

LEXANTM FR RESINS BPL1000

REGION ASIA

DESCRIPTION

LEXAN BPL1000 Polycarbonate (PC) is an injection moldable non-chlorinated/brominated, unfilled, flame retardant grade with high flow and good impact performance. It has an MVR of 23 (300°C/1.2kg), UL94 V0@0.8mm, is available in various opaque color options and can be ideal for thin wall applications.

TYPICAL PROPERTY VALUES

Revision 20191031

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yield	58	MPa	SABIC - Japan Method
Tensile Stress, yld, Type I, 50 mm/min	63	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	51	MPa	ASTM D 638
Tensile Strain, break	100 – 100	%	SABIC - Japan Method
Tensile Strain, yld, Type I, 50 mm/min	4.7	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	96.3	%	ASTM D 638
Tensile Modulus, 5 mm/min	2670	MPa	ASTM D 638
Flexural Stress	93	MPa	ASTM D 790
Flexural Stress, yld, 1.3 mm/min, 50 mm span	102	MPa	ASTM D 790
Flexural Modulus	2200	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2660	MPa	ASTM D 790
Tensile Stress, yield, 50 mm/min	64	MPa	ISO 527
Tensile Stress, break, 50 mm/min	53	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	4.7	%	ISO 527
Tensile Strain, break, 50 mm/min	96.8	%	ISO 527
Tensile Modulus, 1 mm/min	2460	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	94	MPa	ISO 178
Flexural Modulus, 2 mm/min	2360	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	600	J/m	ASTM D 256
Izod Impact, notched, -30°C	N/A	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	48	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	17	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	12	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	17	kJ/m ²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	111	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	105	°C	ASTM D 648
CTE, -40°C to 40°C, flow	7.E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	7.E-05	1/°C	ASTM E 831
CTE, -30°C to 30°C	0.00007 – 0.00007	1/°C	TMA
CTE, -40°C to 40°C, flow	7.E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	7.E-05	1/°C	ISO 11359-2

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Ball Pressure Test, 75°C +/- 2°C	PASS	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	112	°C	ISO 306
Vicat Softening Temp, Rate B/120	114	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	96	°C	ISO 75/Af
Relative Temp Index, Elec	80	°C	UL 746B
Relative Temp Index, Mech w/impact	80	°C	UL 746B
Relative Temp Index, Mech w/o impact	80	°C	UL 746B
PHYSICAL			
Specific Gravity	1.16	-	ASTM D 792
Water Absorption, 24 hours	0.15	%	ASTM D 570
Mold Shrinkage on Tensile Bar, flow	0.5 – 0.7	%	SABIC method
Mold Shrinkage, flow, 3.2 mm	0.5 – 0.7	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm	0.5 – 0.7	%	SABIC method
Melt Flow Rate, 300°C/1.2 kgf	25.2	g/10 min	ASTM D 1238
Density	1.2	g/cm ³	ISO 1183
Water Absorption, (23°C/sat)	0.35	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.15	%	ISO 62
Melt Volume Rate, MVR at 300°C/1.2 kg	23	cm ³ /10 min	ISO 1133
ELECTRICAL			
Dielectric Strength, in oil, 1.6 mm	27	kV/mm	ASTM D 149
Volume Resistivity	>1.E+15	Ohm-cm	IEC 60093
Surface Resistivity, ROA	>1.E+15	Ohm	IEC 60093
Relative Permittivity, 1 MHz	2.9	-	IEC 60250
Dissipation Factor, 50/60 Hz	0.03	-	IEC 60250
Dissipation Factor, 1 MHz	0.01	-	IEC 60250
Comparative Tracking Index	600	V	IEC 60112
Relative Permittivity, 50/60 Hz	3	-	IEC 60250
FLAME CHARACTERISTICS			
UL Recognized, 94V-2 Flame Class Rating	0.45	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating	0.8	mm	UL 94
Glow Wire Flammability Index 960°C, passes at	1	mm	IEC 60695-2-12
Glow Wire Ignitability Temperature, 1.0 mm	800	°C	IEC 60695-2-13
Oxygen Index (LOI)	36	%	ISO 4589
INJECTION MOLDING			
Drying Temperature	90	°C	
Drying Time	4	hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	280 – 300	°C	
Nozzle Temperature	270 – 290	°C	
Front - Zone 3 Temperature	280 – 300	°C	
Middle - Zone 2 Temperature	270 – 290	°C	
Rear - Zone 1 Temperature	260 – 280	°C	
Hopper Temperature	60 – 80	°C	
Mold Temperature	90	°C	



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