

LEXAN™ ML6411 resin

Polycarbonate

SABIC Innovative Plastics Europe

Message:

LEXAN ML6411 polycarbonate (PC) siloxane resin, is a high flow opaque injection molding (IM) grade with very low temperature ductility characteristics. This grade offers UL94 V0 @ 1.5mm and 5VA @ 3.0mm flame retardancy based on non-chlorine, non-bromine FR systems. LEXAN ML6411 resin offers excellent processing characteristics with opportunity for shorter IM cycle times compared to standard PC. This product is available in a wide range of opaque colors and is an excellent candidate for a wide range of electrical applications.

General Information			
UL YellowCard	E207780-521735		
Additive	Flame retardancy		
Features	Chlorine Free		
	Workability, good		
	Fast molding cycle		
	High liquidity		
	Bromine-free		
	ductility		
	Flame retardancy		
Uses	Electrical/Electronic Applications		
Appearance	Opacity		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.19	g/cm³	ASTM D792
--	1.20	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (260°C/2.16 kg)	7.0	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (260°C/5.0 kg)	18.0	cm³/10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.40 - 0.80	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	0.30	%	ISO 62
Equilibrium, 23°C, 50% RH	0.10	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2500	MPa	ASTM D638
--	2350	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	62.0	MPa	ASTM D638
Yield	62.0	MPa	ISO 527-2/50

Fracture ³	54.0	MPa	ASTM D638
Fracture	58.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	5.0	%	ASTM D638
Yield	5.0	%	ISO 527-2/50
Fracture ⁵	100	%	ASTM D638
Fracture	100	%	ISO 527-2/50
Flexural Modulus			
50.0mm span ⁶	2600	MPa	ASTM D790
-- ⁷	2350	MPa	ISO 178
Flexural Stress			
--	90.0	MPa	ISO 178
Yield, 50.0mm span ⁸	95.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
-30°C	150	J/m	ASTM D256
23°C	900	J/m	ASTM D256
-30°C ⁹	15	kJ/m ²	ISO 180/1A
23°C ¹⁰	60	kJ/m ²	ISO 180/1A
Instrumented Dart Impact (23°C, Total Energy)	72.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, unannealed, 6.40mm	128	°C	ASTM D648
0.45 MPa, unannealed, 100 mm span ¹¹	125	°C	ISO 75-2/Be
1.8 MPa, unannealed, 3.20mm	114	°C	ASTM D648
1.8 MPa, unannealed, 6.40mm	119	°C	ASTM D648
1.8 MPa, unannealed, 100 mm span ¹²	115	°C	ISO 75-2/Ae
Vicat Softening Temperature			
--	134	°C	ASTM D1525, ISO 306/B50 ¹³
--	135	°C	ISO 306/B120
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
Linear thermal expansion coefficient			
Flow: -40 to 40°C	7.7E-5	cm/cm/°C	ASTM E831
Flow: -40 to 40°C	7.0E-5	cm/cm/°C	ISO 11359-2
Lateral: -40 to 40°C	5.9E-5	cm/cm/°C	ASTM E831
Lateral: -40 to 40°C	7.0E-5	cm/cm/°C	ISO 11359-2
RTI Elec	100	°C	UL 746
RTI Imp	100	°C	UL 746
RTI	100	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	> 1.0E+15	ohms · cm	IEC 60093

Dielectric Strength (3.20 mm, in Oil)	27	kV/mm	ASTM D149
Comparative Tracking Index (CTI)	PLC 2		UL 746
Comparative Tracking Index	250	V	IEC 60112
High Amp Arc Ignition (HAI)	PLC 1		UL 746
Hot-wire Ignition (HWI)	PLC 3		UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.50 mm	V-0		UL 94
2.00 mm	5VB		UL 94
3.00 mm	5VA		UL 94
3.00 mm, Testing by SABIC	5VA		UL 94
Glow Wire Flammability Index (1.00 mm)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature			IEC 60695-2-13
1.00 mm	800	°C	IEC 60695-2-13
2.00 mm	800	°C	IEC 60695-2-13
3.00 mm	800	°C	IEC 60695-2-13
Injection	Nominal Value	Unit	
Drying Temperature	90.0 - 100	°C	
Drying Time	2.0 - 4.0	hr	
Suggested Max Moisture	0.020	%	
Hopper Temperature	60.0 - 80.0	°C	
Rear Temperature	230 - 260	°C	
Middle Temperature	250 - 290	°C	
Front Temperature	260 - 300	°C	
Nozzle Temperature	250 - 290	°C	
Processing (Melt) Temp	270 - 300	°C	
Mold Temperature	60.0 - 90.0	°C	
NOTE			
1.	50 mm/min		
2.	Type 1, 50mm/min		
3.	Type 1, 50mm/min		
4.	Type 1, 50mm/min		
5.	Type 1, 50mm/min		
6.	1.3 mm/min		
7.	2.0 mm/min		
8.	1.3 mm/min		
9.	80*10*3		
10.	80*10*3		
11.	120*10*4 mm		
12.	120*10*4 mm		
13.	标准 B (120°C/h), 载荷2 (50N)		

The information and data on this page are provided by manufacturers and document providers. SHANGHAI SUSHENG assumes no legal liability. It is strongly recommended to verify all technical data with material suppliers before final material selection. All rights belong to the original authors. If any infringement occurs, please contact us immediately.

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519
Phone: +86 13424755533
Email: sales@su-jiao.com
No. 215, Lianhe North Road, Fengxian District, Shanghai, China

