

SABIC Innovative Plastics Lexan® OQ1022 PC

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Standard Flow OQ Resin

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-OQ1022-PC.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.19 g/cc	1.19 g/cc	ASTM D792
Density	1.19 g/cc	0.0430 lb/in ³	ISO 1183
Moisture Absorption	0.200 %	0.200 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.20 %	0.20 %	ISO 62
Linear Mold Shrinkage, Flow	0.0060 - 0.0080 cm/cm @Thickness 3.20 mm	0.0060 - 0.0080 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	11 g/10 min @Load 1.20 kg, Temperature 250 °C	11 g/10 min @Load 2.65 lb, Temperature 482 °F	ASTM D1238
Melt Index of Compound	10 g/10 min @Load 1.20 kg, Temperature 250 °C	10 g/10 min @Load 2.65 lb, Temperature 482 °F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	51.0 MPa	7400 psi	Type I, 50 mm/min; ASTM D638
	56.0 MPa	8120 psi	50 mm/min; ISO 527
Tensile Strength, Yield	61.0 MPa	8850 psi	Type I, 50 mm/min; ASTM D638
	61.0 MPa	8850 psi	50 mm/min; ISO 527
Elongation at Break	100 %	100 %	Type I, 50 mm/min; ASTM D638
	108 %	108 %	50 mm/min; ISO 527
Elongation at Yield	5.9 %	5.9 %	50 mm/min; ISO 527
	6.0 %	6.0 %	Type I, 50 mm/min; ASTM D638
Tensile Modulus	2.42 GPa	351 ksi	50 mm/min; ASTM D638
	2.44 GPa	354 ksi	1 mm/min; ISO 527

Mechanical Properties	Metric	English	Comments
Flexural Yield Strength	90.0 MPa	13100 psi	2 mm/min; ISO 178
Flexural Modulus	2.40 GPa	348 ksi	2 mm/min; ISO 178
	2.46 GPa	357 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	5.50 J/cm	10.3 ft-lb/in	ASTM D256
	NB	NB	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Notched (ISO)	14.0 kJ/m ²	6.66 ft-lb/in ²	80*10*3; ISO 180/1A
	11.0 kJ/m ²	5.23 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	4.00 J/cm ²	19.0 ft-lb/in ²	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	1.10 J/cm ²	5.23 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	46.0 J	33.9 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	70.0 µm/m-°C	38.9 µin/in-°F	ISO 11359-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
	81.0 µm/m-°C	45.0 µin/in-°F	ASTM E 831
	@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	ISO 11359-2

Thermal Properties	Metric @Temperature 23.0 - 30.0 °C	English @Temperature 73.4 - 86.0 °F	Comments
	72.0 µm/m-°C	40.0 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
Deflection Temperature at 1.8 MPa (264 psi)	121 °C	250 °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
	123 °C	253 °F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	140 °C	284 °F	Rate B/50; ASTM D1525
	140 °C	284 °F	Rate B/50; ISO 306
	141 °C	286 °F	Rate B/120; ISO 306

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