

XYLEX™ X7300CL resin

Polycarbonate + Polyester
SABIC Innovative Plastics

Message:

PC+ POLYESTER unreinforced alloy developed for optical or lense market. Chemical resistance.

General Information			
Features	Good Chemical Resistance		
Uses	Lenses		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.20	g/cm ³	ASTM D792
--	1.18	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR)			ASTM D1238
265°C/2.16 kg	21	g/10 min	
300°C/1.2 kg	44	g/10 min	
Melt Volume-Flow Rate (MVR)			ISO 1133
265°C/2.16 kg	20.0	cm ³ /10min	
300°C/1.2 kg	42.0	cm ³ /10min	
Molding Shrinkage			Internal Method
Flow : 3.20 mm	0.40 to 0.80	%	
Across Flow : 3.20 mm	0.50 to 0.70	%	
Water Absorption			ISO 62
Saturation, 23°C	0.50	%	
Equilibrium, 23°C, 50% RH	0.12	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	1840	MPa	ASTM D638
--	1900	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	49.0	MPa	ASTM D638
Yield	55.0	MPa	ISO 527-2/50
Break ³	52.0	MPa	ASTM D638
Break	55.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	5.0	%	ASTM D638
Yield	5.0	%	ISO 527-2/50
Break ⁵	150	%	ASTM D638
Break	> 150	%	ISO 527-2/50

Flexural Modulus			
50.0 mm Span ⁶	1940	MPa	ASTM D790
-- ⁷	2000	MPa	ISO 178
Flexural Stress			
--	71.0	MPa	ISO 178
Yield, 50.0 mm Span ⁸	83.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹ (23°C)	11	kJ/m ²	ISO 179/1eA
Notched Izod Impact			
-30°C	56	J/m	ASTM D256
23°C	660	J/m	ASTM D256
-30°C ¹⁰	7.0	kJ/m ²	ISO 180/1A
-10°C ¹¹	5.0	kJ/m ²	ISO 180/1A
23°C ¹²	10	kJ/m ²	ISO 180/1A
Instrumented Dart Impact (23°C, Total Energy)	95.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 3.20 mm	102	°C	ASTM D648
1.8 MPa, Unannealed, 3.20 mm	88.0	°C	ASTM D648
1.8 MPa, Unannealed, 100 mm Span ¹³	90.0	°C	ISO 75-2/Ae
1.8 MPa, Unannealed, 64.0 mm Span ¹⁴	92.0	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	108	°C	ASTM D1525 ¹⁵
--	107	°C	ISO 306/B50
--	106	°C	ISO 306/B120
CLTE			
Flow : -40 to 40°C	1.2E-4	cm/cm/°C	ASTM E831
Flow : 23 to 60°C	8.5E-5	cm/cm/°C	ISO 11359-2
Transverse : -40 to 40°C	1.1E-4	cm/cm/°C	ASTM E831
Transverse : 23 to 60°C	8.5E-5	cm/cm/°C	ISO 11359-2
Flammability	Nominal Value		Test Method
Flame Rating (3.00 mm)	V-2		UL 94
Optical	Nominal Value	Unit	Test Method
Transmittance (2540 µm)	88.0	%	ASTM D1003
Haze (2540 µm)	2.0	%	ASTM D1003
Injection	Nominal Value	Unit	
Drying Temperature	82.2 to 93.3	°C	
Drying Time	3.0 to 5.0	hr	
Drying Time, Maximum	8.0	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	40 to 80	%	

Rear Temperature	238 to 249	°C
Middle Temperature	243 to 266	°C
Front Temperature	249 to 271	°C
Nozzle Temperature	249 to 271	°C
Processing (Melt) Temp	249 to 271	°C
Mold Temperature	43.3 to 60.0	°C
Back Pressure	0.172 to 0.517	MPa
Screw Speed	20 to 100	rpm
Vent Depth	0.013 to 0.020	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.	80*10*4
13.	120*10*4 mm
14.	80*10*4 mm
15.	Rate B (120°C/h), Loading 2 (50 N)

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