

SABIC Innovative Plastics Lexan® ML7687 PC (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

ML7687 is an optical quality, high purity PC resin optimized for use in optical applications such as light guide panels

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-ML7687-PC-Europe-Africa-Middle-East.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
Melt Flow	10 g/10 min @Load 3.80 kg, Temperature 200 °C	10 g/10 min @Load 8.38 lb, Temperature 392 °F	ASTM D1238
Melt Index of Compound	11 g/10 min @Load 1.20 kg, Temperature 250 °C	11 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	45.0 MPa	6530 psi	50 mm/min; ISO 527
	220 MPa	31900 psi	Type I, 50 mm/min; ASTM D638
Tensile Strength, Yield	60.0 MPa	8700 psi	50 mm/min; ISO 527
	65.0 MPa	9430 psi	Type I, 50 mm/min; ASTM D638
Elongation at Break	>= 40 %	>= 40 %	50 mm/min; ISO 527
Elongation at Yield	6.0 %	6.0 %	50 mm/min; ISO 527
Tensile Modulus	2.35 GPa	341 ksi	1 mm/min; ISO 527
Flexural Strength	93.0 MPa	13500 psi	ASTM D790
Flexural Yield Strength	90.0 MPa	13100 psi	2 mm/min; ISO 178
Flexural Modulus	2.35 GPa	341 ksi	2 mm/min; ISO 178
Izod Impact, Notched (ISO)	6.00 kJ/m ²	2.86 ft-lb/in ²	80*10*3; ISO 180/1A
Izod Impact, Unnotched (ISO)	NB	NB	80*10*3; ISO 180/1U

Mechanical Properties	Metric	English	Comments
Charpy Impact, Unnotched	NB	NB	10*3 sp=62mm; ISO 179/1eB
	@Temperature -30.0 °C	@Temperature -22.0 °F	Edgew 80*10*3 sp=62mm; ISO 179/1eU
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	

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	
CTE, linear, Transverse 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	
Deflection Temperature at 0.46 MPa (66 psi)	128 °C	262 °F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Deflection Temperature at 1.8 MPa (264 psi)	124 °C	255 °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
Vicat Softening Point	138 °C	280 °F	Rate B/50; ISO 306
	140 °C	284 °F	Rate B/120; ISO 306
Flammability, UL94	V-2	V-2	UL 94
	@Thickness 1.50 mm	@Thickness 0.0591 in	

Optical Properties	Metric	English	Comments
Refractive Index	1.586	1.586	ISO 489
Transmission, Visible	88 %	88 %	2.54 mm; ASTM D1003

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