

**ROWAD NATIONAL PLASTIC CO. LTD.****ROWAD POLYCARBONATE SHEETS (RPCS)****SPECIFICATIONS**

Typical Properties	Units	Value	Test Method
GENERAL			
Density	gm/cc	1.2	ASTM D 792
Flammability	mm	1.48	UL 94
Oxygen Index	%	28	ASTM D 2863
Water Absorption	%	< 0.45	ASTM D 570
MECHANICAL			
Tensile Strength at Yield	Mpa	60	ASTM D 638
Tensile Strength at Break	Mpa	70	ASTM D 638
Elongation at Yield	%	6	ASTM D 638
Elongation at Break	%	125	ASTM D 638
Tensile Modulus	Mpa	2400	ASTM D 638
Flexural Strength	Mpa	1000	ASTM D 790
Taber Abrasion	mg/100 cycles	10	ASTM D 1044
Charpy Impact Notched	kJ/m ²	40	ASTM D 256
Izod Impact Notched	kJ/m ²	75	ASTM D 256A
Impact Resistance	joules	72	ASTM F 736
THERMAL			
Vicat Softening Point	°C	148	ASTM D 1525
Heat Deflection Temperature	°C	132	ASTM D 648
Thermal Index – Electrical Properties	°C	100	UL 746B
Thermal Index – Mechanical Properties	°C	120	UL 746B
Coefficient of Linear Thermal Expansion	m/m°C	70x10 ⁻⁵	ASTM D 696
Shrinkage	%	< 3	BSEN ISO
ELECTRICAL/ OPTICAL			
Volume Resistivity	Ohm.cm	> 10	ASTM D 257
Dielectric Strength	kv/mm	30	ASTM D 149
Dissipation Factor		0.01	ASTM D 150
Light Transmission	%	> 85	ASTM D 1003
Haze	%	< 1	ASTM D 1003
Refractive Index		1.59	ASTM D 542



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Light and Energy Transmission:

By allowing the transmittance of up to 90% of solar energy and 88% visible light, clear RPCS is an excellent glazing material for a wide range of applications where clarity is essential. RPCS is also available in blue, green and bronze tints to help control heat gain and a variety of privacy patterns for obscure glazing requirements.

Impact Protection:

Unsurpassed by any clear glazing product on the market, RPCS is hundred times stronger than plate glass and many times stronger than Acrylic, RPCS sheet exhibits excellent retention of impact strength and stiffness at elevated as well as sub zero temperatures. RPCS a continuous use temperature of 100°C on the positive side and -40°C on the negative side

UV Protection:

RPCS is UV protected to give excellent durability to outdoor weathering and to resist the degrading effects of direct sunlight and other harmful UV sources. RPCS is most suitable for even harsh and hot climates of the desert. It carries with it a co extruded UV layer of 50 microns on both sides.

Fire Performance:

Although RPCS melts under intense heat or fire it makes no contribution to the growth of fire through flame spread. It softens at a relatively low temperature allowing fire, smoke and hot gases to escape, as polycarbonate is a self venting material.

