

LEXAN™ BPL1000 resin

Polycarbonate

SABIC Innovative Plastics Asia Pacific

Message:

LEXAN BPL1000 Polycarbonate (PC) resin is an injection moldable grade featuring high flow and good impact performance. It contains non-chlorinated and non-brominated flame retardant systems with UL-94 V0 rating at 0.8mm. LEXAN BPL1000 resin offers various opaque color options and is ideal for thin wall applications.

General Information			
Additive	Flame retardancy		
Features	Chlorine Free		
	Impact resistance, good		
	High liquidity		
	Bromine-free		
	Flame retardancy		
Uses	Thin wall parts		
RoHS Compliance	RoHS compliance		
Appearance	Opacity		
	Available colors		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.17	g/cm ³	ASTM D792
--	1.20	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	25	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	23.2	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal method
Flow ¹	0.50 - 0.70	%	Internal method
Flow: 3.20mm	0.50 - 0.70	%	Internal method
Transverse flow: 3.20mm	0.50 - 0.70	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	0.35	%	ISO 62
Equilibrium, 23°C, 50% RH	0.15	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ²	2680	MPa	ASTM D638
--	2460	MPa	ISO 527-2/1
Tensile Strength			

Yield ³	63.4	MPa	ASTM D638
Yield	64.8	MPa	ISO 527-2/50
Fracture ⁴	51.0	MPa	ASTM D638
Fracture	53.5	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁵	4.8	%	ASTM D638
Yield	4.7	%	ISO 527-2/50
Fracture ⁶	96	%	ASTM D638
Fracture	97	%	ISO 527-2/50
Flexural Modulus			
50.0mm span ⁷	2670	MPa	ASTM D790
-- ⁸	2370	MPa	ISO 178
Flexural Stress			
--	94.8	MPa	ISO 178
Yield, 50.0mm span ⁹	102	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	600	J/m	ASTM D256
Instrumented Dart Impact (23°C, Total Energy)	48.6	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, unannealed, 3.20mm	106	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span ¹⁰	96.1	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	111	°C	ASTM D1525 ¹¹
--	113	°C	ISO 306/B50
--	114	°C	ISO 306/B120
Ball Pressure Test (75°C)	Pass		IEC 60695-10-2
Linear thermal expansion coefficient			ASTM E831, ISO 11359-2
Flow: -40 to 40°C	7.0E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Lateral: -40 to 40°C	7.0E-5	cm/cm/°C	ASTM E831, ISO 11359-2
RTI Elec	80.0	°C	UL 746
RTI Imp	80.0	°C	UL 746
RTI	80.0	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms · cm	IEC 60093
Dielectric Strength (1.60 mm, in Oil)	27	kV/mm	ASTM D149
Relative Permittivity			IEC 60250
50 Hz	3.00		IEC 60250
60 Hz	3.00		IEC 60250
1 MHz	2.90		IEC 60250

Dissipation Factor			IEC 60250
50 Hz	0.030		IEC 60250
60 Hz	0.030		IEC 60250
1 MHz	0.010		IEC 60250
Comparative Tracking Index	200	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.450 mm	V-2		UL 94
0.800 mm	V-0		UL 94
Glow Wire Flammability Index (1.00 mm)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature (1.00 mm)	800	°C	IEC 60695-2-13
Oxygen Index	36	%	ISO 4589-2
Injection	Nominal Value	Unit	
Drying Temperature	90.0	°C	
Drying Time	4.0	hr	
Suggested Max Moisture	0.020	%	
Hopper Temperature	60.0 - 80.0	°C	
Rear Temperature	260 - 280	°C	
Middle Temperature	270 - 290	°C	
Front Temperature	280 - 300	°C	
Nozzle Temperature	270 - 290	°C	
Processing (Melt) Temp	280 - 300	°C	
Mold Temperature	90.0	°C	
NOTE			
1.	Tensile Bar		
2.	5.0 mm/min		
3.	Type 1, 50mm/min		
4.	Type 1, 50mm/min		
5.	Type 1, 50mm/min		
6.	Type 1, 50mm/min		
7.	1.3 mm/min		
8.	2.0 mm/min		
9.	1.3 mm/min		
10.	80*10*4 mm		
11.	标准 B (120°C/h), 载荷2 (50N)		

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