

SABIC Innovative Plastics Valox® HX215HP PBT

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

Material Notes:

High Flow, Unreinforced, Polybutylene Terephthalate (PBT). For medical devices and pharmaceutical applications. Healthcare management of change, biocompatible (ISO 10993 or USP Class VI), food contact compliant. Available in limited colors.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Valox-HX215HP-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 ^o C / 50% RH; ISO 62
Water Absorption at Saturation	0.34 %	0.34 %	ISO 62
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
Melt Flow	80 g/10 min @Load 2.16 kg, Temperature 250 ^o C	80 g/10 min @Load 4.76 lb, Temperature 482 ^o F	ASTM D1238
Melt Index of Compound	70 g/10 min @Load 2.16 kg, Temperature 250 ^o C	70 g/10 min @Load 4.76 lb, Temperature 482 ^o 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
	60.0 MPa	8700 psi	Type I, 50 mm/min; ASTM D638
Elongation at Break	10 %	10 %	Type I, 50 mm/min; ASTM D638
	10 %	10 %	50 mm/min; ISO 527
Elongation at Yield	3.2 %	3.2 %	50 mm/min; ISO 527
	3.7 %	3.7 %	Type I, 50 mm/min; ASTM D638
Tensile Modulus	2.60 GPa	377 ksi	1 mm/min; ISO 527

Mechanical Properties	2.70 GPa Metric	392 ksi English	5 mm/min: ASTM D638 Comments
Flexural Yield Strength	80.0 MPa	11600 psi	2 mm/min; ISO 178
	89.0 MPa	12900 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.26 GPa	328 ksi	2 mm/min; ISO 178
	2.50 GPa	363 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	0.300 J/cm	0.562 ft-lb/in	ASTM D256
	0.300 J/cm @Temperature -30.0 Â°C	0.562 ft-lb/in @Temperature -22.0 Â°F	ASTM D256
Izod Impact, Notched (ISO)	2.00 kJ/mÂ²	0.952 ft-lb/inÂ²	80*10*4; ISO 180/1A
	2.00 kJ/mÂ² @Temperature -30.0 Â°C	0.952 ft-lb/inÂ² @Temperature -22.0 Â°F	80*10*4; ISO 180/1A
Charpy Impact, Notched	0.600 J/cmÂ²	2.86 ft-lb/inÂ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	20.0 J	14.8 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	
Deflection Temperature at 0.46 MPa (66 psi)	150 Â°C	302 Â°F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Deflection Temperature at 1.8 MPa	49.0 Â°C	120 Â°F	

(264 psi) Thermal Properties	Metric	English	Flatw 80*10*4 sp=64mm; ISO 75/Af Comments
	54.0 Â°C	129 Â°F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	180 Â°C	356 Â°F	Rate B/50; ASTM D1525
	180 Â°C	356 Â°F	Rate B/120; ISO 306
	183 Â°C	361 Â°F	Rate B/50; ISO 306

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