

XENOY™ CL101 resin

Polycarbonate + PBT

SABIC Innovative Plastics Europe

Technical Data

Product Description

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

Additive	• Impact Modifier	
Features	• Ductile	• Paintable
	• Impact Modified	• 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/cm³	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 cm³/10min	ISO 1133
Molding Shrinkage ³		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 %	

Mechanical

	Nominal Value Unit	Test Method
Tensile Modulus		
-- ⁴	2050 MPa	ASTM D638
--	2050 MPa	ISO 527-2/1
Tensile Strength		
Yield ⁵	53.0 MPa	ASTM D638
Yield	52.0 MPa	ISO 527-2/50
Break ⁵	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 ⁵	50 %	ASTM D638
Break	50 %	ISO 527-2/50
Flexural Modulus		
50.0 mm Span ⁶	2000 MPa	ASTM D790
-- ⁷	2000 MPa	ISO 178
Flexural Stress		
-- ^{7,8}	75.0 MPa	ISO 178
Yield, 50.0 mm Span ⁶	75.0 MPa	ASTM D790
Taber Abrasion Resistance		Internal Method
1000 Cycles, 1000 g, CS-17 Wheel	30.0 mg	



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Impact	Nominal Value Unit	Test Method
Charpy Notched Impact Strength		
-30°C ⁹	25 kJ/m²	ISO 179/1eA
-30°C	20 kJ/m²	ISO 179/2C
-20°C	25 kJ/m²	ISO 179/2C
23°C ⁹	58 kJ/m²	ISO 179/1eA
23°C	30 kJ/m²	ISO 179/2C
Charpy Unnotched Impact Strength ⁹		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 ¹⁰	25 kJ/m²	ISO 180/1A
-30°C ¹⁰	35 kJ/m²	ISO 180/1A
23°C ¹⁰	50 kJ/m²	ISO 180/1A
Unnotched Izod Impact Strength ¹⁰		ISO 180/1U
-30°C	No Break	
23°C	No Break	
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
Thermal	Nominal Value Unit	Test Method
Heat Deflection Temperature		
0.45 MPa, Unannealed, 100 mm Span ¹¹	105 °C	ISO 75-2/Be
0.45 MPa, Unannealed, 64.0 mm Span ¹²	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 ¹¹	83.0 °C	ISO 75-2/Ae
1.8 MPa, Unannealed, 64.0 mm Span ¹²	83.0 °C	ISO 75-2/Af
Vicat Softening Temperature		
--	120 °C	ASTM D1525 ¹³ ISO 306/B50 ¹³
--	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 ¹⁴	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	



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Electrical	Nominal Value Unit	Test Method
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	

