

SABIC Innovative Plastics Lexan® EXL9330 PC Copolymer

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Opaque PC-Siloxane copolymer with excellent processability. Non-chlorinated, non-brominated flame retardant product in most colors.

UV-stabilized. UL rated f1/V-0/5VA.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-EXL9330-PC-Copolymer.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.18 g/cc	1.18 g/cc	ASTM D792
Density	1.19 g/cc	0.0430 lb/in ³	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 - 0.0080 cm/cm @Thickness 3.20 mm	0.0040 - 0.0080 in/in @Thickness 0.126 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.0040 - 0.0080 cm/cm @Thickness 3.20 mm	0.0040 - 0.0080 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	10 g/10 min @Load 1.20 kg, Temperature 300 °C	10 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D1238
Melt Index of Compound	9.0 g/10 min @Load 1.20 kg, Temperature 300 °C	9.0 g/10 min @Load 2.65 lb, Temperature 572 °F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, H358/30	90.0 MPa	13100 psi	ISO 2039-1
Tensile Strength at Break	60.0 MPa	8700 psi	50 mm/min; ISO 527
	61.0 MPa	8850 psi	Type I, 50 mm/min; ASTM D638
Tensile Strength, Yield	55.0 MPa	7980 psi	50 mm/min; ISO 527
	58.0 MPa	8410 psi	Type I, 50 mm/min; ASTM D638
Elongation at Break	125 %	125 %	50 mm/min; ISO 527
	130 %	130 %	Type I, 50 mm/min; ASTM D638
Elongation at Yield	6.0 %	6.0 %	Type I, 50 mm/min; ASTM D638

Mechanical Properties	Metric SI Units	English SI Units	Comments 50 mm/min; ISO 527
Tensile Modulus	2.10 GPa	305 ksi	50 mm/min; ASTM D638
	2.10 GPa	305 ksi	1 mm/min; ISO 527
Flexural Yield Strength	85.0 MPa	12300 psi	2 mm/min; ISO 178
	88.0 MPa	12800 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.06 GPa	299 ksi	1.3 mm/min, 50 mm span; ASTM D790
	2.20 GPa	319 ksi	2 mm/min; ISO 178
Izod Impact, Notched	8.01 J/cm	15.0 ft-lb/in	ASTM D256
	10.68 J/cm	20.01 ft-lb/in	Izod Impact, double-gated, 23°C; SABIC Method
	5.87 J/cm	11.0 ft-lb/in	ASTM D256
	@Temperature -50.0 °C	@Temperature -58.0 °F	
	6.78 J/cm	12.7 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	6.40 J/cm	12.0 ft-lb/in	ASTM D256
	@Thickness 6.40 mm	@Thickness 0.252 in	
Izod Impact, Notched (ISO)	70.0 kJ/m ²	33.3 ft-lb/in ²	80*10*3; ISO 180/1A
	55.0 kJ/m ²	26.2 ft-lb/in ²	80*10*3; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	65.0 kJ/m ²	30.9 ft-lb/in ²	63.5*12.7*3.2; ISO 180/4A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	80.0 kJ/m ²	38.1 ft-lb/in ²	63.5*12.7*3.2; ISO 180/4A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Unnotched (ISO)	NB	NB	80*10*3; ISO 180/1U
	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
	NB	NB	Edgew 80*10*3 sp=62mm; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	

Mechanical Properties	Metric	English	Comments
Energy Impact, Notched	6.00 J/cm ²	28.6 ft-lb/in ²	10*3 sp=62mm; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	Edgew 80*10*3 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	52.0 J	38.4 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	66.6 µm/m-°C	37.0 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	72.0 µm/m-°C	40.0 µin/in-°F	ISO 11359-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
CTE, linear, Transverse to Flow	66.6 µm/m-°C	37.0 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	77.0 µm/m-°C	42.8 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)	135 °C	275 °F	Edgew 120*10*4 sp=100mm; ISO 75/Be
	134 °C	273 °F	
	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	124 °C	255 °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
	120 °C	248 °F	
	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D648
	124 °C	255 °F	unannealed; ASTM D648
	@Thickness 6.40 mm	@Thickness 0.252 in	
Vicat Softening Point	140 °C	284 °F	Rate B/50; ISO 306
	142 °C	288 °F	Rate B/120; ISO 306
	142 °C	288 °F	Rate B/50; ASTM D1525
UL RTI, Electrical	125 °C	257 °F	UL 746B
UL RTI, Mechanical with Impact	115 °C	239 °F	UL 746B

Thermal Properties <i>UL RTI, Mechanical without Impact</i>	Metric <i>125 °C</i>	English <i>255 °F</i>	Comments <i>UL 746B</i>
Electrical Properties			
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	2.6	2.6	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
	2.7	2.7	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	2.9	2.9	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	2.95	2.95	ASTM D150
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
Dielectric Strength	16.0 kV/mm	406 kV/in	in oil; IEC 60243-1
	@Thickness 3.20 mm	@Thickness 0.126 in	
	17.1 kV/mm	434 kV/in	in oil; ASTM D149
	@Thickness 3.20 mm	@Thickness 0.126 in	
Dissipation Factor	0.0010	0.0010	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
	0.0024	0.0024	ASTM D150
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
	0.0085	0.0085	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	0.0085	0.0085	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	175 - 250 V	175 - 250 V	UL 746A
	225 V	225 V	IEC 60112

Electrical Properties ⁰	Metric ⁰ sec	English ¹ sec	Comments
High Amp Arc Ignition, HAI	>= 120 arcs	>= 120 arcs	UL 746A

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