

SABIC Innovative Plastics Lexan® FXE161R PC (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

LEXAN FXE161R is a transparent/translucent medium viscosity grade for special effects with fluorescent appearance. Color package may affect performance. LEXAN FXE161R contains a release agent to ensure easy processing. 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-FXE161R-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	9.0 g/10 min @Load 1.20 kg, Temperature 300 °C	9.0 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

Mechanical Properties	Metric	English	Comments
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	NB	NB	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
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	NB	NB	Edgew 80*10*3 sp=62mm; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	1.40 J/cm ²	6.66 ft-lb/in ²	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	7.30 J/cm ²	34.7 ft-lb/in ²	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel 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	
Thermal Conductivity	0.200 W/m-K	1.39 BTU-in/hr-ft ² -°F	ISO 8302
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	143 °C	289 °F	Rate B/50; ISO 306
	145 °C	293 °F	Rate B/120; ISO 306
Flammability, UL94	HB	HB	UL 94 by SABIC-IP
	@Thickness 1.10 mm	@Thickness 0.0433 in	
	HB	HB	2nd value; UL 94 by SABIC-IP
	@Thickness 3.00 mm	@Thickness 0.118 in	
Oxygen Index	25 %	25 %	LOI; ISO 4589
Glow Wire Test	850 °C	1560 °F	Glow Wire Flammability Index; IEC 60695-2-12
	@Thickness 1.00 mm	@Thickness 0.0394 in	

Optical Properties	Metric	English	Comments
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Optical Properties	Metric	English	Comments
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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 Strength	17.0 kV/mm @Thickness 3.20 mm	432 kV/in @Thickness 0.126 in	in oil; IEC 60243-1

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

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