

SABIC Innovative Plastics Lexan® ML7686E PC (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Transparent Polycarbonate in natural color. Excellent processability, super high flow. UL compliant 94V-2 at 1.5mm.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-ML7686E-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	0.350 %	0.350 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.28 %	0.28 %	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	23 g/10 min @Load 2.16 kg, Temperature 260 °C	23 g/10 min @Load 4.76 lb, Temperature 500 °F	ASTM D1238
	45 g/10 min @Load 1.20 kg, Temperature 300 °C	45 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D1238
Melt Index of Compound	43 g/10 min @Load 1.20 kg, Temperature 300 °C	43 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	55.0 MPa	7980 psi	50 mm/min; ISO 527
Tensile Strength, Yield	75.0 MPa	10900 psi	50 mm/min; ISO 527
Elongation at Break	60 %	60 %	50 mm/min; ISO 527
Elongation at Yield	5.0 %	5.0 %	50 mm/min; ISO 527
Tensile Modulus	2.85 GPa	413 ksi	1 mm/min; ISO 527
Flexural Yield Strength	110 MPa	16000 psi	2 mm/min; ISO 178
Flexural Modulus	2.75 GPa	399 ksi	2 mm/min; ISO 178
Izod Impact, Notched	0.400 J/cm	0.749 ft-lb/in	ASTM D256

Mechanical Properties	Metric /cm	English -lb/in	Comments
	@Temperature -30.0 °C	@Temperature -22.0 °F	ASTM D236
Izod Impact, Notched (ISO)	6.00 kJ/m ²	2.86 ft-lb/in ²	80*10*3; ISO 180/1A
	5.00 kJ/m ²	2.38 ft-lb/in ²	80*10*3; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Unnotched (ISO)	>= 100 kJ/m ²	>= 47.6 ft-lb/in ²	80*10*3; ISO 180/1U
	>= 100 kJ/m ²	>= 47.6 ft-lb/in ²	80*10*3; ISO 180/1U
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact Unnotched	>= 10.0 J/cm ²	>= 47.6 ft-lb/in ²	Edgew 80*10*3 sp=62mm; ISO 179/1eU
	>= 10.0 J/cm ²	>= 47.6 ft-lb/in ²	Edgew 80*10*3 sp=62mm; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	0.500 J/cm ²	2.38 ft-lb/in ²	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	0.500 J/cm ²	2.38 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	80.0 J	59.0 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	66.0 µm/m-°C	36.7 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	72.0 µm/m-°C	40.0 µin/in-°F	ISO 11359-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
CTE, linear, Transverse to Flow	67.0 µm/m-°C	37.2 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	74.0 µm/m-°C	41.1 µin/in-°F	ISO 11359-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
Deflection Temperature at 1.8 MPa (264 psi)	101 °C	214 °F	Flatw 80*10*4 sp=64mm; ISO 75/ Af
	98.0 °C	208 °F	

Thermal Properties	Metric @ Thickness 3.20 mm	English @ Thickness 0.126 in	unannealed; ASTM D648 Comments
Vicat Softening Point	107 °C	225 °F	Rate B/50; ISO 306
	108 °C	226 °F	Rate B/50; ASTM D1525
	110 °C	230 °F	Rate B/120; ISO 306
Flammability, UL94	V-2 @Thickness 1.50 mm	V-2 @Thickness 0.0591 in	UL 94

Optical Properties	Metric	English	Comments
Transmission, Visible	90 %	90 %	transparent; thickness not quantified

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