OPTIX DA - Digital Acrylic

Thermal	TEST METHOD	UNITS	OPTIX DA
Flammability	UL 94		HB
Flame Spread Index	ASTM E-84		115
Smoke Developed Index	ASTM E-84		550
Maximum Recommended Continuous Service Temperature		°F	170-190
Self-Ignition Temperature	ASTM D-1929	°F	833
Smoke Density Rating	ASTM D-2843	%	3.4
Flammability (Burning Rate)	ASTM D-635	In/minute	1.019
Coefficient of Thermal Expansion	ASTM D-696	in/(in-°F) x 10⁻⁵	3.0
Thermal Conductivity	ASTM C-177	BTU-ft/(hr-ft²-°F)	0.075
Deflection Temperature @ 66 psi (0.45 MPa)	ASTM D-648	°F	207
Melting Temperature		°F	300-315
Softening Temperature		°F	210-220
Deflection Temperature @ 264 psi (1.8 MPa)	ASTM D-648	°F	203

Mechanical	TEST METHOD	UNITS	OPTIX DA
Izod Impact Strength – Molded Notch	ASTM D-256	ft-lb/in Notch	0.4
Tensile Strength	ASTM D-638	psi	11,030
Flexural Strength	ASTM D-790	psi	17,000
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
Tensile Modulus of Elasticity	--	psi	490,000
Flexural Modulus of Elasticity	ASTM D-790	psi	490,000
Abrasion Resistance - Change in Haze - 10 cycles	ASTM D-1044	Haze, %	11.2
Abrasion Resistance - Change in Haze - 200 cycles	ASTM D-1044	Haze, %	24.9
Rockwell Hardness	ASTM D-785		M-95
Abrasion Resistance - Change in Haze - 0 cycles	ASTM D-1044	Haze, %	0
Tensile Impact Strength	ASTM D-1822	ft-lb/in²	20
Tensile Elongation – Max.	ASTM D-638	%	5.8

Physical	TEST METHOD	UNITS	OPTIX DA
Light Transmission -Total	ASTM D-1003	%	92
Light Transmission - Haze	ASTM D-1003	%	2
Specific Gravity/Relative Density	ASTM D-792		1.19
Water Absorption	ASTM D-570	% By wt	0.4
Optical Refractive Index	ASTM D-542		1.49
Sound Transmission	ASTM E90 / E413	db	27

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