

SABIC Innovative Plastics Lexan® EXL1182T PC Copolymer

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Lexan® EXL1182T polycarbonate (PC) siloxane copolymer resin is a UV stabilized, enhanced release transparent injection molding (IM) grade. This resin offers good low temperature (-20 C) ductility in combination with high flow characteristics and excellent processability with opportunities for shorter IM cycle times compared to standard PC resins. Lexan EXL1182T resin is a UV stabilized, enhanced release product available in transparent and opaque colors and may be an excellent candidate for a broad range of applications.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-EXL1182T-PC-Copolymer.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.19 g/cc	1.19 g/cc	ASTM D792
Density	1.19 g/cc	0.0430 lb/in ³	ISO 1183
Moisture Absorption	0.0900 %	0.0900 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.24 %	0.24 %	ISO 62
Linear Mold Shrinkage, Flow	0.0040 - 0.0080 cm/cm @Thickness 3.20 mm	0.0040 - 0.0080 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	20 g/10 min @Load 1.20 kg, Temperature 300 °C	20 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D1238
Melt Index of Compound	19 g/10 min @Load 1.20 kg, Temperature 300 °C	19 g/10 min @Load 2.65 lb, Temperature 572 °F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	56.0 MPa	8120 psi	50 mm/min; ISO 527
	57.0 MPa	8270 psi	Type I, 50 mm/min; ASTM D638
Tensile Strength, Yield	57.0 MPa	8270 psi	50 mm/min; ISO 527
	58.0 MPa	8410 psi	Type I, 50 mm/min; ASTM D638
Elongation at Break	117.9 %	117.9 %	Type I, 50 mm/min; ASTM D638
	119.4 %	119.4 %	50 mm/min; ISO 527
Elongation at Yield	5.4 %	5.4 %	50 mm/min; ISO 527
	5.7 %	5.7 %	Type I, 50 mm/min; ASTM D638

Mechanical Properties	Metric ^{MPa}	English	Comments ; ASTM D638
	2.34 GPa	339 ksi	1 mm/min; ISO 527
Flexural Yield Strength	89.0 MPa	12900 psi	2 mm/min; ISO 178
	94.0 MPa	13600 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.14 GPa	310 ksi	2 mm/min; ISO 178
	2.24 GPa	325 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	7.36 J/cm	13.8 ft-lb/in	ASTM D256
	6.18 J/cm	11.6 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Notched (ISO)	47.0 kJ/m ²	22.4 ft-lb/in ²	80*10*4; ISO 180/1A
	24.0 kJ/m ²	11.4 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	6.10 J/cm ²	29.0 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	1.70 J/cm ²	8.09 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Dart Drop, Total Energy	74.0 J	54.6 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	74.8 μm/m-°C	41.6 μin/in-°F	ASTM E 831
	@Temperature -40.0 - 95.0 °C	@Temperature -40.0 - 203 °F	
	74.8 μm/m-°C	41.6 μin/in-°F	ISO 11359-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
CTE, linear, Transverse to Flow	76.4 μm/m-°C	42.4 μin/in-°F	ASTM E 831
	@Temperature -40.0 - 95.0 °C	@Temperature -40.0 - 203 °F	
	76.4 μm/m-°C	42.4 μin/in-°F	ISO 11359-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
Deflection Temperature at 1.8 MPa	116 °C	241 °F	

(264 psi) Thermal Properties	Metric	English	Flatw 80*10*4 sp=64mm; ISO 75/Af Comments
	121 °C	250 °F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	138 °C	280 °F	Rate A/50; ASTM D1525
	138 °C	280 °F	Rate B/50; ISO 306
	139 °C	282 °F	Rate B/120; ISO 306

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