Ardel®(polyarylate)

Stock shapes extruded from Ardel® resin are specifically formulated to endure the damaging effects of UV light. When exposed to UV light, this unique material undergoes a molecular rearrangement resulting in the formation of a protective layer that essentially serves as a UV stabilizer. This inherent UV stability combined with superior retention of optical and mechanical properties make polyarylate an ideal choice for any application where weathering effects could pose a problem.

The following physical property information is based on typical values of the base Ardel® polyarylate resin (PAR).

Electrical Properties			
Property	Units	Test	Result
Dielectric Strength	V/mil	ASTM D149	40
Dielectric Constant @ 1kHz	-	ASTM D150	3.32
Dissipation Factor @ 1 kHz	-	ASTM D150	0.0040
Volume Resistivity	ohm•cm	ASTM D257	2×10^{14}

Mechanical Properties			
Property	Units	Test	Result
Tensile Strength @yeild	psi	ASTM D638	10,000
Tensile Strength @break	psi	ASTM D638	-
Tensile Modulus	psi	ASTM D638	300,000
Tensile Elongation @yield	%	ASTM D638	8.4
Tensile Elongation @break	%	ASTM D638	50.0
Flexural Strength @yield	psi	ASTM D790	11,000
Flexural Modulus	psi	ASTM D790	310,000
Compressive Strength @ yield	psi	ASTM D695	12,180
Compressive Modulus	psi	ASTM D695	-
Izod Impact Strength Un-notched	ft·lbs/in	ASTM D256	-
Izod Impact Strength Notched @ 73°F	ft·lbs/in	ASTM D256	3.8
Hardness (R, M, L or D)	-	ASTM D7852	R125
	-	ASTM D2240	

Optical Properties			
Property	Units	Test	Result
Haze	%	ASTM D1746	2.3
Transparency	%	ASTM D1746	87

Other Properties			
Property	Units	Test	Result
Specific Gravity	-	ASTM D792	1.21
Water Absorption @24 hours	%	ASTM D570	0.26

Thermal Properties			
Property	Units	Test	Result
Heat Deflection Temp. @66 psi	°F	ASTM D648	356
Heat Deflection Temp. @264 psi	°F	ASTM D648	345
Coefficient of Thermal Expansion	in/in/°F	ASTM D696	6.1×10^{-5}
Flammability Rating-UL94 @.125"	-	-	V-0
Thermal Conductivity	(BTU•in)/(hr•ft^2•°F)	ASTM C177	1.48
Limiting Oxygen Index	%	ASTM D2863	36.0