



Uniclass	EPIC
L6619:L441:P*	F5217:D14+D15:X*
CI/SfB	
(37.4)	Rn6

# **PALSUN®**

Flat Polycarbonate Sheet









Overview

PALSUN presents a powerful combination of clarity and impact resistance. PALSUN 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 barrel vault roofing, skylights, architectural roofing and glazing. Clear, translucent or opaque, PALSUN sheets are also ideal as machine guards, sound barriers, anti-vandal and safety glazing.

## 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

# Typical Applications

# Safety and Security Glazing

- Safety glazing
- Machine guards
- Safety glazing in public buildings
- Protective enclosures for bus stops and telephone booth
- Shields for police and security forces
- Glazing in boats, trains, busses and planes
- Windshields for cars
- Eye protection visors for helmets



- Transparent acoustic barriers
- Architectural roofing
- Skylights
- Hall and shopping center ceilings
- Covered walkways
- Sun rooms and conservatories
- Pergolas and covered patios
- Attic windows





#### Advertising

- Signboards and illuminated signage
- Light Fixtures (white opal, diffused, or embossed sheets)

## **Other Applications**

 Thermoformed, vacuum formed, bent, and fabricated items

# ► PALSUN® Product Range

Product	Description
PALTUF™	General purpose flat solid polycarbonate sheet for interior use
PALSUN®	Flat solid polycarbonate sheet, UV protected on one side
PALSUN® UV2	UV protection on both sides
PALSUN® Embossed*	Embossed surface (E102, prismatic, hair cell)
PALSUN® FR*	Fire retardant, with higher fire resistant rating
PALSUN® Matte*	Matte finish on one side
PALSUN® Solar Control*	Efficient heat-blocking with metallic appearance
PALSUN® Smart*	See-through sheet with advanced heat-blocking
PALSUN® Foam	Flat foamed polycarbonate sheet, UV protected on one side
PALGARD™*	Abrasion resistant on one or both sides

<sup>\*</sup> With co-extruded UV protection on one or both sides

## **▶** Colors

Transparent						
Clear	Solar Grey	Bronze	Red	Blue	Green	Smart Green

Translucent							W
Yellow	Red	Mint Green	White Opal 11-50% LT	White Diffuser 11-50% LT	Solar Ice	Solar Olympic	Solar Control

#### Opaque

Dark Red Green Brick	Black	Dark Blue	Cream RAL 9001	Light Grey RAL 7035	Dark Grey	Brown	Off White
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## Standard Dimensions & Surfaces\*

Thickness mm	Width x Length mm	Smooth	<b>Embossed</b> both sides			
1	1220 x 2440	~		~		
1.5	1250 x 2440	V	<b>~</b>	<b>V</b>		V
2		V	V	<b>V</b>		V
2.5 - 6	1220 x 2440	V	V	<b>V</b>	~	V
8	1250 x 2440 2050 x 3050	<b>V</b>	V		~	V
9 - 12	•	~			~	V

<sup>\*</sup>Other dimensions are available with a special order, subject to minimum quantity.

Inasmuch as PALRAM Industries has no control over the use to which others may put the material, it does not guarantee that the same results as those described herein will be obtained. Each user of the material should make his own tests to determine the materials suitability for his own particular use. Statements concerning possible or suggested uses of the materials described herein are not to be construed as constituting a license under any PALRAM Industries patent covering such use or as recommendations for use of such materials in the infringement of any patent. PALRAM Industries or its distributors cannot be held responsible for any losses incurred through incorrect installation of the material. In accordance with our company policy of continual product development you are advised to check with your local PALRAM Industries supplier to ensure that you have obtained the most up to date information.

## 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	٦		°C	-50 to +120
Service Temperature - Long Term	1		°C	-50 to +100
Coefficient of Linear Thermal Exp	ansion (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 (I	SO 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

<sup>\*</sup> ASTM except where noted

# **Flammability**

		Classification	*	
	EN13501	B s1, d0		
	BS 476/7	Class 1		
e Z	NSP 92501, 4	M1, M2		
PALSUN®	DIN 4102	B1, B2		
PA	CSE RF 2/75/A, CSE RF 3/77	Class 1		
	UL Classified	V2 (File e221255)		
	ASTM D-635	CC1		
	ASTM D-635	CC1		
	Standard	Classification	*	
<b>~</b>	UL Classified	V0 (File e221255	5)	
PALSUN® FR	ASTM D-2863-87	L.O.I. = 30		
S		Ignitability Index	= 9	
ALS	ALL 1520.2 1002	Spread of Flame Index	= 8	
<u>a</u> .	AU 1530.3-1982	Heat Evolved Index	= 10	
		Smoke Developed Index = 8		

<sup>\*</sup>Depends on thickness. For additional information please contact your PALSUN distributor.

### Installation

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













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