

SABIC Innovative Plastics XYLEX HX8300HP PC+POLYESTER

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polycarbonate/PET Polyester Blend , Polyester, TP , Polyethylene Terephthalate (PET)

Material Notes:

Medium flow, Transparent PC/Polyester alloy. For medical devices and pharmaceutical applications. Healthcare management of change, biocompatible (ISO 10993 or USP Class VI), food contact compliant. EtO sterilizable.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-XYLEX-HX8300HP-PCPOLYESTER.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.20 g/cc	1.20 g/cc	ASTM D792
Density	1.17 g/cc	0.0423 lb/in ³	ISO 1183
Moisture Absorption	0.150 %	0.150 %	23 ^o C / 50% RH; ISO 62
Water Absorption at Saturation	0.49 %	0.49 %	ISO 62
Linear Mold Shrinkage, Flow	0.0050 - 0.0080 cm/cm @Thickness 3.20 mm	0.0050 - 0.0080 in/in @Thickness 0.126 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.0040 - 0.0060 cm/cm @Thickness 3.20 mm	0.0040 - 0.0060 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	15 g/10 min @Load 2.16 kg, Temperature 265 ^o C	15 g/10 min @Load 4.76 lb, Temperature 509 ^o F	ASTM D1238
Melt Index of Compound	15 g/10 min @Load 2.16 kg, Temperature 265 ^o C	15 g/10 min @Load 4.76 lb, Temperature 509 ^o F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	73	73	10S reading; ASTM D2240
Tensile Strength at Break	46.0 MPa	6670 psi	Type I, 50 mm/min; ASTM D638
	54.0 MPa	7830 psi	50 mm/min; ISO 527
Tensile Strength, Yield	47.0 MPa	6820 psi	Type I, 50 mm/min; ASTM D638
	55.0 MPa	7980 psi	50 mm/min; ISO 527
Elongation at Break	150 %	150 %	Type I, 50 mm/min; ASTM D638
	>= 200 %	>= 200 %	50 mm/min; ISO 527
Elongation at Yield	5.0 %	5.0 %	Type I, 50 mm/min; ASTM D638

Mechanical Properties	Metric	English	Comments
			50 mm/min; ISO 527
Tensile Modulus	1.52 GPa	220 ksi	50 mm/min; ASTM D638
	1.60 GPa	232 ksi	1 mm/min; ISO 527
Flexural Strength	78.0 MPa	11300 psi	2 mm/min; ISO 178
Flexural Yield Strength	71.0 MPa	10300 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	1.68 GPa	244 ksi	1.3 mm/min, 50 mm span; ASTM D790
	1.70 GPa	247 ksi	2 mm/min; ISO 178
Izod Impact, Notched	11.2 J/cm	21.0 ft-lb/in	ASTM D256
	0.0500 J/cm	0.0937 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Notched (ISO)	8.00 kJ/m ²	3.81 ft-lb/in ²	80*10*4; ISO 180/1A
	<= 1.00 kJ/m ²	<= 0.476 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	5.00 kJ/m ²	2.38 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature -10.0 °C	@Temperature 14.0 °F	
Charpy Impact, Notched	7.00 J/cm ²	33.3 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	95.0 J	70.1 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	90.0 μm/m-°C	50.0 μin/in-°F	ISO 11359-2
	@Temperature 23.0 - 60.0 °C	@Temperature 73.4 - 140 °F	
	105 μm/m-°C	58.3 μin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	105 μm/m-°C	58.3 μin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	

Thermal Properties	Metric $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	English $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	Comments
CTE, linear, Transverse to Flow	@Temperature 23.0 - 60.0 Å°C	@Temperature 73.4 - 140 Å°F	ISO 11359-2
	105 Å $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	58.3 Å $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ASTM E 831
	@Temperature -40.0 - 40.0 Å°C	@Temperature -40.0 - 104 Å°F	
	105 Å $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	58.3 Å $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ISO 11359-2
	@Temperature -40.0 - 40.0 Å°C	@Temperature -40.0 - 104 Å°F	
Thermal Conductivity	0.230 W/m-K	1.60 BTU-in/hr-ftÅ²-Å°F	ISO 8302
Hot Ball Pressure Test	<= 85.0 Å°C	<= 185 Å°F	IEC 60695-10-2
Deflection Temperature at 0.46 MPa (66 psi)	79.0 Å°C	174 Å°F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Deflection Temperature at 1.8 MPa (264 psi)	80.0 Å°C	176 Å°F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
	75.0 Å°C	167 Å°F	
	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D648
Vicat Softening Point	92.0 Å°C	198 Å°F	Rate B/50; ISO 306
	96.0 Å°C	205 Å°F	Rate B/120; ISO 306
	96.0 Å°C	205 Å°F	Rate B/50; ASTM D1525
Glow Wire Test	750 Å°C	1380 Å°F	IEC 60695-2-12
	@Thickness 1.00 mm	@Thickness 0.0394 in	

Optical Properties	Metric	English	Comments
Refractive Index	1.539	1.539	ISO 489
Haze	<= 2.0 %	<= 2.0 %	ASTM D1003
	@Thickness 2.54 mm	@Thickness 0.100 in	
Transmission, Visible	88 %	88 %	2.54 mm; ASTM D1003

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+15 ohm-cm	>= 1.00e+15 ohm-cm	ASTM D257
Surface Resistance	>= 1.00e+15 ohm	>= 1.00e+15 ohm	ASTM D257

Comparative Tracking Index
Electrical Properties

≥ 600 V
Metric

≥ 600 V
English

UL 746A
Comments

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