

SABIC Innovative Plastics Xenoy[®] HX5600HP PBT+PC (Asia Pacific)

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-Asia-Pacific.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 μm/m-°C | 50.0 μin/in-°F | ASTM E 831 |
| | @Temperature -40.0 - 40.0 °C | @Temperature -40.0 - 104 °F | |
| | 90.0 μm/m-°C | 50.0 μin/in-°F | ISO 11359-2 |
| | @Temperature -40.0 - 40.0 °C | @Temperature -40.0 - 104 °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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