

SABIC LEXAN™ LS1

UL rated HB as of 10/97. 200 series recommended when V-2 rating required. Automotive lens applications. Low viscosity. UV-stabilized. Transparent colors only.
Information provided by SABIC

Physical Properties	Metric	English	Comments
Specific Gravity	1.20 g/cc	1.20 g/cc	ASTM D792
Water Absorption	0.15 %	0.15 %	24 hours; ASTM D570
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm @Thickness 3.20 mm	0.0050 - 0.0070 in/in @Thickness 0.126 in	SABIC method
Melt Flow	17.5 g/10 min @Load 1.20 kg, Temperature 300 °C	17.5 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D1238
Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	62.0 MPa	8990 psi	50 mm/min; ASTM D638
Elongation at Break	125 %	125 %	50 mm/min; ASTM D638
Flexural Yield Strength	96.0 MPa	13900 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.34 GPa	339 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	6.94 J/cm	13.0 ft-lb/in	ASTM D256
Tensile Impact Strength	472 kJ/m ²	225 ft-lb/in ²	ASTM D1822
Dart Drop, Total Energy	62.0 J	45.7 ft-lb	peak; ASTM D3763
Falling Dart Impact	169 J	125 ft-lb	SABIC method
Electrical Properties	Metric	English	Comments
Comparative Tracking Index	250 - 400 V	250 - 400 V	UL 746A
Hot Wire Ignition, HWI	7.0 - 15 sec	7.0 - 15 sec	UL 746A
High Amp Arc Ignition, HAI	60 - 120 arcs	60 - 120 arcs	UL 746A
High Voltage Arc-Tracking Rate, HVTR	25.4 - 80.0 mm/min	1.00 - 3.15 in/min	UL 746A
Thermal Properties	Metric	English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	129 °C @Thickness 6.40 mm	264 °F @Thickness 0.252 in	unannealed; ASTM D648
UL RTI, Electrical	100 °C	212 °F	UL 746B
UL RTI, Mechanical with Impact	100 °C	212 °F	UL 746B
UL RTI, Mechanical without Impact	100 °C	212 °F	UL 746B
Flammability, UL94	HB @Thickness 1.47 mm	HB @Thickness 0.0579 in	UL 94
Optical Properties	Metric	English	Comments

Transmission, Visible	88 % @Thickness 2.54 mm	88 % @Thickness 0.100 in	ASTM D1003
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Processing Properties	Metric	English	Comments
Nozzle Temperature	275 - 300 °C	527 - 572 °F	Injection Molding
Zone 1	260 - 280 °C	500 - 536 °F	
Zone 2	270 - 295 °C	518 - 563 °F	
Zone 3	280 - 305 °C	536 - 581 °F	
Melt Temperature	280 - 305 °C	536 - 581 °F	
Mold Temperature	70.0 - 95.0 °C	158 - 203 °F	
Drying Temperature	120 °C	248 °F	Injection Molding
Dry Time	3.00 - 4.00 hour	3.00 - 4.00 hour	Injection Molding
	48.0 hour	48.0 hour	Cumulative; Injection Molding
Moisture Content	0.020 %	0.020 %	
Back Pressure	0.300 - 0.700 MPa	43.5 - 102 psi	
Shot Size	40 - 60 %	40 - 60 %	
Vent Depth	0.00250 - 0.00760 cm	0.000984 - 0.00299 in	
Screw Speed	40 - 70 rpm	40 - 70 rpm	

Descriptive Properties			
UV-light, water exposure/immersion	F1		UL 746C