

SABIC Innovative Plastics Lexan® BFL2015HF PC (Asia Pacific)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Non-brominated, non-chlorinated flame retardant, glass reinforced PC. Opaque colors only. UL94 V0 1.5 mm for BLACK; V1 1.5 mm for OTHER Color.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-BFL2015HF-PC-Asia-Pacific.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 ³	ISO 1183
Water Absorption	0.14 % @Time 86400 sec	0.14 % @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	0.0020 - 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	11 g/10 min @Load 1.20 kg, Temperature 300 °C	11 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D1238
Melt Index of Compound	10 g/10 min @Load 1.20 kg, Temperature 300 °C	10 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	91.0 MPa	13200 psi	Type I, 50 mm/min; ASTM D638
	100 MPa	14500 psi	50 mm/min; ISO 527
Tensile Strength, Yield	81.0 MPa	11700 psi	SABIC - Japan Method
	92.0 MPa	13300 psi	Type I, 50 mm/min; ASTM D638
	103 MPa	14900 psi	50 mm/min; ISO 527

Mechanical Properties	Metric	English	Comments
	4.3 %	4.3 %	50 mm/min; ISO 527
	4.0 - 6.0 %	4.0 - 6.0 %	SABIC - Japan Method
Elongation at Yield	3.5 %	3.5 %	Type I, 50 mm/min; ASTM D638
	3.6 %	3.6 %	50 mm/min; ISO 527
Tensile Modulus	4.95 GPa	718 ksi	1 mm/min; ISO 527
	5.33 GPa	773 ksi	5 mm/min; ASTM D638
Flexural Strength	133 MPa	19300 psi	ASTM D790
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
	4.41 GPa	640 ksi	ASTM D790
	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
	0.680 J/cm	1.27 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Notched (ISO)	8.00 kJ/m ²	3.81 ft-lb/in ²	80*10*3; ISO 180/1A
	7.00 kJ/m ²	3.33 ft-lb/in ²	80*10*3; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Unnotched (ISO)	80.0 kJ/m ²	38.1 ft-lb/in ²	80*10*3; ISO 180/1U
	80.0 kJ/m ²	38.1 ft-lb/in ²	80*10*3; ISO 180/1U
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact Unnotched	6.70 J/cm ²	31.9 ft-lb/in ²	ISO 179/2C
	10.0 J/cm ²	47.6 ft-lb/in ²	Edgew 80*10*3 sp=62mm; ISO 179/1eU
	7.50 J/cm ²	35.7 ft-lb/in ²	ISO 179/2C
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	10.0 J/cm ²	47.6 ft-lb/in ²	Edgew 80*10*3 sp=62mm; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	

Mechanical Properties	Metric	English	Comments
Charpy Impact, Notched	0.600 J/cm ²	3.81 ft-lb/in ²	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	1.20 J/cm ²	5.71 ft-lb/in ²	ISO 179/2C
	0.600 J/cm ² @Temperature -30.0 °C	2.86 ft-lb/in ² @Temperature -22.0 °F	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	0.800 J/cm ² @Temperature -30.0 °C	3.81 ft-lb/in ² @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 µm/m-°C	22.2 µin/in-°F	ASTM D696
	@Temperature -30.0 - 30.0 °C	@Temperature -22.0 - 86.0 °F	
	40.0 µm/m-°C	22.2 µin/in-°F	ISO 11359-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
CTE, linear, Transverse to Flow	40.0 µm/m-°C	22.2 µin/in-°F	ASTM D696
	@Temperature -30.0 - 30.0 °C	@Temperature -22.0 - 86.0 °F	
	40.0 µm/m-°C	22.2 µin/in-°F	ISO 11359-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
Deflection Temperature at 0.46 MPa (66 psi)	145 °C	293 °F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Deflection Temperature at 1.8 MPa (264 psi)	132 °C	270 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	141 °C	286 °F	
Vicat Softening Point	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D648
	148 °C	298 °F	Rate B/50; ASTM D1525
	148 °C	298 °F	Rate B/50; ISO 306
	150 °C	302 °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

Thermal Properties	Metric	English	Comments
Flammability, UL94	V-1 @Thickness 1.50 mm	V-1 @Thickness 0.0591 in	UL 94
	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	3.1 @Frequency 1.00e+6 Hz	3.1 @Frequency 1.00e+6 Hz	IEC 60250
	3.2 @Frequency 50.0 - 60.0 Hz	3.2 @Frequency 50.0 - 60.0 Hz	IEC 60250
Dielectric Strength	20.0 kV/mm @Thickness 1.60 mm	508 kV/in @Thickness 0.0630 in	in oil; ASTM D149
Dissipation Factor	0.010 @Frequency 1.00e+6 Hz	0.010 @Frequency 1.00e+6 Hz	IEC 60250
	0.020 @Frequency 50.0 - 60.0 Hz	0.020 @Frequency 50.0 - 60.0 Hz	IEC 60250
Comparative Tracking Index	150 V	150 V	IEC 60112

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

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