



Typical Properties

Property	Test Method	Units	OPTIX
PHYSICAL			
Specific gravity/relative density	ASTM D 792	-	1.19
Optical refractive index	ASTM D 542	-	1.49
Light transmission - Total	ASTM D 1003	%	92
Light transmission, Haze	ASTM D 1003	%	2
Sound transmission	ASTM E 90 / E 413	dB	27
Water absorption	ASTM D 570	%	0.4
Mold shrinkage	ASTM D 955	mils/in	2-6
MECHANICAL			
Tensile strength	ASTM D 638	psi	11,030
Tensile elongation - Max	ASTM D 638	%	5.8
Tensile modulus of elasticity	ASTM D 638	psi	490,000
Flexural strength	ASTM D 790	psi	17,000
Flexural modulus of elasticity	ASTM D 790	psi	490,000
Izod impact strength – Molded notch	ASTM D 256	ft-lbs/in Notch	0.4
Izod impact strength – Milled notch	ASTM D 256	ft-lbs/in Notch	0.28
Tensile impact strength	ASTM D 1822	ft-lb/in ²	20
Abrasion resistance – Change in haze – 0 cycles	ASTM D 1044	Haze, %	0
Abrasion resistance – Change in haze – 10 cycles	ASTM D 1044	Haze, %	11.2
Abrasion resistance – Change in haze – 50 cycles	ASTM D 1044	Haze, %	24
Abrasion resistance – change in haze – 200 cycles	ASTM D 1044	Haze, %	24.9
Rockwell hardness	ASTM D 785		M-95
THERMAL			
Maximum recommended continuous service temperature		°F	170-190
Softening temperature		°F	210-220
Melting temperature		°F	300-315
Deflection temperature @ 264 psi (1.8 MPa)	ASTM D 648	°F	203
Deflection temperature @ 66 psi (0.45 MPa)	ASTM D 648	°F	207
Coefficient of thermal expansion	ASTM D 696	in/in/°F	3.0x10 ⁻⁵
Thermal conductivity	ASTM C 177	BTU-ft/ft ² /hr/°F	0.075
Flammability (burning rate)	ASTM D 635	in/minute	1.019
Flammability	UL 94		HB
Smoke density rating	ASTM D 2843	%	3.4
Self-ignition temperature	ASTM D 1929	°F	833
Flame spread index	ASTM E 84		115
Smoke developed index	ASTM E 84		550