PETG

PRODUCT GUIDE

Tough, clear and robust. Easily moulded into shapes.

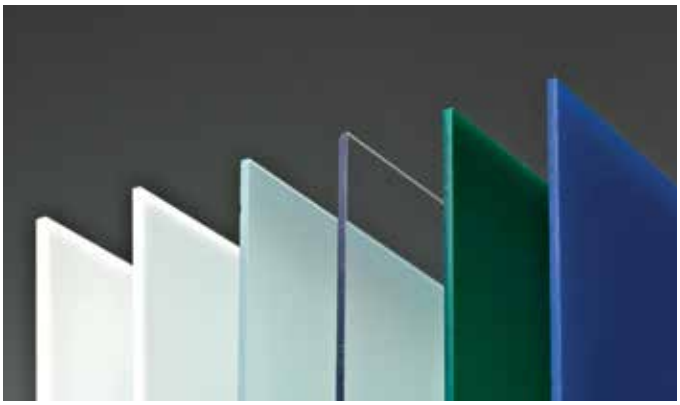
3A COMPOSITES | POLYCASA

PETG

POLYCASA® PETG IS A TOUGH, CLEAR MATERIAL THAT OFFERS MANY SOLUTIONS FOR BOTH INDOOR AND OUTDOOR APPLICATIONS.

This extruded sheet offers possibilities for designers and fabricators, from simple shapes to the most complex designs (where it doesn't lose any of its toughness). PETG is easy to mould, and does not require predrying before use (in contrast to other common materials), which reduces processing costs and time required.

Plus, the high impact performance allows use of a thinner gauge sheet than with other common materials — another way of lowering material costs.



PRODUCT IDENTIFICATION

Polycasa PETG is the brand name for extruded Polyethyleneterephthalate Glycol (**PETG**) copolyester sheet from **Polycasa.**

As a result of the extrusion process, **Polycasa** can offer, in addition to clear and opal versions, a variety of colours and designs to suit a wide range of requirements.

CHARACTERISTICS

- Good optical properties.
- Brilliant surface.
- Easy to fabricate.
- Its biggest advantage compared to other plastics is in vacuum forming.
- Exceptional low temperature performance.
- Very good chemical resistance.
- Very high impact properties.
- Low water absorption.
- Easy to recycle.

Polycasa PETG meets all current food contact legislation and can be used in contact with unwrapped food.

Our UV Grade is not intended for food contact and is therefore not covered by this warranty.

APPLICATIONS

- Bus shelters.
- Poster glazing.
- Machine guards.
- Medical appliance packaging.
- Displays & signs for external use.
- Refrigerators and cold storeroom equipment.
- Bicycle safety helmets.
- Food containers.
- Lenticular lenses.
- Graphic arts.
- Lighting controllers for hazardous areas.
- Motorcycle windshields.

PRODUCT RANGE

- Available with UVP or anti-reflex features.
- Standard sheet thickness range from 0.8 to 10 mm. (12 and 15 mm are also available but subject to special order.)
- Available in standard clear colour, and a range of different opal shades.
- Patterns; Prismatic, Haircell and Impala patterns and also colours are available on request.
- A range of special colours with or without UV protection can be produced, subject to special conditions.
- Standard sheet dimensions are from 0.8 to 1.5 mm, 2050 x 1250 (width) mm; from 1.5 to maximum thickness 3050 x 2050 mm or 2050 mm x 1250.
- Overlength and special sizes on request.

Please contact your local customer service centre for a complete product overview.

For details see back of brochure.

TECHNICAL INFORMATION

GENERAL

Property	Method	Unit	**POLYCASA** PETG + **POLYCASA** PETG UV
Density	D1505	g/cm^3	1.27
Rockwell hardness	D-785	R scale	105

OPTICAL

Property	Method	Unit	**POLYCASA** PETG + **POLYCASA** PETG UV
Light transmission	5036	%	88
Refractive index	53491		1.57
Haze	D1003	%	<1

MECHANICAL

Property	Method	Unit	**POLYCASA** PETG + **POLYCASA** PETG UV
Flexural modulus	53452	MPa	2075
Flexural strength	53452	MPa	70
Tensile modulus	53455	MPa	2200
Tensile strength	53455	MPa	50
Elongation	53455	%	54

THERMAL

Property	Method	Unit	**POLYCASA** PETG + **POLYCASA** PETG UV
Vicat temperature (B)	53460	°C	82
Heat deflection temperature (A/B)	53461	°C	72/68
Specific heat capacity	D-2766	J/gK	1.1
Coefficient of linear thermal expansion	53752	$K^{-1}x10^{-5}$	6.8
Thermal conductivity	52612	W/mK	0.20
Degradation temperature		°C	>280
Max. service temperature		°C	70
Sheet forming temperature range		°C	120-160

IMPACT STRENGTHS

Property	Method	Unit	**POLYCASA** PETG + **POLYCASA** PETG UV
Izod (notched)	ISO 180	kJ/m^2	11.5
Charpy (notched)	53453	kJ/m^2	10
Charpy (unnotched)	53453	kJ/m^2	NB

ELECTRICAL

Property	Method	Unit	**POLYCASA** PETG + **POLYCASA** PETG UV
Dielectric constant 100 HZ	IEC 250		2.6
Volume resistivity	D257	Ω.cm	$>10^{15}$
Surface resistivity	D257	Ω	$>10^{16}$
Dielectric strength	D149	kV/mm	16
Dissipation factor (50 HZ)	IEC 250		0.01

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POLYCASA® PETG EN 11/2016

COMPOSITES

POLYCASA

YOUR HOME
FOR PLASTICS
AND COMPOSITES

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