

SABIC LEXAN™ LUX2289

LEXAN LUX2289 resin is an injection molding grade with 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	1.31 g/cc	0.0473 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	0.0050 - 0.0070 cm/cm @Thickness 3.20 mm	0.0050 - 0.0070 in/in @Thickness 0.126 in	SABIC method
Melt Flow	16 g/10 min @Load 1.20 kg, Temperature 300 °C	16 g/10 min @Load 2.65 lb, Temperature 572 °F	cm ³ /10 min; ISO 1133
	17 g/10 min @Load 1.20 kg, Temperature 300 °C	17 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	61.0 MPa	8850 psi	50 mm/min; ASTM D638
	62.0 MPa	8990 psi	50 mm/min; ISO 527
Tensile Strength, Yield	60.0 MPa	8700 psi	50 mm/min; ASTM D638
	61.0 MPa	8850 psi	50 mm/min; ISO 527
Elongation at Break	120 %	120 %	50 mm/min; ASTM D638
Elongation at Yield	6.0 %	6.0 %	50 mm/min; ASTM D638
	6.0 %	6.0 %	50 mm/min; ISO 527
Flexural Strength	70.0 MPa	10200 psi	ISO 178
Flexural Yield Strength	98.0 MPa	14200 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.50 GPa	363 ksi	ISO 178
	2.67 GPa	387 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	6.48 J/cm	12.1 ft-lb/in	ASTM D256
	1.65 J/cm @Temperature -30.0 °C	3.09 ft-lb/in @Temperature -22.0 °F	ASTM D256
Izod Impact, Unnotched	21.3 J/cm	39.9 ft-lb/in	ASTM D4812
Izod Impact, Notched (ISO)	52.0 kJ/m ²	24.7 ft-lb/in ²	80*10*3; ISO 180/1A
	13.0 kJ/m ² @Temperature -30.0 °C	6.19 ft-lb/in ² @Temperature -22.0 °F	80*10*3; ISO 180/1A
Izod Impact, Unnotched (ISO)	170 kJ/m ²	80.9 ft-lb/in ²	80*10*4; ISO 180/1U
	160 kJ/m ² @Temperature -30.0 °C	76.1 ft-lb/in ² @Temperature -22.0 °F	80*10*3; ISO 180/1U
Charpy Impact Unnotched	14.0 J/cm ²	66.6 ft-lb/in ²	Edgew 80*10*3 sp=62mm; ISO 179/1eU
	14.0 J/cm ² @Temperature -30.0 °C	66.6 ft-lb/in ² @Temperature -22.0 °F	Edgew 80*10*3 sp=62mm; ISO 179/1eU
Charpy Impact, Notched	6.70 J/cm ²	31.9 ft-lb/in ²	Edgew 80*10*3 sp=62mm; ISO 179/1eA

	1.20 J/cm ² @Temperature -30.0 °C	5.71 ft-lb/in ² @Temperature -22.0 °F	Edgew 80*10*3 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	69.0 J	50.9 ft-lb	ASTM D3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	60.0 µm/m-°C @Temperature -40.0 - 40.0 °C	33.3 µin/in-°F @Temperature -40.0 - 104 °F	ASTM E831
CTE, linear, Transverse to Flow	63.0 µm/m-°C @Temperature -40.0 - 40.0 °C	35.0 µin/in-°F @Temperature -40.0 - 104 °F	ASTM E831
Deflection Temperature at 0.46 MPa (66 psi)	136 °C @Thickness 3.20 mm	277 °F @Thickness 0.126 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	124 °C @Thickness 3.20 mm	255 °F @Thickness 0.126 in	unannealed; ASTM D648
	123 °C @Treatment Temp. 120 °C, Time 7200 sec	253 °F @Treatment Temp. 248 °F, Time 2.00 hour	annealed; ISO 75/Ae
Vicat Softening Point	142 °C	288 °F	Rate B/50; ASTM D1525
	144 °C	291 °F	Rate A/50; ISO 306
	145 °C	293 °F	Rate B/50; ISO 306
Flammability, UL94	HB @Thickness 1.00 mm	HB @Thickness 0.0394 in	UL 94
	V-2 @Thickness 1.50 mm	V-2 @Thickness 0.0591 in	UL 94
Glow Wire Test	850 °C @Thickness 1.00 mm	1560 °F @Thickness 0.0394 in	IEC 60695-2-13
	960 °C @Thickness 1.00 mm	1760 °F @Thickness 0.0394 in	IEC 60695-2-12

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	