

XYLEX* X8303CL Resin

Tuesday, September 27, 2011

General Information

Product Description

PC+ POLYESTER, Transparent, Low processing Temperature, High flow with excellent impact, UV stabilized, OQ quality. For In Mold Decoration /Labeling.

General

Material Status	• Commercial: Active
Availability	• North America
Additive	• UV Stabilizer
Features	• High Flow • High Impact Resistance
Uses	• Labels
Appearance	• Clear/Transparent
Processing Method	• Injection Molding

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.20	g/cm ³	ASTM D792
Density	1.20	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (265°C/2.16 kg)	30	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (265°C/2.16 kg)	27.5	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.40 to 0.80	%	Internal Method
Water Absorption (Saturation, 23°C)	0.50	%	ISO 62
Water Absorption (Equilibrium, 23°C, 50% RH)	0.20	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ²	1680	MPa	ASTM D638
Tensile Modulus	1690	MPa	ISO 527-2/1
Tensile Strength ³ (Yield)	46.0	MPa	ASTM D638
Tensile Stress (Yield)	48.0	MPa	ISO 527-2/50
Tensile Strength ³ (Break)	44.0	MPa	ASTM D638
Tensile Stress (Break)	43.0	MPa	ISO 527-2/50
Tensile Elongation ³ (Yield)	5.0	%	ASTM D638
Tensile Strain (Yield)	6.0	%	ISO 527-2/50
Tensile Elongation ³ (Break)	140	%	ASTM D638
Tensile Strain (Break)	140	%	ISO 527-2/50
Flexural Modulus ⁴ (50.0 mm Span)	1620	MPa	ASTM D790
Flexural Modulus ⁵	1720	MPa	ISO 178
Flexural Strength ^{5,6}	72.0	MPa	ISO 178
Flexural Strength ⁴ (Yield, 50.0 mm Span)	72.0	MPa	ASTM D790



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Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁷ (23°C)	14	kJ/m ²	ISO 179/1eA
Notched Izod Impact			ASTM D256
-30°C	100	J/m	
23°C	1000	J/m	
Notched Izod Impact Strength ⁸			ISO 180/1A
-30°C	9.0	kJ/m ²	
23°C	20	kJ/m ²	
Instrumented Dart Impact (23°C, Total Energy)	65.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed, 3.20 mm	92.0	°C	
Deflection Temperature Under Load			ASTM D648
1.8 MPa, Unannealed, 3.20 mm	80.0	°C	
Heat Deflection Temperature ⁹			ISO 75-2/Af
1.8 MPa, Unannealed, 64.0 mm Span	90.0	°C	
Vicat Softening Temperature	98.0	°C	ASTM D1525 ¹⁰
Vicat Softening Temperature			
--	100	°C	ISO 306/B50
--	100	°C	ISO 306/B120
CLTE - Flow (-40 to 40°C)	0.000090	cm/cm/°C	ASTM E831
CLTE - Flow (23 to 60°C)	0.000092	cm/cm/°C	ISO 11359-2
CLTE - Transverse (-40 to 40°C)	0.000090	cm/cm/°C	ASTM E831
CLTE - Transverse (23 to 60°C)	0.000098	cm/cm/°C	ISO 11359-2

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	70.0 to 80.0	°C
Drying Time	3.0 to 5.0	hr
Suggested Max Moisture	0.020	%
Rear Temperature	235 to 255	°C
Middle Temperature	235 to 265	°C
Front Temperature	240 to 270	°C
Nozzle Temperature	240 to 270	°C
Processing (Melt) Temp	240 to 270	°C
Mold Temperature	50.0 to 70.0	°C
Screw Speed	20 to 100	rpm



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Notes

¹ Typical properties: these are not to be construed as specifications.
² 5.0 mm/min
³ Type I, 50 mm/min
⁴ 1.3 mm/min
⁵ 2.0 mm/min
⁶ Break
⁷ 80*10*4 sp=62mm
⁸ 80*10*4
⁹ 80*10*4 mm
¹⁰ Rate B (120°C/h), Loading 2 (50 N)

