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Polycasa offers an extensive range of plastic sheets to distribution and industrial partners, with an industry leading selection of polymers, thicknesses, sizes, colours, patterns, and coatings.



**Brands from Polycasa:**



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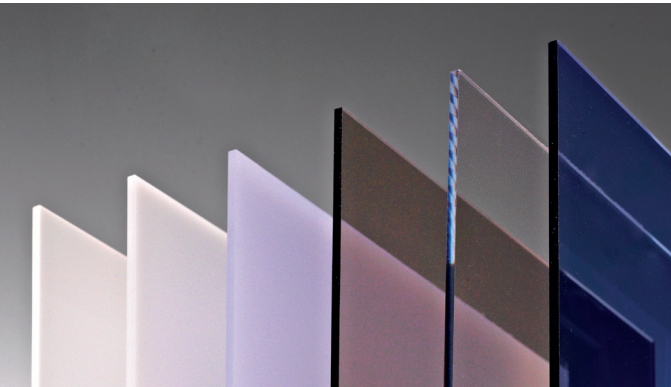
# Product Guide





POLYCASA® PC IS THE VIRTUALLY UNBREAKABLE POLYCARBONATE SHEET WITH EXCELLENT OPTICAL AND WEATHERING PROPERTIES.

This makes it the material of choice for safety and balcony glazing, machine guards, windows and canopy roofs. And with excellent mechanical, thermal and electrical properties, not to mention a range of special features and patterns, you can use **Polycasa PC** almost anywhere — ideal for the construction and glazing industries.



PRODUCT IDENTIFICATION

**Polycasa PC** is the brand name for extruded Polycarbonate sheet from **Polycasa** in accordance with ISO 11963/ DIN 16801.

The **Polycasa PC** programme offers solutions to both indoor and outdoor applications and for outdoor use we recommend **Polycasa PC UVP**, a material with 10 years weathering warranty.

As well as clear, standard opals and white, a variety of colours and designs are also available as a result of the extrusion process we can offer.

CHARACTERISTICS

- Excellent optical properties and a brilliant surface.
- Easy to fabricate and shows exceptional performance at both low and high temperatures (from -40°C to +130°C).
- Excellent mechanical, thermal and electrical properties.
- Virtually unbreakable in normal use.

**Polycasa PC sheets also combine the following excellent properties:**

- Easy to vacuum form (pre-drying required).
- Normally inflammable - Building Regulations I Class B2 to DIN 4102, Part 1. (For gauges from 1.50 up to 6.00 mm Class B1 applies.)

**Polycasa PC UVP** sheets are manufactured by coextrusion on both sides of the sheet, which means that the two UV-protection layers are integral with the base sheet.

**PC UVP** sheets are strongly recommended for outdoor use. Even after long years of weathering exposure, the sheets will maintain their clarity.

APPLICATIONS

**Polycasa PC:**

- Moulded containers, bowls and tubs.
- Machine safety guards, vending machine fascias.
- Vehicle and boat construction, aircraft (only for internal use).
- Safety glazing (sports centres, penal establishments and other buildings).
- Street and traffic signs.
- Office machinery (covers, sight panels).
- Industrial construction.

• Partition walls.

• Advertising panels.

**Polycasa PC UVP:**

• Lighting covers.

• Balcony glazing.

• Glazed walkways.

• Sound barrier walls.

• Greenhouses.

• Conservatories.

• Doors and windows.

• Canopy roofs.

• Barrel vaults.

PRODUCT RANGE

- **Polycasa PC** is available with or without a special UV-resistant finish.
- Colours: clear, white, brown and smoke, and more.
- Special features: opal, UVP opal, double- or single-sided scratch resistance.
- Special patterns: Prismatic , Impala , Haircell UV Protection on request.
- Standard thicknesses range from 1 to 15 mm. 0.8 mm or 20.0 mm is available upon request in the regular and UV-grade.
- Standard sheet dimensions are from 0.8 to 1.5 mm just 2050 x 1250 mm, from 1.5 to max. thickness 3050 x 2050 and 2050 x 1250 mm.
- Overlength and special sizes on request.

TECHNICAL INFORMATION

GENERAL			
Property	Method	Unit	PC + PC UVP
Density	ISO 1183	g/cm³	1.2
Rockwell hardness	D-78	M scale	-

OPTICAL			
Property	Method	Unit	PC + PC UVP
Light transmission	DIN 5036	%	86
Refractive index	T3	n <sup>D</sup>	1.585

MECHANICAL			
Property	Method	Unit	PC + PC UVP
Flexural modulus	ISO 489	MPa	-
Flexural strength	ISO 178	MPa	>95
Tensile modulus	ISO 527	MPa	2200
Tensile strength	ISO 527	MPa	60
Elongation	ISO 527	%	80

THERMAL			
Property	Method	Unit	PC + PC UVP
Vicat temperature (VST/A 50)	ISO 306	°C	145
Heat deflection temperature (A/B)	ISO R75	°C	135
Specific heat capacity		J/gK	1.17
Coefficient of linear thermal expansion	DIN 53328	K <sup>-1</sup> x10 <sup>-5</sup>	6.5
Thermal conductivity	DIN 52612	W/mK	0.2
Degradation temperature		°C	>280
Max. service temperature continuous use		°C	115
Max. service temperature short term use		°C	130
Sheet forming temperature range		°C	180-210

IMPACT STRENGTHS			
Property	Method	Unit	PC + PC UVP
Izod (notched)	ISO 180	KJ/m²	-
Charpy (notched)	ISO 179	KJ/m²	10
Charpy (unnotched)	ISO 179	KJ/m²	NB

ELECTRICAL			
Property	Method	Unit	PC + PC UVP
Dielectric constant 50 HZ	DIN 53483		3.0
Volume resistivity	DIN 53482	Ω.cm	10 <sup>15</sup>
Surface resistivity	DIN 53482	Ω	>10 <sup>15</sup>
Dielectric strength	DIN 53481	kV/mm	>30
Dissipation factor (50 HZ)	DIN 53483		8x10 <sup>-4</sup>