FEATURES

- Excellent impact strength
- Excellent dimensional stability with a high capacity to maintain its original dimensions when subjected to changes in temperature and humidity
- Rigidity over a wide range of temperatures
- Pliable and flexible
- Moderate chemical resistance and low solvent resistance
- Translucent
- Good heat resistance
- Good insulation properties
- Good machinability
- Easy to polish, weldable and bondable using glue

White Plastic Sheet, 1250mm x 610mm x 3mm

RS Stock No.: 681637

RS Professionally Approved Products bring to you professional quality parts across all product categories. Our product range has been tested by engineers and provides a comparable quality to the leading brands without paying a premium price.

Product Description

From RS Pro a range of high-quality polycarbonate translucent solid plastic sheets available in a range of sizes and thicknesses

General Specifications

Form	Solid
Colour	White
Material	Polycarbonate
Laminated	Yes
Laminated Material	Acrylic; Epoxy Resin; Fine Weave Cotton; Glass Fibre
Flammability Rating	UL 94 HB
Polymer Type	Copolymer
Finish	Clear
Adhesive Backing	Yes
Applications	Medical devices, Electronic components, Automotive components, Electrical cases and covers, Digital Disks (CDs, DVDs, and Blu-ray), Machine guards and protective screens, Signage and displays

Electrical Specifications

Specific Surface Resistance	10^{14} Ω
Specific Volume Resistance	10^{13} Ω.cm
Dielectric Constant	2.9
Dielectric Loss Factor	0.0017tg
Breakdown Voltage	17kV/mm
Dielectric Strength 23°C, 50% r.h.	49kV/mm

Mechanical Specifications

Length	1250mm
Width	610mm
Thickness	3mm
Density	1.2g/cm^3
Tensile Strength	62Mpa
Hardness	R 118 Rockwell
Water absorption	0.35%
Thermal Conductivity	0.17W/m.K
Elongation	20%
Impact Strength	12kJM^{-2}
Modulus Of Elasticity	2500Mpa
Flexural Strength	91Mpa
Compression Strength	20Mpa
Compression Modulus	2300Mpa
Ball Indentation Hardness	165Mpa
Thermal Expansion	8x10^{-5}k^{-1}
Specific Heat	1.1J/(g.K)
Specific Gravity	1.38
Flexural Modulus	2600Mpa
Friction Coefficient	0.54
Poisson Ratio	0.38kJM^{-2}

Operation Environment Specifications

Maximum Operating Temperature	120°C
Melting Point	255°C
Glass Transition Temperature	-60°C
Vicat Softening Point	65°C

Approvals

Compliance/Certifications	CE / UR / cUR

Polycarbonate

Properties	Test method	Units	Values	Applications
Mechanical				Suitable for general glazing applications which are vulnerable to vandalism or accidents. Other applications include machine guards/shields, safety visors and light fittings.
Tensile stress at yield	DIN 53455	N/mm^2	60	
Elongation at break	DIN 53455	%	>100	
Tensile modulus of elasticity	DIN 53457	N/mm^2	2300	
Unnotched impact strength (Charpy)	DIN53453	kJ/m^2	no break	
Notched impact strength: Charpy	DIN 53453	kJ/m^2	>30	
Izod	ASTMD 256	J/m	600-800	
Thermal				
Glass transition temperature		°C	140	
Thermal conductivity	DIN 52612	W/km	0.21	
Coeff. of linear thermal expansion, average value between 0 and 60°C		K^{-1}	65×10^5	
Heat deflection temperature under load acc. to ISO/R75 method A: $1.81 N/mm^2$	DIN53461	°C	135-140	
Max. service temperature in air:				
for short periods		°C	145	
continuously		°C	120	
Min. service temperature		°C	–100	
Flammability				
acc. to ASTM (oxygen-index)	ASTM D 2863	%	25	
acc. to UL 94: 1.5mm thick sheet	UL94	rating	V-2	
6mm thick sheet	UL94	rating	V-0	
acc. to French standard: 3mm thick sheet		rating	M3	
acc. to British standard: surface spread of flame test 4mm thick sheet	BS476 Part 1	rating	Class O	
Electrical				
Dielectric strength	DIN 53481	kV/mm	>30	
Volume resistivity	DIN 53482	Ohm cm	$>10^{16}$	
Surface resistivity	DIN 53482	Ohm	$>10^{15}$	
Dielectric constant at 10^3 Hz	DIN 53483	–	3	
Dissipation factor tg δ at 10^3 Hz	DIN 53483	–	0.001	
Tracking resistance	DIN 53480	rating	KC 250-300	
Physical				
Density	DIN 53479	g/cm^3	1.2	
Moisture absorption: saturated at 23°C/50% RH		%	0.15	
Index of refraction n_D at 20°C	DIN 53491		1.585	