



ADVANCED MATERIALS

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Optical Grade Polycarbonate Properties

Physical Properties	ASTM Test Method	Units	Values
Specific Gravity	D-792	g/cm ³	1.20
Optical Refractive Index	D-542		1.586
Light Transmission	D-1003	%	88
Water Absorption	D-570	%	0.15
Mechanical Properties	ASTM Test Method	Units	Values
Tensile Strength-Ultimate	D-638	psi	9,500
Tensile Strength-Yield	D-638	psi	9,000
Tensile Modulus	D-638	psi	340,000
Elongation	D-638	%	110.0
Flexural Strength	D-790	psi	13,500
Flexural Modulus	D-790	psi	345,000
Thermal Properties	ASTM Test Method	Units	Values
Coefficient of Thermal Expansion	D-696	in/(in-°F) x 10 ⁻⁵	3.75
Coefficient of Thermal Conductivity	C-177	BTU-ft/(hr-ft ² -°F)	1.35
Heat Deflection Temperature, @ 264 psi	D-648	°F	270
Heat Deflection Temperature, @ 66 psi	D-648	°F	280
Flammability Properties	ASTM Test Method	Units	Values
Horizontal Burn, AEB	D-635	in	<1
Ignition Temperature, Self	D-1929	°F	1022
Ignition Temperature, Flash	D-1929	°F	824

These suggestions and data are based on information we believe to be reliable. They are offered in good faith, but without guarantee, as conditions and methods of use are beyond our control. We recommend that the prospective user determine the suitability of our materials and suggestions before adopting them on a commercial scale.