

SABIC Innovative Plastics Valox[®] SHF4930 PBT (Europe-Africa-Middle East)

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

Material Notes:

Super high flow FR PBT grade with 15% Glass reinforced

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Valox-SHF4930-PBT-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.54 g/cc	1.54 g/cc	ASTM D792
Density	1.54 g/cc	0.0556 lb/in ³	ISO 1183
Filler Content	15 %	15 %	ASTM D229
Moisture Absorption	0.0700 %	0.0700 %	23 [°] C / 50% RH; ISO 62
Water Absorption at Saturation	0.23 %	0.23 %	ISO 62
Viscosity	65000 cP	65000 cP	Melt Viscosity, 260 [°] C, 1500 sec-1; ISO 11443
	90000 cP	90000 cP	Melt Viscosity, 250 [°] C, 1500 sec-1; ISO 11443
Linear Mold Shrinkage, Flow	0.0050 - 0.0080 cm/cm	0.0050 - 0.0080 in/in	on Tensile Bar; SABIC Method
	0.0050 - 0.0080 cm/cm @Thickness 3.20 mm	0.0050 - 0.0080 in/in @Thickness 0.126 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.0060 - 0.0090 cm/cm	0.0060 - 0.0090 in/in	on Tensile Bar; SABIC Method
Melt Flow	18 g/10 min	18 g/10 min	ASTM D1238
	@Load 2.16 kg, Temperature 250 [°] C	@Load 4.76 lb, Temperature 482 [°] F	
	20 g/10 min	20 g/10 min	ISO 1133
	@Load 2.16 kg, Temperature 250 [°] C	@Load 4.76 lb, Temperature 482 [°] F	
Melt Index of Compound	16 g/10 min	16 g/10 min	MVR [cm ³ /10 min]; ISO 1133
	@Load 2.16 kg, Temperature 250 [°] C	@Load 4.76 lb, Temperature 482 [°] F	
	53 g/10 min	53 g/10 min	MVR [cm ³ /10 min]; ISO 1133
	@Load 5.00 kg, Temperature 250 [°] C	@Load 11.0 lb, Temperature 482 [°] F	

Mechanical Properties	Metric	English	Comments
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Hardness, Rockwell B Mechanical Properties	117 Metric	117 English	ISO 2039-2 Comments
Hardness, H358/30	190 MPa	27600 psi	ISO 2039-1
Tensile Strength at Break	80.0 MPa	11600 psi	Type I, 5 mm/min; ASTM D638
	85.0 MPa	12300 psi	5 mm/min; ISO 527
Tensile Strength, Yield	80.0 MPa	11600 psi	Type I, 5 mm/min; ASTM D638
	85.0 MPa	12300 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
	3.0 %	3.0 %	Flexural Strain, break, 2 mm/min; ISO 178
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	6.20 GPa	899 ksi	1 mm/min; ISO 527
	6.30 GPa	914 ksi	5 mm/min; ASTM D638
Flexural Strength	140 MPa	20300 psi	2 mm/min; ISO 178
Flexural Yield Strength	129 MPa	18700 psi	1.3 mm/min, 50 mm span; ASTM D790
	140 MPa	20300 psi	2 mm/min; ISO 178
Flexural Modulus	5.17 GPa	750 ksi	1.3 mm/min, 50 mm span; ASTM D790
	5.30 GPa	769 ksi	2 mm/min; ISO 178
Izod Impact, Notched	0.500 J/cm	0.937 ft-lb/in	ASTM D256
	0.500 J/cm	0.937 ft-lb/in	ASTM D256
	@Temperature 0.000 Â°C	@Temperature 32.0 Â°F	
	0.500 J/cm	0.937 ft-lb/in	ASTM D256
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Izod Impact, Unnotched	3.10 J/cm	5.81 ft-lb/in	ASTM D4812
	2.65 J/cm	4.96 ft-lb/in	ASTM D4812
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	

Izod Impact Notched (ISO) Mechanical Properties	Metric	English	80*10*4; ISO 180/1A Comments
	6.00 kJ/m ^Å ² @Temperature 0.000 Å°C	2.86 ft-lb/in ^Å ² @Temperature 32.0 Å°F	80*10*4; ISO 180/1A
	6.00 kJ/m ^Å ² @Temperature -30.0 Å°C	2.86 ft-lb/in ^Å ² @Temperature -22.0 Å°F	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	25.0 kJ/m ^Å ²	11.9 ft-lb/in ^Å ²	80*10*4; ISO 180/1U
	19.0 kJ/m ^Å ² @Temperature -30.0 Å°C	9.04 ft-lb/in ^Å ² @Temperature -22.0 Å°F	80*10*4; ISO 180/1U
Charpy Impact Unnotched	2.90 J/cm ^Å ²	13.8 ft-lb/in ^Å ²	ISO 179/2C
	2.30 J/cm ^Å ² @Temperature -30.0 Å°C	10.9 ft-lb/in ^Å ² @Temperature -22.0 Å°F	ISO 179/2C
Charpy Impact, Notched	0.600 J/cm ^Å ²	2.86 ft-lb/in ^Å ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	0.600 J/cm ^Å ²	2.86 ft-lb/in ^Å ²	ISO 179/2C
	0.600 J/cm ^Å ² @Temperature -30.0 Å°C	2.86 ft-lb/in ^Å ² @Temperature -22.0 Å°F	ISO 179/2C
Dart Drop, Total Energy	55.0 J @Temperature 23.0 Å°C	40.6 ft-lb @Temperature 73.4 Å°F	ASTM D3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	39.0 Åµm/m-Å°C	21.7 Åµin/in-Å°F	ASTM E 831
	@Temperature -40.0 - 40.0 Å°C	@Temperature -40.0 - 104 Å°F	
	42.0 Åµm/m-Å°C	23.3 Åµin/in-Å°F	ISO 11359-2
	@Temperature -40.0 - 40.0 Å°C	@Temperature -40.0 - 104 Å°F	
CTE, linear, Transverse to Flow	93.0 Åµm/m-Å°C	51.7 Åµin/in-Å°F	ASTM E 831
	@Temperature -40.0 - 40.0 Å°C	@Temperature -40.0 - 104 Å°F	
	98.0 Åµm/m-Å°C	54.4 Åµin/in-Å°F	ISO 11359-2
	@Temperature -40.0 -	@Temperature -40.0 -	

Thermal Properties	40.0 Å°C Metric	104 Å°F English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	215 Å°C	419 Å°F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
	215 Å°C @Thickness 3.20 mm	419 Å°F @Thickness 0.126 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	195 Å°C	383 Å°F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	195 Å°C @Thickness 3.20 mm	383 Å°F @Thickness 0.126 in	unannealed; ASTM D648
Vicat Softening Point	195 Å°C	383 Å°F	Rate B/120; ISO 306

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+15 ohm-cm	>= 1.00e+15 ohm-cm	IEC 60093
Surface Resistance	>= 1.00e+12 ohm	>= 1.00e+12 ohm	ROA; IEC 60093
Dielectric Strength	17.5 kV/mm @Thickness 3.20 mm	445 kV/in @Thickness 0.126 in	in oil; IEC 60243-1
	27.0 kV/mm @Thickness 1.50 mm	686 kV/in @Thickness 0.0591 in	in oil; IEC 60243-1
	27.5 kV/mm @Thickness 1.60 mm	699 kV/in @Thickness 0.0630 in	in oil; IEC 60243-1
	40.0 kV/mm @Thickness 0.800 mm	1020 kV/in @Thickness 0.0315 in	in oil; IEC 60243-1
Dissipation Factor	0.016 @Frequency 1.00e+6 Hz	0.016 @Frequency 1.00e+6 Hz	IEC 60250
Comparative Tracking Index	275 V	275 V	IEC 60112
Hot Wire Ignition, HWI	15 - 30 sec	15 - 30 sec	UL 746A
High Amp Arc Ignition, HAI	>= 120 arcs	>= 120 arcs	UL 746A

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