LEXAN™ EXL8414 resin

Polycarbonate

SABIC Innovative Plastics

Message:

LEXAN EXL8414 is a PC/siloxane copolymer resin with medium flow, excellent low temperature impact and up to 25% post consumer recycle content. Availability of resin is restricted and lead times are longer due to limited manufacturing capability. Higher color variability and contamination risks including black specs needs to be considered before approval for use in applications. Contact your technical sales representative with questions.

General Information			
UL YellowCard	E121562-100150790		
Recycled Content	Yes,25%		
Features	Copolymer Low Temperature Impact Resistance Medium Flow		
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 : 3.20 mm	0.40 to 0.80	%	
Across Flow : 3.20 mm	0.40 to 0.80	%	
Water Absorption			ISO 62
Saturation, 23°C	0.35	%	
Equilibrium, 23°C, 50% RH	0.15	%	
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
Break [3]	60.0	MPa	ASTM D638
Break	58.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield [4]	6.0	%	ASTM D638
Yield	6.0	%	ISO 527-2/50

Break [5]	110	%	ASTM D638
Break	110	%	ISO 527-2/50
Flexural Modulus			
50.0 mm Span [6]	2210	MPa	ASTM D790
-- [7]	2170	MPa	ISO 178
Flexural Stress			
--	86.0	MPa	ISO 178
Yield, 50.0 mm 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, 3.20 mm	138	°C	ASTM D648
0.45 MPa, Unannealed, 100 mm Span [12]	138	°C	ISO 75-2/Be
1.8 MPa, Unannealed, 3.20 mm	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
CLTE			
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
Transverse : -40 to 40°C	6.5E-5	cm/cm/°C	ASTM E831
Transverse : 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	
1.00 mm	960	°C	
Glow Wire Ignition Temperature			IEC 60695-2-13
1.00 mm	875	°C	
3.00 mm	875	°C	
Injection	**Nominal Value**	**Unit**	
Drying Temperature	121	°C	
Drying Time	3.0 to 4.0	hr	

Drying Time, Maximum	48	hr
Suggested Max Moisture	0.020	%
Suggested Shot Size	40 to 60	%
Rear Temperature	271 to 293	°C
Middle Temperature	282 to 304	°C
Front Temperature	293 to 316	°C
Nozzle Temperature	288 to 310	°C
Processing (Melt) Temp	293 to 316	°C
Mold Temperature	71.1 to 93.3	°C
Back Pressure	0.345 to 0.689	MPa
Screw Speed	40 to 70	rpm
Vent Depth	0.025 to 0.076	mm

NOTE	
1.	50 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.	80*10*4 sp=62mm
10.	80*10*4
11.	80*10*4
12.	120*10*4 mm
13.	120*10*4 mm
14.	Rate B (120°C/h), Loading 2 (50 N)

Recommended distributors for this material

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