

**LEXAN® BPL1000**

Asia Pacific: COMMERCIAL

Non-brominated, non-chlorinated flame retardant PC. Low viscosity. Available in opaque colors.

Features

Heat Stabilized

Opaque

TYPICAL PROPERTIES ¹	TYPICAL VALUE	UNIT	STANDARD
MECHANICAL			
Tensile Stress, yield	59	MPa	GEPJ 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	%	GEPJ Method
Tensile Strain, yld, Type I, 50 mm/min	4.8	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	96.4	%	ASTM D 638
Tensile Modulus, 5 mm/min	2680	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	2670	MPa	ASTM D 790
Tensile Stress, yield, 50 mm/min	65	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	95	MPa	ISO 178
Flexural Modulus, 2 mm/min	2370	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	49	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	18	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	18	kJ/m ²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	111	°C	ASTM D 1525



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HDT, 0.45 MPa, 3.2 mm, unannealed	106	°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	7.E-05 - 7.E-05	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
Ball Pressure Test, 75°C +/- 2°C	PASS	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	113	°C	ISO 306
Vicat Softening Temp, Rate B/120	114	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	122	°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	1.17	-	ASTM D 792
Water Absorption, 24 hours	0.15	%	ASTM D 570
Mold Shrinkage on Tensile Bar, flow (2)	0.5 - 0.7	%	GE Method
Mold Shrinkage, flow, 3.2 mm	0.5 - 0.7	%	GE Method
Mold Shrinkage, xflow, 3.2 mm	0.5 - 0.7	%	GE Method
Melt Flow Rate, 300°C/1.2 kgf	25.3	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, 50/60 Hz	3	-	IEC 60250
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	200	V	IEC 60112
FLAME CHARACTERISTICS			
UL Recognized, 94V-2 Flame Class Rating (3)	0.5	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating (3)	0.8	mm	UL 94





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TYPICAL PROPERTIES ¹	TYPICAL VALUE	UNIT	STANDARD
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





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PROCESSING PARAMETERS	TYPICAL VALUE	UNIT
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

