

LEXAN™ FXM1414T resin

Polycarbonate

SABIC Innovative Plastics

Message:

PC-siloxane copolymer in special metallic colors. Medium flow. Improved toughness compared to medium flow standard PC in same color. Color package may affect performance.

General Information			
Features	Copolymer		
	Good Toughness		
	Medium Flow		
Appearance	Colors Available		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.18	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	10	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	9.40	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal Method
Flow ¹	0.40 to 0.80	%	
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	0.12	%	
Equilibrium, 23°C, 50% RH	0.090	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ²	2260	MPa	ASTM D638
--	2270	MPa	ISO 527-2/1
Tensile Strength			
Yield ³	58.0	MPa	ASTM D638
Yield	56.0	MPa	ISO 527-2/50
Break ⁴	48.0	MPa	ASTM D638
Break	47.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁵	5.7	%	ASTM D638
Yield	5.4	%	ISO 527-2/50
Break ⁶	78	%	ASTM D638
Break	89	%	ISO 527-2/50
Flexural Modulus			

50.0 mm Span ⁷	2230	MPa	ASTM D790
-- ⁸	2120	MPa	ISO 178
Flexural Stress			
--	88.0	MPa	ISO 178
Yield, 50.0 mm Span ⁹	85.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ¹⁰ (23°C)	40	kJ/m ²	ISO 179/1eA
Notched Izod Impact			
-30°C	270	J/m	ASTM D256
23°C	520	J/m	ASTM D256
-30°C ¹¹	14	kJ/m ²	ISO 180/1A
23°C ¹²	30	kJ/m ²	ISO 180/1A
Instrumented Dart Impact (23°C, Total Energy)	57.5	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
1.8 MPa, Unannealed, 3.20 mm	120	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹³	119	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	139	°C	ASTM D1525, ISO 306/B50 12 ¹⁴
--	142	°C	ISO 306/B120
Ball Pressure Test (75°C)	Pass		IEC 60695-10-2
CLTE			
Flow : -40 to 95°C	6.8E-5	cm/cm/°C	ASTM E831
Flow : 23 to 80°C	6.8E-5	cm/cm/°C	ISO 11359-2
Transverse : -40 to 95°C	8.0E-5	cm/cm/°C	ASTM E831
Transverse : 23 to 80°C	8.0E-5	cm/cm/°C	ISO 11359-2
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	217 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	71.0 to 93.0	°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.	Tensile Bar
2.	50 mm/min
3.	Type I, 50 mm/min
4.	Type I, 50 mm/min
5.	Type I, 50 mm/min
6.	Type I, 50 mm/min
7.	1.3 mm/min
8.	2.0 mm/min
9.	1.3 mm/min
10.	80*10*4 sp=62mm
11.	80*10*4
12.	80*10*4
13.	80*10*4 mm
14.	Rate B (120°C/h), Loading 2 (50 N)

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