

## Lexan\* Resin BFL2015

Americas: COMMERCIAL

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

### Property

TYPICAL PROPERTIES <sup>(1)</sup>			
MECHANICAL	Value	Unit	Standard
Tensile Stress, yld, Type I, 50 mm/min	92	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	91	MPa	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	5330	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	156	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	4600	MPa	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	Value	Unit	Standard
Charpy Impact, unnotched, 23°C	67	kJ/m <sup>2</sup>	ISO 179/2C
Charpy Impact, unnotched, -30°C	75	kJ/m <sup>2</sup>	ISO 179/2C
Izod Impact, notched, 23°C	78	J/m	ASTM D 256
Izod Impact, notched, -30°C	N/A	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	61	J	ASTM D 3763
Izod Impact, unnotched 80*10*3 +23°C	80	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, unnotched 80*10*3 -30°C	80	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, notched 80*10*3 +23°C	8	kJ/m <sup>2</sup>	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	7	kJ/m <sup>2</sup>	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	8	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	6	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm	100	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm	100	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy Impact, notched, 23°C	12	kJ/m <sup>2</sup>	ISO 179/2C
Charpy Impact, notched, -30°C	8	kJ/m <sup>2</sup>	ISO 179/2C
THERMAL	Value	Unit	Standard
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
<b>PHYSICAL</b>	<b>Value</b>	<b>Unit</b>	<b>Standard</b>
Specific Gravity	1.23	-	ASTM D 792
Mold Shrinkage on Tensile Bar, flow (2)	0.2 - 0.5	%	SABIC Method
Mold Shrinkage, flow, 3.2 mm	0.2 - 0.5	%	SABIC Method
Mold Shrinkage, xflow, 3.2 mm	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/cm <sup>3</sup>	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	cm <sup>3</sup> /10 min	ISO 1133
<b>ELECTRICAL</b>	<b>Value</b>	<b>Unit</b>	<b>Standard</b>
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, 50/60 Hz	3.2	-	IEC 60250
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
<b>FLAME CHARACTERISTICS</b>	<b>Value</b>	<b>Unit</b>	<b>Standard</b>
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

Source GMD, last updated:12/22/2003

## Processing

Parameter	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

Source GMD, last updated:12/22/2003

THESE PROPERTY VALUES ARE NOT INTENDED FOR SPECIFICATION PURPOSES.

PLEASE CHECK WITH YOUR [\(LOCAL SALES OFFICE\)](#) FOR AVAILABILITY IN YOUR REGION

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. Not to be used for part or tool design.

- (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.

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