

SABIC Innovative Plastics Lexan® LSHF PC (Asia Pacific)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Clear PolyCarbonate, High Flow, UV Stabilization, Heat Stabilization

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-LSHF-PC-Asia-Pacific.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.20 g/cc	1.20 g/cc	ASTM D792
Density	1.20 g/cc	0.0434 lb/in ³	ISO 1183
Moisture Absorption	0.150 %	0.150 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.35 %	0.35 %	ISO 62
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	on Tensile Bar; SABIC Method
	0.0050 - 0.0070 cm/cm @Thickness 3.20 mm	0.0050 - 0.0070 in/in @Thickness 0.126 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.0050 - 0.0070 cm/cm @Thickness 3.20 mm	0.0050 - 0.0070 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	25 g/10 min @Load 1.20 kg, Temperature 300 °C	25 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D1238
Melt Index of Compound	24 g/10 min @Load 1.20 kg, Temperature 300 °C	24 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	50.0 MPa	7250 psi	50 mm/min; ISO 527
	65.0 MPa	9430 psi	Type I, 50 mm/min; ASTM D638
Tensile Strength, Yield	62.0 MPa	8990 psi	Type I, 50 mm/min; ASTM D638
	63.0 MPa	9140 psi	50 mm/min; ISO 527
Elongation at Break	70 %	70 %	50 mm/min; ISO 527
	110 %	110 %	Type I, 50 mm/min; ASTM D638
Elongation at Yield	6.0 %	6.0 %	Type I, 50 mm/min; ASTM D638

Mechanical Properties	6.0% Metric	6.0% English	50 mm/min; ISO 527 Comments
Tensile Modulus	2.35 GPa	341 ksi	1 mm/min; ISO 527
	2.38 GPa	345 ksi	5 mm/min; ASTM D638
Flexural Yield Strength	90.0 MPa	13100 psi	2 mm/min; ISO 178
	93.0 MPa	13500 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.30 GPa	334 ksi	1.3 mm/min, 50 mm span; ASTM D790
	2.30 GPa	334 ksi	2 mm/min; ISO 178
Izod Impact, Notched	6.40 J/cm	12.0 ft-lb/in	ASTM D256
Izod Impact, Notched (ISO)	60.0 kJ/m ²	28.6 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	6.00 J/cm ²	28.6 ft-lb/in ²	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	1.20 J/cm ²	5.71 ft-lb/in ²	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Tensile Impact Strength	378 kJ/m ²	180 ft-lb/in ²	Type S; ASTM D1822
Dart Drop, Total Energy	54.0 J	39.8 ft-lb	Instrumented Impact Energy @ peak; ASTM D3763
	60.0 J	44.3 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	ASTM D696
	@Temperature -30.0 - 30.0 °C	@Temperature -22.0 - 86.0 °F	

Thermal Properties	Metric $m/m-^{\circ}C$	English $in-^{\circ}F$	Comments
	@Temperature 23.0 - 80.0 $^{\circ}C$	@Temperature 73.4 - 176 $^{\circ}F$	ISO 11359-2
CTE, linear, Transverse to Flow	70.0 $\mu m/m-^{\circ}C$	38.9 $\mu in/in-^{\circ}F$	ASTM D696
	@Temperature -30.0 - 30.0 $^{\circ}C$	@Temperature -22.0 - 86.0 $^{\circ}F$	
	70.0 $\mu m/m-^{\circ}C$	38.9 $\mu in/in-^{\circ}F$	ISO 11359-2
	@Temperature 23.0 - 80.0 $^{\circ}C$	@Temperature 73.4 - 176 $^{\circ}F$	
Deflection Temperature at 1.8 MPa (264 psi)	122 $^{\circ}C$	252 $^{\circ}F$	Flatw 80*10*4 sp=64mm; ISO 75/Af
	126 $^{\circ}C$	259 $^{\circ}F$	unannealed; ASTM D648
	@Thickness 6.40 mm	@Thickness 0.252 in	
	127 $^{\circ}C$	261 $^{\circ}F$	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	138 $^{\circ}C$	280 $^{\circ}F$	Rate B/50; ASTM D1525
	139 $^{\circ}C$	282 $^{\circ}F$	Rate B/50; ISO 306
	140 $^{\circ}C$	284 $^{\circ}F$	Rate B/120; ISO 306

Optical Properties	Metric	English	Comments
Transmission, Visible	88 %	88 %	2.54 mm; ASTM D1003

Descriptive Properties	Value	Comments
Ball Pressure Test, 125 $^{\circ}C$ +/- 2 $^{\circ}C$	PASSES	IEC 60695-10-2

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