

SABIC Innovative Plastics Xenoy[®] CL101 PBT+PC

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polycarbonate/Polybutylene Terephthalate (PBT) Blend, Unreinforced , Polyester, TP , Polybutylene Terephthalate (PBT)

Material Notes:

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.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Xenoy-CL101-PBTPC.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.22 g/cc	1.22 g/cc	ASTM D792
Density	1.22 g/cc	0.0441 lb/in ³	ISO 1183
Moisture Absorption	0.150 %	0.150 %	23 [°] C / 50% RH; ISO 62
Water Absorption at Saturation	0.50 %	0.50 %	ISO 62
Linear Mold Shrinkage, Flow	0.0070 - 0.011 cm/cm @Thickness 3.20 mm	0.0070 - 0.011 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	14 g/10 min @Load 5.00 kg, Temperature 250 [°] C	14 g/10 min @Load 11.0 lb, Temperature 482 [°] F	ASTM D1238
Melt Index of Compound	13 g/10 min @Load 5.00 kg, Temperature 250 [°] C	13 g/10 min @Load 11.0 lb, Temperature 482 [°] F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell L	89	89	ISO 2039-2
Hardness, H358/30	82.0 MPa	11900 psi	ISO 2039-1
Tensile Strength at Break	44.0 MPa	6380 psi	50 mm/min; ISO 527
	49.0 MPa	7110 psi	Type I, 50 mm/min; ASTM D638
Tensile Strength, Yield	52.0 MPa	7540 psi	50 mm/min; ISO 527
	53.0 MPa	7690 psi	Type I, 50 mm/min; ASTM D638
Elongation at Break	50 %	50 %	Type I, 50 mm/min; ASTM D638
	50 %	50 %	50 mm/min; ISO 527
Elongation at Yield	4.5 %	4.5 %	Type I, 50 mm/min; ASTM D638

Mechanical Properties	Metric	English	Comments : ISO 527
Tensile Modulus	2.05 GPa	297 ksi	50 mm/min; ASTM D638
	2.05 GPa	297 ksi	1 mm/min; ISO 527
Flexural Yield Strength	75.0 MPa	10900 psi	1.3 mm/min, 50 mm span; ASTM D790
	75.0 MPa	10900 psi	2 mm/min; ISO 178
Flexural Modulus	2.00 GPa	290 ksi	1.3 mm/min, 50 mm span; ASTM D790
	2.00 GPa	290 ksi	2 mm/min; ISO 178
Izod Impact, Notched	6.25 J/cm	11.7 ft-lb/in	ASTM D256
	4.50 J/cm	8.43 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Notched	6.00 J/cm	11.2 ft-lb/in	ASTM D256
	@Temperature 0.000 °C	@Temperature 32.0 °F	
Izod Impact, Notched (ISO)	50.0 kJ/m ²	23.8 ft-lb/in ²	80*10*4; ISO 180/1A
	25.0 kJ/m ²	11.9 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature -40.0 °C	@Temperature -40.0 °F	
Izod Impact, Notched (ISO)	35.0 kJ/m ²	16.7 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Unnotched (ISO)	NB	NB	80*10*4; ISO 180/1U
	NB	NB	80*10*4; ISO 180/1U
Charpy Impact Unnotched	NB	NB	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	NB	NB	Edgew 80*10*4 sp=62mm; ISO 179/1eU
Charpy Impact, Notched	5.80 J/cm ²	27.6 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	2.50 J/cm ²	11.9 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO

Mechanical Properties	Metric @Temperature -30.0 °C	English @Temperature -22.0 °F	179/1eA Comments
Dart Drop, Total Energy	50.0 J @Temperature 23.0 °C	36.9 ft-lb @Temperature 73.4 °F	ASTM D3763
Taber Abrasion, mg/1000 Cycles	30	30	CS-17, 1 kg; SABIC Method

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	90.0 Åµm/m-Å°C	50.0 Åµin/in-Å°F	ASTM E 831
	@Temperature -40.0 - 40.0 Å°C	@Temperature -40.0 - 104 Å°F	
CTE, linear, Transverse to Flow	90.0 Åµm/m-Å°C	50.0 Åµin/in-Å°F	ISO 11359-2
	@Temperature 23.0 - 80.0 Å°C	@Temperature 73.4 - 176 Å°F	
CTE, linear, Transverse to Flow	95.0 Åµm/m-Å°C	52.8 Åµin/in-Å°F	ASTM E 831
	@Temperature -40.0 - 40.0 Å°C	@Temperature -40.0 - 104 Å°F	
Thermal Conductivity	0.180 W/m-K	1.25 BTU-in/hr-ftÅ²- Å°F	ISO 8302
Deflection Temperature at 0.46 MPa (66 psi)	105 Å°C	221 Å°F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
Deflection Temperature at 1.8 MPa (264 psi)	83.0 Å°C	181 Å°F	Flatw 80*10*4 sp=64mm; ISO 75/Åf
Vicat Softening Point	83.0 Å°C	181 Å°F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	120 Å°C	248 Å°F	Rate B/50; ASTM D1525
	120 Å°C	248 Å°F	Rate B/50; ISO 306
	123 Å°C	253 Å°F	Rate B/120; ISO 306
	155 Å°C	311 Å°F	Rate A/50; ISO 306
Flammability, UL94	HB	HB	UL 94 by SABIC-IP
	@Thickness 1.50 mm	@Thickness 0.0591 in	

Electrical Properties	Metric	English	Comments
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Volume Resistivity Electrical Properties	$\geq 1.00e+14$ ohm-cm Metric	$\geq 1.00e+14$ ohm-cm English	IEC 60093 Comments
Surface Resistance	$\geq 1.00e+15$ ohm	$\geq 1.00e+15$ ohm	ROA; IEC 60093
Dielectric Constant	3.3	3.3	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.3	3.3	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
Dielectric Strength	17.0 kV/mm	432 kV/in	in oil; IEC 60243-1
	@Thickness 3.20 mm	@Thickness 0.126 in	
	18.0 kV/mm	457 kV/in	short time; IEC 60243-1
	@Thickness 1.00 mm	@Thickness 0.0394 in	
Dissipation Factor	0.0020	0.0020	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
	0.020	0.020	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

Descriptive Properties	Value	Comments
Ball Pressure Test, 75 \hat{A} C +/- 2 \hat{A} C	PASSES	IEC 60695-10-2

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