

Westlake Plastics Zelux® W Window Grade Polycarbonate

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polycarbonate, Optical Grade

Material Notes:

Zelux polycarbonate is a transparent engineering plastic with excellent dimensional stability and good mechanical and electrical properties. It is used for structural applications when clarity and impact strength are essential including lenses, manifolds, site glasses and machine guards. Zelux is used for a wide range of electrical applications since it has low moisture absorption and good insulating properties. Information provided by Westlake Plastics.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Westlake-Plastics-Zelux-W-Window-Grade-Polycarbonate.php

Physical Properties	Metric	English	Comments
Density	1.20 g/cc	0.0434 lb/in ³	ASTM D792
Water Absorption	0.15 %	0.15 %	ASTM D570; 24 hrs.
Water Absorption at Saturation	0.35 %	0.35 %	ASTM D570; at equilibrium

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	70	70	ASTM D7852
Hardness, Rockwell R	118	118	ASTM D7852
Tensile Strength at Break	68.9 MPa	10000 psi	ASTM D638
Tensile Strength, Yield	62.1 MPa	9000 psi	ASTM D638
Elongation at Break	135 %	135 %	ASTM D638
Elongation at Yield	7.0 %	7.0 %	ASTM D638
Flexural Yield Strength	97.9 MPa	14200 psi	ASTM D790
Flexural Modulus	2.34 GPa	340 ksi	ASTM D790
Compressive Strength	86.2 MPa	12500 psi	ASTM D695
Compressive Modulus	2.38 GPa	345 ksi	ASTM D695
Izod Impact, Notched	9.08 J/cm	17.0 ft-lb/in	ASTM D256
Izod Impact, Unnotched	NB	NB	ASTM D256

Thermal Properties	Metric	English	Comments
CTE, linear	68.4 µm/m-°C	38.0 µin/in-°F	ASTM D696
	@Temperature 20.0 °C	@Temperature 68.0 °F	

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	138 °C	280 °F	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	132 °C	270 °F	ASTM D648
Flammability, UL94	V-0 @Thickness 9.52 mm	V-0 @Thickness 0.375 in	

Optical Properties	Metric	English	Comments
Haze	3.2 %	3.2 %	ASTM D1746
Transmission, Visible	90 %	90 %	transparent; thickness not reported

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+17 ohm-cm	1.00e+17 ohm-cm	ASTM D257
Dielectric Constant	3.17 @Frequency 60 Hz	3.17 @Frequency 60 Hz	ASTM D150
Dielectric Strength	38.0 kV/mm	965 kV/in	ASTM D149
Dissipation Factor	0.00090 @Frequency 60 Hz	0.00090 @Frequency 60 Hz	ASTM D150

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