,3,4} | Insulation | Cover Board, Barrier Product⁵ | Ply Sheet | Allowable Uplift Pressure |
|------------------------|-------------------------|---|---|---|---|----------------------------------|
| 96 | Steel | UC-14 Clips at 36 inches o.c. attached with two #10-12 Pancake Head wood screws, secured to the cover board | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, or ISOGARD HD Composite | Min. 7/16 in. OSB or min 1-½ in. HailGard Composite Board installed with HD HailGard Fasteners at a rate of 24 per 4 ft x 8 ft board. | CLAD-GARD SA-FR Underlayment | -53 |
| 97 | | UC-14 Clips at 18 inches o.c. attached with two #10-12 Pancake Head wood screws, secured to HailGard | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, or ISOGARD HD Composite | 1-½ in. HailGard Composite Board installed with HD HailGard Fasteners at a rate of 8 per 4 ft x 8 ft board. | CLAD-GARD SA-FR Underlayment | -53 |
| 98 | Plywood or OSB | UC-14 Clip at 24 inches o.c. with two #10-12 Pancake Head wood screws | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, or ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, CLAD-GARD SA-S, CLAD-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -68 |
| 99 | | | Optional: HailGard | | CLAD-GARD SA-FR Underlayment | -68 |

Table 11 (continued)

Panel - UC-14 24 gauge steel 18 inches wide

Class A Fire Rated – Unlimited Slope

| Assembly Number | Deck ¹ | Attachment ^{2,3,4} | Insulation | Barrier Product | Ply Sheet | Allowable Uplift Pressure |
|-----------------|-------------------|---|--|---|---|---------------------------|
| 100 | Steel | UC-14 Clips at 18 inches o.c. attached with two #12-13 Drill Point fasteners. | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, CLAD-GARD SA-S, CLAD-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -53 |
| 101 | | | Optional: HailGard | | CLAD-GARD SA-FR Underlayment | -53 |

Table 12

Panel - UC-14 .032 aluminum 16 inches wide

Class A Fire Rated – Unlimited Slope

| Assembly Number | Deck¹ | Attachment^{2,3,4} | Insulation | Barrier Product⁵ | Ply Sheet | Allowable Uplift Pressure |
|------------------------|-------------------------|--|--|---|---|----------------------------------|
| 102 | 5/8 inch plywood | UC-14 Clip at 6 inches o.c. attached with two #10-12 Pancake Head wood screws | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, CLAD-GARD SA-S, CLAD-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -86 |
| 103 | | | Optional: HailGard | | CLAD-GARD SA-FR Underlayment | -86 |
| 104 | | UC-14 Clip at 12 inches o.c. attached with two #10-12 Pancake Head wood screws | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, CLAD-GARD SA-S, CLAD-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -74 |
| 105 | | | Optional: HailGard | | CLAD-GARD SA-FR Underlayment | -74 |

Table 12 (continued)

Panel - UC-14 .032 aluminum 16 inches wide

Class A Fire Rated – Unlimited Slope

| Assembly Number | Deck¹ | Attachment^{2,3,4} | Insulation | Cover Board | Ply Sheet | Allowable Uplift Pressure |
|------------------------|-------------------------|---|--|--|------------------------------|----------------------------------|
| 106 | Steel | UC-14 Clips at 18 inches o.c. fastened with two #10-12 Pancake Head wood screws, secured to the cover board | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | Min. 7/16 in. OSB or min 1-½ in. HailGard Composite Board installed with HD HailGard Fasteners at a rate of 24 per 4 ft x 8 ft board | CLAD-GARD SA-FR Underlayment | -53 |

Table 12 (continued)

| Panel - UC-14 .032 aluminum 18 inches wide | | | | | | |
|---|-------------------------|--|--|---|---|----------------------------------|
| Class A Fire Rated – Unlimited Slope | | | | | | |
| Assembly Number | Deck¹ | Attachment^{2,3,4} | Insulation | Barrier Product⁵ | Ply Sheet | Allowable Uplift Pressure |
| 107 | Plywood/ OSB | UC-14 Clips at 18 inches o.c. attached with two #10-12 pancake head wood screws. | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, CLAD-GARD SA-S, CLAD-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -53 |
| 108 | | | Optional: HailGard | | | |
| 109 | Steel | UC-14 Clips at 18 inches o.c. attached with two #12-13 Drill Point fasteners | Optional: Any thickness ISO 95+ GL, RESISTA, ISOGARD HD, ISOGARD HD Composite | G-P Products DensDeck, 1/4 in. thick min, or UL Classified Gypsum board, 1/2 in. thick min, or minimum one layer CLAD-GARD SA-FR Underlayment | Optional: CLAD-GARD SA-N, CLAD-GARD SA-S, CLAD-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment | -53 |
| 110 | | | Optional: HailGard | | | |

- 1 –Wood deck must be minimum 15/32-inch-thick (11.9 mm) plywood unless otherwise noted in this report. Steel deck must be a minimum no. 22 gauge galvanized steel [0.030 inch (0.76mm)]. Where OSB is listed, min 7/16 in, thick (11.1 mm) or greater is acceptable.
- 2 –All installations of Clips over foam plastic insulation require use of UC Bearing Plate and Firestone #12-13 Drill Point fastener. Installations over DensDeck or Gypsum boards require Clips to be attached with Firestone #12-13 Drill Point Fasteners.
- 3 –Fastener spacing is the maximum allowable for the rated Uplift Pressure.
- 4 –Minimum penetration into and through the deck for fasteners is 1 inch for wood decks and ¾ inch for steel decks.
- 5 –Joints in barrier board offset a minimum of 6 in. with joints in deck.

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