

SABIC Innovative Plastics Lexan® BFL2000 PC

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Non-Brominated, non-chlorinated flame retardant PC. Available in opaque white colors.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-BFL2000-PC.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.29 g/cc	1.29 g/cc	ASTM D792
Density	1.29 g/cc	0.0466 lb/in ³	ISO 1183
Water Absorption	0.15 % @Time 86400 sec	0.15 % @Time 24.0 hour	ASTM D570
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	0.0050 - 0.0070 in/in	on Tensile Bar; SABIC Method
	0.0050 - 0.0070 cm/cm @Thickness 3.20 mm	0.0050 - 0.0070 in/in @Thickness 0.126 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.0050 - 0.0070 cm/cm @Thickness 3.20 mm	0.0050 - 0.0070 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	32 g/10 min @Load 1.20 kg, Temperature 300 °C	32 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D1238
Melt Index of Compound	30 g/10 min @Load 1.20 kg, Temperature 300 °C	30 g/10 min @Load 2.65 lb, Temperature 572 °F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, H358/30	105 MPa	15200 psi	ISO 2039-1
Tensile Strength at Break	50.0 MPa	7250 psi	Type I, 50 mm/min; ASTM D638
	52.0 MPa	7540 psi	50 mm/min; ISO 527
Tensile Strength, Yield	60.0 MPa	8700 psi	Type I, 50 mm/min; ASTM D638
	60.0 MPa	8700 psi	50 mm/min; ISO 527

Elongation at Break Mechanical Properties	70 % Metric	70 % English	50 mm/min; ISO 527 Comments
	80 %	80 %	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	2.35 GPa	341 ksi	1 mm/min; ISO 527
	2.50 GPa	363 ksi	5 mm/min; ASTM D638
Flexural Yield Strength	90.0 MPa	13100 psi	2 mm/min; ISO 178
	93.0 MPa	13500 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.30 GPa	334 ksi	2 mm/min; ISO 178
	2.45 GPa	355 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	6.00 J/cm	11.2 ft-lb/in	ASTM D256
Izod Impact, Unnotched	NB	NB	ASTM D4812
Izod Impact, Notched (ISO)	11.0 kJ/m ²	5.23 ft-lb/in ²	80*10*3; ISO 180/1A
	10.0 kJ/m ² @Temperature -30.0 °C	4.76 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	1.20 J/cm ²	5.71 ft-lb/in ²	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	1.10 J/cm ² @Temperature -30.0 °C	5.23 ft-lb/in ² @Temperature -22.0 °F	Edgew 80*10*3 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	55.0 J @Temperature 23.0 °C	40.6 ft-lb @Temperature 73.4 °F	ASTM D3763

Thermal Properties	Metric	English	Comments
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Thermal Properties CTE, linear, Parallel to Flow	70.0 µm/m-°C Metric	38.9 µin/in-°F English	Comments ISO 11359-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
	70.0 µm/m-°C	38.9 µin/in-°F	ASTM D696
	@Temperature -30.0 - 30.0 °C	@Temperature -22.0 - 86.0 °F	
CTE, linear, Transverse to Flow	70.0 µm/m-°C	38.9 µin/in-°F	ISO 11359-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
	70.0 µm/m-°C	38.9 µin/in-°F	ASTM D696
	@Temperature -30.0 - 30.0 °C	@Temperature -22.0 - 86.0 °F	
Deflection Temperature at 0.46 MPa (66 psi)	133 °C	271 °F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
	125 °C	257 °F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Deflection Temperature at 1.8 MPa (264 psi)	122 °C	252 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	127 °C	261 °F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	138 °C	280 °F	Rate B/50; ASTM D1525
	139 °C	282 °F	Rate B/50; ISO 306
	141 °C	286 °F	Rate B/120; ISO 306
UL RTI, Electrical	80.0 °C	176 °F	UL 746B
UL RTI, Mechanical with Impact	80.0 °C	176 °F	UL 746B
UL RTI, Mechanical without Impact	80.0 °C	176 °F	UL 746B
Flammability, UL94	V-2	V-2	UL 94
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	V-0	V-0	UL 94
	@Thickness 1.50 mm	@Thickness 0.0591 in	
Oxygen Index	36 %	36 %	ISO 4589
Glow Wire Test	850 °C	1560 °F	IEC 60695-2-13
	960 °C	1760 °F	IEC 60695-2-12

Thermal Properties	@Thickness 1.00 mm Metric	@Thickness 0.0394 in English	Comments
Electrical Properties	Metric	English	Comments
Volume Resistivity	$\geq 1.00 \times 10^{15}$ ohm-cm	$\geq 1.00 \times 10^{15}$ ohm-cm	IEC 60093
Surface Resistance	$\geq 1.00 \times 10^{15}$ ohm	$\geq 1.00 \times 10^{15}$ ohm	ROA; IEC 60093
Dielectric Constant	3.2	3.2	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.2	3.2	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
Dielectric Strength	21.0 kV/mm	533 kV/in	in oil; ASTM D149
	@Thickness 1.60 mm	@Thickness 0.0630 in	
Dissipation Factor	0.010	0.010	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
	0.010	0.010	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	225 V	225 V	IEC 60112

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

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