

SABIC Innovative Plastics Lexan® FXG154 PC

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

FXG154 is a Lexan PC grade with the Diamond effect. Color Package may affect properties, Application testing always recommended. This data was supplied by SABIC-IP for the Americas region.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-FXG154-PC.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.20 g/cc	1.20 g/cc	ASTM D 792
Density	1.20 g/cc	0.0434 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	0.090 %	0.090 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.15 % @Temperature 23.0 °C	0.15 % @Temperature 73.4 °F	ISO 62
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm @Thickness 3.20 mm	0.0050 - 0.0070 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	2.0 g/10 min @Load 5.00 kg, Temperature 220 °C	2.0 g/10 min @Load 11.0 lb, Temperature 428 °F	[cm ³ /10 min] Melt Volume Rate; ISO 1133
	2.5 g/10 min @Load 3.80 kg, Temperature 200 °C	2.5 g/10 min @Load 8.38 lb, Temperature 392 °F	ASTM D 1238

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	54.0 MPa	7830 psi	5 mm/min; ISO 527
	57.0 MPa	8270 psi	Type I, 5 mm/min; ASTM D 638
Tensile Strength, Yield	58.0 MPa	8410 psi	Type I, 5 mm/min; ASTM D 638
	61.0 MPa	8850 psi	5 mm/min; ISO 527
Elongation at Break	39 %	39 %	Type I, 5 mm/min; ASTM D 638
	75 %	75 %	5 mm/min; ISO 527
Elongation at Yield	5.9 %	5.9 %	Type I, 5 mm/min; ASTM D 638
	6.2 %	6.2 %	5 mm/min; ISO 527
Tensile Modulus	2.43 GPa	352 ksi	1 mm/min; ISO 527

Mechanical Properties	Metric 2.68 GPa	English 389 ksi	Comments 5 mm/min; ASTM D 638
Flexural Yield Strength	94.0 MPa	13600 psi	2 mm/min; ISO 178
	98.0 MPa	14200 psi	1.3 mm/min, 50 mm span; ASTM D 790
Flexural Modulus	2.34 GPa	339 ksi	2 mm/min; ISO 178
	2.39 GPa	347 ksi	1.3 mm/min, 50 mm span; ASTM D 790
Izod Impact, Notched	1.42 J/cm @Temperature -30.0 °C	2.66 ft-lb/in @Temperature -22.0 °F	ASTM D 256
	7.52 J/cm @Temperature 23.0 °C	14.1 ft-lb/in @Temperature 73.4 °F	ASTM D 256
Izod Impact, Notched (ISO)	16.0 kJ/m² @Temperature -30.0 °C	7.61 ft-lb/in² @Temperature -22.0 °F	80*10*4; ISO 180/1A
	51.0 kJ/m² @Temperature 23.0 °C	24.3 ft-lb/in² @Temperature 73.4 °F	80*10*4; ISO 180/1A
Charpy Impact, Notched	5.80 J/cm² @Temperature 23.0 °C	27.6 ft-lb/in² @Temperature 73.4 °F	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
Impact Test	62.0 J @Temperature 23.0 °C	45.7 ft-lb @Temperature 73.4 °F	Instrumented Impact Total Energy; ASTM D 3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	70.0 µm/m-°C @Temperature -40.0 - 40.0 °C	38.9 µin/in-°F @Temperature -40.0 - 104 °F	ASTM E 831
	70.0 µm/m-°C @Temperature -40.0 - 40.0 °C	38.9 µin/in-°F @Temperature -40.0 - 104 °F	ISO 11359-2
CTE, linear, Transverse to Flow	70.0 µm/m-°C @Temperature -40.0 - 40.0 °C	38.9 µin/in-°F @Temperature -40.0 - 104 °F	ASTM E 831
	70.0 µm/m-°C @Temperature -40.0 - 40.0 °C	38.9 µin/in-°F @Temperature -40.0 - 104 °F	ISO 11359-2
Deflection Temperature at 1.8 MPa (264 psi)	129 °C	264 °F	Flatw 80*10*4 sp=64mm; ISO 75/ Af

Thermal Properties	Metric	English	Comments
	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D 648
Vicat Softening Point	147 °C	297 °F	Rate B/50; ISO 306
	149 °C	300 °F	Rate B/120; ISO 306
	153 °C	307 °F	Rate B/50; ASTM D 1525

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