

Westlake Plastics Zelux® 10% GF Polycarbonate 10% Glass Filled

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polycarbonate, 10% 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-10-GF-Polycarbonate-10-Glass-Filled.php

Physical Properties	Metric	English	Comments
Density	1.25 g/cc	0.0452 lb/in ³	ASTM D792
Water Absorption	0.12 %	0.12 %	ASTM D570; 24 hrs.
Water Absorption at Saturation	0.31 %	0.31 %	ASTM D570; at equilibrium

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	85	85	ASTM D7852
Hardness, Rockwell R	124	124	ASTM D7852
Tensile Strength at Break	55.2 MPa	8000 psi	ASTM D638
Tensile Strength, Yield	66.2 MPa	9600 psi	ASTM D638
Elongation at Break	15 %	15 %	ASTM D638
Elongation at Yield	8.0 %	8.0 %	ASTM D638
Tensile Modulus	3.10 GPa	450 ksi	ASTM D638
Flexural Yield Strength	103 MPa	15000 psi	ASTM D790
Flexural Modulus	3.45 GPa	500 ksi	ASTM D790
Compressive Strength	96.5 MPa	14000 psi	ASTM D695
Compressive Modulus	3.59 GPa	520 ksi	ASTM D695
Izod Impact, Notched	1.07 J/cm	2.00 ft-lb/in	ASTM D256
Izod Impact, Unnotched	21.4 J/cm	40.0 ft-lb/in	ASTM D256

Thermal Properties	Metric	English	Comments
	32.4 µm/m-°C	18.0 µin/in-°F	

CTE linear Thermal Properties	Metric @ Temperature 20.0 °C	English @ Temperature 68.0 °F	ASTM D696 Comments
Thermal Conductivity	0.200 W/m-K	1.39 BTU-in/hr-ft²-°F	ASTM C177
Deflection Temperature at 0.46 MPa (66 psi)	146 °C	295 °F	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	142 °C	288 °F	ASTM D648
Flammability, UL94	V-0 @Thickness 1.47 mm	V-0 @Thickness 0.0580 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	3.1 @Frequency 60 Hz	3.1 @Frequency 60 Hz	ASTM D150
Dielectric Strength	45.0 kV/mm	1140 kV/in	ASTM D149
Dissipation Factor	0.00080 @Frequency 60 Hz	0.00080 @Frequency 60 Hz	ASTM D150

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