



PALSUN®

Flat Solid Polycarbonate Sheet



CONSTRUCTION



ARCHITECTURE



SIGN & DISPLAY



FABRICATION



Overview

PALSUN combines superior impact resistance and clarity, making it the material of choice for many demanding applications. It is virtually unbreakable, yet it is transparent as glass at less than half its weight.

PALSUN can be cold bent and easily fabricated and formed, making it ideal for roofing, skylights, architectural roofing and glazing.

Clear, translucent and opaque PALSUN sheets are also ideal as machine guards, sound barriers, anti-vandal and safety glazing. PALSUN Diffuser and LB sheets are extensively used in light boxes.

Main Benefits

- High impact resistance - Virtually unbreakable
- High clarity and light transmission
- Weather and UV resistant
- Wide service temperature range
- Blocks harmful UV radiation
- Good acoustical insulation
- Lightweight
- Easy to handle and install
- Versatile, formable, and machinable
- Printable



Typical Applications

Architecture

- Transparent acoustic barriers
- Sport venues
- Skylights
- Shopping centers
- Covered walkways

Construction

- Sun rooms and conservatories
- Pergolas and covered patios

Safety and Security Glazing

- Safety glazing, machine guards
- Bus stops and Glazing transportation
- Shields for police and security forces
- Safety windshields for cars
- Eye protection visors for helmets

Sign & Display

- Signs, public sign guards
- Displays, P.O.P stands
- Illuminated signs, light fixtures

Fabrication

- Thermoformed, vacuum formed, bent and fabricated items

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Standard Dimensions*

Thickness (mm)	Width x Length (mm)	Surface Finish				
		Smooth Both sides	Embossed Both sides	Matte One side	Hair Cell One side	Prismatic One side
1	1220 x 2440	✓		✓		
1.5	1250 x 2440	✓	✓	✓		
2		✓	✓	✓		
2.5 - 6	1220 x 2440	✓	✓	✓	✓	✓
8	2050 x 3050	✓	✓		✓	
9 - 12.7		✓			✓	
2 - 18	2450 x 3050	✓				

*Other dimensions are available upon request, subject to a minimum order.

Colors*

Transparent

Clear	Solar Grey	Bronze	Red	Blue	Green	Smart Green	Smart Blue	Bluish Breeze™
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Translucent

Yellow	Red	Mint Green	White Opal 11-50% LT	White Diffuser 11-50% LT	LB (Light Box) 44-50% LT	Solar Ice	Solar Olympic	Solar Control
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Opaque

Dark Green	Red Brick	Black	Dark Blue	Cream RAL 9001	Light Grey RAL 7035	Dark Grey	Brown	Off White
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*Custom colors and solar transmissions are available upon request, subject to a minimum order.

PALSUN® Product Range

Product	Description
PALTUF™	General purpose flat solid polycarbonate sheet for interior use
PALSUN®	UV protected on one side
PALSUN® UV2	UV protection on both sides
PALSUN® Embossed*	Embossed surface (E102, prismatic, hair cell)
PALSUN® FR*	Fire retardant (UL94 V0)
PALSUN® Matte*	Matte finish on one side
PALSUN® Solar Control*	Efficient heat-blocking with metallic appearance
PALSUN® Breeze*	Advanced heat-blocking with high transparency
PALGARD™	Abrasion resistance on one or both sides

* Available with UV protection on one or both sides.

Typical Physical Properties

Property	(Method*)	Conditions	Units	Value
Density	(D-792)		g/cm³	1.2
Heat Deflection Temperature	(D-648)	Load: 1.82 MP	°C	130
Service Temperature - Short Term			°C	-50 to +120
Service Temperature - Long Term			°C	-50 to +100
Coefficient of Linear Thermal Expansion	(D-696)		mm/m °C	0.065
Thermal Conductivity	(C-177)		W/m K	0.21
Tensile Strength at Yield	(D-638)	10 mm/min.	MPa	65
Tensile Strength at Break	(D-638)	10 mm/min.	MPa	60
Elongation at Yield	(D-638)	10 mm/min.	%	6
Elongation at Break	(D-638)	10 mm/min.	%	>90
Tensile Modulus of Elasticity	(D-638)	1 mm/min.	MPa	2,300
Flexural Strength	(D-790)	1.3 mm/min.	MPa	100
Flexural Modulus	(D-790)	1.3 mm/min.	MPa	2,600
Impact Falling Weight	(ISO 6603/1 E50)	3mm sheet	J	158
Rockwell Hardness	(D-785)		R Scale	125R
Light Transmission	(D-1003)	3mm clear sheet	%	90
Haze	(D-1003)	3mm clear sheet	%	<0.5
Yellowness Index	(D-313)	3mm clear sheet	YI	<1

* ASTM except where noted.

Flammability

PALSUN complies with the most demanding international fire resistance standards in the field of plastics, as indicated in the detailed table herein. The classification is subject to product type, thickness and color.

Product	Standard	Classification*
PALSUN®	EN13501	B, s1, d0
	BS 476/7	Class 1
	NFP 92501, 4	M2
	UL Classified	V2 (File e221255)
	ASTM D-635	CC1
PALSUN® FR	Standard	Classification*
	UL 94	V0 (File e221255)

* For more detailed information please contact your Palram distributor.

Installation

Product masking (protective film) must be removed from both sides immediately after installation. Installation instructions are available from your PALRAM distributor upon request.



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