

Westlake Plastics Zelux® 40% GF Polycarbonate 40% Glass Filled

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polycarbonate, 40% Glass Filled

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-40-GF-Polycarbonate-40-Glass-Filled.php

Physical Properties	Metric	English	Comments
Density	1.52 g/cc	0.0549 lb/in ³	ASTM D792
Water Absorption	0.12 %	0.12 %	ASTM D570; 24 hrs.
Water Absorption at Saturation	0.23 %	0.23 %	ASTM D570; at equilibrium

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	93	93	ASTM D7852
Tensile Strength, Yield	159 MPa	23000 psi	ASTM D638
Elongation at Yield	3.0 %	3.0 %	ASTM D638
Tensile Modulus	11.6 GPa	1680 ksi	ASTM D638
Flexural Yield Strength	186 MPa	27000 psi	ASTM D790
Flexural Modulus	9.65 GPa	1400 ksi	ASTM D790
Compressive Strength	145 MPa	21000 psi	ASTM D695
Compressive Modulus	10.3 GPa	1500 ksi	ASTM D695
Izod Impact, Notched	1.33 J/cm	2.50 ft-lb/in	ASTM D256
Izod Impact, Unnotched	12.8 J/cm	24.0 ft-lb/in	ASTM D256

Thermal Properties	Metric	English	Comments
CTE, linear	16.2 µm/m-°C	9.00 µin/in-°F	ASTM D696
	@Temperature 20.0 °C	@Temperature 68.0 °F	
Thermal Conductivity	0.220 W/m-K	1.53 BTU-in/hr-ft ² -°F	ASTM C177
Deflection Temperature at 0.46 MPa (66 psi)	154 °C	310 °F	ASTM D648

Thermal Properties	Metric	English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	146 °C	295 °F	ASTM D648
Flammability, UL94	V-1	V-1	
	@Thickness 1.12 mm	@Thickness 0.0440 in	

Optical Properties	Metric	English	Comments
Transmission, Visible	90 %	90 %	transparent; thickness not quantified

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+17 ohm-cm	1.00e+17 ohm-cm	ASTM D257
Dielectric Constant	3.53	3.53	ASTM D150
	@Frequency 60 Hz	@Frequency 60 Hz	
Dielectric Strength	45.0 kV/mm	1140 kV/in	ASTM D149
Dissipation Factor	0.0013	0.0013	ASTM D150
	@Frequency 60 Hz	@Frequency 60 Hz	

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