

Product Evaluation

RWA04 | 0919

Engineering Services Program

The following product has been evaluated for compliance with the wind loads specified in the International Residential Code (IRC) and the International Building Code (IBC).

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

For more information, contact TDI Engineering Services Program at (800) 248-6032.

Evaluation ID: RWA-04

Effective Date: September 1, 2019

Re-evaluation Date: September 2023

Product Name: SunSky 12" Polycarbonate Light Transmitting Roofing Panels Installed Over Steel Purlins, Non-Impact Resistant

Manufacturer: Palram Americas, Inc.
9735 Commerce Circle
Kutztown, PA 19530
(610) 285-9918

General Description:

The SunSky 12" roof panel is either 1.00mm or 1.50mm thick polycarbonate light transmitting roof panels. The roof panel has a 36" coverage with 1-1/4" tall major ribs at 12" on center.

Limitations:

Roof Framing: The roof panels must be installed over minimum 16-gauge open steel purlins.

New Roof Framing Attachment: The roof framing must meet or exceed the uplift requirements of the IRC or IBC and must be installed as required for resistance to wind loads.

Design Wind Pressures: The design pressure uplift load resistance must be as specified in Table 1 and Table 2.

Roof Slope: The roof panels may be installed on roofs with a roof slope as low as 1/2:12 if sealant is used on the panel side laps. If sealant is not used on the panel side laps, then the minimum roof slope is 3:12.

Installation Over an Existing Roof Covering: Not permitted.

Impact Resistance: The roof panels are not impact resist. Provide an impact protective system when installing the product in areas that require windborne debris protection is required.

Table 1: SunSky 12" 1.0mm thick Roof Panels Installed Over Steel Purlins

| Design Wind Pressure | Purlins | Attachment of Panels to Steel Purlins |
|-----------------------|-------------------------------------|---|
| -27.5 psf / +35.0 psf | Minimum 16-gauge 5'-0" on center | Fasteners @ 7"-5"-7"-5"-7" 5'-0" on center |

Table 2: SunSky 12" 1.5mm thick Roof Panels Installed Over Steel Purlins

| Design Wind Pressure | Purlins | Attachment of Panels to Steel Purlins |
|-----------------------|-------------------------------------|---|
| -45.0 psf / +50.0 psf | Minimum 16-gauge 5'-0" on center | Fasteners @ 7"-5"-7"-5"-7" 5'-0" on center |
| -135.3 psf | Minimum 16 Gauge 2'-6" on center | Fasteners @ 7"-5"-7"-5"-7" 2'-6" on center |

Installation:

General: The roof panels must be installed in accordance with the manufacturer's recommended installation instructions and this evaluation report.

Steel Purlins: The minimum thickness of the steel purlins must be as specified in Table 1 and Table 2.

Underlayment: N/A

Attachment of Roof Panels to Steel Purlins: The roof panels must be fastened to the purlins with minimum No. 12-14 x 1-1/4" long, HWH self-drilling screws with a 1-1/8" oversize bonded washer. A line of fasteners must be located along each steel purlin. The fastener pattern and the spacing along the length of the panel must be as specified in Table 1 and Table 2. The fasteners must be long enough to penetrate a minimum of 3 pitches of thread below the steel purlin. Refer to Figure 1 for an illustration of the required fastener pattern.

Panel Side Laps: The panel side laps are stitched together with minimum 1/4-14 x 1" Grommets at each support then 1'-3" on center. Refer to Figure 1 for an Illustration of the required fastener pattern.

Panel Ends and End Laps to the Steel Purlins: Minimum No. 12-14 x 1-1/4" long, HWH self-drilling screws with a 1-1/8" oversize bonded washer. A line of fasteners in a 7"-5"-7"-5"-7" pattern must be located along the steel purlin. The fasteners must be long enough to penetrate a minimum of 3 pitches of thread below the steel purlin. Refer to Figure 1 for an Illustration of the required fastener pattern.

Trims, Closures, and Accessories: Components, such as the eave trim, rake trim, rake tie-in, ridge flashing, high-side trim, high-side tie-in, hip flashing, and valley flashing must be installed as required by the manufacturer.

Note: Keep the manufacturer's installation instructions available on the job site during the installation. Use corrosion resistant fasteners as specified in the IRC, the IBC, and the Texas Revisions.

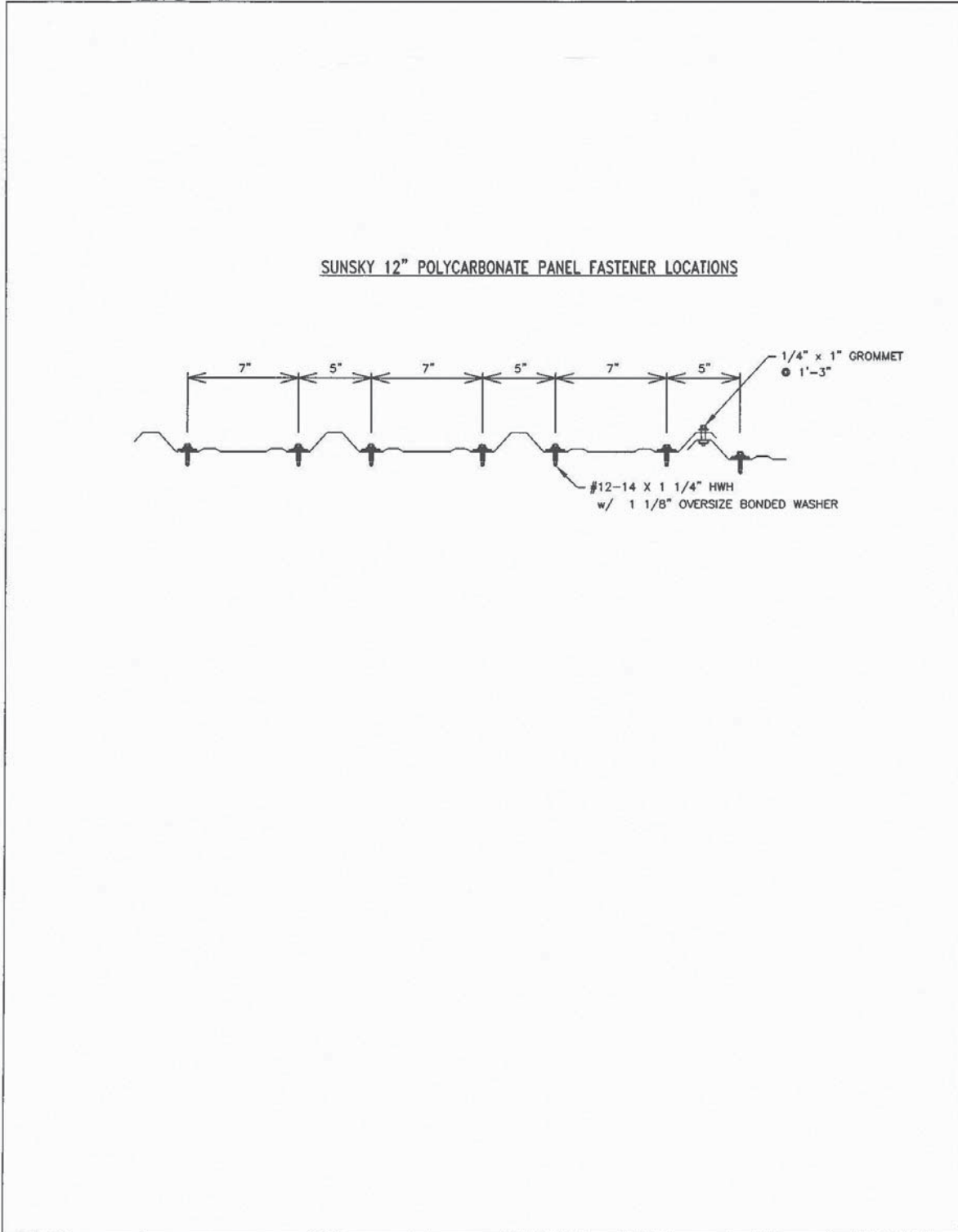


Figure 1. Illustration of the required fastener pattern