LEXAN™ FR RESINS BFL2015

REGION EUROPE

DESCRIPTION

LEXAN BFL2015 Polycarbonate (PC) is an injection moldable non-chlorinated/brominated flame retardant grade that is 15% glass fiber filled and has improved flow. It has a UL94 V0@1.5mm rating and is available in various opaque color options.

TYPICAL PROPERTY VALUES

Revision 20200730

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	92	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	91	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	3.5	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	4	%	ASTM D638
Tensile Modulus, 5 mm/min	5330	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	156	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	4600	MPa	ASTM D790
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	78	J/m	ASTM D256
Izod Impact, notched, -30°C	N/A	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	61	J	ASTM D3763
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
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 D1525
HDT, 0.45 MPa, 3.2 mm, unannealed	145	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	141	°C	ASTM D648

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CTE, -30°C to 30°C, flow	4.E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	4.E-05	1/°C	ASTM D696
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 D792
Mold Shrinkage on Tensile Bar, flow	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 D1238
Density	1.3	g/cm³	ISO 1183
Water Absorption, (23°C/saturated)	0.35	%	ISO 62-1
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 D149
Volume Resistivity	>1.E+15	Ω.cm	IEC 60093
Surface Resistivity, ROA	>1.E+15	Ω	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	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
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	

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Mold Temperature	80 – 120	°C	

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