

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	UV stabilizer		
	Flame retardancy		
Features	Chlorine Free		
	Copolymer		
	Workability, good		
	Fast molding cycle		
	High liquidity		
	Bromine-free		
	ductility		
Appearance	Flame retardancy		
	Opacity		
Processing Method	Available colors		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.19	g/cm³	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	cm³/10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.40 - 0.80	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	0.40	%	ISO 62
Equilibrium, 23°C, 50% RH	0.15	%	ISO 62
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
Fracture ³	59.0	MPa	ASTM D638
Fracture	57.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	6.0	%	ASTM D638
Yield	6.0	%	ISO 527-2/50
Fracture ⁵	120	%	ASTM D638
Fracture	110	%	ISO 527-2/50
Flexural Modulus			
50.0mm span ⁶	2400	MPa	ASTM D790
-- ⁷	2100	MPa	ISO 178
Flexural Stress			
--	87.0	MPa	ISO 178
Yield, 50.0mm 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	ISO 179/1eA
23°C	70	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength ¹⁰			ISO 179/1eU
-30°C	No Break		ISO 179/1eU
23°C	No Break		ISO 179/1eU
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		ISO 180/1U
23°C	No Break		ISO 180/1U
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, 3.20mm	123	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm 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
Linear thermal expansion coefficient			ASTM E831, ISO 11359-2
Flow: -40 to 40°C	6.1E-5	cm/cm/°C	ASTM E831, ISO 11359-2

Lateral: -40 to 40°C	6.2E-5	cm/cm/°C	ASTM E831, ISO 11359-2
RTI Elec	125	°C	UL 746
RTI Imp	115	°C	UL 746
RTI	120	°C	UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.50 mm	V-0		UL 94
3.00 mm	5VA		UL 94
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	IEC 60695-2-13
3.00 mm	825	°C	IEC 60695-2-13
Injection	Nominal Value	Unit	
Drying Temperature	120	°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	270 - 295	°C	
Middle Temperature	280 - 305	°C	
Front Temperature	295 - 315	°C	
Nozzle Temperature	290 - 310	°C	
Processing (Melt) Temp	295 - 315	°C	
Mold Temperature	70.0 - 95.0	°C	
Back Pressure	0.300 - 0.700	MPa	
Screw Speed	40 - 70	rpm	
Vent Depth	0.025 - 0.076	mm	
NOTE			
1.	5.0 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 sp=62mm		
11.	80*10*3		
12.	80*10*3		
13.	80*10*3		
14.	80*10*4 mm		

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