

SABIC Innovative Plastics Lexan® FXE1434T PC Copolymer (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Lexan® EXL1434T polycarbonate (PC) siloxane copolymer resin is a UV stabilized transparent injection molding grade. This resin offers extreme low temperature (-40 C) ductility in combination with medium flow characteristics and excellent processability with opportunities for shorter IM cycle times compared to standard PC. Lexan EXL1434T resin is a UV stabilized general purpose 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 Europe-Africa-Middle East region.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-FXE1434T-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	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	55.0 MPa	7980 psi	50 mm/min; ISO 527
	59.0 MPa	8560 psi	Type I, 50 mm/min; ASTM D 638
Tensile Strength, Yield	56.0 MPa	8120 psi	50 mm/min; ISO 527
	57.0 MPa	8270 psi	Type I, 50 mm/min; ASTM D 638
Elongation at Break	108.5 %	108.5 %	50 mm/min; ISO 527
	123.9 %	123.9 %	Type I, 50 mm/min; ASTM D 638

Mechanical Properties	Metric	English	Comments
	5.6 %	5.6 %	Type I, 50 mm/min; ASTM D 638
Tensile Modulus	2.18 GPa	316 ksi	50 mm/min; ASTM D 638
	2.30 GPa	334 ksi	1 mm/min; ISO 527
Flexural Yield Strength	88.0 MPa	12800 psi	2 mm/min; ISO 178
	92.0 MPa	13300 psi	1.3 mm/min, 50 mm span; ASTM D 790
Flexural Modulus	2.12 GPa	307 ksi	2 mm/min; ISO 178
	2.18 GPa	316 ksi	1.3 mm/min, 50 mm span; ASTM D 790
Izod Impact, Notched	7.12 J/cm	13.3 ft-lb/in	ASTM D 256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	8.24 J/cm	15.4 ft-lb/in	ASTM D 256
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Impact Test	75.0 J	55.3 ft-lb	Instrumented Impact Total Energy; ASTM D 3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	67.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	37.2 $\mu\text{in}/\text{in}\cdot\text{°F}$	ISO 11359-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
	67.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	37.2 $\mu\text{in}/\text{in}\cdot\text{°F}$	ASTM E 831
	@Temperature -40.0 - 95.0 °C	@Temperature -40.0 - 203 °F	
CTE, linear, Transverse to Flow	80.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	44.4 $\mu\text{in}/\text{in}\cdot\text{°F}$	ISO 11359-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
	80.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	44.4 $\mu\text{in}/\text{in}\cdot\text{°F}$	ASTM E 831
	@Temperature -40.0 - 95.0 °C	@Temperature -40.0 - 203 °F	
Deflection Temperature at 1.8 MPa (264 psi)	116 °C	241 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	120 °C	248 °F	unannealed; ASTM D 648
	@Thickness 3.20 mm	@Thickness 0.126 in	

Vicat Softening Point Thermal Properties	138 °C Metric	280 °F English	Rate A/50; ASTM D 1525 Comments
	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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