

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 Retardant		
Features	Bromine Free		
	Chlorine Free		
	Copolymer		
	Flame Retardant		
	Good Flow		
	Good Processability		
Appearance	Opaque		
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 : 3.20 mm	0.40 to 0.80	%	
Across Flow : 3.20 mm	0.40 to 0.80	%	
Water Absorption			ISO 62
Saturation, 23°C	0.35	%	
Equilibrium, 23°C, 50% RH	0.15	%	
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

Break ³	58.5	MPa	ASTM D638
Break	55.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	5.8	%	ASTM D638
Yield	5.0	%	ISO 527-2/50
Break ⁵	100	%	ASTM D638
Break	100	%	ISO 527-2/50
Flexural Modulus			
50.0 mm Span ⁶	2340	MPa	ASTM D790
-- ⁷	2300	MPa	ISO 178
Flexural Stress			
--	88.0	MPa	ISO 178
Yield, 50.0 mm 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	
23°C	60	kJ/m ²	
Notched Izod Impact			
-30°C	560	J/m	ASTM D256
23°C	730	J/m	ASTM D256
-30°C ¹⁰	18	kJ/m ²	ISO 180/1A
-30°C ¹¹	20	kJ/m ²	ISO 180/1A
23°C ¹²	55	kJ/m ²	ISO 180/1A
23°C ¹³	53	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength ¹⁴			ISO 180/1U
-30°C	No Break		
23°C	No Break		
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, 3.20 mm	136	°C	ASTM D648
0.45 MPa, Unannealed, 100 mm Span ¹⁵	136	°C	ISO 75-2/Be
1.8 MPa, Unannealed, 3.20 mm	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
CLTE			
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

Transverse : -40 to 40°C	7.2E-5	cm/cm/°C	ASTM E831
Transverse : 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 Str	130	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Electric Strength (3.20 mm, in Oil)	19	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
50 Hz	2.70		
60 Hz	2.70		
1 MHz	2.70		
Dissipation Factor			IEC 60250
50 Hz	4.0E-4		
60 Hz	4.0E-4		
1 MHz	0.010		
Comparative Tracking Index	175	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.52 mm	V-0		
3.05 mm	5VA		
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 to 4.0	hr	
Drying Time, Maximum	48	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	40 to 60	%	
Rear Temperature	217 to 293	°C	
Middle Temperature	282 to 304	°C	
Front Temperature	293 to 316	°C	
Nozzle Temperature	288 to 310	°C	
Processing (Melt) Temp	293 to 316	°C	
Mold Temperature	71.0 to 93.0	°C	
Back Pressure	0.345 to 0.689	MPa	
Screw Speed	40 to 70	rpm	
Vent Depth	0.025 to 0.076	mm	
NOTE			
1.	50 mm/min		
2.	Type I, 50 mm/min		
3.	Type I, 50 mm/min		

4.	Type I, 50 mm/min
5.	Type I, 50 mm/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*4
11.	80*10*3
12.	80*10*3
13.	80*10*4
14.	80*10*3
15.	120*10*4 mm
16.	120*10*4 mm
17.	Rate B (120°C/h), Loading 2 (50 N)

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