

SABIC Innovative Plastics Lexan® EXL4019 PC (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Lexan® EXL4019 is an opaque 9% Glass Fiber (GF) reinforced polycarbonate (PC) siloxane copolymer resin for injection molding (IM) applications requiring improved stiffness. This resin also offers improved ductility over conventional GF reinforced PC resins in combination with medium flow characteristics and excellent processability with opportunities for shorter IM cycle times when compared to standard PC. Lexan EXL4019 resin is a product that may be an excellent candidate for a wide variety of applications. Available in limited colors only. 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-EXL4019-PC-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	0.40 %	0.40 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.15 % @Temperature 23.0 °C	0.15 % @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
Linear Mold Shrinkage, Transverse	0.0020 - 0.0060 cm/cm @Thickness 3.20 mm	0.0020 - 0.0060 in/in @Thickness 0.126 in	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
	7.5 g/10 min @Load 1.20 kg, Temperature 300 °C	7.5 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D 1238

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	45.0 MPa	6530 psi	Type I, 5 mm/min; ASTM D 638
	48.0 MPa	6960 psi	5 mm/min; ISO 527
Tensile Strength, Yield	54.0 MPa	7830 psi	5 mm/min; ISO 527
	55.0 MPa	7980 psi	Type I, 5 mm/min; ASTM D 638
Elongation at Break	8.7 %	8.7 %	5 mm/min; ISO 527

Mechanical Properties	Metric	English	Comments
			Type I, 5 mm/min; ASTM D 638
Elongation at Yield	4.3 %	4.3 %	Type I, 5 mm/min; ASTM D 638
	4.3 %	4.3 %	5 mm/min; ISO 527
Tensile Modulus	3.90 GPa	566 ksi	1 mm/min; ISO 527
	3.95 GPa	573 ksi	5 mm/min; ASTM D 638
Flexural Yield Strength	98.0 MPa	14200 psi	2 mm/min; ISO 178
	103 MPa	14900 psi	1.3 mm/min, 50 mm span; ASTM D 790
Flexural Modulus	3.45 GPa	500 ksi	2 mm/min; ISO 178
	3.50 GPa	508 ksi	1.3 mm/min, 50 mm span; ASTM D 790
Izod Impact, Notched	1.50 J/cm	2.81 ft-lb/in	ASTM D 256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	3.45 J/cm	6.46 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	

Mechanical Properties	Metric	English	Comments
Impact Test	@Temperature 23.0 °C	@Temperature 73.4 °F	Instrumented Impact Total Energy; ASTM D 3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	47.0 µm/m-°C	26.1 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	47.0 µm/m-°C	26.1 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
CTE, linear, Transverse to Flow	70.0 µm/m-°C	38.9 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	70.0 µm/m-°C	38.9 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)	135 °C	275 °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
	137 °C	279 °F	unannealed; ASTM D 648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	146 °C	295 °F	Rate B/50; ASTM D 1525
	146 °C	295 °F	Rate B/50; ISO 306
	146 °C	295 °F	Rate B/120; ISO 306
Flammability, UL94	HB	HB	UL 94
	@Thickness 0.750 mm	@Thickness 0.0295 in	

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

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