

SABIC Innovative Plastics Lexan® BFL4000U PC

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Lexan® BFL4000U Polycarbonate resin is an injection moldable grade. It contains non-brominated, non-chlorinated flame retardant systems with UL-94 V0 rating and good impact/flow balance. Designed for high light reflectance and light shielding applications with good UV weathering capability.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-BFL4000U-PC.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.38 g/cc	1.38 g/cc	ASTM D792
Density	1.38 g/cc	0.0499 lb/in ³	ISO 1183
Moisture Absorption	0.150 %	0.150 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.35 %	0.35 %	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	24 g/10 min @Load 1.20 kg, Temperature 300 °C	24 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D1238
Melt Index of Compound	22 g/10 min @Load 1.20 kg, Temperature 300 °C	22 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	44.0 MPa	6380 psi	5 mm/min; ISO 527
	47.0 MPa	6820 psi	Type I, 5 mm/min; ASTM D638
Tensile Strength, Yield	50.0 MPa	7250 psi	5 mm/min; ISO 527
	54.0 MPa	7830 psi	Type I, 5 mm/min; ASTM D638
Elongation at Break	56 %	56 %	Type I, 5 mm/min; ASTM D638
	74 %	74 %	5 mm/min; ISO 527
Elongation at Yield	5.0 %	5.0 %	Type I, 5 mm/min; ASTM D638
	6.0 %	6.0 %	5 mm/min; ISO 527
Tensile Modulus	2.04 GPa	296 ksi	1 mm/min; ISO 527

Mechanical Properties	Metric 2.24 GPa	English 325 ksi	Comments 5 mm/min; ASTM D638
Flexural Yield Strength	83.0 MPa	12000 psi	2 mm/min; ISO 178
	90.0 MPa	13100 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
	2.17 GPa	315 ksi	2 mm/min; ISO 178
Izod Impact, Notched	4.70 J/cm	8.81 ft-lb/in	ASTM D256
	2.40 J/cm	4.50 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Notched (ISO)	30.0 kJ/m ²	14.3 ft-lb/in ²	80*10*4; ISO 180/1A
	20.0 kJ/m ²	9.52 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	3.00 J/cm ²	14.3 ft-lb/in ²	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	75.0 µm/m-°C	41.7 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	75.0 µm/m-°C	41.7 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
CTE, linear, Transverse to Flow	75.0 µm/m-°C	41.7 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	75.0 µm/m-°C	41.7 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
Deflection Temperature at 0.46 MPa (66 psi)	130 °C	266 °F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
	131 °C	268 °F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	

Thermal Properties	Metric	English	Comments
	@Thickness 6.40 mm	@Thickness 0.252 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	115 °C	239 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	115 °C	239 °F	annealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
	124 °C	255 °F	unannealed; ASTM D648
	@Thickness 6.40 mm	@Thickness 0.252 in	
Vicat Softening Point	136 °C	277 °F	Rate B/50; ASTM D1525
	137 °C	279 °F	Rate B/50; ISO 306
	139 °C	282 °F	Rate B/120; ISO 306
Flammability, UL94	V-0	V-0	UL 94
	@Thickness 1.50 mm	@Thickness 0.0591 in	

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