



PALSUN®

Flat Solid Polycarbonate Sheet



CONSTRUCTION



FABRICATION



ADVERTISING



ARCHITECTURE



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 barrel vault 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 durable 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



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 telephone booth
- Shields for police and security forces
- Glazing in public transportation
- Safety windshields for cars
- Eye protection visors for helmets

Sign & Graphics

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

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 | 1250 x 2440 | ✓ | ✓ | | ✓ | ✓ |
| 9 - 12 | 2050 x 3050 | ✓ | | | ✓ | ✓ |

*Other dimensions are available with a special order, subject to a minimum order.

Colors*

Transparent

| | | | | | | | | |
|-------|------------|--------|-----|------|-------|-------------|------------|----------------|
| Clear | Solar Grey | Bronze | Red | Blue | Green | Smart Green | Smart Blue | Bluish Breeze™ |
|-------|------------|--------|-----|------|-------|-------------|------------|----------------|

Translucent

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

Opaque

| | | | | | | | | |
|------------|-----------|-------|-----------|-------------------|------------------------|-----------|-------|-----------|
| Dark Green | Red Brick | Black | Dark Blue | Cream RAL 9001 | Light Grey RAL 7035 | Dark Grey | Brown | Off White |
|------------|-----------|-------|-----------|-------------------|------------------------|-----------|-------|-----------|

*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® | 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, better flammability ratings |
| PALSUN® Matte* | Matte finish on one side |
| PALSUN® LB* | Diffused sheet for light box applications |
| PALSUN® Solar Control* | Efficient heat-blocking with metallic appearance |
| PALSUN® Breeze* | Advanced heat-blocking with high transparency |
| PALSUN® Foam | Flat foamed polycarbonate sheet, UV protected on one side |
| 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/cm ³ | 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

| Product | Standard | Classification* |
|------------|----------------|-------------------|
| PALSUN® | EN13501 | B, s1, d0 |
| | BS 476/7 | Class 1 |
| | NSP 92501, 4 | M2 |
| | DIN 4102 | B1, B2 |
| | UL Classified | V2 (File e221255) |
| | ASTM D-635 | CC1 |
| PALSUN® FR | Standard | Classification* |
| | UL 94 | V0 |
| | ASTM D-2863-87 | L.O.I. = 30 |

* Depends on thickness. For additional information please contact your PALRAM distributor.

Installation

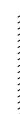
Product masking (protective film) must be removed from both sides immediately after installation. Installation instructions are available from your PALRAM distributor upon request.



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