

SABIC Innovative Plastics Lexan® ML7681 PC Copolymer (Asia Pacific)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Polycarbonate with high flow, good processability, good impact and thermal properties, non-Chlorine and non-Bromine flame retardant, UL rated V-0 and V-1. Available in limited translucent colors only.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-ML7681-PC-Copolymer-Asia-Pacific.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	0.0900 %	0.0900 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.24 %	0.24 %	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
Linear Mold Shrinkage, Transverse	0.0060 - 0.0080 cm/cm @Thickness 3.20 mm	0.0060 - 0.0080 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	51.0 MPa	7400 psi	50 mm/min; ISO 527
	54.0 MPa	7830 psi	Type I, 50 mm/min; ASTM D638
Tensile Strength, Yield	52.0 MPa	7540 psi	50 mm/min; ISO 527
	53.0 MPa	7690 psi	Type I, 50 mm/min; ASTM D638
Elongation at Break	98 %	98 %	50 mm/min; ISO 527
	102 %	102 %	Type I, 50 mm/min; ASTM D638
Elongation at Yield	5.8 %	5.8 %	50 mm/min; ISO 527
	6.0 %	6.0 %	Type I, 50 mm/min; ASTM D638

Mechanical Properties	Metric	English	Comments
Tensile Modulus	2.20 GPa	319 ksi	1 mm/min; ISO 527
	2.25 GPa	326 ksi	50 mm/min; ASTM D638
Flexural Yield Strength	93.0 MPa	13500 psi	2 mm/min; ISO 178
	95.0 MPa	13800 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.20 GPa	319 ksi	1.3 mm/min, 50 mm span; ASTM D790
	2.30 GPa	334 ksi	2 mm/min; ISO 178
Izod Impact, Notched	7.10 J/cm	13.3 ft-lb/in	ASTM D256
	2.30 J/cm	4.31 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Notched (ISO)	58.0 kJ/m ²	27.6 ft-lb/in ²	80*10*3; ISO 180/1A
	21.0 kJ/m ²	9.99 ft-lb/in ²	80*10*3; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Unnotched (ISO)	184 kJ/m ²	87.6 ft-lb/in ²	80*10*3; ISO 180/1U
	183 kJ/m ²	87.1 ft-lb/in ²	80*10*3; ISO 180/1U
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Dart Drop, Total Energy	65.0 J	47.9 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	68.0 µm/m-°C	37.8 µin/in-°F	ISO 11359-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
	71.0 µm/m-°C	39.4 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
CTE, linear, Transverse to Flow	69.0 µm/m-°C	38.3 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	69.0 µm/m-°C	38.3 µin/in-°F	ISO 11359-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	

Thermal Properties	120 °C Metric	248 °F English	Comments ; ASTM D648
Deflection Temperature at 1.8 MPa (104 psi)	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	136 °C	277 °F	Rate B/50; ASTM D1525
	137 °C	279 °F	Rate B/50; ISO 306
	138 °C	280 °F	Rate B/120; ISO 306
Flammability, UL94	V-1	V-1	UL 94
	@Thickness 1.00 mm	@Thickness 0.0394 in	
	V-0	V-0	UL 94
	@Thickness 1.20 mm	@Thickness 0.0472 in	

Electrical Properties	Metric	English	Comments
Comparative Tracking Index	175 - 250 V	175 - 250 V	UL 746A

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

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