

XYLEX X7300CL

SABIC Innovative Plastics Europe - Polycarbonate + Polyester

General Information

Product Description

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

General

Material Status	• Commercial: Active
Availability	• Europe
Features	• Good Chemical Resistance
Uses	• Lenses
RoHS Compliance	• RoHS Compliant
Forms	• Pellets
Processing Method	• Injection Molding

ASTM and ISO Properties ¹

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Specific Gravity	1.20	1.20	ASTM D792
Density	1.18 g/cm³	1.18 g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (265°C/2.16 kg)	21 g/10 min	21 g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (265°C/2.16 kg)	1.22 in³/10min	20.0 cm³/10min	ISO 1133
Molding Shrinkage (Flow, 0.126 in (3.20 mm))	0.0040 to 0.0080 in/in	0.40 to 0.80 %	ASTM D955
Molding Shrinkage Across Flow, 0.126 in (3.20 mm)	0.0050 to 0.0070 in/in	0.50 to 0.70 %	ASTM D955

Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus ²	267000 psi	1840 MPa	ASTM D638
Tensile Modulus	276000 psi	1900 MPa	ISO 527-1, -2/1
Tensile Strength ³ (Yield)	7110 psi	49.0 MPa	ASTM D638
Tensile Stress (Yield)	7980 psi	55.0 MPa	ISO 527-1, -2/50
Tensile Strength ³ (Break)	7540 psi	52.0 MPa	ASTM D638
Tensile Stress (Break)	7980 psi	55.0 MPa	ISO 527-1, -2/50
Tensile Elongation ³ (Yield)	5.0 %	5.0 %	ASTM D638
Tensile Strain (Yield)	5.0 %	5.0 %	ISO 527-1, -2/50
Tensile Elongation ³ (Break)	150 %	150 %	ASTM D638
Tensile Strain (Break)	> 150 %	> 150 %	ISO 527-1, -2/50
Flexural Modulus ⁴ (1.97 in (50.0 mm) Span)	281000 psi	1940 MPa	ASTM D790
Flexural Modulus ⁵	290000 psi	2000 MPa	ISO 178
Flexural Strength ^{5, 6}	10300 psi	71.0 MPa	ISO 178
Flexural Strength ⁴ Yield, 1.97 in (50.0 mm) Span	12000 psi	83.0 MPa	ASTM D790

Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact (73 °F (23 °C))	12.4 ft·lb/in	660 J/m	ASTM D256
Notched Izod Impact Strength 14 °F (-10 °C)	2.38 ft·lb/in²	5.00 kJ/m²	ISO 180/1A
73 °F (23 °C)	4.76 ft·lb/in²	10.00 kJ/m²	
Instrumented Dart Impact - Total Energy (73 °F (23 °C))	841 in·lb	95.0 J	ASTM D3763



XYLEX* X7300CL Resin

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Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load 66 psi (0.45 MPa), Unannealed, 0.126 in (3.20 mm)	216 °F	102 °C	ASTM D648
Deflection Temperature Under Load 264 psi (1.8 MPa), Unannealed, 0.126 in (3.20 mm)	190 °F	88.0 °C	ASTM D648
Heat Deflection Temperature ⁷ 264 psi (1.8 MPa), Unannealed	194 °F	90.0 °C	ISO 75A-1, -2
Vicat Softening Point Rate B, Loading 2 (50 N)	226 °F	108 °C	ASTM D1525
Vicat Softening Temperature	223 °F	106 °C	ISO 306/B120
CLTE, Flow (TMA) -40 to 104 °F (-40 to 40 °C)	0.000064 in/in/°F	0.00011 cm/cm/°C	ASTM E831
Coefficient of Linear Thermal Expansion, Flow 73 to 140 °F (23 to 60 °C)	0.000047 in/in/°F	0.000085 cm/cm/°C	ISO 11359-1, -2
CLTE, Transverse (TMA) -40 to 104 °F (-40 to 40 °C)	0.000058 in/in/°F	0.00011 cm/cm/°C	ASTM E831
Coefficient of Linear Thermal Expansion, Transverse 73 to 140 °F (23 to 60 °C)	0.000047 in/in/°F	0.000085 cm/cm/°C	ISO 11359-1, -2
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Transmittance	88.0 %	88.0 %	ASTM D1003
Haze	2.0 %	2.0 %	ASTM D1003

Processing Information			
Injection	Nominal Value (English)	Nominal Value (SI)	
Drying Temperature	180 to 200 °F	82.2 to 93.3 °C	
Drying Time	3.0 to 5.0 hr	3.0 to 5.0 hr	
Drying Time, Maximum	8.0 hr	8.0 hr	
Suggested Max Moisture	0.020 %	0.020 %	
Suggested Shot Size	40 to 80 %	40 to 80 %	
Rear Temperature	460 to 480 °F	238 to 249 °C	
Middle Temperature	470 to 510 °F	243 to 266 °C	
Front Temperature	480 to 520 °F	249 to 271 °C	
Nozzle Temperature	480 to 520 °F	249 to 271 °C	
Processing (Melt) Temp	480 to 520 °F	249 to 271 °C	
Mold Temperature	110 to 140 °F	43.3 to 60.0 °C	
Back Pressure	25.0 to 75.0 psi	0.172 to 0.517 MPa	
Screw Speed	20 to 100 rpm	20 to 100 rpm	
Vent Depth	0.00050 to in 0.00080	0.013 to 0.020 mm	

