

SABIC Innovative Plastics Lexan® EXL4419 PC Copolymer (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Lexan® EXL4419 polycarbonate (PC) siloxane copolymer resin is a 9% Glass Fiber (GF) reinforced opaque injection molding (IM) grade. This medium flow resin offers much higher ductility, improved release characteristics and excellent processability with opportunities for shorter IM cycle times when compared to GF reinforced standard PC resins. Lexan EXL4419 resin is available in opaque colors only and is an excellent candidate for a broad range of applications that require a combination of stiffness and ductility. 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-EXL4419-PC-Copolymer-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.25 g/cc	1.25 g/cc	ASTM D 792
Density	1.25 g/cc	0.0452 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	0.46 %	0.46 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.12 % @Temperature 23.0 °C	0.12 % @Temperature 73.4 °F	ISO 62
Linear Mold Shrinkage, Flow	0.0020 - 0.0060 cm/cm @Thickness 3.20 mm	0.0020 - 0.0060 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	[cm ³ /10 min] Melt Volume Rate; ISO 1133
	11 g/10 min @Load 1.20 kg, Temperature 300 °C	11 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D 1238

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	43.0 MPa	6240 psi	5 mm/min; ISO 527
	44.0 MPa	6380 psi	Type I, 5 mm/min; ASTM D 638
Tensile Strength, Yield	53.0 MPa	7690 psi	Type I, 5 mm/min; ASTM D 638
	55.0 MPa	7980 psi	5 mm/min; ISO 527
Elongation at Break	12.5 %	12.5 %	5 mm/min; ISO 527
	20 %	20 %	Type I, 5 mm/min; ASTM D 638

Mechanical Properties	Metric	English	Comments
	4.5 %	4.5 %	5 mm/min; ISO 527
Tensile Modulus	3.30 GPa	479 ksi	5 mm/min; ASTM D 638
	3.30 GPa	479 ksi	1 mm/min; ISO 527
Flexural Yield Strength	90.0 MPa	13100 psi	2 mm/min; ISO 178
	95.0 MPa	13800 psi	1.3 mm/min, 50 mm span; ASTM D 790
Flexural Modulus	3.20 GPa	464 ksi	1.3 mm/min, 50 mm span; ASTM D 790
	3.30 GPa	479 ksi	2 mm/min; ISO 178
Izod Impact, Notched	1.10 J/cm	2.06 ft-lb/in	ASTM D 256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	2.80 J/cm	5.25 ft-lb/in	ASTM D 256
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Notched (ISO)	10.0 kJ/m ²	4.76 ft-lb/in ²	80*10*3; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	25.0 kJ/m ²	11.9 ft-lb/in ²	80*10*3; ISO 180/1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Unnotched (ISO)	NB	NB	80*10*3; ISO 180/1U
	@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	1.50 J/cm ²	7.14 ft-lb/in ²	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	2.50 J/cm ²	11.9 ft-lb/in ²	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	40.0 J	29.5 ft-lb	Instrumented Impact Total Energy;

Impact Test Mechanical Properties	Metric @ Temperature 23.0 °C	English @ Temperature 73.4 °F	ASTM D 3763 Comments
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Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	40.7 µm/m-°C	22.6 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	40.7 µm/m-°C	22.6 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
CTE, linear, Transverse to Flow	69.4 µm/m-°C	38.6 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	69.4 µm/m-°C	38.6 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
Deflection Temperature at 1.8 MPa (264 psi)	134 °C	273 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	135 °C	275 °F	
	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D 648
Vicat Softening Point	144 °C	291 °F	Rate B/50; ISO 306
	145 °C	293 °F	Rate B/50; ASTM D 1525
	146 °C	295 °F	Rate B/120; ISO 306

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.78e+17 ohm-cm	1.78e+17 ohm-cm	ASTM D 257
Surface Resistance	2.86e+17 ohm	2.86e+17 ohm	ASTM D 257
Dielectric Constant	3.04	3.04	ASTM D 150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Strength	31.5 kV/mm	800 kV/in	in oil; ASTM D 149
	@Thickness 1.60 mm	@Thickness 0.0630 in	
Dissipation Factor	0.0086	0.0086	ASTM D 150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

Descriptive Properties	Value	Comments
Ball Pressure Test, 75°C +/- 2°C	PASS	IEC 60695-10-2

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

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