

SABIC Innovative Plastics Lexan® FXE101 PC (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Transparent PC. ILLUMINATE special effects (fluorescent/edge glow colors). For thicker sections without sinks. This data was supplied by SABIC-IP for the Europe-Africa-Middle East region.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-FXE101-PC-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Density	1.20 g/cc	0.0434 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	0.15 %	0.15 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.35 % @Temperature 23.0 °C	0.35 % @Temperature 73.4 °F	ISO 62
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	on tensile bar; SABIC Method
Melt Flow	6.0 g/10 min @Load 1.20 kg, Temperature 300 °C	6.0 g/10 min @Load 2.65 lb, Temperature 572 °F	[cm ³ /10 min] Melt Volume Rate; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, H358/30	95.0 MPa	13800 psi	ISO 2039-1
Tensile Strength at Break	70.0 MPa	10200 psi	50 mm/min; ISO 527
Tensile Strength, Yield	63.0 MPa	9140 psi	50 mm/min; ISO 527
Elongation at Break	120 %	120 %	50 mm/min; ISO 527
Elongation at Yield	6.0 %	6.0 %	50 mm/min; ISO 527
Tensile Modulus	2.35 GPa	341 ksi	1 mm/min; ISO 527
Flexural Yield Strength	90.0 MPa	13100 psi	2 mm/min; ISO 178
Flexural Modulus	2.30 GPa	334 ksi	2 mm/min; ISO 178
Izod Impact, Notched (ISO)	12.0 kJ/m ² @Temperature -30.0 °C	5.71 ft-lb/in ² @Temperature -22.0 °F	80*10*3; ISO 180/1A
	70.0 kJ/m ² @Temperature 23.0 °C	33.3 ft-lb/in ² @Temperature 73.4 °F	80*10*3; ISO 180/1A
	NB	NB	

Mechanical Properties	Metric @ Temperature 23.0 °C	English @ Temperature 73.4 °F	80*10*3; ISO 180/1U Comments
	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	80*10*3; ISO 180/1U
Charpy Impact Unnotched	NB @Temperature 23.0 °C	NB @Temperature 73.4 °F	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	1.50 J/cm ² @Temperature -30.0 °C	7.14 ft-lb/in ² @Temperature -22.0 °F	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
	3.50 J/cm ² @Temperature 23.0 °C	16.7 ft-lb/in ² @Temperature 73.4 °F	ISO 179/2C
	7.50 J/cm ² @Temperature 23.0 °C	35.7 ft-lb/in ² @Temperature 73.4 °F	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
Taber Abrasion, mg/1000 Cycles	10 @Load 1.00 kg	10 @Load 2.20 lb	CS-17; SABIC Method

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	70.0 µm/m-°C @Temperature 23.0 - 80.0 °C	38.9 µin/in-°F @Temperature 73.4 - 176 °F	ISO 11359-2
Thermal Conductivity	0.200 W/m-K	1.39 BTU-in/hr-ft ² -°F	ISO 8302
Hot Ball Pressure Test	<= 140 °C	<= 284 °F	IEC 60695-10-2
Deflection Temperature at 0.46 MPa (66 psi)	138 °C	280 °F	Edgew 120*10*4 sp=100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	127 °C	261 °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
Vicat Softening Point	144 °C	291 °F	Rate B/50; ISO 306
	145 °C	293 °F	Rate B/120; ISO 306
UL RTI, Electrical	130 °C	266 °F	UL 746B
UL RTI, Mechanical with Impact	125 °C	257 °F	UL 746B
UL RTI, Mechanical without Impact	125 °C	257 °F	UL 746B
	HB	HB	

Flammability, UL 94 Thermal Properties	Metric @Thickness 0.700 mm	English @Thickness 0.0276 in	UL 94 Comments
	HB @Thickness 3.00 mm	HB @Thickness 0.118 in	2nd value; UL 94
Oxygen Index	25 %	25 %	LOI; ISO 4589
Glow Wire Test	850 °C @Thickness 1.00 mm	1560 °F @Thickness 0.0394 in	Glow Wire Flammability Index; IEC 60695-2-12

Optical Properties	Metric	English	Comments
Refractive Index	1.586	1.586	ISO 489
Haze	<= 0.80 % @Thickness 2.54 mm	<= 0.80 % @Thickness 0.100 in	ASTM D 1003
Transmission, Visible	88 - 90 % @Thickness 2.54 mm	88 - 90 % @Thickness 0.100 in	ASTM D 1003

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	2.7 @Frequency 1.00e+6 Hz	2.7 @Frequency 1.00e+6 Hz	IEC 60250
	2.7 @Frequency 50.0 - 60.0 Hz	2.7 @Frequency 50.0 - 60.0 Hz	IEC 60250
Dielectric Strength	17.0 kV/mm @Thickness 3.20 mm	432 kV/in @Thickness 0.126 in	in oil; IEC 60243-1
Dissipation Factor	0.0010 @Frequency 50.0 - 60.0 Hz	0.0010 @Frequency 50.0 - 60.0 Hz	IEC 60250
	0.010 @Frequency 1.00e+6 Hz	0.010 @Frequency 1.00e+6 Hz	IEC 60250

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

Descriptive Properties	Value	Comments
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