

SABIC Innovative Plastics Valox[®] HX3061HP PBT

Category : Polymer , Thermoplastic , Polyester, TP , Polybutylene Terephthalate (PBT)

Material Notes:

PBT for compounding/fibers only. Not intended for injection molding. Biocompatible. Melt viscosity: 250C at 21.6 kgf is 1450-1850 poise.

Available in Natural color (1001) only.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Valox-HX3061HP-PBT.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.31 g/cc	1.31 g/cc	ASTM D792
Density	1.31 g/cc	0.0473 lb/in ³	ISO 1183
Moisture Absorption	0.0800 %	0.0800 %	23 [°] C / 50% RH; ISO 62
Water Absorption at Saturation	0.34 %	0.34 %	ISO 62
Viscosity	100000 cP	100000 cP	Melt Viscosity; SABIC Method
Linear Mold Shrinkage, Flow	0.015 - 0.020 cm/cm @Thickness 3.20 mm	0.015 - 0.020 in/in @Thickness 0.126 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.015 - 0.020 cm/cm @Thickness 3.20 mm	0.015 - 0.020 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	50 g/10 min @Load 2.16 kg, Temperature 250 [°] C	50 g/10 min @Load 4.76 lb, Temperature 482 [°] F	ASTM D1238
Melt Index of Compound	45 g/10 min @Load 2.16 kg, Temperature 250 [°] C	45 g/10 min @Load 4.76 lb, Temperature 482 [°] F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	26.0 MPa	3770 psi	Type I, 50 mm/min; ASTM D638
	49.0 MPa	7110 psi	50 mm/min; ISO 527
Tensile Strength, Yield	50.0 MPa	7250 psi	50 mm/min; ISO 527
	58.0 MPa	8410 psi	Type I, 50 mm/min; ASTM D638
Elongation at Break	8.6 %	8.6 %	50 mm/min; ISO 527
	140 %	140 %	Type I, 50 mm/min; ASTM D638
Elongation at Yield	3.2 %	3.2 %	50 mm/min; ISO 527

Mechanical Properties	Metric	English	Comments
			Type I, 50 mm/min; ASTM D638
Tensile Modulus	2.60 GPa	377 ksi	5 mm/min; ASTM D638
	2.60 GPa	377 ksi	1 mm/min; ISO 527
Flexural Yield Strength	80.0 MPa	11600 psi	2 mm/min; ISO 178
	83.0 MPa	12000 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.20 GPa	319 ksi	2 mm/min; ISO 178
	2.40 GPa	348 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	0.370 J/cm	0.693 ft-lb/in	ASTM D256
	0.350 J/cm	0.656 ft-lb/in	ASTM D256
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Izod Impact, Notched (ISO)	4.00 kJ/mÂ²	1.90 ft-lb/inÂ²	80*10*4; ISO 180/1A
	3.00 kJ/mÂ²	1.43 ft-lb/inÂ²	80*10*4; ISO 180/1A
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Charpy Impact, Notched	0.400 J/cmÂ²	1.90 ft-lb/inÂ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	25.0 J	18.4 ft-lb	ASTM D3763
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	76.0 Âµm/m-Â°C	42.2 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
	76.0 Âµm/m-Â°C	42.2 Âµin/in-Â°F	ISO 11359-2
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
CTE, linear, Transverse to Flow	78.0 Âµm/m-Â°C	43.3 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
	78.0 Âµm/m-Â°C	43.3 Âµin/in-Â°F	ISO 11359-2
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	49.0 Â°C	120 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	49.0 Â°C @Thickness 3.20 mm	120 Â°F @Thickness 0.126 in	unannealed; ASTM D648
Vicat Softening Point	167 Â°C	333 Â°F	Rate B/50; ASTM D1525
	169 Â°C	336 Â°F	Rate B/120; ISO 306
	173 Â°C	343 Â°F	Rate B/50; ISO 306

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