

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 ³	
Heat deflection temperature under load acc. to ISO/R75 method A: 1.81N/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	