

SABIC Innovative Plastics Xenoy[®] 6370 PBT+PC

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

Material Notes:

30% glass-reinforced, impact modified thermoplastic alloy. Improved toughness and ductility.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Xenoy-6370-PBTPC.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.44 g/cc	1.44 g/cc	ASTM D792
Density	1.44 g/cc	0.0520 lb/in ³	ISO 1183
Water Absorption	0.090 % @Time 86400 sec	0.090 % @Time 24.0 hour	ASTM D570
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	0.0030 - 0.0040 cm/cm @Thickness 0.750 - 2.30 mm	0.0030 - 0.0040 in/in @Thickness 0.0295 - 0.0906 in	SABIC Method
	0.0040 - 0.0050 cm/cm @Thickness 2.30 - 4.60 mm	0.0040 - 0.0050 in/in @Thickness 0.0906 - 0.181 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.0040 - 0.0070 cm/cm @Thickness 0.750 - 2.30 mm	0.0040 - 0.0070 in/in @Thickness 0.0295 - 0.0906 in	SABIC Method
	0.0070 - 0.0090 cm/cm @Thickness 2.30 - 4.60 mm	0.0070 - 0.0090 in/in @Thickness 0.0906 - 0.181 in	SABIC Method
Melt Flow	24 g/10 min @Load 5.00 kg, Temperature 250 [°] C	24 g/10 min @Load 11.0 lb, Temperature 482 [°] F	ASTM D1238
Melt Index of Compound	12 g/10 min @Load 5.00 kg, Temperature 250 [°] C	12 g/10 min @Load 11.0 lb, Temperature 482 [°] F	MVR [cm ³ /10 min]; ISO 1133
	19 g/10 min @Load 5.00 kg, Temperature 265 [°] C	19 g/10 min @Load 11.0 lb, Temperature 509 [°] F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	109	109	ASTM D785
Tensile Strength at Break	91.0 MPa	13200 psi	Type I, 5 mm/min; ASTM D638
Tensile Strength, Yield	97.0 MPa	14100 psi	Type I, 5 mm/min; ASTM D638
	105 MPa	15200 psi	5 mm/min; ISO 527
Elongation at Break	105 %	105 %	5 mm/min; ISO 527
Elongation at Yield	3.0 %	3.0 %	Type I, 5 mm/min; ASTM D638
	3.0 %	3.0 %	5 mm/min; ISO 527
Tensile Modulus	8.50 GPa	1230 ksi	1 mm/min; ISO 527
	9.75 GPa	1410 ksi	5 mm/min; ASTM D638
Flexural Strength	138 MPa	20000 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Yield Strength	150 MPa	21800 psi	1.3 mm/min, 50 mm span; ASTM D790
	154 MPa	22300 psi	2 mm/min; ISO 178
Flexural Modulus	5.37 GPa	779 ksi	1.3 mm/min, 50 mm span; ASTM D790
	7.75 GPa	1120 ksi	2 mm/min; ISO 178
Izod Impact, Notched	1.70 J/cm	3.18 ft-lb/in	ASTM D256
	1.12 J/cm	2.10 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Unnotched	6.40 J/cm	12.0 ft-lb/in	ASTM D4812
Izod Impact, Notched (ISO)	10.0 kJ/m ²	4.76 ft-lb/in ²	80*10*4; ISO 180/1A
	6.00 kJ/m ²	2.86 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	0.900 J/cm ²	4.28 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	5.00 J	3.69 ft-lb	Instrumented Impact Energy @ peak; ASTM D3763
	17.0 J	12.5 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Mechanical Properties	Metric	English	Comments
Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	19.8 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	11.0 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ASTM E 831
	@Temperature 60.0 - 138 $\text{Å}^\circ\text{C}$	@Temperature 140 - 280 $\text{Å}^\circ\text{F}$	
	27.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	15.0 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ASTM E 831
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
	27.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	15.0 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ISO 11359-2
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
CTE, linear, Transverse to Flow	110 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	61.1 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ISO 11359-2
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
	110 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	61.1 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ASTM E 831
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
Deflection Temperature at 0.46 MPa (66 psi)	204 $\text{Å}^\circ\text{C}$	399 $\text{Å}^\circ\text{F}$	unannealed; ASTM D648
	@Thickness 6.40 mm	@Thickness 0.252 in	
Deflection Temperature at 1.8 MPa (264 psi)	155 $\text{Å}^\circ\text{C}$	311 $\text{Å}^\circ\text{F}$	Flatw 80*10*4 sp=64mm; ISO 75/Af
	149 $\text{Å}^\circ\text{C}$	300 $\text{Å}^\circ\text{F}$	
	@Thickness 6.40 mm	@Thickness 0.252 in	unannealed; ASTM D648
	163 $\text{Å}^\circ\text{C}$	325 $\text{Å}^\circ\text{F}$	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	148 $\text{Å}^\circ\text{C}$	298 $\text{Å}^\circ\text{F}$	Rate B/50; ISO 306
	150 $\text{Å}^\circ\text{C}$	302 $\text{Å}^\circ\text{F}$	Rate B/120; ISO 306
	153 $\text{Å}^\circ\text{C}$	307 $\text{Å}^\circ\text{F}$	Rate B/50; ASTM D1525
UL RTI, Electrical	140 $\text{Å}^\circ\text{C}$	284 $\text{Å}^\circ\text{F}$	UL 746B
UL RTI, Mechanical with Impact	130 $\text{Å}^\circ\text{C}$	266 $\text{Å}^\circ\text{F}$	UL 746B
UL RTI, Mechanical without Impact	140 $\text{Å}^\circ\text{C}$	284 $\text{Å}^\circ\text{F}$	UL 746B
Flammability, UL94	HB	HB	UL 94
	@Thickness 1.50 mm	@Thickness 0.0591 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	4.80e+15 ohm-cm	4.80e+15 ohm-cm	ASTM D257
Dielectric Constant	4.0	4.0	ASTM D150
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	4.0	4.0	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Strength	20.0 kV/mm	508 kV/in	in air; ASTM D149
	@Thickness 3.20 mm	@Thickness 0.126 in	
Dielectric Strength	27.0 kV/mm	686 kV/in	in oil; ASTM D149
	@Thickness 1.60 mm	@Thickness 0.0630 in	
Dissipation Factor	0.0030	0.0030	ASTM D150
	@Frequency 100 Hz	@Frequency 100 Hz	
Dissipation Factor	0.020	0.020	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Arc Resistance	120 - 180 sec	120 - 180 sec	Tungsten; ASTM D495
Comparative Tracking Index	250 - 400 V	250 - 400 V	UL 746A
Hot Wire Ignition, HWI	60 - 120 sec	60 - 120 sec	UL 746A
High Amp Arc Ignition, HAI	15 - 30 arcs	15 - 30 arcs	UL 746A
High Voltage Arc-Tracking Rate, HVTR	10.0 - 25.4 mm/min	0.394 - 1.00 in/min	UL 746A

Descriptive Properties	Value	Comments
Specific Volume	0.7cm ³ /g	ASTM D792

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