

SABIC Innovative Plastics Lexan® ML6413 PC

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Lexan® ML6413 resin is an impact modified, flame retardant polycarbonate grade with Br- & Cl-free FR systems. It features improved light shielding capability with good flow, impact and thermal properties suitable for various applications.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-ML6413-PC.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	0.100 %	0.100 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.30 %	0.30 %	ISO 62
Linear Mold Shrinkage, Flow	0.0040 - 0.0080 cm/cm @Thickness 3.20 mm	0.0040 - 0.0080 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	24 g/10 min @Load 5.00 kg, Temperature 260 °C	24 g/10 min @Load 11.0 lb, Temperature 500 °F	ASTM D1238
Melt Index of Compound	20 g/10 min @Load 5.00 kg, Temperature 260 °C	20 g/10 min @Load 11.0 lb, Temperature 500 °F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	55.0 MPa	7980 psi	Type I, 50 mm/min; ASTM D638
	58.0 MPa	8410 psi	50 mm/min; ISO 527
Tensile Strength, Yield	58.0 MPa	8410 psi	Type I, 50 mm/min; ASTM D638
	62.0 MPa	8990 psi	50 mm/min; ISO 527
Elongation at Break	100 %	100 %	Type I, 50 mm/min; ASTM D638
	100 %	100 %	50 mm/min; ISO 527
Elongation at Yield	5.0 %	5.0 %	Type I, 50 mm/min; ASTM D638
	5.0 %	5.0 %	50 mm/min; ISO 527
Tensile Modulus	2.35 GPa	341 ksi	1 mm/min; ISO 527

Mechanical Properties	2.50 GPa Metric	363 ksi English	5 mm/min: ASTM D638 Comments
Flexural Yield Strength	85.0 MPa	12300 psi	1.3 mm/min, 50 mm span; ASTM D790
	90.0 MPa	13100 psi	2 mm/min; ISO 178
Flexural Modulus	2.25 GPa	326 ksi	1.3 mm/min, 50 mm span; ASTM D790
	2.35 GPa	341 ksi	2 mm/min; ISO 178
Izod Impact, Notched	7.90 J/cm	14.8 ft-lb/in	ASTM D256
	1.50 J/cm @Temperature -30.0 °C	2.81 ft-lb/in @Temperature -22.0 °F	ASTM D256
Izod Impact, Notched (ISO)	60.0 kJ/m ²	28.6 ft-lb/in ²	80*10*3; ISO 180/1A
	15.0 kJ/m ² @Temperature -30.0 °C	7.14 ft-lb/in ² @Temperature -22.0 °F	80*10*3; ISO 180/1A
Dart Drop, Total Energy	72.0 J	53.1 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	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	77.0 µm/m-°C	42.8 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
CTE, linear, Transverse to Flow	59.0 µm/m-°C	32.8 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	70.0 µm/m-°C	38.9 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
Deflection Temperature at 0.46 MPa (66 psi)	125 °C	257 °F	Edgew 120*10*4 sp=100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	115 °C	239 °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
	118 °C @Thickness 6.40 mm	244 °F @Thickness 0.252 in	

Vicat Softening Point Thermal Properties	134 °C Metric	273 °F English	Rate B/50: ASTM D1525 Comments
	134 °C	273 °F	Rate B/50; ISO 306
	135 °C	275 °F	Rate B/120; ISO 306
UL RTI, Electrical	100 °C	212 °F	UL 746B
UL RTI, Mechanical with Impact	100 °C	212 °F	UL 746B
UL RTI, Mechanical without Impact	100 °C	212 °F	UL 746B
Flammability, UL94	V-0	V-0	UL 94
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	5VB	5VB	UL 94
	@Thickness 2.00 mm	@Thickness 0.0787 in	
	5VA	5VA	UL 94
	@Thickness 3.00 mm	@Thickness 0.118 in	
Glow Wire Test	800 °C	1470 °F	IEC 60695-2-13
	800 °C	1470 °F	IEC 60695-2-13
	960 °C	1760 °F	IEC 60695-2-12
@Thickness 1.60 mm	@Thickness 0.0630 in		

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+15 ohm-cm	>= 1.00e+15 ohm-cm	ASTM D257
Comparative Tracking Index	250 - 400 V	250 - 400 V	UL 746A
Hot Wire Ignition, HWI	15 - 30 sec	15 - 30 sec	UL 746A

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