LEXAN™ FR Resin BX7241

REGION ASIA

DESCRIPTION

LEXAN BX7241 is based on Polycarbonate (PC) copolymer. It is an injection moldable non-chlorinated/brominated, unfilled flame retardant grade that has good impact and processability. It has an MVR of 18 (260°C/2.16kg), UL94 V0@0.6mm, 5VA at 3.0mm rating and is targeted for thin wall applications.

TYPICAL PROPERTY VALUES

Revision 20261110

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 50 mm/min	67	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	65	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	4.4	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	100	%	ASTM D638
Tensile Modulus, 5 mm/min	2500	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	107	MPa	ASTM D790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	105	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2450	MPa	ASTM D790
Tensile Stress, yield, 50 mm/min	62	MPa	ISO 527
Tensile Stress, break, 50 mm/min	45	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	4.2	%	ISO 527
Tensile Strain, break, 50 mm/min	90	%	ISO 527
Tensile Modulus, 1 mm/min	2500	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	99	MPa	ISO 178
Flexural Stress, break, 2 mm/min	98	MPa	ISO 178
Flexural Modulus, 2 mm/min	2600	MPa	ISO 178
IMPACT [1]			
Izod impact, notched			
23°C	690	J/m	ASTM D256
0°C	420	J/m	ASTM D256
-30°C	190	J/m	ASTM D256
80*10*4 +23°C	28	kJ/m²	ISO 180/1A
80*10*4 0°C	11	kJ/m²	ISO 180/1A
80*10*4 -30°C	11	kJ/m²	ISO 180/1A
Instrumented Dart Impact Total Energy, 23°C	60	J	ASTM D3763
Charpy Impact, Notched			
23°C, 80*10*4mm, Cut	37	kJ/m²	ISO 179/1eA
0°C, 80*10*4mm, Cut	12	kJ/m²	ISO 179/1eA
-30°C, 80*10*4mm, Cut	11	kJ/m²	ISO 179/1eA
THERMAL [1]			
Vicat Softening Temp, Rate B/50	111	°C	ASTM D1525
HDT, 0.45 MPa, 3.2 mm, unannealed	103	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	93	°C	ASTM D648
CTE, -40°C to 40°C, flow	5.9E-05	1/°C	ASTM E831

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -40°C to 40°C, xflow	5.9E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, flow	5.9E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	5.9E-05	1/°C	ISO 11359-2
Ball Pressure Test, 75°C +/- 2°C	Pass	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	109	°C	ISO 306
Vicat Softening Temp, Rate B/120	112	°C	ISO 306
Relative Temp Index, Elec [2]	80	°C	UL 746B
Relative Temp Index, Mech w/impact [2]	80	°C	UL 746B
Relative Temp Index, Mech w/o impact [2]	80	°C	UL 746B
PHYSICAL [1]			
Specific Gravity	1.2	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm [3]	0.4 – 0.6	%	SABIC method
Melt Flow Rate, 260°C/2.16 kgf	18	g/10 min	ASTM D1238
Water Absorption, (23°C/saturated)	0.2	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.1	%	ISO 62
Melt Volume Rate, MVR at 260°C/2.16 kg	18	cm³/10 min	ISO 1133
ELECTRICAL [1]			
Volume Resistivity	>1.E+16	Ω.cm	ASTM D257
Surface Resistivity	>2.E+15	Ω	ASTM D257
FLAME CHARACTERISTICS [2]			
UL Yellow Card Link	E207780-102078504	-	-
UL Recognized, 94V-0 Flame Class Rating	≥0.5	mm	UL 94
UL Recognized, 94V-1 Flame Class Rating	≥0.5	mm	UL 94
UL Recognized, 94V-2 Flame Class Rating	≥0.2	mm	UL 94
Glow Wire Flammability Index 960°C, passes at [4]	0.75	mm	IEC 60695-2-12
Glow Wire Ignitability Temperature, 1.0 mm [4]	800	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 1.5 mm [4]	825	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 3.0 mm [4]	825	°C	IEC 60695-2-13
INJECTION MOLDING [5]			
Drying Temperature	80 – 90	°C	
Drying Time	2 – 4	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	250 – 300	°C	
Nozzle Temperature	250 – 300	°C	
Front - Zone 3 Temperature	250 – 300	°C	
Middle - Zone 2 Temperature	240 – 290	°C	
Rear - Zone 1 Temperature	230 – 280	°C	
Hopper Temperature	60 – 80	°C	
Mold Temperature	60 – 85	°C	
Vent Depth	0.03 - 0.075	mm	

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(1) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.
(2) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.
(3) 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.,The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.
(4) Value shown here is based on internal measurement.
(5) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

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