

SABIC Innovative Plastics Lexan® EXRL0672 PC Copolymer

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

40 MFR LEXAN High Flow Ductile Copolymer This data was supplied by SABIC-IP for the Americas region.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-EXRL0672-PC-Copolymer.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.20 g/cc	1.20 g/cc	ASTM D 792
Density	1.20 g/cc	0.0434 lb/in ³	ISO 1183
	1.20 g/cc	0.0434 lb/in ³	ASTM D 792
Moisture Absorption at Equilibrium	0.15 %	0.15 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.30 % @Temperature 23.0 °C	0.30 % @Temperature 73.4 °F	ISO 62
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm @Thickness 3.20 mm	0.0050 - 0.0070 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	38 g/10 min @Load 1.20 kg, Temperature 300 °C	38 g/10 min @Load 2.65 lb, Temperature 572 °F	[cm ³ /10 min] Melt Volume Rate; ISO 1133
	40 g/10 min @Load 1.20 kg, Temperature 300 °C	40 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D 1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	120	120	ASTM D 785
Tensile Strength at Break	56.0 MPa	8120 psi	Type I, 50 mm/min; ASTM D 638
	56.0 MPa	8120 psi	50 mm/min; ISO 527
Tensile Strength, Yield	60.0 MPa	8700 psi	Type I, 50 mm/min; ASTM D 638
	63.0 MPa	9140 psi	50 mm/min; ISO 527
Elongation at Break	97 %	97 %	50 mm/min; ISO 527
	130 %	130 %	Type I, 50 mm/min; ASTM D 638
Elongation at Yield	5.5 %	5.5 %	Type I, 50 mm/min; ASTM D 638

Mechanical Properties	6.0% Metric	6.0% English	50 mm/min; ISO 527 Comments
Tensile Modulus	2.18 GPa	316 ksi	1 mm/min; ISO 527
	2.27 GPa	329 ksi	5 mm/min; ASTM D 638
Flexural Yield Strength	91.0 MPa	13200 psi	2 mm/min; ISO 178
	100 MPa	14500 psi	1.3 mm/min, 50 mm span; ASTM D 790
Flexural Modulus	2.18 GPa	316 ksi	2 mm/min; ISO 178
	2.24 GPa	325 ksi	1.3 mm/min, 50 mm span; ASTM D 790
Izod Impact, Notched	6.99 J/cm @Temperature 0.000 °C	13.1 ft-lb/in @Temperature 32.0 °F	ASTM D 256
	7.28 J/cm @Temperature 23.0 °C	13.6 ft-lb/in @Temperature 73.4 °F	ASTM D 256
Izod Impact, Notched (ISO)	11.0 kJ/m ² @Temperature -30.0 °C	5.23 ft-lb/in ² @Temperature -22.0 °F	80*10*3; ISO 180/1A
	58.0 kJ/m ² @Temperature 23.0 °C	27.6 ft-lb/in ² @Temperature 73.4 °F	80*10*3; ISO 180/1A
Izod Impact, Unnotched (ISO)	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	80*10*3; ISO 180/1U
	NB @Temperature 23.0 °C	NB @Temperature 73.4 °F	80*10*3; ISO 180/1U
Charpy Impact Unnotched	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	Edgew 80*10*3 sp=62mm; ISO 179/1eU
	NB @Temperature 23.0 °C	NB @Temperature 73.4 °F	Edgew 80*10*3 sp=62mm; ISO 179/1eU
Charpy Impact, Notched	1.30 J/cm ² @Temperature -30.0 °C	6.19 ft-lb/in ² @Temperature -22.0 °F	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
	6.40 J/cm ² @Temperature 23.0 °C	30.5 ft-lb/in ² @Temperature 73.4 °F	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
Impact Test	95.0 J	70.1 ft-lb	Multiaxial Impact; ISO 6603
	56.0 J	41.3 ft-lb	Instrumented Impact Total Energy; ASTM D 3763

Mechanical Properties	@Temperature 23.0 °C Metric	@Temperature 73.4 °F English	Comments
Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	80.0 µm/m-°C	44.4 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	80.0 µm/m-°C	44.4 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
CTE, linear, Transverse to Flow	80.0 µm/m-°C	44.4 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	80.0 µm/m-°C	44.4 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
Deflection Temperature at 0.46 MPa (66 psi)	121 °C	250 °F	unannealed; ASTM D 648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Deflection Temperature at 1.8 MPa (264 psi)	115 °C	239 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	110 °C	230 °F	unannealed; ASTM D 648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	129 °C	264 °F	Rate B/50; ISO 306
	130 °C	266 °F	Rate B/120; ISO 306
	135 °C	275 °F	Rate B/50; ASTM D 1525

Optical Properties	Metric	English	Comments
Refractive Index	1.582	1.582	ASTM D 542
Haze	<= 1.0 %	<= 1.0 %	ASTM D 1003
	@Thickness 2.54 mm	@Thickness 0.100 in	
Transmission, Visible	88 %	88 %	ASTM D 1003
	@Thickness 2.54 mm	@Thickness 0.100 in	

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

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