

SABIC Innovative Plastics Lexan® FXE1414T PC Copolymer

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Clear PC-siloxane copolymer with excellent processability, for Visual fX capability in ""Energy"" colors. Medium flow. Improved toughness compared to medium flow standard PC in same color. Color package may affect performance.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-FXE1414T-PC-Copolymer.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.19 g/cc	1.19 g/cc	ASTM D792
Density	1.19 g/cc	0.0430 lb/in ³	ISO 1183
Moisture Absorption	0.0900 %	0.0900 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.13 %	0.13 %	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	10 g/10 min @Load 1.20 kg, Temperature 300 °C	10 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D1238
Melt Index of Compound	9.0 g/10 min @Load 1.20 kg, Temperature 300 °C	9.0 g/10 min @Load 2.65 lb, Temperature 572 °F	MVR [cm ³ /10 min]; ISO 1133

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 D638
Tensile Strength, Yield	56.0 MPa	8120 psi	50 mm/min; ISO 527
	57.0 MPa	8270 psi	Type I, 50 mm/min; ASTM D638
Elongation at Break	108.5 %	108.5 %	50 mm/min; ISO 527
	123.9 %	123.9 %	Type I, 50 mm/min; ASTM D638
Elongation at Yield	5.4 %	5.4 %	50 mm/min; ISO 527
	5.6 %	5.6 %	Type I, 50 mm/min; ASTM D638
Tensile Modulus	2.18 GPa	316 ksi	50 mm/min; ASTM D638

Mechanical Properties	2-30 GPa Metric	334 ksi English	1 mm/min: ISO 527 Comments
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 D790
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 D790
Izod Impact, Notched	8.24 J/cm	15.4 ft-lb/in	ASTM D256
	7.12 J/cm @Temperature -30.0 °C	13.3 ft-lb/in @Temperature -22.0 °F	ASTM D256
Izod Impact, Notched (ISO)	65.0 kJ/m ²	30.9 ft-lb/in ²	80*10*3; ISO 180/1A
	55.0 kJ/m ² @Temperature -30.0 °C	26.2 ft-lb/in ² @Temperature -22.0 °F	80*10*3; ISO 180/1A
Izod Impact, Unnotched (ISO)	NB	NB	80*10*3; ISO 180/1U
	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	80*10*3; ISO 180/1U
Charpy Impact Unnotched	NB	NB	Edgew 80*10*3 sp=62mm; ISO 179/1eU
	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	Edgew 80*10*3 sp=62mm; ISO 179/1eU
Charpy Impact, Notched	7.00 J/cm ²	33.3 ft-lb/in ²	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	6.00 J/cm ² @Temperature -30.0 °C	28.6 ft-lb/in ² @Temperature -22.0 °F	Edgew 80*10*3 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	75.0 J	55.3 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	67.0 µm/m-°C	37.2 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 95.0 °C	@Temperature -40.0 - 203 °F	
	67.0 µm/m-°C	37.2 µin/in-°F	ISO 11359-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	

Thermal Properties <i>CTE, linear, transverse to Flow</i>	80.0 µm/m-°C Metric	44.4 µin/in-°F English	Comments ASTM E 831
	@Temperature -40.0 - 95.0 °C	@Temperature -40.0 - 203 °F	
	80.0 µm/m-°C	44.4 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)	118 °C	244 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	120 °C	248 °F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	138 °C	280 °F	Rate A/50; ASTM D1525
	138 °C	280 °F	Rate B/50; ISO 306
	139 °C	282 °F	Rate B/120; ISO 306

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

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