

LEXAN™ BFL4000U resin

Polycarbonate

SABIC Innovative Plastics

Message:

LEXAN BFL4000U Polycarbonate resin is an injection moldable grade. It contains non-brominated, non-chlorinated flame retardant systems with UL-94 V0 rating and good impact/flow balance. Designed for high light reflectance and light shielding applications with good UV weathering capability.

General Information			
UL YellowCard	E207780-531362		
Additive	Flame retardancy		
Features	Chlorine Free		
	Impact resistance, good		
	Good UV resistance		
	Good liquidity		
	Good weather resistance		
	Bromine-free		
	Flame retardancy		
Uses	Illumination diffuser		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.38	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	24	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	22.0	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.50 - 0.70	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	0.35	%	ISO 62
Equilibrium, 23°C, 50% RH	0.15	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2240	MPa	ASTM D638
--	2040	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	54.0	MPa	ASTM D638
Yield	50.0	MPa	ISO 527-2/5
Fracture ³	47.0	MPa	ASTM D638
Fracture	44.0	MPa	ISO 527-2/5
Tensile Elongation			
Yield ⁴	5.0	%	ASTM D638
Yield	6.0	%	ISO 527-2/5

Fracture ⁵	56	%	ASTM D638
Fracture	74	%	ISO 527-2/5
Flexural Modulus			
50.0mm span ⁶	2050	MPa	ASTM D790
-- ⁷	2170	MPa	ISO 178
Flexural Stress			
--	83.0	MPa	ISO 178
Yield, 50.0mm span ⁸	90.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹ (23°C)	30	kJ/m ²	ISO 179/1eA
Notched Izod Impact			
-30°C	240	J/m	ASTM D256
23°C	470	J/m	ASTM D256
-30°C ¹⁰	20	kJ/m ²	ISO 180/1A
23°C ¹¹	30	kJ/m ²	ISO 180/1A
Instrumented Dart Impact (23°C, Total Energy)	68.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, unannealed, 3.20mm	131	°C	ASTM D648
0.45 MPa, unannealed, 6.40mm	134	°C	ASTM D648
0.45 MPa, unannealed, 64.0mm span ¹²	130	°C	ISO 75-2/Bf
1.8 MPa, unannealed, 6.40mm	124	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span ¹³	115	°C	ISO 75-2/Af
1.8 MPa, annealed, 3.20mm	115	°C	ASTM D648
Vicat Softening Temperature			
--	136	°C	ASTM D1525 ¹⁴
--	137	°C	ISO 306/B50
--	139	°C	ISO 306/B120
Linear thermal expansion coefficient			
Flow: -40 to 40°C	7.5E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Lateral: -40 to 40°C	7.5E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Flammability	Nominal Value	Test Method	
Flame Rating (1.50 mm)	V-0	UL 94	
Injection	Nominal Value	Unit	
Drying Temperature	121	°C	
Drying Time	3.0 - 4.0	hr	
Drying Time, Maximum	48	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	40 - 60	%	
Rear Temperature	249 - 271	°C	
Middle Temperature	260 - 282	°C	

Front Temperature	271 - 293	°C
Nozzle Temperature	266 - 288	°C
Processing (Melt) Temp	271 - 293	°C
Mold Temperature	71.1 - 93.3	°C
Back Pressure	0.345 - 0.689	MPa
Screw Speed	40 - 70	rpm
Vent Depth	0.025 - 0.076	mm

NOTE

1.	5.0 mm/min
2.	Type 1, 5.0 mm/min
3.	Type 1, 5.0 mm/min
4.	Type 1, 5.0 mm/min
5.	Type 1, 5.0 mm/min
6.	1.3 mm/min
7.	2.0 mm/min
8.	1.3 mm/min
9.	80*10*4 sp=62mm
10.	80*10*4
11.	80*10*4
12.	80*10*4 mm
13.	80*10*4 mm
14.	标准 B (120°C/h), 载荷2 (50N)

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