

## SABIC Innovative Plastics Lexan® BFL2015 PC

Category : Polymer , Thermoplastic , Polycarbonate (PC)

### Material Notes:

Non-brominated, non-chlorinated flame retardant, glass reinforced PC. Opaque colors only

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-Lexan-BFL2015-PC.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-BFL2015-PC.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.23 g/cc	1.23 g/cc	ASTM D792
Density	1.30 g/cc	0.0470 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	0.0020 - 0.0050 cm/cm	0.0020 - 0.0050 in/in	on Tensile Bar; SABIC Method
	0.0020 - 0.0050 cm/cm @Thickness 3.20 mm	0.0020 - 0.0050 in/in @Thickness 0.126 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.0020 - 0.0050 cm/cm @Thickness 3.20 mm	0.0020 - 0.0050 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	6.5 g/10 min @Load 1.20 kg, Temperature 300 °C	6.5 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D1238
Melt Index of Compound	6.0 g/10 min @Load 1.20 kg, Temperature 300 °C	6.0 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	91.0 MPa	13200 psi	Type I, 50 mm/min; ASTM D638
	100 MPa	14500 psi	50 mm/min; ISO 527
Tensile Strength, Yield	92.0 MPa	13300 psi	Type I, 50 mm/min; ASTM D638
	103 MPa	14900 psi	50 mm/min; ISO 527
Elongation at Break	4.0 %	4.0 %	Type I, 50 mm/min; ASTM D638
	4.3 %	4.3 %	50 mm/min; ISO 527
Elongation at Yield	3.5 %	3.5 %	Type I, 50 mm/min; ASTM D638

Mechanical Properties	3.6% Metric	3.6% English	50 mm/min; ISO 527 Comments
Tensile Modulus	4.95 GPa	718 ksi	1 mm/min; ISO 527
	5.33 GPa	773 ksi	5 mm/min; ASTM D638
Flexural Yield Strength	150 MPa	21800 psi	2 mm/min; ISO 178
	156 MPa	22600 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	4.28 GPa	621 ksi	2 mm/min; ISO 178
	4.60 GPa	667 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	0.780 J/cm	1.46 ft-lb/in	ASTM D256
Izod Impact, Notched (ISO)	8.00 kJ/m <sup>2</sup>	3.81 ft-lb/in <sup>2</sup>	80*10*3; ISO 180/1A
	7.00 kJ/m <sup>2</sup> @Temperature -30.0 °C	3.33 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	80*10*3; ISO 180/1A
Izod Impact, Unnotched (ISO)	80.0 kJ/m <sup>2</sup>	38.1 ft-lb/in <sup>2</sup>	80*10*3; ISO 180/1U
	80.0 kJ/m <sup>2</sup> @Temperature -30.0 °C	38.1 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	80*10*3; ISO 180/1U
Charpy Impact Unnotched	6.70 J/cm <sup>2</sup>	31.9 ft-lb/in <sup>2</sup>	ISO 179/2C
	10.0 J/cm <sup>2</sup>	47.6 ft-lb/in <sup>2</sup>	Edgew 80*10*3 sp=62mm; ISO 179/1eU
	7.50 J/cm <sup>2</sup> @Temperature -30.0 °C	35.7 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	ISO 179/2C
	10.0 J/cm <sup>2</sup> @Temperature -30.0 °C	47.6 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	Edgew 80*10*3 sp=62mm; ISO 179/1eU
Charpy Impact, Notched	0.800 J/cm <sup>2</sup>	3.81 ft-lb/in <sup>2</sup>	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	1.20 J/cm <sup>2</sup>	5.71 ft-lb/in <sup>2</sup>	ISO 179/2C
	0.600 J/cm <sup>2</sup> @Temperature -30.0 °C	2.86 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	0.800 J/cm <sup>2</sup> @Temperature -30.0 °C	3.81 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	ISO 179/2C
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	40.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	22.2 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	ASTM D696
	@Temperature -30.0 - 30.0 $^\circ\text{C}$	@Temperature -22.0 - 86.0 $^\circ\text{F}$	
	40.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	22.2 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	ISO 11359-2
	@Temperature 23.0 - 80.0 $^\circ\text{C}$	@Temperature 73.4 - 176 $^\circ\text{F}$	
CTE, linear, Transverse to Flow	40.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	22.2 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	ASTM D696
	@Temperature -30.0 - 30.0 $^\circ\text{C}$	@Temperature -22.0 - 86.0 $^\circ\text{F}$	
	40.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	22.2 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	ISO 11359-2
	@Temperature 23.0 - 80.0 $^\circ\text{C}$	@Temperature 73.4 - 176 $^\circ\text{F}$	
Deflection Temperature at 0.46 MPa (66 psi)	145 $^\circ\text{C}$	293 $^\circ\text{F}$	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Deflection Temperature at 1.8 MPa (264 psi)	132 $^\circ\text{C}$	270 $^\circ\text{F}$	Flatw 80*10*4 sp=64mm; ISO 75/Af
	141 $^\circ\text{C}$	286 $^\circ\text{F}$	
Vicat Softening Point	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D648
	148 $^\circ\text{C}$	298 $^\circ\text{F}$	
	149 $^\circ\text{C}$	300 $^\circ\text{F}$	Rate B/50; ISO 306
	150 $^\circ\text{C}$	302 $^\circ\text{F}$	Rate B/120; ISO 306
	UL RTI, Electrical	80.0 $^\circ\text{C}$	176 $^\circ\text{F}$
UL RTI, Mechanical with Impact	80.0 $^\circ\text{C}$	176 $^\circ\text{F}$	UL 746B
UL RTI, Mechanical without Impact	80.0 $^\circ\text{C}$	176 $^\circ\text{F}$	UL 746B
Flammability, UL94	V-0	V-0	UL 94
	@Thickness 1.50 mm	@Thickness 0.0591 in	
Oxygen Index	38 %	38 %	ISO 4589
Glow Wire Test	825 $^\circ\text{C}$	1520 $^\circ\text{F}$	IEC 60695-2-13
	960 $^\circ\text{C}$	1760 $^\circ\text{F}$	IEC 60695-2-12
	@Thickness 1.00 mm	@Thickness 0.0394 in	

Electrical Properties	Metric	English	Comments
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Volume Resistivity Electrical Properties	$\geq 1.00\text{e}+15$ ohm-cm Metric	$\geq 1.00\text{e}+15$ ohm-cm English	IEC 60093 Comments
Surface Resistance	$\geq 1.00\text{e}+15$ ohm	$\geq 1.00\text{e}+15$ ohm	ROA; IEC 60093
Dielectric Constant	3.1	3.1	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Strength	20.0 kV/mm	508 kV/in	in oil; ASTM D149
	@Thickness 1.60 mm	@Thickness 0.0630 in	
Dissipation Factor	0.010	0.010	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	0.020	0.020	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
Comparative Tracking Index	150 V	150 V	IEC 60112

Descriptive Properties	Value	Comments
Ball Pressure Test, 125°C +/- 2°C	PASSE0	IEC 60695-10-2

## Contact Songhan Plastic Technology Co.,Ltd.

Website : [www.lookpolymers.com](http://www.lookpolymers.com)

Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China