

XENOY™ CL101 resin

Polycarbonate + PBT

SABIC Innovative Plastics Europe

Message:

Xenoy CL101 is an unfilled, impact modified PC/PBT blend with excellent solvent resistance and low-temperature ductility. It has a proven track record in off-line painted exterior automotive applications. ISO1043: PC+PBT-I.

General Information			
Additive	Impact Modifier		
Features	Ductile		
	Impact Modified		
	Paintable		
	Solvent Resistant		
Uses	Automotive Exterior Parts		
RoHS Compliance	RoHS Compliant		
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 ¹			Internal Method
Flow	0.70 to 1.1	%	
Across Flow	0.70 to 1.1	%	
Water Absorption			ISO 62
Saturation, 23°C	0.50	%	
Equilibrium, 23°C, 50% RH	0.15	%	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (L-Scale)	89		ISO 2039-2
Ball Indentation Hardness (H 358/30)	82.0	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ²	2050	MPa	ASTM D638
--	2050	MPa	ISO 527-2/1
Tensile Strength			
Yield ³	53.0	MPa	ASTM D638
Yield	52.0	MPa	ISO 527-2/50
Break ⁴	49.0	MPa	ASTM D638
Break	44.0	MPa	ISO 527-2/50
Tensile Elongation			

Yield ⁵	4.5	%	ASTM D638
Yield	4.5	%	ISO 527-2/50
Break ⁶	50	%	ASTM D638
Break	50	%	ISO 527-2/50
Flexural Modulus			
50.0 mm Span ⁷	2000	MPa	ASTM D790
-- ⁸	2000	MPa	ISO 178
Flexural Stress			
--	75.0	MPa	ISO 178
Yield, 50.0 mm Span ⁹	75.0	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			
-30°C ¹⁰	25	kJ/m ²	ISO 179/1eA
-30°C	20	kJ/m ²	ISO 179/2C
-20°C	25	kJ/m ²	ISO 179/2C
23°C ¹¹	58	kJ/m ²	ISO 179/1eA
23°C	30	kJ/m ²	ISO 179/2C
Charpy Unnotched Impact Strength ¹²			ISO 179/1eU
-30°C	No Break		
23°C	No Break		
Notched Izod Impact			
-30°C	450	J/m	ASTM D256
0°C	600	J/m	ASTM D256
23°C	630	J/m	ASTM D256
-40°C ¹³	25	kJ/m ²	ISO 180/1A
-30°C ¹⁴	35	kJ/m ²	ISO 180/1A
23°C ¹⁵	50	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength ¹⁶			ISO 180/1U
-30°C	No Break		
23°C	No Break		
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed, 100 mm Span ¹⁷	105	°C	ISO 75-2/Be
0.45 MPa, Unannealed, 64.0 mm Span ¹⁸	105	°C	ISO 75-2/Bf
1.8 MPa, Unannealed, 3.20 mm	83.0	°C	ASTM D648
1.8 MPa, Unannealed, 100 mm Span ¹⁹	83.0	°C	ISO 75-2/Ae
1.8 MPa, Unannealed, 64.0 mm Span ²⁰	83.0	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	120	°C	ASTM D1525, ISO 306/B50 ¹² ²¹
--	155	°C	ISO 306/A50

--	123	°C	ISO 306/B120
Ball Pressure Test (75°C)	Pass		IEC 60695-10-2
CLTE			
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
Transverse : -40 to 40°C	9.5E-5	cm/cm/°C	ASTM E831
Transverse : 23 to 80°C	9.5E-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
Electric Strength			IEC 60243-1
1.00 mm ²²	18	kV/mm	
3.20 mm, in Oil	17	kV/mm	
Relative Permittivity			IEC 60250
50 Hz	3.30		
60 Hz	3.30		
1 MHz	3.30		
Dissipation Factor			IEC 60250
50 Hz	2.0E-3		
60 Hz	2.0E-3		
1 MHz	0.020		
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.50 mm, Testing by SABIC)	HB		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	90.0 to 100	°C	
Drying Time	2.0 to 4.0	hr	
Suggested Max Moisture	0.020	%	
Hopper Temperature	40.0 to 60.0	°C	
Rear Temperature	230 to 250	°C	
Middle Temperature	240 to 265	°C	
Front Temperature	250 to 270	°C	
Nozzle Temperature	250 to 265	°C	
Processing (Melt) Temp	255 to 270	°C	
Mold Temperature	60.0 to 80.0	°C	
NOTE			
1.	Tensile Bar		
2.	50 mm/min		
3.	Type I, 50 mm/min		
4.	Type I, 50 mm/min		
5.	Type I, 50 mm/min		
6.	Type I, 50 mm/min		

7.	1.3 mm/min
8.	2.0 mm/min
9.	1.3 mm/min
10.	80*10*4 sp=62mm
11.	80*10*4 sp=62mm
12.	80*10*4 sp=62mm
13.	80*10*4
14.	80*10*4
15.	80*10*4
16.	80*10*4
17.	120*10*4 mm
18.	80*10*4 mm
19.	120*10*4 mm
20.	80*10*4 mm
21.	Rate B (120°C/h), Loading 2 (50 N)
22.	Short-Time

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