LEXAN™ EXL8414 resin

Polycarbonate

SABIC Innovative Plastics

Message:

LEXAN EXL8414 is a PC/siloxane copolymer resin with medium flow, excellent low temperature impact and 25% post consumer recycle content. Limited availability and restricted color only. Higher color variability and contamination risks including black specs needs to be considered before approval for use in applications.

General Information			
UL YellowCard	E207780-100468898		
Recycled Content	Yes, 25%		
Features	Copolymer Medium liquidity Low temperature impact resistance		
Processing Method	Injection molding		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity			
--	1.18	g/cm³	ASTM D792
--	1.19	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	9.2	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	8.00	cm³/10min	ISO 1133
Molding Shrinkage			Internal method
Flow: 3.20mm	0.40 - 0.80	%	Internal method
Transverse flow: 3.20mm	0.40 - 0.80	%	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]	2150	MPa	ASTM D638
--	2360	MPa	ISO 527-2/1
Tensile Strength			
Yield [2]	57.0	MPa	ASTM D638
Yield	57.0	MPa	ISO 527-2/50
Fracture [3]	60.0	MPa	ASTM D638
Fracture	58.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield [4]	6.0	%	ASTM D638
Yield	6.0	%	ISO 527-2/50

Fracture [5]	110	%	ASTM D638
Fracture	110	%	ISO 527-2/50
Flexural Modulus			
50.0mm span [6]	2210	MPa	ASTM D790
-- [7]	2170	MPa	ISO 178
Flexural Stress			
--	86.0	MPa	ISO 178
Yield, 50.0mm span [8]	91.0	MPa	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength [9] (23°C)	82	kJ/m²	ISO 179/1eA
Notched Izod Impact			
-30°C	740	J/m	ASTM D256
23°C	850	J/m	ASTM D256
-30°C [10]	56	kJ/m²	ISO 180/1A
23°C [11]	67	kJ/m²	ISO 180/1A
Instrumented Dart Impact (23°C, Total Energy)	71.0	J	ASTM D3763
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			
0.45 MPa, unannealed, 3.20mm	138	°C	ASTM D648
0.45 MPa, unannealed, 100 mm span [12]	138	°C	ISO 75-2/Be
1.8 MPa, unannealed, 3.20mm	126	°C	ASTM D648
1.8 MPa, unannealed, 100 mm span [13]	126	°C	ISO 75-2/Ae
Vicat Softening Temperature			
--	143	°C	ASTM D1525, ISO 306/B50 11 [14]
--	145	°C	ISO 306/B120
Linear thermal expansion coefficient			
Flow: -40 to 40°C	6.4E-5	cm/cm/°C	ASTM E831
Flow: 23 to 80°C	7.2E-5	cm/cm/°C	ISO 11359-2
Lateral: -40 to 40°C	6.5E-5	cm/cm/°C	ASTM E831
Lateral: 23 to 80°C	7.6E-5	cm/cm/°C	ISO 11359-2
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating (0.750 mm)	HB		UL 94
Glow Wire Flammability Index			IEC 60695-2-12
0.800 mm	850	°C	IEC 60695-2-12
1.00 mm	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature			IEC 60695-2-13
1.00 mm	875	°C	IEC 60695-2-13
3.00 mm	875	°C	IEC 60695-2-13
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	271 - 293	°C
Middle Temperature	282 - 304	°C
Front Temperature	293 - 316	°C
Nozzle Temperature	288 - 310	°C
Processing (Melt) Temp	293 - 316	°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.	50 mm/min
2.	Type 1, 50mm/min
3.	Type 1, 50mm/min
4.	Type 1, 50mm/min
5.	Type 1, 50mm/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.	120*10*4 mm
13.	120*10*4 mm
14.	标准 B (120°C/h), 载荷2 (50N)

Recommended distributors for this material

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