

SABIC LEXAN™ LUX1619

LEXAN LUX1619 Polycarbonate resin is an extrusion grade. It is UL94 HB rated. It was designed for high light reflectance. Information provided by SABIC

Physical Properties	Metric	English	Comments
Specific Gravity	1.34 g/cc	1.34 g/cc	ASTM D792
Density	1.34 g/cc	0.0484 lb/in ³	ISO 1183
Water Absorption	0.35 %	0.35 %	23°C/sat; ISO 62
Moisture Absorption	0.150 %	0.150 %	23°C / 50% RH; ISO 62
Linear Mold Shrinkage, Flow	0.0080 - 0.010 cm/cm @Thickness 3.20 mm	0.0080 - 0.010 in/in @Thickness 0.126 in	SABIC method
Melt Flow	7.5 g/10 min @Load 1.20 kg, Temperature 300 °C	7.5 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	50.0 MPa	7250 psi	50 mm/min; ASTM D638
Tensile Strength, Yield	57.0 MPa	8270 psi	50 mm/min; ASTM D638
Elongation at Break	74 %	74 %	50 mm/min; ASTM D638
Elongation at Yield	6.0 %	6.0 %	50 mm/min; ASTM D638
Flexural Yield Strength	97.0 MPa	14100 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.73 GPa	396 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	6.40 J/cm	12.0 ft-lb/in	ASTM D256
	1.35 J/cm @Temperature -30.0 °C	2.53 ft-lb/in @Temperature -22.0 °F	ASTM D256
Izod Impact, Unnotched	21.3 J/cm	39.9 ft-lb/in	ASTM D4812
Dart Drop, Total Energy	69.0 J	50.9 ft-lb	ASTM D3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	61.0 µm/m-°C @Temperature -40.0 - 40.0 °C	33.9 µin/in-°F @Temperature -40.0 - 104 °F	ASTM E831
CTE, linear, Transverse to Flow	64.0 µm/m-°C @Temperature -40.0 - 40.0 °C	35.6 µin/in-°F @Temperature -40.0 - 104 °F	ASTM E831

Deflection Temperature at 0.46 MPa (66 psi)	141 °C @Thickness 3.20 mm	286 °F @Thickness 0.126 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	129 °C @Thickness 3.20 mm	264 °F @Thickness 0.126 in	unannealed; ASTM D648
Vicat Softening Point	147 °C	297 °F	Rate B/50; ASTM D1525
Flammability, UL94	HB @Thickness 1.50 mm	HB @Thickness 0.0591 in	UL 94
Glow Wire Test	850 °C @Thickness 3.00 mm	1560 °F @Thickness 0.118 in	IEC 60695-2-13
	850 °C @Thickness 1.50 mm	1560 °F @Thickness 0.0591 in	IEC 60695-2-13
	960 °C @Thickness 1.50 - 3.00 mm	1760 °F @Thickness 0.0591 - 0.118 in	IEC 60695-2-12

Processing Properties	Metric	English	Comments
Nozzle Temperature	305 - 325 °C	581 - 617 °F	Injection Molding
Zone 1	290 - 310 °C	554 - 590 °F	
Zone 2	300 - 320 °C	572 - 608 °F	
Zone 3	310 - 330 °C	590 - 626 °F	
Melt Temperature	310 - 330 °C	590 - 626 °F	
Mold Temperature	80.0 - 115 °C	176 - 239 °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	