

LEXAN™ EXL4016H resin

Polycarbonate

SABIC Innovative Plastics

Message:

6% GF reinforced opaque polycarbonate-siloxane copolymer with good impact strength, stiffness and hydrolytic stability.

General Information			
Filler / Reinforcement	Glass Fiber,6.0% Filler by Weight		
Features	Copolymer		
	Good Impact Resistance		
	Good Stiffness		
	Hydrolytically Stable		
Appearance	Opaque		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.22	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	6.6	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	6.00	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.20 to 0.60	%	Internal Method
Water Absorption			ISO 62
Saturation, 23°C	0.12	%	
Equilibrium, 23°C, 50% RH	0.46	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	3300	MPa	ASTM D638
--	3200	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	55.0	MPa	ASTM D638
Yield	55.0	MPa	ISO 527-2/5
Break ³	46.0	MPa	ASTM D638
Break	47.0	MPa	ISO 527-2/5
Tensile Elongation			
Yield ⁴	4.5	%	ASTM D638
Yield	4.6	%	ISO 527-2/5
Break ⁵	19	%	ASTM D638
Break	15	%	ISO 527-2/5
Flexural Modulus			
50.0 mm Span ⁶	2850	MPa	ASTM D790

-- ⁷	2830	MPa	ISO 178
Flexural Stress			
--	104	MPa	ISO 178
Yield, 50.0 mm Span ⁸	105	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	170	J/m	ASTM D256
23°C	260	J/m	ASTM D256
-30°C ¹¹	10	kJ/m ²	ISO 180/1A
23°C ¹²	30	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)	39.0	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, 64.0 mm Span ¹⁴	134	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	146	°C	ASTM D1525, ISO 306/B50 10 ¹⁵
--	148	°C	ISO 306/B120
CLTE			ASTM E831, ISO 11359-2
Flow : -40 to 40°C	4.8E-5	cm/cm/°C	
Transverse : -40 to 40°C	7.1E-5	cm/cm/°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	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	82.2 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.	80*10*4 mm
15.	Rate B (120°C/h), Loading 2 (50 N)

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