

SABIC Innovative Plastics Xenoy[®] HX5600HP PBT+PC

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

Material Notes:

Xenoy HX5600HP is PBT based semi-crystalline blend with balanced flow and impact properties. Improved chemical resistance against lab disinfectants and chemicals for healthcare enclosure and housing applications. Healthcare management of change, biocompatible (ISO10993 or USP Class VI). EtO, Gamma and Steam sterilizable.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Xenoy-HX5600HP-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	0.0500 %	0.0500 %	23 [°] C / 50% RH; ISO 62
Water Absorption at Saturation	0.40 %	0.40 %	ISO 62
Viscosity	260000 cP	260000 cP	Melt Viscosity, 260 [°] C, 1500 sec-1; ISO 11443
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	11 g/10 min @Load 5.00 kg, Temperature 250 [°] C	11 g/10 min @Load 11.0 lb, Temperature 482 [°] F	ASTM D1238
Melt Index of Compound	10 g/10 min @Load 5.00 kg, Temperature 250 [°] C	10 g/10 min @Load 11.0 lb, Temperature 482 [°] F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	52.0 MPa	7540 psi	Type I, 50 mm/min; ASTM D638
	55.0 MPa	7980 psi	50 mm/min; ISO 527
Tensile Strength, Yield	50.0 MPa	7250 psi	Type I, 50 mm/min; ASTM D638
	50.0 MPa	7250 psi	50 mm/min; ISO 527
Elongation at Break	100 %	100 %	50 mm/min; ISO 527
	150 %	150 %	Type I, 50 mm/min; ASTM D638
Elongation at Yield	5.0 %	5.0 %	Type I, 50 mm/min; ASTM D638

Mechanical Properties	Metric	English	Comments : ISO 527
Tensile Modulus	2.05 GPa	297 ksi	1 mm/min; ISO 527
	2.10 GPa	305 ksi	5 mm/min; ASTM D638
Flexural Yield Strength	70.0 MPa	10200 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
	2.05 GPa	297 ksi	2 mm/min; ISO 178
Izod Impact, Notched	7.50 J/cm	14.1 ft-lb/in	ASTM D256
	6.00 J/cm @Temperature -30.0 °C	11.2 ft-lb/in @Temperature -22.0 °F	ASTM D256
Izod Impact, Notched (ISO)	55.0 kJ/m ²	26.2 ft-lb/in ²	80*10*4; ISO 180/1A
	25.0 kJ/m ² @Temperature -30.0 °C	11.9 ft-lb/in ² @Temperature -22.0 °F	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	NB @Temperature -40.0 °C	NB @Temperature -40.0 °F	80*10*4; ISO 180/1U
	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	Edgew 80*10*3 sp=62mm; ISO 179/1eU
Charpy Impact Unnotched	6.00 J/cm ²	28.6 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Charpy Impact, Notched	80.0 J @Temperature 23.0 °C	59.0 ft-lb @Temperature 73.4 °F	ASTM D3763

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 -40.0 - 40.0 Å°C	@Temperature -40.0 - 104 Å°F	

Thermal Properties	100 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$ Metric	55.6 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$ English	Comments ISO 11359-2
	@Temperature 23.0 - 60.0 $\text{Å}^\circ\text{C}$	@Temperature 73.4 - 140 $\text{Å}^\circ\text{F}$	
CTE, linear, Transverse to Flow	90.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	50.0 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ASTM E 831
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
	90.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	50.0 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ISO 11359-2
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
Deflection Temperature at 0.46 MPa (66 psi)	105 $\text{Å}^\circ\text{C}$	221 $\text{Å}^\circ\text{F}$	Flatw 80*10*4 sp=64mm; ISO 75/Bf
Deflection Temperature at 1.8 MPa (264 psi)	80.0 $\text{Å}^\circ\text{C}$	176 $\text{Å}^\circ\text{F}$	Flatw 80*10*4 sp=64mm; ISO 75/Af
	80.0 $\text{Å}^\circ\text{C}$	176 $\text{Å}^\circ\text{F}$	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	123 $\text{Å}^\circ\text{C}$	253 $\text{Å}^\circ\text{F}$	Rate B/120; ISO 306
	125 $\text{Å}^\circ\text{C}$	257 $\text{Å}^\circ\text{F}$	Rate B/50; ASTM D1525
	125 $\text{Å}^\circ\text{C}$	257 $\text{Å}^\circ\text{F}$	Rate B/50; ISO 306

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