

SABIC Innovative Plastics Lexan® FXE1112T PC Copolymer (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Lexan® FXE1112T Lexan® polycarbonate (PC) siloxane copolymer resin is a transparent injection molding 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. Lexan FXE1112T resin may be an excellent candidate for a broad range of applications. This product is available in GE Plastics' Visual fX® Piano Black, Raven Black & Illuminate color range only. This data was supplied by SABIC-IP for the Europe-Africa-Middle East region.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-FXE1112T-PC-Copolymer-Europe-Africa-Middle-East.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	19 g/10 min @Load 1.20 kg, Temperature 300 °C	19 g/10 min @Load 2.65 lb, Temperature 572 °F	[cm ³ /10 min] Melt Volume Rate; ISO 1133
	20 g/10 min @Load 1.20 kg, Temperature 300 °C	20 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D 1238

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 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	117.9 %	117.9 %	Type I, 50 mm/min; ASTM D 638
	119.4 %	119.4 %	50 mm/min; ISO 527

Mechanical Properties	Metric	English	Comments
	5.7 %	5.7 %	Type I, 50 mm/min; ASTM D 638
Tensile Modulus	2.26 GPa	328 ksi	50 mm/min; ASTM D 638
	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 D 790
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 D 790
Izod Impact, Notched	6.18 J/cm	11.6 ft-lb/in	ASTM D 256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	7.36 J/cm	13.8 ft-lb/in	ASTM D 256
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Notched (ISO)	55.0 kJ/m ²	26.2 ft-lb/in ²	80*10*3; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	65.0 kJ/m ²	30.9 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	4.50 J/cm ²	21.4 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; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	74.0 J	54.6 ft-lb	Instrumented Impact Total Energy;

Impact Test Mechanical Properties	Metric @ Temperature 23.0 °C	English @ Temperature 73.4 °F	ASTM D 3763 Comments
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 (264 psi)	116 °C	241 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	121 °C	250 °F	
Vicat Softening Point	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D 648
	138 °C	280 °F	
	138 °C	280 °F	Rate A/50; ASTM D 1525
	138 °C	280 °F	Rate B/50; ISO 306
	139 °C	282 °F	Rate B/120; ISO 306
Optical Properties	Metric	English	Comments
Transmission, Visible	90 %	90 %	transparent; thickness not quantified

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