

SABIC Innovative Plastics Valox® HX420HP PBT

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

Material Notes:

Medium Flow, 30% Glass filled, Polybutylene Terephthalate (PBT) resin. 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-HX420HP-PBT.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.53 g/cc	1.53 g/cc	ASTM D792
Density	1.53 g/cc	0.0553 lb/in ³	ISO 1183
Water Absorption	0.060 % @Time 86400 sec	0.060 % @Time 24.0 hour	ASTM D570
Moisture Absorption	0.0600 %	0.0600 %	23Â°C / 50% RH; ISO 62
Water Absorption at Saturation	0.26 %	0.26 %	ISO 62
Linear Mold Shrinkage, Flow	0.0030 - 0.0050 cm/cm	0.0030 - 0.0050 in/in	SABIC Method
	@Thickness 1.50 - 3.20 mm	@Thickness 0.0591 - 0.126 in	
	0.0030 - 0.0080 cm/cm @Thickness 3.20 mm	0.0030 - 0.0080 in/in @Thickness 0.126 in	
Linear Mold Shrinkage, Transverse	0.0050 - 0.0080 cm/cm	0.0050 - 0.0080 in/in	SABIC Method
	@Thickness 3.20 - 4.60 mm	@Thickness 0.126 - 0.181 in	
	0.0040 - 0.0060 cm/cm @Thickness 1.50 - 3.20 mm	0.0040 - 0.0060 in/in @Thickness 0.0591 - 0.126 in	
Melt Flow	0.0060 - 0.0090 cm/cm	0.0060 - 0.0090 in/in	SABIC Method
	@Thickness 3.20 - 4.60 mm	@Thickness 0.126 - 0.181 in	
	26 g/10 min @Load 2.16 kg, Temperature 250 Â°C	26 g/10 min @Load 4.76 lb, Temperature 482 Â°F	
Melt Index of Compound	20 g/10 min @Load 2.16 kg, Temperature 250 Â°C	20 g/10 min @Load 4.76 lb, Temperature 482 Â°F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	118	118	ASTM D785
Tensile Strength at Break	120 MPa	17400 psi	Type I, 5 mm/min; ASTM D638
	125 MPa	18100 psi	5 mm/min; ISO 527
Tensile Strength, Yield	120 MPa	17400 psi	Type I, 5 mm/min; ASTM D638
	125 MPa	18100 psi	5 mm/min; ISO 527
Elongation at Break	2.0 %	2.0 %	5 mm/min; ISO 527
	3.0 %	3.0 %	Type I, 5 mm/min; ASTM D638
Elongation at Yield	2.0 %	2.0 %	5 mm/min; ISO 527
	3.0 %	3.0 %	Type I, 5 mm/min; ASTM D638
Tensile Modulus	9.30 GPa	1350 ksi	5 mm/min; ASTM D638
	9.30 GPa	1350 ksi	1 mm/min; ISO 527
Flexural Strength	189 MPa	27400 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Yield Strength	195 MPa	28300 psi	2 mm/min; ISO 178
Flexural Modulus	7.58 GPa	1100 ksi	1.3 mm/min, 50 mm span; ASTM D790
	8.50 GPa	1230 ksi	2 mm/min; ISO 178
Izod Impact, Notched	0.850 J/cm	1.59 ft-lb/in	ASTM D256
	0.800 J/cm	1.50 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Unnotched	8.01 J/cm	15.0 ft-lb/in	ASTM D4812
Izod Impact, Notched (ISO)	8.00 kJ/mÂ²	3.81 ft-lb/inÂ²	80*10*4; ISO 180/1A
	7.00 kJ/mÂ²	3.33 ft-lb/inÂ²	80*10*4; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Unnotched (ISO)	45.0 kJ/mÂ²	21.4 ft-lb/inÂ²	80*10*4; ISO 180/1U
	45.0 kJ/mÂ²	21.4 ft-lb/inÂ²	80*10*4; ISO 180/1U
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	0.500 J/cmÂ²	2.38 ft-lb/inÂ²	Edgew 80*10*4 sp=62mm; ISO

Charpy Impact, Notched Mechanical Properties	Metric	English	179/1eA Comments
Dart Drop, Total Energy	10.0 J @Temperature 23.0 Â°C	7.38 ft-lb @Temperature 73.4 Â°F	ASTM D3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	25.0 Âµm/m-Â°C	13.9 Âµin/in-Â°F	ISO 11359-2
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
	25.2 Âµm/m-Â°C	14.0 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
	25.2 Âµm/m-Â°C	14.0 Âµin/in-Â°F	ASTM E 831
	@Temperature 60.0 - 138 Â°C	@Temperature 140 - 280 Â°F	
CTE, linear, Transverse to Flow	120 Âµm/m-Â°C	66.7 Âµin/in-Â°F	ISO 11359-2
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
Deflection Temperature at 0.46 MPa (66 psi)	215 Â°C	419 Â°F	unannealed; ASTM D648
	@Thickness 6.40 mm	@Thickness 0.252 in	
Deflection Temperature at 1.8 MPa (264 psi)	200 Â°C	392 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	207 Â°C	405 Â°F	
Vicat Softening Point	@Thickness 6.40 mm	@Thickness 0.252 in	unannealed; ASTM D648
	215 Â°C	419 Â°F	
	215 Â°C	419 Â°F	Rate B/50; ISO 306
	220 Â°C	428 Â°F	

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 3.20e+16 ohm-cm	>= 3.20e+16 ohm-cm	ASTM D257
Dielectric Constant	3.7	3.7	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.8	3.8	ASTM D150
	@Frequency 100 Hz	@Frequency 100 Hz	

Electrical Properties	18.7 kV/mm Metric	475 kV/in English	Comments
	@Thickness 3.20 mm	@Thickness 0.126 in	
	24.8 kV/mm	630 kV/in	in oil; ASTM D149
	@Thickness 1.60 mm	@Thickness 0.0630 in	
Dissipation Factor	0.0020	0.0020	ASTM D150
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.020	0.020	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

Descriptive Properties	Value	Comments
Specific Volume	0.65cm ³ /g	ASTM D792

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China