

SABIC Innovative Plastics Valox® SHF436HR PBT

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

Material Notes:

PBT, Super High Flow, 30% glass reinforced, hydrolytically resistant.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Valox-SHF436HR-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
Moisture Absorption	0.0600 %	0.0600 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.28 %	0.28 %	ISO 62
Linear Mold Shrinkage, Flow	0.0030 - 0.0050 cm/cm @Thickness 3.20 mm	0.0030 - 0.0050 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	30 g/10 min @Load 2.16 kg, Temperature 250 °C	30 g/10 min @Load 4.76 lb, Temperature 482 °F	ASTM D1238
Melt Index of Compound	30 g/10 min @Load 2.16 kg, Temperature 250 °C	30 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	111 MPa	16100 psi	Type I, 5 mm/min; ASTM D638
	117 MPa	17000 psi	5 mm/min; ISO 527
Tensile Strength, Yield	111 MPa	16100 psi	Type I, 5 mm/min; ASTM D638
	117 MPa	17000 psi	5 mm/min; ISO 527
Elongation at Break	2.0 %	2.0 %	Type I, 5 mm/min; ASTM D638
	2.0 %	2.0 %	5 mm/min; ISO 527
Elongation at Yield	2.0 %	2.0 %	Type I, 5 mm/min; ASTM D638
	2.0 %	2.0 %	5 mm/min; ISO 527
Tensile Modulus	9.49 GPa	1380 ksi	1 mm/min; ISO 527
	11.9 GPa	1730 ksi	5 mm/min; ASTM D638

Mechanical Properties	Metric	English	Comments
	165 MPa	23900 psi	2 mm/min; ISO 178
Flexural Modulus	7.72 GPa	1120 ksi	2 mm/min; ISO 178
	8.70 GPa	1260 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	0.920 J/cm	1.72 ft-lb/in	ASTM D256
	0.950 J/cm	1.78 ft-lb/in	ASTM D256
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Izod Impact, Notched (ISO)	8.00 kJ/mÂ²	3.81 ft-lb/inÂ²	80*10*4; ISO 180/1A
	8.00 kJ/mÂ²	3.81 ft-lb/inÂ²	80*10*4; ISO 180/1A
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Charpy Impact, Notched	0.800 J/cmÂ²	3.81 ft-lb/inÂ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	6.00 J	4.43 ft-lb	ASTM D3763
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	100 Âµm/m-Â°C	55.6 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
	100 Âµm/m-Â°C	55.6 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	30.0 Âµm/m-Â°C	16.7 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
	30.0 Âµm/m-Â°C	16.7 Âµin/in-Â°F	ISO 11359-2
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
Deflection Temperature at 1.8 MPa (264 psi)	206 Â°C	403 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	214 Â°C	417 Â°F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	

Vicat Softening Point Thermal Properties	200 Â°C Metric	392 Â°F English	Rate B/50' ASTM D1525 Comments
	200 Â°C	392 Â°F	Rate B/50; ISO 306
	200 Â°C	392 Â°F	Rate B/120; ISO 306

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