

LEXAN™ EXL9112 resin

Polycarbonate
SABIC Innovative Plastics

Message:

Opaque PC-Siloxane copolymer with excellent processability. Improved flow, low temp. ductility. Non-chlorinated, non-brominated flame retardant product. UL rated V-0/5VA.

General Information			
Additive	Flame retardancy		
Features	Chlorine Free		
	Copolymer		
	Workability, good		
	Good liquidity		
	Bromine-free		
	Flame retardancy		
RoHS Compliance	RoHS compliance		
Appearance	Opacity		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.18	g/cm ³	ASTM D792
--	1.19	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	17	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	16.0	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal method
Flow: 3.20mm	0.40 - 0.80	%	Internal method
Transverse flow: 3.20mm	0.40 - 0.80	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	0.35	%	ISO 62
Equilibrium, 23°C, 50% RH	0.15	%	ISO 62
Outdoor Suitability	f1		UL 746C
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness (H 358/30)	95.0	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2270	MPa	ASTM D638
--	2200	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	58.1	MPa	ASTM D638

Yield	59.0	MPa	ISO 527-2/50
Fracture ³	58.5	MPa	ASTM D638
Fracture	55.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	5.8	%	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	2340	MPa	ASTM D790
-- ⁷	2300	MPa	ISO 178
Flexural Stress			
--	88.0	MPa	ISO 178
Yield, 50.0mm span ⁸	95.1	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹			ISO 179/1eA
-30°C	25	kJ/m ²	ISO 179/1eA
23°C	60	kJ/m ²	ISO 179/1eA
Notched Izod Impact			
-30°C	560	J/m	ASTM D256
23°C	730	J/m	ASTM D256
-30°C ¹⁰	20	kJ/m ²	ISO 180/1A
-30°C ¹¹	18	kJ/m ²	ISO 180/1A
23°C ¹²	53	kJ/m ²	ISO 180/1A
23°C ¹³	55	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength ¹⁴			ISO 180/1U
-30°C	No Break		ISO 180/1U
23°C	No Break		ISO 180/1U
Instrumented Dart Impact (23°C, Total Energy)	67.9	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, unannealed, 3.20mm	136	°C	ASTM D648
0.45 MPa, unannealed, 100 mm span ¹⁵	136	°C	ISO 75-2/Be
1.8 MPa, unannealed, 3.20mm	124	°C	ASTM D648
1.8 MPa, unannealed, 100 mm span ¹⁶	124	°C	ISO 75-2/Ae
Vicat Softening Temperature			
--	143	°C	ASTM D1525, ISO 306/B50 12 ¹⁷
--	144	°C	ISO 306/B120
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
Linear thermal expansion coefficient			
Flow: -40 to 40°C	7.2E-5	cm/cm/°C	ASTM E831

Flow: 23 to 80°C	7.5E-5	cm/cm/°C	ISO 11359-2
Lateral: -40 to 40°C	7.2E-5	cm/cm/°C	ASTM E831
Lateral: 23 to 80°C	7.5E-5	cm/cm/°C	ISO 11359-2
RTI Elec	130	°C	UL 746
RTI Imp	120	°C	UL 746
RTI	130	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Dielectric Strength (3.20 mm, in Oil)	19	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
50 Hz	2.70		IEC 60250
60 Hz	2.70		IEC 60250
1 MHz	2.70		IEC 60250
Dissipation Factor			IEC 60250
50 Hz	4.0E-4		IEC 60250
60 Hz	4.0E-4		IEC 60250
1 MHz	0.010		IEC 60250
Comparative Tracking Index	175	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.52 mm	V-0		UL 94
3.05 mm	5VA		UL 94
Glow Wire Flammability Index (1.00 mm)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature (1.00 mm)	825	°C	IEC 60695-2-13
Oxygen Index	40	%	ISO 4589-2
Injection	Nominal Value	Unit	
Drying Temperature	121	°C	
Drying Time	3.0 - 4.0	hr	
Drying Time, Maximum	48	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	40 - 60	%	
Rear Temperature	217 - 293	°C	
Middle Temperature	282 - 304	°C	
Front Temperature	293 - 316	°C	
Nozzle Temperature	288 - 310	°C	
Processing (Melt) Temp	293 - 316	°C	
Mold Temperature	71.0 - 93.0	°C	
Back Pressure	0.345 - 0.689	MPa	
Screw Speed	40 - 70	rpm	
Vent Depth	0.025 - 0.076	mm	
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 sp=62mm
10.	80*10*3
11.	80*10*4
12.	80*10*4
13.	80*10*3
14.	80*10*3
15.	120*10*4 mm
16.	120*10*4 mm
17.	标准 B (120°C/h), 载荷2 (50N)

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