

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	Lens		
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	ASTM D1238
300°C/1.2 kg	44	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR)			ISO 1133
265°C/2.16 kg	20.0	cm ³ /10min	ISO 1133
300°C/1.2 kg	42.0	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal method
Flow: 3.20mm	0.40 - 0.80	%	Internal method
Transverse flow: 3.20mm	0.50 - 0.70	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	0.50	%	ISO 62
Equilibrium, 23°C, 50% RH	0.12	%	ISO 62
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
Fracture ³	52.0	MPa	ASTM D638
Fracture	55.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	5.0	%	ASTM D638
Yield	5.0	%	ISO 527-2/50
Fracture ⁵	150	%	ASTM D638
Fracture	> 150	%	ISO 527-2/50

Flexural Modulus			
50.0mm span ⁶	1940	MPa	ASTM D790
-- ⁷	2000	MPa	ISO 178
Flexural Stress			
--	71.0	MPa	ISO 178
Yield, 50.0mm 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, 3.20mm	102	°C	ASTM D648
1.8 MPa, unannealed, 3.20mm	88.0	°C	ASTM D648
1.8 MPa, unannealed, 100 mm span ¹³	90.0	°C	ISO 75-2/Ae
1.8 MPa, unannealed, 64.0mm 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
Linear thermal expansion coefficient			
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
Lateral: -40 to 40°C	1.1E-4	cm/cm/°C	ASTM E831
Lateral: 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 - 93.3	°C	
Drying Time	3.0 - 5.0	hr	
Drying Time, Maximum	8.0	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	40 - 80	%	

Rear Temperature	238 - 249	°C
Middle Temperature	243 - 266	°C
Front Temperature	249 - 271	°C
Nozzle Temperature	249 - 271	°C
Processing (Melt) Temp	249 - 271	°C
Mold Temperature	43.3 - 60.0	°C
Back Pressure	0.172 - 0.517	MPa
Screw Speed	20 - 100	rpm
Vent Depth	0.013 - 0.020	mm

NOTE

1.	50 mm/min
2.	Type 1, 50mm/min
3.	Type 1, 50mm/min
4.	Type 1, 50mm/min
5.	Type 1, 50mm/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.	标准 B (120°C/h), 载荷2 (50N)

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



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