LEXAN™ Resin BFL2015
Americas: COMMERCIAL

Non-brominated, non-chlorinated flame retardant, glass reinforced PC. Opaque colors only

TYPICAL PROPERTIES[1]	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	930	kgf/cm²	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	920	kgf/cm²	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	3.5	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	4	%	ASTM D 638
Tensile Modulus, 5 mm/min	54300	kgf/cm²	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	1590	kgf/cm²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	46900	kgf/cm²	ASTM D 790
Tensile Stress, yield, 50 mm/min	103	MPa	ISO 527
Tensile Stress, break, 50 mm/min	100	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	3.6	%	ISO 527
Tensile Strain, break, 50 mm/min	4.3	%	ISO 527
Tensile Modulus, 1 mm/min	4950	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	150	MPa	ISO 178
Flexural Modulus, 2 mm/min	4280	MPa	ISO 178
IMPACT			
Charpy Impact, unnotched, 23°C	67	kJ/m²	ISO 179/2C
Charpy Impact, unnotched, -30°C	75	kJ/m²	ISO 179/2C
Izod Impact, notched, 23°C	7	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -30°C	N/A	cm-kgf/cm	ASTM D 256
Instrumented Impact Total Energy, 23°C	622	cm-kgf	ASTM D 3763
Izod Impact, unnotched 80*10*3 +23°C	80	kJ/m²	ISO 180/1U
Izod Impact, unnotched 80*10*3 -30°C	80	kJ/m²	ISO 180/1U

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(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.
(4) Internal measurements according to UL standards.
(5) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.
(6) Needs hard coat to consistently pass 60 sec Vertical Burn.

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IMPACT			
Izod Impact, notched 80*10*3 +23°C	8	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	7	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	8	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	6	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm	100	kJ/m²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm	100	kJ/m²	ISO 179/1eU
Charpy Impact, notched, 23°C	12	kJ/m²	ISO 179/2C
Charpy Impact, notched, -30°C	8	kJ/m²	ISO 179/2C
THERMAL			
Vicat Softening Temp, Rate B/50	148	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	145	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	141	°C	ASTM D 648
CTE, -30°C to 30°C, flow	4.E-05	1/°C	ASTM D 696
CTE, -30°C to 30°C, xflow	4.E-05	1/°C	ASTM D 696
CTE, 23°C to 80°C, flow	4.E-05	1/°C	ISO 11359-2
CTE, 23°C to 80°C, xflow	4.E-05	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	PASSES0	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	149	°C	ISO 306
Vicat Softening Temp, Rate B/120	150	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	132	°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	1.23	-	ASTM D 792

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TYPICAL PROPERTIES[1]	TYPICAL VALUE	Unit	Standard
PHYSICAL			
Mold Shrinkage on Tensile Bar, flow (2) (5)	0.2 - 0.5	%	SABIC Method
Mold Shrinkage, flow, 3.2 mm (5)	0.2 - 0.5	%	SABIC Method
Mold Shrinkage, xflow, 3.2 mm (5)	0.2 - 0.5	%	SABIC Method
Melt Flow Rate, 300°C/1.2 kgf	6.5	g/10 min	ASTM D 1238
Density	1.3	g/cm³	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	6	cm³/10 min	ISO 1133
ELECTRICAL			
Dielectric Strength, in oil, 1.6 mm	20	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	3.1	-	IEC 60250
Dissipation Factor, 50/60 Hz	0.02	-	IEC 60250
Dissipation Factor, 1 MHz	0.01	-	IEC 60250
Comparative Tracking Index	150	V	IEC 60112
Relative Permittivity, 50/60 Hz	3.2	-	IEC 60250
FLAME CHARACTERISTICS			
UL Recognized, 94V-0 Flame Class Rating (3)	1.5	mm	UL 94
Glow Wire Flammability Index 960°C, passes at	1	mm	IEC 60695-2-12
Glow Wire Ignitability Temperature, 1.0 mm	825	°C	IEC 60695-2-13
Oxygen Index (LOI)	38	%	ISO 4589

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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
Drying Temperature	120	°C
Drying Time	2 - 4	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	290 - 320	°C
Nozzle Temperature	280 - 310	°C
Front - Zone 3 Temperature	290 - 320	°C
Middle - Zone 2 Temperature	280 - 310	°C
Rear - Zone 1 Temperature	270 - 300	°C
Hopper Temperature	60 - 80	°C
Mold Temperature	80 - 120	°C

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