

SABIC Innovative Plastics Lexan® EXL1483T PC Copolymer

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Lexan® EXL1483T polycarbonate (PC) siloxane copolymer resin is a UV stabilized, enhanced release, transparent injection molding grade. This resin offers excellent low temperature (-30 °C) ductility in combination with medium flow characteristics and excellent processability with opportunities for shorter IM cycle times compared to standard PC. Lexan EXL1483T resin is a UV stabilized, release available in transparent and opaque colors and is an excellent candidate for a broad range of applications. This data was supplied by SABIC-IP for the Americas region.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-EXL1483T-PC-Copolymer.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.19 g/cc	1.19 g/cc	ASTM D 792
Density	1.19 g/cc	0.0430 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	0.090 %	0.090 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.24 % @Temperature 23.0 °C	0.24 % @Temperature 73.4 °F	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	9.0 g/10 min @Load 1.20 kg, Temperature 300 °C	9.0 g/10 min @Load 2.65 lb, Temperature 572 °F	[cm ³ /10 min] Melt Volume Rate; ISO 1133
	10 g/10 min @Load 1.20 kg, Temperature 300 °C	10 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D 1238

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	61.0 MPa	8850 psi	50 mm/min; ISO 527
	64.0 MPa	9280 psi	Type I, 50 mm/min; ASTM D 638
Tensile Strength, Yield	57.0 MPa	8270 psi	50 mm/min; ISO 527
	58.0 MPa	8410 psi	Type I, 50 mm/min; ASTM D 638
Elongation at Break	124.9 %	124.9 %	50 mm/min; ISO 527
	131.4 %	131.4 %	Type I, 50 mm/min; ASTM D 638

Elongation at Yield Mechanical Properties	5.5 % Metric	5.5 % English	50 mm/min; ISO 527 Comments
	5.8 %	5.8 %	Type I, 50 mm/min; ASTM D 638
Tensile Modulus	2.21 GPa	321 ksi	50 mm/min; ASTM D 638
	2.35 GPa	341 ksi	1 mm/min; ISO 527
Flexural Yield Strength	90.0 MPa	13100 psi	2 mm/min; ISO 178
	94.0 MPa	13600 psi	1.3 mm/min, 50 mm span; ASTM D 790
Flexural Modulus	2.15 GPa	312 ksi	2 mm/min; ISO 178
	2.21 GPa	321 ksi	1.3 mm/min, 50 mm span; ASTM D 790
Izod Impact, Notched	7.95 J/cm @Temperature -30.0 °C	14.9 ft-lb/in @Temperature -22.0 °F	ASTM D 256
	8.90 J/cm @Temperature 23.0 °C	16.7 ft-lb/in @Temperature 73.4 °F	ASTM D 256
Izod Impact, Notched (ISO)	29.0 kJ/m ² @Temperature -30.0 °C	13.8 ft-lb/in ² @Temperature -22.0 °F	80*10*4; ISO 180/1A
	56.0 kJ/m ² @Temperature 23.0 °C	26.6 ft-lb/in ² @Temperature 73.4 °F	80*10*4; ISO 180/1A
Charpy Impact, Notched	2.40 J/cm ² @Temperature -30.0 °C	11.4 ft-lb/in ² @Temperature -22.0 °F	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
	7.40 J/cm ² @Temperature 23.0 °C	35.2 ft-lb/in ² @Temperature 73.4 °F	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
Impact Test	82.0 J @Temperature 23.0 °C	60.5 ft-lb @Temperature 73.4 °F	Instrumented Impact Total Energy; ASTM D 3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	71.5 µm/m-°C @Temperature -40.0 - 95.0 °C	39.7 µin/in-°F @Temperature -40.0 - 203 °F	ASTM E 831
	71.5 µm/m-°C @Temperature 23.0 - 80.0 °C	39.7 µin/in-°F @Temperature 73.4 - 176 °F	ISO 11359-2
	79.3 µm/m-°C	44.1 µin/in-°F	

CTE, linear, Transverse to Flow Thermal Properties	Metric @ Temperature -40.0 - 95.0 °C	English @ Temperature -40.0 - 203 °F	ASTM E 831 Comments
	79.3 µm/m-°C	44.1 µin/in-°F	ISO 11359-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
Deflection Temperature at 1.8 MPa (264 psi)	118 °C	244 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	124 °C	255 °F	unannealed; ASTM D 648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	141 °C	286 °F	Rate A/50; ASTM D 1525
	141 °C	286 °F	Rate B/50; ISO 306
	142 °C	288 °F	Rate B/120; ISO 306

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