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ICC-ES Evaluation Report

ESR-1893

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Reissued 03/2018
This report is subject to renewal 03/2019.

DIVISION: 08 00 00—OPENINGS
SECTION: 08 84 00—PLASTIC GLAZING

REPORT HOLDER:

PALRAM AMERICAS, INC.

**9735 COMMERCE CIRCLE
KUTZTOWN, PENNSYLVANIA 19530**

EVALUATION SUBJECT:

PALSUN® BASIC, PALSUN® UV, PALGARD, SUNTUF® (ALSO KNOWN AS SUNSKY® AND DYNAGLAS), AND SUNLITE® (ALSO KNOWN AS THERMAGLAS™) SERIES POLYCARBONATE EXTRUDED PLASTIC SHEETS



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DIVISION: 08 00 00—OPENINGS
Section: 08 84 00—Plastic Glazing

REPORT HOLDER:

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EVALUATION SUBJECT:

PALSUN® BASIC, PALSUN® UV, PALGARD, SUNTUF® (ALSO KNOWN AS SUNSKY® AND DYNAGLAS), AND SUNLITE® (ALSO KNOWN AS THERMAGLAS™) SERIES POLYCARBONATE EXTRUDED PLASTIC SHEETS

1.0 EVALUATION SCOPE

Compliance with the following code:

- 2012, 2009, and 2006 *International Building Code*® (IBC)
- 2013 *Abu Dhabi International Building Code* (ADIBC)[†]

[†]The ADIBC is based on the 2009 IBC. 2009 IBC code sections referenced in this report are the same sections in the ADIBC.

Properties evaluated:

- Light-transmitting plastic
- Surface burning characteristics
- Durability

2.0 USES

The Palsun Basic, Palsun UV, Palgard, Suntuf, and Sunlite series polycarbonate extruded plastic sheets are light-transmitting plastics complying with IBC Sections 803.1 and 2606.4 and are intended for use in interior applications. The Palsun UV, Suntuf, and Sunlite plastic sheets are also intended for use in exterior applications.

3.0 DESCRIPTION

3.1 General:

The plastic sheets are extruded from polycarbonate resins and are furnished as transparent sheets.

The light-transmitting combustibility classifications in accordance with IBC Section 2606.4 for the plastic sheets are noted in Table 1.

3.2 Palsun Basic, Palsun UV, and Palgard Monolithic Sheet Products:

The Palsun Basic, Palsun UV, and Palgard series are monolithic plastic sheets available with smooth, matte or textured surface finishes.

3.3 Suntuf (also known as Sunsky and Dynaglas) Corrugated Sheet Products:

The Suntuf series are corrugated plastic sheets available with smooth or textured surface finishes. The sheets are available in various corrugated profiles.

3.4 Sunlite (also known as ThermoGlas) Multiwalled Sheet Products:

The Sunlite series are multiwalled (twin wall, triple wall, structured, and SLT profiles, see Figure 1) plastic sheets available with smooth or matte surface finishes.

3.5 Surface-burning Characteristics:

When tested in accordance with ASTM E84: the 1.5 and 3 mm thick Palsun Basic exhibits a flame spread of less than 25; the 1 mm thick Palsun UV exhibits a flame spread of less than 25; the 1.2 mm thick Suntuf exhibits a flame spread of less than 25; the 8 and 10 mm thick Twin Wall Sunlite exhibits a flame spread of less than 25; the 8 and 10 mm thick Triple Wall Sunlite exhibits a flame spread of less than 200; the 16 mm thick Structured Sunlite exhibits a flame spread of less than 75; the 8 mm thick SLT Sunlite exhibits a flame spread of less than 25. These products also exhibit a smoke-developed index of 450 or less when tested in accordance with ASTM E84.

4.0 INSTALLATION

Use of the polycarbonate extruded products is limited to applications permitted by the IBC for light-transmitting plastics and interior finish.

When use is for interior finish, installation of the polycarbonate extruded products must also be in accordance with the IBC.

5.0 CONDITIONS OF USE

The plastic sheets 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** The products must be manufactured, installed and identified in accordance with this report and the IBC.
- 5.2** End use of the products requires justification of compliance with appropriate code requirements, including structural and durability considerations.

5.3 The 1 mm thick Palsun UV; 0.8 mm thick Suntuf; 8 and 10 mm thick Twin Wall Sunlite; 8 and 10 mm thick Triple Wall Sunlite; 16 mm Structured Sunlite; and 8 mm SLT Sunlite products are recognized for use in skylights, exterior wall and roof panel applications provided the skylights, exterior wall and roof panel products utilizing the products are recognized in a current ICC-ES evaluation report.

5.4 The plastic sheets are manufactured in Kutztown, Pennsylvania, under a quality control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

6.1 Reports of tests in accordance with ASTM E84, ASTM D1929, ASTM D2893, and ASTM D635.

6.2 Reports of ultraviolet-light tests and comparison tension tests.

6.3 Quality documentation.

7.0 IDENTIFICATION

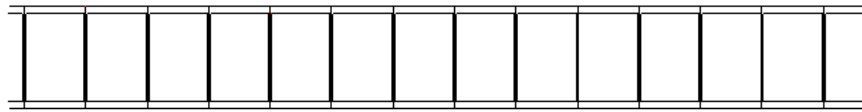
Each sheet bears a label that includes the Palram Americas, Inc., name and address, the product name, product description, the evaluation report number (ESR-1893), the interior finish classification (Class A, B or C, as applicable) and the plastic classification (CC1 or CC2, as applicable).

TABLE 1—PALSUN BASIC, PALSUN UV, PALGARD, SUNTUF, AND SUNLITE SHEET PRODUCTS

PRODUCT DESCRIPTION		SHEET WEIGHTS (kg/m ²)	THICKNESS (mm)	PLASTIC CLASSIFICATION (IBC Section 2606.4)
Palsun Basic		1.8	1.5	CC1
		3.6	3	CC1
		14.4	12	CC1
Palsun UV		1.3	1	CC2
		3.6	3	CC1
		14.4	12	CC1
Palgard		3.6	3	CC1
		14.4	12	CC1
Suntuf		1.2	0.8	CC2
Sunlite	Twin Wall	1.5	8	CC2
		1.7	10	CC2
	Triple Wall	1.7	8	CC2
		2	10	CC2
	Structured	2.7	16	CC2
	SLT	1.5	8	CC1

For **SI**: 1 mm = 0.0394 inch; 1 kg = 0.454 lb; 1 m = 3.281 ft.

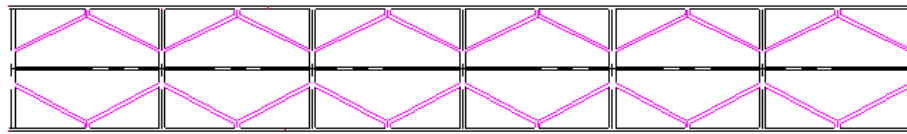
¹The sheets must be mechanically fastened to supporting members.



Twin Wall Profile



Triple Wall Profile



Structured Profile

FIGURE 1—SUNLITE MULTIWALLED PROFILES
(The SLT has the same profile as the Twin Wall.)