

**SABIC Innovative Plastics Lexan® FXE1414L PC Copolymer**

Category : Polymer , Thermoplastic , Polycarbonate (PC)

**Material Notes:**

Opaque EXL, UV-Stabilized & light shielding capability (Wall thickness >0.8mm), for portable electronics device enclosure application. Only available in white, grey and limited pastel colors. Consult CIC or PM for color availability & limitation.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-Lexan-FXE1414L-PC-Copolymer.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-FXE1414L-PC-Copolymer.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.28 g/cc	1.28 g/cc	ASTM D792
Density	1.28 g/cc	0.0462 lb/in <sup>3</sup>	ISO 1183
Moisture Absorption	0.0700 %	0.0700 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.17 %	0.17 %	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	11 g/10 min @Load 1.20 kg, Temperature 300 °C	11 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D1238
Melt Index of Compound	10 g/10 min @Load 1.20 kg, Temperature 300 °C	10 g/10 min @Load 2.65 lb, Temperature 572 °F	MVR [cm <sup>3</sup> /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	47.0 MPa	6820 psi	50 mm/min; ISO 527
	54.0 MPa	7830 psi	Type I, 50 mm/min; ASTM D638
Tensile Strength, Yield	52.0 MPa	7540 psi	Type I, 50 mm/min; ASTM D638
	52.0 MPa	7540 psi	50 mm/min; ISO 527
Elongation at Break	75 %	75 %	50 mm/min; ISO 527
	84 %	84 %	Type I, 50 mm/min; ASTM D638
Elongation at Yield	5.0 %	5.0 %	Type I, 50 mm/min; ASTM D638
	5.0 %	5.0 %	50 mm/min; ISO 527
Tensile Modulus	2.00 GPa	290 ksi	1 mm/min; ISO 527

Mechanical Properties	2.03 GPa Metric	294 ksi English	50 mm/min; ASTM D638 Comments
Flexural Yield Strength	83.0 MPa	12000 psi	2 mm/min; ISO 178
	86.0 MPa	12500 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.05 GPa	297 ksi	1.3 mm/min, 50 mm span; ASTM D790
	2.11 GPa	306 ksi	2 mm/min; ISO 178
Izod Impact, Notched	7.66 J/cm	14.4 ft-lb/in	ASTM D256
	6.40 J/cm @Temperature -30.0 °C	12.0 ft-lb/in @Temperature -22.0 °F	ASTM D256
Izod Impact, Notched (ISO)	56.0 kJ/m <sup>2</sup>	26.6 ft-lb/in <sup>2</sup>	80*10*4; ISO 180/1A
	46.0 kJ/m <sup>2</sup> @Temperature -30.0 °C	21.9 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	80*10*4; ISO 180/1A
Charpy Impact, Notched	5.50 J/cm <sup>2</sup>	26.2 ft-lb/in <sup>2</sup>	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	68.0 J	50.2 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	70.0 µm/m-°C	38.9 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	70.2 µm/m-°C	39.0 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
CTE, linear, Transverse to Flow	67.3 µm/m-°C	37.4 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	82.3 µm/m-°C	45.7 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
Deflection Temperature at 1.8 MPa (264 psi)	118 °C	244 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	121 °C @Thickness 3.20 mm	250 °F @Thickness 0.126 in	unannealed; ASTM D648

Vicat Softening Point Thermal Properties	138 °C Metric	280 °F English	Rate B/50; ASTM D1525 Comments
	138 °C	280 °F	Rate B/50; ISO 306
	146 °C	295 °F	Rate B/120; ISO 306
Flammability, UL94	HB @Thickness 0.400 mm	HB @Thickness 0.0157 in	UL 94

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