

SABIC Innovative Plastics Lexan® EXL4016H PC Copolymer

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

6% GF reinforced opaque polycarbonate-siloxane copolymer with good impact strength, stiffness and hydrolytic stability.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-EXL4016H-PC-Copolymer.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.22 g/cc	1.22 g/cc	ASTM D792
Density	1.22 g/cc	0.0441 lb/in ³	ISO 1183
Moisture Absorption	0.460 %	0.460 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.12 %	0.12 %	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	6.6 g/10 min @Load 1.20 kg, Temperature 300 °C	6.6 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D1238
Melt Index of Compound	6.0 g/10 min @Load 1.20 kg, Temperature 300 °C	6.0 g/10 min @Load 2.65 lb, Temperature 572 °F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	46.0 MPa	6670 psi	Type I, 5 mm/min; ASTM D638
	47.0 MPa	6820 psi	5 mm/min; ISO 527
Tensile Strength, Yield	55.0 MPa	7980 psi	Type I, 5 mm/min; ASTM D638
	55.0 MPa	7980 psi	5 mm/min; ISO 527
Elongation at Break	15.4 %	15.4 %	5 mm/min; ISO 527
	19 %	19 %	Type I, 5 mm/min; ASTM D638
Elongation at Yield	4.5 %	4.5 %	Type I, 5 mm/min; ASTM D638
	4.6 %	4.6 %	5 mm/min; ISO 527
Tensile Modulus	3.20 GPa	464 ksi	1 mm/min; ISO 527
	3.30 GPa	479 ksi	5 mm/min; ASTM D638

Mechanical Properties	Metric	English	Comments
	105 MPa	15200 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.83 GPa	410 ksi	2 mm/min; ISO 178
	2.85 GPa	413 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	2.60 J/cm	4.87 ft-lb/in	ASTM D256
	1.66 J/cm	3.11 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Notched (ISO)	30.0 kJ/m ²	14.3 ft-lb/in ²	80*10*3; ISO 180/1A
	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	
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	
Charpy Impact, Notched	2.50 J/cm ²	11.9 ft-lb/in ²	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	1.50 J/cm ²	7.14 ft-lb/in ²	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Dart Drop, Total Energy	39.0 J	28.8 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	48.0 µm/m-°C	26.7 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	48.0 µm/m-°C	26.7 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
CTE, linear, Transverse to Flow	71.0 µm/m-°C	39.4 µin/in-°F	ASTM E 831

Thermal Properties	Metric @Temperature -40.0 - 40.0 °C	English @Temperature -40.0 - 104 °F	Comments
	71.0 µm/m-°C	39.4 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
	137 °C	279 °F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	146 °C	295 °F	Rate B/50; ASTM D1525
	146 °C	295 °F	Rate B/50; ISO 306
	148 °C	298 °F	Rate B/120; ISO 306

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