

SABIC Innovative Plastics Lexan® ML6031 PC Copolymer (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

High viscosity PC copolymer blend with enhanced UV stabilization and added release agent. V2 rated. Available in transparent and tinted colors. This data was supplied by SABIC-IP for the Europe-Africa-Middle East region.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-ML6031-PC-Copolymer-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.20 g/cc	1.20 g/cc	ASTM D 792
Density	1.20 g/cc	0.0434 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	0.15 %	0.15 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.35 % @Temperature 23.0 °C	0.35 % @Temperature 73.4 °F	ISO 62
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm @Thickness 3.20 mm	0.0050 - 0.0070 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	5.0 g/10 min @Load 1.20 kg, Temperature 300 °C	5.0 g/10 min @Load 2.65 lb, Temperature 572 °F	[cm ³ /10 min] Melt Volume Rate; ISO 1133
	6.0 g/10 min @Load 1.20 kg, Temperature 300 °C	6.0 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D 1238

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	76.0 MPa	11000 psi	Type I, 50 mm/min; ASTM D 638
	76.0 MPa	11000 psi	50 mm/min; ISO 527
Tensile Strength, Yield	67.0 MPa	9720 psi	Type I, 50 mm/min; ASTM D 638
	67.0 MPa	9720 psi	50 mm/min; ISO 527
Elongation at Break	>= 100 %	>= 100 %	Type I, 50 mm/min; ASTM D 638
	>= 100 %	>= 100 %	50 mm/min; ISO 527
Elongation at Yield	6.3 %	6.3 %	Type I, 50 mm/min; ASTM D 638
	6.3 %	6.3 %	50 mm/min; ISO 527

Mechanical Properties	Metric Pa	English	Comments ASTM D 638
	2.34 GPa	339 ksi	1 mm/min; ISO 527
Flexural Yield Strength	96.0 MPa	13900 psi	1.3 mm/min, 50 mm span; ASTM D 790
	96.0 MPa	13900 psi	2 mm/min; ISO 178
Flexural Modulus	2.12 GPa	307 ksi	1.3 mm/min, 50 mm span; ASTM D 790
	2.12 GPa	307 ksi	2 mm/min; ISO 178
Izod Impact, Notched	1.40 J/cm	2.62 ft-lb/in	ASTM D 256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	8.20 J/cm	15.4 ft-lb/in	ASTM D 256
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Impact Test	85.0 J	62.7 ft-lb	Instrumented Impact Total Energy; ASTM D 3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	70.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	38.9 $\mu\text{in}/\text{in}\cdot\text{°F}$	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	70.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	38.9 $\mu\text{in}/\text{in}\cdot\text{°F}$	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
CTE, linear, Transverse to Flow	70.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	38.9 $\mu\text{in}/\text{in}\cdot\text{°F}$	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	70.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	38.9 $\mu\text{in}/\text{in}\cdot\text{°F}$	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
Deflection Temperature at 1.8 MPa (264 psi)	121 °C	250 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	134 °C	273 °F	unannealed; ASTM D 648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	135 °C	275 °F	Rate B/50; ASTM D 1525
	137 °C	279 °F	Rate B/50; ISO 306

Thermal Properties	139 °C Metric	282 °F English	Rate B/120: ISO 306 Comments
Optical Properties	Metric	English	Comments
Haze	0.50 % @Thickness 2.54 mm	0.50 % @Thickness 0.100 in	ASTM D 1003
Transmission, Visible	89 % @Thickness 2.54 mm	89 % @Thickness 0.100 in	ASTM D 1003

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