		ASTM TEST METHOD	LUMICLEAR™	LUMIFORM™	LUMISHIELD EX™	TYPICAL GLASS (ANNEALED)
MATERIAL	Type		Acrylic (PMMA)	Polyethylene (PETG)	Polycarbonate (PC)	Soda-Lime Float Glass
PHYSICAL PROPERTIES*	Specific Gravity (density to water)	D-792	1.19	1.27	1.20	2.50
	Water Absorption	D-570	0.40%	0.20%	0.15%	n/a
	Sound Transmission [1/8" (3mm)]	E-90	28 db	25 db	31 db	27 db
OPTICAL PROPERTIES*	Optical Refractive Index	D-542	1.49	1.57	1.586	1.50-1.58
	Regular Light Transmittance	D-1003	92%	89%	86%	89%
	Haze Light Transmittance	D-1003	2%	<1%	1.1%	n/a
	UV - Resin Degradation		No	Yes	No	No
	UV Cap (protection for resin)		81%	n/a	96%	34%
MECHANICAL PROPERTIES *	Tensile Strength Max	D-638	11,000 psi (76.1 MPa)	7,700 psi (53 MPa)	9,500 psi (65.5 MPa)	2,800-4,100 psi (19.3-28.4 MPa)
	Tensile Elongation Max	D-638	5.80%	4.80%	110%	n/a
	Tensile Modulus	D-638	490,000 psi (3,378 MPA)	320,000 psi (2,200 MPa)	340,000 psi (2,344 MPa)	10,000,00 psi (69,000 MPa)
	Flexural Strength Max	D-790	17,000 psi (117.2 MPa)	11,200 psi (77 MPa)	13,500 psi (93 MPa)	Short Term: 7,100 psi [49 MPa] Long Term: 1,400 psi (10 MPa)
	Flexural Modulus	D-790	490,000 psi (3,378 MPa)	310,000 psi (2,100 MPa)	345,000 psi (2,379 MPa)	n/a
	Izod Impact Strength - Milled Notch, Room Temperature	D-256	0.28 ft-lb/in (14.9 J/m)	1.7 ft-lb/in (88 J/m)	18 ft-lb/in (961 J/m)	0.04-0.09 ft-lb/in (2-5 J/m)
	Rockwell Hardness	D-785	M-95	R-115	M-70/R-118	
	Abrasion Resistance (% Haze)	D-1044	24.9% @ 200 cycles	41% @ 200 cycles	30% @ 100 cycles	<1% @ 100 cycles
FLAMMABILITY PROPERTIES	Flammability (Burning Rate)	D-635	PASS, CC2	PASS, CC1	PASS, CC1	
	Smoke Density Rating (75% max)	D-2843	4.8%, PASS	71.6%, PASS	68%, PASS	
	Self Ignition Temperature	D-1929	716°F (445°C) pass >650°F (343°C)	932°F (500°C) pass >650°F (343°C)	1,070°F (577°C) pass >650°F (343°C)	
THERMAL PROPERTIES	Max Continuous Survice Temp		170-190°F (77-87°C)	150°F (66°C)	257°F (125°C)	
	Softening Temperature		210-220°F (99-104°C)	181°F (83°C)	297°F (147°C)	1328°F (720°C)
	Deflection Temp [264 psi (1.8 MPa)]	D-648	203°F (95°C)	164°F (74°C)	280°F (139C) @ 66 psi (455 KPa) 270°F (132C) @ 264 psi (1,820 KPa)	
	Coefficient of Thermal Expansion	D-696	3.0x10e-5 in/(in-°F) [5.4x10e-5 m/(m-°C)]	5.0x10e-5 in/(in-°F) [9.0x10e-5 m/(m-°C)]	3.75x10e-5 in/(in-°F) [6.8x10e-5 m/(m-°C)]	0.03x10e-5 in/(in-°F) [0.85x10e-5 m/(m-°C)]
	Thermal Conductivity	C-177	0.90 BTU-in/(hr-ft^2-°F) [0.0013 w/(cm-°C)]	1.67 BTU-in/(hr-ft^2-°F) [0.0024 w/(cm-°C)]	1.35 BTU-in/(hr-ft^2-°F) [0.0019 w/(cm-°C)]	7.28 BTU-in/(hr-ft2-°F) [0.0105 w/(cm-°C)]
RECYCLED CONTENT	R4 Resin		50%	40%	40%	n/a
	R4 Recycled Glass		60% in gauges .472" and below, 50% in gauges .708" and below		n/a	n/a

*Applies to the resin itself. Results may vary for finished sheets w/ encapsulated materials.

Note- Properties will vary based on decors selected and should be considered for design. The data provided pertains to the base raw material only as used in the manufacture of Lumicor material. These suggestions and data are based on information we believe to be reliable. The data is offered in good faith, but without guarantee, as conditions and method of use are beyond our control. We recommend prospective users determine the suitability of Lumicor materials and suggestions before adopting on a commercial scale. In no case is Lumicor, Inc. liable for direct, consequential, economic, or other damages. Lumicor disclaims all other warranties, expressed or implied, including the warranty of merchantability and fitness for a particular purpose. Lumicor does not recommend using its products as a structural member.