

# PLASKOLITE

## OPTIX Patterned Acrylic

Thermal	TEST METHOD	UNITS	OPTIX Patterned Acrylic
Flame Spread Index	ASTM E-84		115
Flammability (Burning Rate)	ASTM D-635	In/minute	1.019
Melting Temperature		°F	300-315
Coefficient of Thermal Expansion	ASTM D-696	in/(in-°F ) x 10 <sup>&lt;sup&gt;-5&lt;/sup&gt;</sup>	3.0
Self-Ignition Temperature	ASTM D-1929	°F	833
Deflection Temperature @ 264 psi (1.8 MPa)	ASTM D-648	°F	203
Smoke Density Rating	ASTM D-2843	%	3.4
Flammability	UL 94		HB
Deflection Temperature @ 66 psi (0.45 MPa)	ASTM D-648	°F	207
Smoke Developed Index	ASTM E-84		550
Thermal Conductivity	ASTM C-177	BTU-ft/(hr-ft <sup>&lt;sup&gt;2&lt;/sup&gt;-°F)</sup>	0.075
Melt Flow Rate	ASTM D-1238	g/10 min.	1.5
Maximum Recommended Continuous Service Temperature		°F	170-190
Softening Temperature		°F	210-220

Chemical	TEST METHOD	UNITS	OPTIX Patterned Acrylic
Resistance to Stress - Critical Cracking Stress to: Solvesso 100	ARTC Modification of MIL-P6997	psi	1,600
Resistance to Stress - Critical Cracking Stress to: Isopropyl Alcohol	ARTC Modification of MIL-P6997	psi	900
Resistance to Stress - Critical Cracking Stress to: Toluene	ARTC Modification of MIL-P6997	psi	1,300
Resistance to Stress - Critical Cracking Stress to: Lacquer Thinner	ARTC Modification of MIL-P6997	psi	500

Mechanical	TEST METHOD	UNITS	OPTIX Patterned Acrylic
Abrasion Resistance - Change in Haze - 200 cycles	ASTM D-1044	Haze, %	24.9
Tensile Modulus of Elasticity	--	psi	490,000
Flexural Strength	ASTM D-790	psi	17,000
Rockwell Hardness	ASTM D-785		M-95
Tensile Impact Strength	ASTM D-1822	ft-lb/in <sup>&lt;sup&gt;2&lt;/sup&gt;</sup>	20
Izod Impact Strength – Molded Notch	ASTM D-256	ft-lb/in Notch	0.4
Tensile Elongation – Max.	ASTM D-638	%	5.8
Tensile Strength	ASTM D-638	psi	11,030
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
Flexural Modulus of Elasticity	ASTM D-790	psi	490,000
Izod Impact Strength – Milled Notch	ASTM D-256	ft-lb/in Notch	0.28
Abrasion Resistance - Change in Haze - 50 cycles	ASTM D-1044	Haze, %	24

Physical	TEST METHOD	UNITS	OPTIX Patterned Acrylic
Sound Transmission	ASTM E90 / E413	db	27
Mold Shrinkage	ASTM D-955	mils/in	2-6
Specific Gravity/Relative Density	ASTM D-792		1.19
Optical Refractive Index	ASTM D-542		1.49
Water Absorption	ASTM D-570	% By wt	0.4

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.

Questions? Please contact Plaskolite Customer Support 800-848-9124

**PLASKOLITE**

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