

SABIC Innovative Plastics Xenoy® CL100 PBT+PC

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

Material Notes:

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.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Xenoy-CL100-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 %	23Â°C / 50% RH; ISO 62
Water Absorption at Saturation	0.50 %	0.50 %	ISO 62
Linear Mold Shrinkage, Flow	0.0070 - 0.010 cm/cm @Thickness 3.20 mm	0.0070 - 0.010 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	14 g/10 min @Load 5.00 kg, Temperature 250 Â°C	14 g/10 min @Load 11.0 lb, Temperature 482 Â°F	ASTM D1238
Melt Index of Compound	13 g/10 min @Load 5.00 kg, Temperature 250 Â°C	13 g/10 min @Load 11.0 lb, Temperature 482 Â°F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, H358/30	96.0 MPa	13900 psi	ISO 2039-1
Tensile Strength at Break	55.0 MPa	7980 psi	Type I, 50 mm/min; ASTM D638
	56.0 MPa	8120 psi	50 mm/min; ISO 527
Tensile Strength, Yield	55.0 MPa	7980 psi	50 mm/min; ISO 527
	56.0 MPa	8120 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	5.0 %	5.0 %	Type I, 50 mm/min; ASTM D638
	5.0 %	5.0 %	50 mm/min; ISO 527

Mechanical Properties	Metric ^{ISO 527}	English	Comments ^{ISO 527}
	2.20 GPa	319 ksi	5 mm/min; ASTM D638
Flexural Yield Strength	80.0 MPa	11600 psi	2 mm/min; ISO 178
	85.0 MPa	12300 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.05 GPa	297 ksi	1.3 mm/min, 50 mm span; ASTM D790
	2.05 GPa	297 ksi	2 mm/min; ISO 178
Izod Impact, Notched	7.00 J/cm	13.1 ft-lb/in	ASTM D256
	1.60 J/cm	3.00 ft-lb/in	ASTM D256
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	1.70 J/cm	3.18 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	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
	20.0 kJ/m ²	9.52 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	45.0 kJ/m ²	21.4 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature 0.000 °C	@Temperature 32.0 °F	
Izod Impact, Unnotched (ISO)	NB	NB	80*10*4; ISO 180/1U
	NB	NB	80*10*4; ISO 180/1U
	@Temperature -30.0 °C	@Temperature -22.0 °F	
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
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	5.50 J/cm ²	26.2 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA

Mechanical Properties	Metric	English	Comments
	2.00 J/cm ^Å	9.52 ft-lb/in ^Å	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	@Temperature -30.0 Å°C	@Temperature -22.0 Å°F	
Dart Drop, Total Energy	50.0 J	36.9 ft-lb	ASTM D3763
	@Temperature 23.0 Å°C	@Temperature 73.4 Å°F	
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	
	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	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	
	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	
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)	110 Å°C	230 Å°F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
Deflection Temperature at 1.8 MPa (264 psi)	90.0 Å°C	194 Å°F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
	90.0 Å°C	194 Å°F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	90.0 Å°C	194 Å°F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	125 Å°C	257 Å°F	Rate B/50; ASTM D1525
	125 Å°C	257 Å°F	Rate B/50; ISO 306
	127 Å°C	261 Å°F	Rate B/120; ISO 306
	160 Å°C	320 Å°F	Rate A/50; ISO 306
Flammability, UL94	HB	HB	UL 94
	@Thickness 1.50 mm	@Thickness 0.0591 in	

Thermal Properties	Metric	English	Comments
Electrical Properties	Metric	English	Comments
Volume Resistivity	$\geq 1.00\text{e}+14$ ohm-cm	$\geq 1.00\text{e}+14$ ohm-cm	IEC 60093
Surface Resistance	$\geq 1.00\text{e}+15$ ohm	$\geq 1.00\text{e}+15$ 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	

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