

SABIC Innovative Plastics Lexan® EXL1880T PC Copolymer

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Lexan® EXL1880T polycarbonate (PC) siloxane copolymer resin is a UV stabilized, transparent injection molding grade. This resin offers good low temperature (0 C) ductility in combination with very high flow characteristics and excellent processability with opportunities for shorter IM cycle times compared to standard PC. Lexan EXL1880T resin is a UV stabilized, improved release product 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-EXL1880T-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
Linear Mold Shrinkage, Transverse	0.0040 - 0.0080 cm/cm @Thickness 3.20 mm	0.0040 - 0.0080 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	33 g/10 min @Load 1.20 kg, Temperature 300 °C	33 g/10 min @Load 2.65 lb, Temperature 572 °F	[cm ³ /10 min] Melt Volume Rate; ISO 1133
	35 g/10 min @Load 1.20 kg, Temperature 300 °C	35 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D 1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell L	90	90	ISO 2039-2
Tensile Strength at Break	56.0 MPa	8120 psi	50 mm/min; ISO 527
	58.0 MPa	8410 psi	Type I, 50 mm/min; ASTM D 638
Tensile Strength, Yield	59.0 MPa	8560 psi	Type I, 50 mm/min; ASTM D 638
	59.0 MPa	8560 psi	50 mm/min; ISO 527

Mechanical Properties	Metric	English	Comments
Elongation at Break	118.9 %	118.9 %	50 mm/min; ISO 527
	118.9 %	118.9 %	Type I, 50 mm/min; ASTM D 638
Elongation at Yield	5.4 %	5.4 %	50 mm/min; ISO 527
	5.7 %	5.7 %	Type I, 50 mm/min; ASTM D 638
Tensile Modulus	2.36 GPa	342 ksi	50 mm/min; ASTM D 638
	2.40 GPa	348 ksi	1 mm/min; ISO 527
Flexural Yield Strength	92.0 MPa	13300 psi	2 mm/min; ISO 178
	99.0 MPa	14400 psi	1.3 mm/min, 50 mm span; ASTM D 790
Flexural Modulus	2.25 GPa	326 ksi	2 mm/min; ISO 178
	2.35 GPa	341 ksi	1.3 mm/min, 50 mm span; ASTM D 790
Izod Impact, Notched	2.20 J/cm	4.12 ft-lb/in	ASTM D 256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	7.02 J/cm	13.2 ft-lb/in	ASTM D 256
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Notched (ISO)	30.0 kJ/m ²	14.3 ft-lb/in ²	80*10*3; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	60.0 kJ/m ²	28.6 ft-lb/in ²	80*10*3; ISO 180/1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Unnotched (ISO)	NB	NB	80*10*3; ISO 180/1U
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	NB	NB	80*10*3; ISO 180/1U
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact Unnotched	NB	NB	Edgew 80*10*3 sp=62mm; ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	NB	NB	Edgew 80*10*3 sp=62mm; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	4.00 J/cm ²	19.0 ft-lb/in ²	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	6.50 J/cm ²	30.9 ft-lb/in ²	V-notch Edgew 80*10*3 sp=62mm;

Mechanical Properties	Metric @ Temperature 23.0 °C	English @ Temperature 73.4 °F	ISO 179/1eA Comments
Impact Test	79.0 J @ Temperature 23.0 °C	58.3 ft-lb @ Temperature 73.4 °F	Instrumented Impact Total Energy; ASTM D 3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	65.0 µm/m-°C @ Temperature -40.0 - 95.0 °C	36.1 µin/in-°F @ Temperature -40.0 - 203 °F	ASTM E 831
	65.0 µm/m-°C @ Temperature 23.0 - 80.0 °C	36.1 µin/in-°F @ Temperature 73.4 - 176 °F	ISO 11359-2
CTE, linear, Transverse to Flow	74.0 µm/m-°C @ Temperature -40.0 - 95.0 °C	41.1 µin/in-°F @ Temperature -40.0 - 203 °F	ASTM E 831
	74.0 µm/m-°C @ Temperature 23.0 - 80.0 °C	41.1 µin/in-°F @ Temperature 73.4 - 176 °F	ISO 11359-2
Deflection Temperature at 1.8 MPa (264 psi)	117 °C	243 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	120 °C @ Thickness 3.20 mm	248 °F @ Thickness 0.126 in	unannealed; ASTM D 648
Vicat Softening Point	137 °C	279 °F	Rate B/50; ISO 306
	138 °C	280 °F	Rate A/50; ASTM D 1525
	140 °C	284 °F	Rate B/120; ISO 306
Glow Wire Test	850 °C @ Thickness 1.00 mm	1560 °F @ Thickness 0.0394 in	Glow Wire Ignitability Temperature; IEC 60695-2-13

Optical Properties	Metric	English	Comments
Haze	3.0 % @ Thickness 2.54 mm	3.0 % @ Thickness 0.100 in	ASTM D 1003
	82 % @ Thickness 2.54 mm	82 % @ Thickness 0.100 in	ASTM D 1003

Descriptive Properties	Value	Comments
Ball Pressure Test, 125°C +/- 2°C		IEC 60695-10-2

Descriptive Properties	PASS Value	Comments
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