

LEXAN™ EXL9134 resin

Polycarbonate
SABIC Innovative Plastics

Message:

LEXAN EXL9134 polycarbonate (PC) siloxane copolymer resin is a UV stabilized high flow opaque injection molding (IM) grade. This resin offers UL94 V0 @ 1.5mm flame retardancy based on non-bromine, non-chlorine FR systems, extreme low temperature ductility (-40 deg C) characteristics and excellent processability with opportunities for shorter IM cycle times compared to standard PC. LEXAN EXL9134 resin is a product available in a wide range of opaque colors and may be an excellent candidate for a wide range of applications.

General Information			
Additive	Flame Retardant		
	UV Stabilizer		
Features	Bromine Free		
	Chlorine Free		
	Copolymer		
	Ductile		
	Fast Molding Cycle		
	Flame Retardant		
	Good Processability		
	High Flow		
Appearance	Colors Available		
	Opaque		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.19	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	16	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	15.1	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.40 to 0.80	%	Internal Method
Water Absorption			ISO 62
Saturation, 23°C	0.40	%	
Equilibrium, 23°C, 50% RH	0.15	%	
Outdoor Suitability	f1		UL 746C
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2100	MPa	ASTM D638
--	2000	MPa	ISO 527-2/1
Tensile Strength			

Yield ²	58.0	MPa	ASTM D638
Yield	56.0	MPa	ISO 527-2/50
Break ³	59.0	MPa	ASTM D638
Break	57.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	6.0	%	ASTM D638
Yield	6.0	%	ISO 527-2/50
Break ⁵	120	%	ASTM D638
Break	110	%	ISO 527-2/50
Flexural Modulus			
50.0 mm Span ⁶	2400	MPa	ASTM D790
-- ⁷	2100	MPa	ISO 178
Flexural Stress			
--	87.0	MPa	ISO 178
Yield, 50.0 mm Span ⁸	92.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹			ISO 179/1eA
-30°C	35	kJ/m ²	
23°C	70	kJ/m ²	
Charpy Unnotched Impact Strength ¹⁰			ISO 179/1eU
-30°C	No Break		
23°C	No Break		
Notched Izod Impact			
-30°C	660	J/m	ASTM D256
23°C	790	J/m	ASTM D256
-30°C ¹¹	30	kJ/m ²	ISO 180/1A
23°C ¹²	65	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength ¹³			ISO 180/1U
-30°C	No Break		
23°C	No Break		
Instrumented Dart Impact (23°C, Total Energy)	67.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
1.8 MPa, Unannealed, 3.20 mm	123	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹⁴	118	°C	ISO 75-2/ Af
Vicat Softening Temperature			
--	140	°C	ASTM D1525 ¹⁵
--	139	°C	ISO 306/B50
--	141	°C	ISO 306/B120
CLTE			ASTM E831, ISO 11359-2
Flow : -40 to 40°C	6.1E-5	cm/cm/°C	

Transverse : -40 to 40°C	6.2E-5	cm/cm/°C	
RTI Elec	125	°C	UL 746
RTI Imp	115	°C	UL 746
RTI Str	120	°C	UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.50 mm	V-0		
3.00 mm	5VA		
Glow Wire Flammability Index (1.50 mm)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature			IEC 60695-2-13
1.50 mm	825	°C	
3.00 mm	825	°C	
Injection	Nominal Value	Unit	
Drying Temperature	120	°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	270 to 295	°C	
Middle Temperature	280 to 305	°C	
Front Temperature	295 to 315	°C	
Nozzle Temperature	290 to 310	°C	
Processing (Melt) Temp	295 to 315	°C	
Mold Temperature	70.0 to 95.0	°C	
Back Pressure	0.300 to 0.700	MPa	
Screw Speed	40 to 70	rpm	
Vent Depth	0.025 to 0.076	mm	
NOTE			
1.	5.0 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*3 sp=62mm		
11.	80*10*3		
12.	80*10*3		
13.	80*10*3		
14.	80*10*4 mm		

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