

XENOY™ CL100 resin

Polycarbonate + PBT

SABIC Innovative Plastics Europe

Message:

XENOY CL100 is an unfilled, impact modified, UV-stabilized PC/PBT blend with excellent solvent resistance and good low-temperature ductility. It has a proven track record in unpainted exterior automotive applications. ISO1043: PC+PBT-I.

General Information			
UL YellowCard	E207780-557503		
Additive	Impact modifier		
	UV stabilizer		
Features	Impact modification		
	Solvent resistance		
	ductility		
Uses	Automotive exterior parts		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.22	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (250°C/5.0 kg)	14	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (250°C/5.0 kg)	13.0	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.70 - 1.0	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	0.50	%	ISO 62
Equilibrium, 23°C, 50% RH	0.15	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness (H 358/30)	96.0	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2200	MPa	ASTM D638
--	2150	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	56.0	MPa	ASTM D638
Yield	55.0	MPa	ISO 527-2/50
Fracture ³	55.0	MPa	ASTM D638
Fracture	56.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	5.0	%	ASTM D638
Yield	5.0	%	ISO 527-2/50

Fracture ⁵	50	%	ASTM D638
Fracture	50	%	ISO 527-2/50
Flexural Modulus			
50.0mm span ⁶	2050	MPa	ASTM D790
-- ⁷	2050	MPa	ISO 178
Flexural Stress			
--	80.0	MPa	ISO 178
Yield, 50.0mm span ⁸	85.0	MPa	ASTM D790
Taber Abrasion Resistance (1000 Cycles, 1000 g, CS-17 Wheel)	30.0	mg	Internal method
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹			ISO 179/1eA
-30°C	20	kJ/m ²	ISO 179/1eA
23°C	55	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength ¹⁰			ISO 179/1eU
-30°C	No Break		ISO 179/1eU
23°C	No Break		ISO 179/1eU
Notched Izod Impact			
-40°C	160	J/m	ASTM D256
-30°C	170	J/m	ASTM D256
0°C	600	J/m	ASTM D256
23°C	700	J/m	ASTM D256
-30°C ¹¹	20	kJ/m ²	ISO 180/1A
0°C ¹²	45	kJ/m ²	ISO 180/1A
23°C ¹³	50	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength ¹⁴			ISO 180/1U
-30°C	No Break		ISO 180/1U
23°C	No Break		ISO 180/1U
Instrumented Dart Impact (23°C, Total Energy)	50.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, unannealed, 64.0mm span ¹⁵	110	°C	ISO 75-2/Bf
1.8 MPa, unannealed, 3.20mm	90.0	°C	ASTM D648
1.8 MPa, unannealed, 100 mm span ¹⁶	90.0	°C	ISO 75-2/Ae
1.8 MPa, unannealed, 64.0mm span ¹⁷	90.0	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	125	°C	ASTM D1525, ISO 306/B50 ¹⁸
--	160	°C	ISO 306/A50
--	127	°C	ISO 306/B120
Linear thermal expansion coefficient			
Flow: -40 to 40°C	9.0E-5	cm/cm/°C	ASTM E831

Flow: 23 to 80°C	9.0E-5	cm/cm/°C	ISO 11359-2
Lateral: -40 to 40°C	9.0E-5	cm/cm/°C	ASTM E831
Lateral: 23 to 80°C	9.0E-5	cm/cm/°C	ISO 11359-2
Thermal Conductivity	0.18	W/m/K	ISO 8302
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	> 1.0E+14	ohms·cm	IEC 60093
Dielectric Strength			IEC 60243-1
1.00 mm ¹⁹	18	kV/mm	IEC 60243-1
3.20mm, in oil	17	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
50 Hz	3.30		IEC 60250
60 Hz	3.30		IEC 60250
1 MHz	3.30		IEC 60250
Dissipation Factor			IEC 60250
50 Hz	2.0E-3		IEC 60250
60 Hz	2.0E-3		IEC 60250
1 MHz	0.020		IEC 60250
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.50 mm)	HB		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	90.0 - 100	°C	
Drying Time	2.0 - 4.0	hr	
Suggested Max Moisture	0.020	%	
Hopper Temperature	40.0 - 60.0	°C	
Rear Temperature	230 - 250	°C	
Middle Temperature	240 - 265	°C	
Front Temperature	250 - 270	°C	
Nozzle Temperature	250 - 265	°C	
Processing (Melt) Temp	255 - 270	°C	
Mold Temperature	60.0 - 80.0	°C	
NOTE			
1.	5.0 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 sp=62mm		

11.	80*10*4
12.	80*10*4
13.	80*10*4
14.	80*10*4
15.	80*10*4 mm
16.	120*10*4 mm
17.	80*10*4 mm
18.	标准 B (120°C/h), 载荷2 (50N)
19.	Short-Time

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