

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 reinforced material, 9.0% filler by weight		
Features	Rigid, good		
	Copolymer		
	Workability, good		
	Fast molding cycle		
	Medium liquidity		
	ductility		
Appearance	Opacity		
	Available colors		
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: 3.20mm	0.20 - 0.60	%	Internal method
Transverse flow: 3.20mm	0.20 - 0.60	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	0.15	%	ISO 62
Equilibrium, 23°C, 50% RH	0.40	%	ISO 62
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
Fracture ³	45.0	MPa	ASTM D638

Fracture	48.0	MPa	ISO 527-2/5
Tensile Elongation			
Yield ⁴	4.3	%	ASTM D638
Yield	4.3	%	ISO 527-2/5
Fracture ⁵	14	%	ASTM D638
Fracture	8.7	%	ISO 527-2/5
Flexural Modulus			
50.0mm span ⁶	3500	MPa	ASTM D790
-- ⁷	3450	MPa	ISO 178
Flexural Stress			
--	98.0	MPa	ISO 178
Yield, 50.0mm 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	ISO 179/1eA
23°C	25	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength ¹⁰			ISO 179/1eU
-30°C	No Break		ISO 179/1eU
23°C	No Break		ISO 179/1eU
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		ISO 180/1U
23°C	No Break		ISO 180/1U
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, 3.20mm	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
Linear thermal expansion coefficient			ASTM E831, ISO 11359-2
Flow: -40 to 40°C	4.7E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Lateral: -40 to 40°C	7.0E-5	cm/cm/°C	ASTM E831, ISO 11359-2
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 - 4.0	hr
Drying Time, Maximum	48	hr
Suggested Max Moisture	0.020	%
Suggested Shot Size	40 - 60	%
Rear Temperature	288 - 310	°C
Middle Temperature	299 - 321	°C
Front Temperature	310 - 332	°C
Nozzle Temperature	304 - 327	°C
Processing (Melt) Temp	310 - 332	°C
Mold Temperature	82.0 - 116	°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*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.	标准 B (120°C/h), 载荷2 (50N)

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