

SABIC Innovative Plastics Lexan® FXG1414T PC Copolymer (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

PC-siloxane copolymer in special "Diamond Sparkle" colors. Medium flow. Improved toughness compared to medium flow standard PC in same color. Color package may affect performance. 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-FXG1414T-PC-Copolymer-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.18 g/cc	1.18 g/cc	ASTM D 792
Density	1.18 g/cc	0.0426 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	0.090 %	0.090 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.13 % @Temperature 23.0 °C	0.13 % @Temperature 73.4 °F	ISO 62
Linear Mold Shrinkage, Flow	0.0040 - 0.0080 cm/cm	0.0040 - 0.0080 in/in	on tensile bar; SABIC Method
	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	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	45.0 MPa	6530 psi	Type I, 50 mm/min; ASTM D 638
	49.0 MPa	7110 psi	50 mm/min; ISO 527
Tensile Strength, Yield	56.0 MPa	8120 psi	50 mm/min; ISO 527
	58.0 MPa	8410 psi	Type I, 50 mm/min; ASTM D 638
Elongation at Break	11.3 %	11.3 %	50 mm/min; ISO 527

Mechanical Properties	Metric	English	Comments
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	2.06 GPa	299 ksi	50 mm/min; ASTM D 638
	2.25 GPa	326 ksi	1 mm/min; ISO 527
Flexural Yield Strength	84.0 MPa	12200 psi	1.3 mm/min, 50 mm span; ASTM D 790
	88.0 MPa	12800 psi	2 mm/min; ISO 178
Flexural Modulus	2.15 GPa	312 ksi	2 mm/min; ISO 178
	2.23 GPa	323 ksi	1.3 mm/min, 50 mm span; ASTM D 790
Izod Impact, Notched	3.47 J/cm	6.50 ft-lb/in	ASTM D 256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	5.23 J/cm	9.80 ft-lb/in	ASTM D 256
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Impact Test	49.0 J	36.1 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)	117 °C	243 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	121 °C	250 °F	unannealed; ASTM D 648
	@Thickness 3.20 mm	@Thickness 0.126 in	

Thermal Properties	Metric	English	Comments
Vicat Softening Point	139 °C	282 °F	Rate B/50; ASTM D 1525
	139 °C	282 °F	Rate B/50; ISO 306
	142 °C	288 °F	Rate B/120; ISO 306

Descriptive Properties	Value	Comments
Ball Pressure Test, 75°C +/- 2°C	PASS	IEC 60695-10-2

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