

## SABIC Innovative Plastics Lexan® LI1911R PC

Category : Polymer , Thermoplastic , Polycarbonate (PC)

### Material Notes:

Low-viscosity multi-purpose PC having low levels of ionics species. Internal mold release.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-Lexan-LI1911R-PC.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-LI1911R-PC.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.20 g/cc	1.20 g/cc	ASTM D792
Density	1.19 g/cc	0.0430 lb/in <sup>3</sup>	ASTM D792
	1.20 g/cc	0.0434 lb/in <sup>3</sup>	ISO 1183
Moisture Absorption	0.150 %	0.150 %	23°C / 50% RH; ISO 62
Moisture Absorption at Equilibrium	0.58 % @Temperature 100 °C	0.58 % @Temperature 212 °F	ASTM D570
Water Absorption at Saturation	0.35 %	0.35 %	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	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
Melt Index of Compound	21 g/10 min @Load 5.00 kg, Temperature 220 °C	21 g/10 min @Load 11.0 lb, Temperature 428 °F	MVR [cm <sup>3</sup> /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	118	118	ASTM D785
Tensile Strength at Break	65.0 MPa	9430 psi	50 mm/min; ISO 527
	68.0 MPa	9860 psi	Type I, 50 mm/min; ASTM D638
Tensile Strength, Yield	62.0 MPa	8990 psi	Type I, 50 mm/min; ASTM D638
	63.0 MPa	9140 psi	50 mm/min; ISO 527
Elongation at Break	100 %	100 %	50 mm/min; ISO 527
	125 %	125 %	Type I, 50 mm/min; ASTM D638

Elongation at Yield Mechanical Properties	6.0 % Metric	6.0 % English	50 mm/min; ISO 527 Comments
	7.0 %	7.0 %	Type I, 50 mm/min; ASTM D638
Tensile Modulus	2.35 GPa	341 ksi	1 mm/min; ISO 527
	2.38 GPa	345 ksi	5 mm/min; ASTM D638
Flexural Yield Strength	90.0 MPa	13100 psi	2 mm/min; ISO 178
	96.0 MPa	13900 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.30 GPa	334 ksi	2 mm/min; ISO 178
	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
Izod Impact, Unnotched	32.04 J/cm	60.02 ft-lb/in	ASTM D4812
Izod Impact, Notched (ISO)	12.0 kJ/m <sup>2</sup>	5.71 ft-lb/in <sup>2</sup>	80*10*4; ISO 180/1A
	10.0 kJ/m <sup>2</sup> @Temperature -30.0 °C	4.76 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	80*10*4; ISO 180/1A
Charpy Impact Unnotched	NB	NB	Edgew 80*10*4 sp=62mm; ISO 179/1eU
Dart Drop, Total Energy	62.0 J	45.7 ft-lb	Instrumented Impact Energy @ peak; ASTM D3763
Taber Abrasion, mg/1000 Cycles	10	10	CS-17, 1 kg; ASTM D1044

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	68.4 µm/m-°C	38.0 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 95.0 °C	@Temperature -40.0 - 203 °F	
	70.0 µm/m-°C	38.9 µin/in-°F	ISO 11359-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
CTE, linear, Transverse to Flow	70.0 µm/m-°C	38.9 µin/in-°F	ISO 11359-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
Specific Heat Capacity	1.25 J/g-°C	0.299 BTU/lb-°F	ASTM C351
Thermal Conductivity	0.190 W/m-K	1.32 BTU-in/hr-ft <sup>2</sup> -°F	ASTM C177
Deflection Temperature at 0.46 MPa	137 °C	279 °F	

Thermal Properties	Metric @ Thickness 6.40 mm	English @ Thickness 0.252 in	Comments unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	122 °C	252 °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
	125 °C @Thickness 3.20 mm	257 °F @Thickness 0.126 in	unannealed; ASTM D648
	129 °C @Thickness 6.40 mm	264 °F @Thickness 0.252 in	unannealed; ASTM D648
Vicat Softening Point	140 °C	284 °F	Rate B/50; ISO 306
	141 °C	286 °F	Rate B/120; ISO 306
	154 °C	309 °F	Rate B/50; ASTM D1525

Optical Properties	Metric	English	Comments
Refractive Index	1.586	1.586	ASTM D542
Haze	1.0 % @Thickness 2.54 mm	1.0 % @Thickness 0.100 in	ASTM D1003
Transmission, Visible	88 %	88 %	2.54 mm; ASTM D1003

Descriptive Properties	Value	Comments
Ball Pressure Test, 75°C +/- 2°C	PASS	IEC 60695-10-2
Specific Volume	0.83cm <sup>3</sup> /g	ASTM D792

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