

TruPoly SL Product Details

Property	Conditions (U.S. Customary)	ASTM Method	Units - SI (U.S. Customary)	Value (U.S. Customary)
Physical				
Density		D-1505	g/cm ³ (lb/ft ³)	1.2 (75)
Water Absorption	24 hr. @ 23°C	D-570	%	0.15
Mechanical				
Tensile strength at yield	10 mm/min (0.4 in./min)	D-638	MPa (psi)	62 (9,000)
Tensile strength at break	10 mm/min (0.4 in./min)	D-638	MPa (psi)	65 (9500)
Elongation at yield	10 mm/min (0.4 in./min)	D-638	%	6
Elongation at break	10 mm/min (0.4 in./min)	D-638	%	110
Tensile Modulus of Elasticity	10 mm/min (0.4 in. /min)	D-638	MPa (psi)	2,378 (345,000)
Flexural Modulus	1.3 mm/min (0.05 in./min)	D-790	MPa (psi)	2,378 (345,000)
Flexural Strength at Yield	1.3 mm/min (0.05 in./min)	D-790	MPa (psi)	93 (13,500)
Notch Impact Strength Izod	23°C (73°F)	D-256	J/m (ft-lbf/in.)	800 (15)
Notch Impact Strength Charpy	23°C (73°F)	D-256	J/m (ft-lbf/in)	800 (15)
Impact Falling Weight	3 mm (0.12 in.) Sheet	ISO-6603/1b	J (ft-lbf)	158 (117)
Rockwell Hardness		D-785	R scale / M scale	125 / 70
Compressive Strength	1.3 mm/min (.05 in./min)	D-695	MPa (psi)	86 (12,500)
Compressive Modulus	1.3 mm/min (.05 in./min)	D-695	MPa (psi)	2378 (345,000)
Shear strength at Yield	1.3 mm/min (.05 in./min)	D-732	MPa (psi)	41 (6000)
Shear strength at Break	1.3 mm/min (.05 in./min)	D-732	MPa (psi)	68 (10,000)
Shear Modulus	1.3 mm/min (.05 in./min)	D-732	MPa (psi)	786 (114,000)
Thermal				
Long Term Service Temperature			°C (°F)	-75 to +100 (-175 to +212)
Short Term Service Temperature			°C (°F)	-75 to +120 (-175 to +250)
Heat Deflection Temperature	Load: 1.82 Mpa (264 psi)	D-648	°C (°F)	132 (270)
Vicat Softening Temperature	Load: 1 kg (2.2 lb)	D-1525	°C (°F)	150 (300)
Coefficient of Linear Thermal Expansion		D-696	10 ⁻⁵ /°C (10 ⁻⁵ /°F)	6.5 (3.6)
Thermal Conductivity		C-177	W/m ² K (Btu-in./hr-ft ² -°F)	0.21 (1.46)
Specific Heat Capacity		C-351	kJ/kg ² K (Btu/lb ² F)	1.26 (0.31)
Optical				
Haze	3 mm (0.12 in.) Clear Sheet	D-1003	%	<0.5
Light Transmission	3 mm (0.12 in.) Clear Sheet	D-1003	%	89
Refractive Index	Clear Sheet	D-542		1.59
Yellowness Index	3 mm (0.12 in.) Clear Sheet	D-1925		<1
Electrical				
Dielectric Constant	50 Hz	D-150		3
	1 MHz	D-150		2.9
Dissipation Factor	50 Hz	D-150		0.9
	1 MHz	D-150		11
Dielectric Strength Short Time	500 V/s	D-149	kV/mm (V/mil)	>30 (>770)
Surface Resistance	Ketley	D-257	Ohm	5.1x10 ¹⁵
Volume Resistance	Ketley	D-257	Ohm-cm	1.3x10 ¹⁷

