



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

1) Typical values only. Variations within normal tolerances are possible for various colours. All values are measured at least after 48 hours storage at 23°C/50% relative humidity.
All properties, except the melt volume rate are measured on injection moulded samples.
All samples are prepared according to ISO 294.

2) Only typical data for material selection purpose. Not to be used for part or tool design.
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4) Own measurement according to UL.





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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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GE Plastics

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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

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