

## SABIC Innovative Plastics Lexan® BFL2010 PC

Category : Polymer , Thermoplastic , Polycarbonate (PC)

### Material Notes:

Non-brominated, non-chlorinated flame retardant, glass reinforced PC with improved flow. Available in opaque colors.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-Lexan-BFL2010-PC.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-BFL2010-PC.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.30 g/cc	1.30 g/cc	ASTM D792
Density	1.27 g/cc	0.0459 lb/in <sup>3</sup>	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	0.0040 - 0.0060 cm/cm	0.0040 - 0.0060 in/in	on Tensile Bar; SABIC Method
Melt Flow	14.4 g/10 min @Load 1.20 kg, Temperature 300 °C	14.4 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D1238
Melt Index of Compound	12 g/10 min @Load 1.20 kg, Temperature 300 °C	12 g/10 min @Load 2.65 lb, Temperature 572 °F	MVR [cm <sup>3</sup> /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	46.0 MPa	6670 psi	Type I, 50 mm/min; ASTM D638
	52.0 MPa	7540 psi	50 mm/min; ISO 527
Tensile Strength, Yield	57.0 MPa	8270 psi	Type I, 50 mm/min; ASTM D638
	62.0 MPa	8990 psi	50 mm/min; ISO 527
Elongation at Break	8.9 %	8.9 %	50 mm/min; ISO 527
	15 %	15 %	Type I, 50 mm/min; ASTM D638
Elongation at Yield	4.7 %	4.7 %	Type I, 50 mm/min; ASTM D638
	4.8 %	4.8 %	50 mm/min; ISO 527
Tensile Modulus	3.51 GPa	509 ksi	1 mm/min; ISO 527
	3.96 GPa	574 ksi	5 mm/min; ASTM D638
Flexural Yield Strength	98.0 MPa	14200 psi	2 mm/min; ISO 178

Mechanical Properties	Metric 10 <sup>3</sup> MPa	English 10 <sup>3</sup> psi	Comments 1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	3.19 GPa	463 ksi	2 mm/min; ISO 178
	3.40 GPa	493 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	1.10 J/cm	2.06 ft-lb/in	ASTM D256
Izod Impact, Unnotched	NB	NB	ASTM D4812
Izod Impact, Notched (ISO)	9.00 kJ/m <sup>2</sup>	4.28 ft-lb/in <sup>2</sup>	80*10*3; ISO 180/1A
	9.00 kJ/m <sup>2</sup>	4.28 ft-lb/in <sup>2</sup>	80*10*3; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Unnotched (ISO)	NB	NB	80*10*3; ISO 180/1U
	130 kJ/m <sup>2</sup>	61.9 ft-lb/in <sup>2</sup>	80*10*3; ISO 180/1U
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact Unnotched	NB	NB	Edgew 80*10*3 sp=62mm; ISO 179/1eU
	NB	NB	Edgew 80*10*3 sp=62mm; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	0.900 J/cm <sup>2</sup>	4.28 ft-lb/in <sup>2</sup>	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	0.900 J/cm <sup>2</sup>	4.28 ft-lb/in <sup>2</sup>	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Dart Drop, Total Energy	61.0 J	45.0 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	50.0 µm/m-°C	27.8 µin/in-°F	ASTM D696
	@Temperature -30.0 - 30.0 °C	@Temperature -22.0 - 86.0 °F	
	50.0 µm/m-°C	27.8 µin/in-°F	ISO 11359-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
CTE, linear, Transverse to Flow	50.0 µm/m-°C	27.8 µin/in-°F	ASTM D696
	@Temperature -30.0 - 30.0 °C	@Temperature -22.0 - 86.0 °F	
	50.0 µm/m-°C	27.8 µin/in-°F	

Thermal Properties	Metric	English	Comments
	@ Temperature 23.0 - 80.0 °C	@ Temperature 73.4 - 176 °F	
Deflection Temperature at 0.46 MPa (66 psi)	141 °C @Thickness 3.20 mm	286 °F @Thickness 0.126 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	142 °C	288 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	135 °C @Thickness 3.20 mm	275 °F @Thickness 0.126 in	unannealed; ASTM D648
Vicat Softening Point	143 °C	289 °F	Rate B/50; ASTM D1525
	144 °C	291 °F	Rate B/50; ISO 306
	145 °C	293 °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-0 @Thickness 1.50 mm	V-0 @Thickness 0.0591 in	UL 94
Oxygen Index	38 %	38 %	ISO 4589
Glow Wire Test	825 °C	1520 °F	IEC 60695-2-13
	960 °C @Thickness 1.00 mm	1760 °F @Thickness 0.0394 in	IEC 60695-2-12

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+15 ohm-cm	>= 1.00e+15 ohm-cm	IEC 60093
Surface Resistance	>= 1.00e+15 ohm	>= 1.00e+15 ohm	ROA; IEC 60093
Dielectric Constant	3.0 @Frequency 1.00e+6 Hz	3.0 @Frequency 1.00e+6 Hz	IEC 60250
	3.0 @Frequency 50.0 - 60.0 Hz	3.0 @Frequency 50.0 - 60.0 Hz	IEC 60250
Dielectric Strength	19.5 kV/mm @Thickness 1.60 mm	495 kV/in @Thickness 0.0630 in	in air; ASTM D149

Electrical Properties	0.010 Metric	0.010 English	Comments
Dielectric Factor	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	IEC 60250
	0.010	0.010	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	IEC 60250
Comparative Tracking Index	175 V	175 V	IEC 60112

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

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