

LEXAN™ BX7241 resin

Polycarbonate

SABIC Innovative Plastics Asia Pacific

Message:

Lexan® BX7241 resin is an injection moldable PC blend with non-brominated and non-chlorinated flame retardant systems. Thin wall FR together with excellent impact/flow balance makes it ideal for thin wall applications.

General Information			
Additive	Flame Retardant		
Features	Bromine Free		
	Chlorine Free		
	Flame Retardant		
Uses	Thin-walled Parts		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.20	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (260°C/2.16 kg)	18	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (260°C/2.16 kg)	18.0	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.40 to 0.60	%	Internal Method
Water Absorption			ISO 62
Saturation, 23°C	0.20	%	
Equilibrium, 23°C, 50% RH	0.10	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2500	MPa	ASTM D638
--	2500	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	67.0	MPa	ASTM D638
Yield	62.0	MPa	ISO 527-2/50
Break ³	65.0	MPa	ASTM D638
Break	45.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	4.4	%	ASTM D638
Yield	4.2	%	ISO 527-2/50
Break ⁵	120	%	ASTM D638
Break	90	%	ISO 527-2/50
Flexural Modulus			
50.0 mm Span ⁶	2450	MPa	ASTM D790

-- ⁷	2600	MPa	ISO 178
Flexural Stress			
--	98.0	MPa	ISO 178
--	99.0	MPa	ISO 178
Yield, 50.0 mm Span ⁸	107	MPa	ASTM D790
Break, 50.0 mm Span ⁹	105	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C ¹⁰	11	kJ/m ²	
0°C ¹¹	12	kJ/m ²	
23°C ¹²	37	kJ/m ²	
Notched Izod Impact			
-30°C	190	J/m	ASTM D256
0°C	420	J/m	ASTM D256
23°C	690	J/m	ASTM D256
-30°C ¹³	11	kJ/m ²	ISO 180/1A
0°C ¹⁴	11	kJ/m ²	ISO 180/1A
23°C ¹⁵	28	kJ/m ²	ISO 180/1A
Instrumented Dart Impact (23°C, Total Energy)	60.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed, 3.20 mm	103	°C	
1.8 MPa, Unannealed, 3.20 mm	93.0	°C	
Vicat Softening Temperature			
--	111	°C	ASTM D1525 ¹⁶
--	109	°C	ISO 306/B50
--	112	°C	ISO 306/B120
Ball Pressure Test (75°C)	Pass		IEC 60695-10-2
CLTE			ASTM E831, ISO 11359-2
Flow : -40 to 40°C	5.9E-5	cm/cm/°C	
Transverse : -40 to 40°C	5.9E-5	cm/cm/°C	
RTI Elec	80.0	°C	UL 746
RTI Imp	80.0	°C	UL 746
RTI Str	80.0	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 2.0E+15	ohms	ASTM D257
Volume Resistivity	> 1.0E+16	ohms · cm	ASTM D257
Comparative Tracking Index (CTI)	PLC 3		UL 746
Hot-wire Ignition (HWI)	PLC 4		UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94

0.200 mm	V-2		
0.500 mm	V-1		
0.600 mm	V-0		
1.50 mm	5VB		
3.00 mm	5VA		
Glow Wire Flammability Index (0.750 mm)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature			IEC 60695-2-13
1.00 mm	800	°C	
1.50 mm	825	°C	
3.00 mm	825	°C	
Injection	Nominal Value	Unit	
Drying Temperature	80.0 to 90.0	°C	
Drying Time	2.0 to 4.0	hr	
Suggested Max Moisture	0.020	%	
Hopper Temperature	60.0 to 80.0	°C	
Rear Temperature	230 to 280	°C	
Middle Temperature	240 to 290	°C	
Front Temperature	250 to 300	°C	
Nozzle Temperature	250 to 300	°C	
Processing (Melt) Temp	250 to 300	°C	
Mold Temperature	60.0 to 85.0	°C	
Vent Depth	0.030 to 0.075	mm	
NOTE			
1.	5.0 mm/min		
2.	Type I, 50 mm/min		
3.	Type I, 50 mm/min		
4.	Type I, 50 mm/min		
5.	Type I, 50 mm/min		
6.	1.3 mm/min		
7.	2.0 mm/min		
8.	1.3 mm/min		
9.	1.3 mm/min		
10.	80*10*4mm, Cut		
11.	80*10*4 mm, Cut		
12.	80*10*4 mm, Cut		
13.	80*10*4		
14.	80*10*4		
15.	80*10*4		
16.	Rate B (120°C/h), Loading 2 (50 N)		

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



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