PRODUCT BULLETIN

ZELUX® W POLYCARBONATE

Zelux polycarbonate is an engineering plastic with excellent dimensional stability and good strength and stiffness over a wide range of service temperatures. Zelux is often 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 variety of electrical applications since it has low moisture absorption, good insulating properties, and an excellent flammability rating. Zelux is easy to fabricate, paint, and glue. Zelux W is formulated with UV stabilizers to enhance its resistance to yellowing and property loss when exposed to UV radiation.

The following physical property information is based on typical values of the base polycarbonate resin.

Applications Include:
- Site glasses
- Viewing windows
- Impact shields
- Fluid handling components
- Manifolds
- Housings and covers

Advantages of Zelux W:
- Excellent impact resistance
- Excellent dimensional stability
- Low moisture absorption
- Easy to machine
- Good strength and stiffness over a wide range of service temperatures
- Good electrical insulating properties
- Easy to fabricate, paint and glue
- Excellent flammability rating, UL Yellow card file E240206

Manufacturing Capabilities:
- Sheet: $3/8$" to 6" thick

Colors/Grades:
- Zelux W - window grade (optically clear)

In addition to our standard capabilities, Westlake also has the ability to process custom resins in various sizes and colors with some exceptions.

Property	Units	Test Standard	Zelux W (compression molded sheet) UV Stabilized
Mechanical			
Flexural Modulus	psi	ASTM D790	328,000
Flexural Strength @yield	psi	ASTM D790	13,100
Hardness	M Scale	ASTM D785	M77
Izod Impact Strength Notched	ft•lbs/in	ASTM D256	17.0
Tensile Elongation @break @yield	% %	ASTM D638 ASTM D638	140 6.0
Tensile Strength @break @yield	psi psi	ASTM D638 ASTM D638	11,600 8,990
Thermal			
Coefficient of Thermal Expansion	in/in/°F	ASTM D696	3.8×10^{-5}
Flammability Rating @11.5mm *	—	UL94	V-0
Heat Deflection Temperature @66 psi @264 psi	°F °F	ASTM D648 ASTM D648	288 268
Electrical			
Dielectric Constant @60Hz @1MHz	— —	ASTM D150 ASTM D150	2.95 2.90
Dielectric Strength	V/mil	ASTM D149	760 **
Volume Resistivity	ohm•cm	ASTM D257	3.0×10^{18}
Optical			
Haze	%	ASTM D1003	0.5-2.0
Refractive Index	—	ASTM D542	1.585
Light Transmittance @118mil	%	ASTM D1003	88
Other			
Specific Gravity	—	ASTM D792	1.20
Water Absorption @24 hours	%	ASTM D570	0.2

* Westlake Plastics UL Yellow Card file E240206

** Slow rate to rise