

SABIC Innovative Plastics Valox[®] SHF4960 PBT

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

Material Notes:

Valox Super high flow grade, 30% glass filled Flame retardant, High CTI, heat stabilized with mold release.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Valox-SHF4960-PBT.php

Physical Properties	Metric	English	Comments
Density	1.64 g/cc	0.0592 lb/in ³	ISO 1183
Moisture Absorption	0.0700 %	0.0700 %	23 [°] C / 50% RH; ISO 62
Water Absorption at Saturation	0.25 %	0.25 %	ISO 62
Viscosity	92000 cP	92000 cP	Melt Viscosity, 250 [°] C, 1500 sec-1; ISO 11443
Melt Index of Compound	6.0 g/10 min @Load 2.16 kg, Temperature 250 [°] C	6.0 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	110 MPa	16000 psi	5 mm/min; ISO 527
Tensile Strength, Yield	110 MPa	16000 psi	5 mm/min; ISO 527
Elongation at Break	1.8 %	1.8 %	5 mm/min; ISO 527
Elongation at Yield	1.8 %	1.8 %	5 mm/min; ISO 527
Tensile Modulus	10.0 GPa	1450 ksi	1 mm/min; ISO 527
Flexural Yield Strength	165 MPa	23900 psi	2 mm/min; ISO 178
Flexural Modulus	8.50 GPa	1230 ksi	2 mm/min; ISO 178
Izod Impact, Notched (ISO)	7.00 kJ/m ²	3.33 ft-lb/in ²	80*10*4; ISO 180/1A
	7.00 kJ/m ² @Temperature -30.0 [°] C	3.33 ft-lb/in ² @Temperature -22.0 [°] F	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	36.0 kJ/m ² @Temperature -30.0 [°] C	17.1 ft-lb/in ² @Temperature -22.0 [°] F	80*10*4; ISO 180/1U
Charpy Impact, Notched	0.700 J/cm ²	3.33 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	25.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	13.9 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ISO 11359-2
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
CTE, linear, Transverse to Flow	120 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	66.7 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ISO 11359-2
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
Deflection Temperature at 1.8 MPa (264 psi)	195 $\text{Å}^\circ\text{C}$	383 $\text{Å}^\circ\text{F}$	Flatw 80*10*4 sp=64mm; ISO 75/Af
Vicat Softening Point	185 $\text{Å}^\circ\text{C}$	365 $\text{Å}^\circ\text{F}$	Rate B/50; ISO 306
	195 $\text{Å}^\circ\text{C}$	383 $\text{Å}^\circ\text{F}$	Rate B/120; ISO 306
Flammability, UL94	V-0	V-0	UL 94 by SABIC-IP
	@Thickness 0.800 mm	@Thickness 0.0315 in	
Oxygen Index	32 %	32 %	ISO 4589

Electrical Properties	Metric	English	Comments
Volume Resistivity	$\geq 1.00\text{e}+15$ ohm-cm	$\geq 1.00\text{e}+15$ ohm-cm	IEC 60093
Surface Resistance	$\geq 1.00\text{e}+12$ ohm	$\geq 1.00\text{e}+12$ ohm	ROA; IEC 60093
Dielectric Strength	17.8 kV/mm	452 kV/in	in oil; IEC 60243-1
	@Thickness 3.20 mm	@Thickness 0.126 in	
	24.5 kV/mm	622 kV/in	in oil; IEC 60243-1
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	35.0 kV/mm	889 kV/in	in oil; IEC 60243-1
	@Thickness 0.800 mm	@Thickness 0.0315 in	
Comparative Tracking Index	275 V	275 V	IEC 60112

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