LEXAN™ EXL4019 resin

Polycarbonate

SABIC Innovative Plastics

Message:

LEXAN EXL4019 is an opaque 9% Glass Fiber (GF) reinforced polycarbonate (PC) siloxane copolymer resin for injection molding (IM) applications requiring improved stiffness. This resin also offers improved ductility over conventional GF reinforced PC resins in combination with medium flow characteristics and excellent processability with opportunities for shorter IM cycle times when compared to standard PC. LEXAN EXL4019 resin is a product that may be an excellent candidate for a wide variety of applications. Available in limited colors only.

General Information			
Filler / Reinforcement	Glass Fiber,9.0% Filler by Weight		
Features	Copolymer Ductile Fast Molding Cycle Good Processability Good Stiffness Medium Flow		
Appearance	Colors Available Opaque		
Processing Method	Injection Molding		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	1.25	g/cm³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	7.5	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	6.50	cm³/10min	ISO 1133
Molding Shrinkage			Internal Method
Flow : 3.20 mm	0.20 to 0.60	%	
Across Flow : 3.20 mm	0.20 to 0.60	%	
Water Absorption			ISO 62
Saturation, 23°C	0.15	%	
Equilibrium, 23°C, 50% RH	0.40	%	
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus			
-- [1]	3950	MPa	ASTM D638
--	3900	MPa	ISO 527-2/1
Tensile Strength			
Yield [2]	55.0	MPa	ASTM D638
Yield	54.0	MPa	ISO 527-2/5
Break [3]	45.0	MPa	ASTM D638

Break	48.0	MPa	ISO 527-2/5
Tensile Elongation			
Yield [4]	4.3	%	ASTM D638
Yield	4.3	%	ISO 527-2/5
Break [5]	14	%	ASTM D638
Break	8.7	%	ISO 527-2/5
Flexural Modulus			
50.0 mm Span [6]	3500	MPa	ASTM D790
-- [7]	3450	MPa	ISO 178
Flexural Stress			
--	98.0	MPa	ISO 178
Yield, 50.0 mm Span [8]	103	MPa	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength [9]			ISO 179/1eA
-30°C	15	kJ/m^2	
23°C	25	kJ/m^2	
Charpy Unnotched Impact Strength [10]			ISO 179/1eU
-30°C	No Break		
23°C	No Break		
Notched Izod Impact			
-30°C	150	J/m	ASTM D256
23°C	350	J/m	ASTM D256
-30°C [11]	10	kJ/m^2	ISO 180/1A
23°C [12]	25	kJ/m^2	ISO 180/1A
Unnotched Izod Impact Strength [13]			ISO 180/1U
-30°C	No Break		
23°C	No Break		
Instrumented Dart Impact (23°C, Total Energy)	40.0	J	ASTM D3763
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			
1.8 MPa, Unannealed, 3.20 mm	137	°C	ASTM D648
1.8 MPa, Unannealed, 100 mm Span [14]	135	°C	ISO 75-2/Ae
Vicat Softening Temperature	146	°C	ASTM D1525, ISO 306/B50, ISO 306/B120 [15]
Ball Pressure Test (75°C)	Pass		IEC 60695-10-2
CLTE			ASTM E831, ISO 11359-2
Flow : -40 to 40°C	4.7E-5	cm/cm/°C	
Transverse : -40 to 40°C	7.0E-5	cm/cm/°C	
Flammability	**Nominal Value**		**Test Method**
Flame Rating (0.750 mm)	HB		UL 94
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	288 to 310	°C
Middle Temperature	299 to 321	°C
Front Temperature	310 to 332	°C
Nozzle Temperature	304 to 327	°C
Processing (Melt) Temp	310 to 332	°C
Mold Temperature	82.0 to 116	°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.	5.0 mm/min
2.	Type I, 5.0 mm/min
3.	Type I, 5.0 mm/min
4.	Type I, 5.0 mm/min
5.	Type I, 5.0 mm/min
6.	1.3 mm/min
7.	2.0 mm/min
8.	1.3 mm/min
9.	80*10*3 sp=62mm
10.	80*10*3 sp=62mm
11.	80*10*3
12.	80*10*3
13.	80*10*3
14.	120*10*4 mm
15.	Rate B (120°C/h), Loading 2 (50 N)

Recommended distributors for this material

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