

SABIC Innovative Plastics Valox® V4860HR PBT (Asia Pacific)

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

Material Notes:

30% glass reinforced PBT, UL94 V-0 rated, Hydrolytically stable, Impact Modified.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Valox-V4860HR-PBT-Asia-Pacific.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.64 g/cc	1.64 g/cc	ASTM D792
Density	1.64 g/cc	0.0592 lb/in ³	ISO 1183
Moisture Absorption	0.0600 %	0.0600 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.19 %	0.19 %	ISO 62
Linear Mold Shrinkage, Flow	0.0018 - 0.0021 cm/cm	0.0018 - 0.0021 in/in	SABIC Method
	@Thickness 3.20 mm	@Thickness 0.126 in	
Linear Mold Shrinkage, Transverse	0.0075 - 0.0094 cm/cm	0.0075 - 0.0094 in/in	SABIC Method
	@Thickness 3.20 mm	@Thickness 0.126 in	
Melt Flow	17.8 g/10 min	17.8 g/10 min	ASTM D1238
	@Load 5.00 kg, Temperature 250 °C	@Load 11.0 lb, Temperature 482 °F	
Melt Index of Compound	12 g/10 min	12 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
Tensile Strength at Break	110 MPa	16000 psi	5 mm/min; ISO 527
	114 MPa	16500 psi	Type I, 5 mm/min; ASTM D638
Tensile Strength, Yield	111 MPa	16100 psi	5 mm/min; ISO 527
	116 MPa	16800 psi	Type I, 5 mm/min; ASTM D638
Elongation at Break	2.1 %	2.1 %	5 mm/min; ISO 527
	2.3 %	2.3 %	Type I, 5 mm/min; ASTM D638
	2.9 %	2.9 %	Flexural Strain, break, 2 mm/min; ISO 178
Elongation at Yield	2.1 %	2.1 %	5 mm/min; ISO 527

Mechanical Properties	Metric	English	Comments
Tensile Modulus	9.44 GPa	1370 ksi	1 mm/min; ISO 527
	9.75 GPa	1410 ksi	5 mm/min; ASTM D638
Flexural Strength	182 MPa	26400 psi	2 mm/min; ISO 178
Flexural Yield Strength	174 MPa	25200 psi	1.3 mm/min, 50 mm span; ASTM D790
	183 MPa	26500 psi	2 mm/min; ISO 178
Flexural Modulus	6.74 GPa	978 ksi	1.3 mm/min, 50 mm span; ASTM D790
	7.87 GPa	1140 ksi	2 mm/min; ISO 178
Izod Impact, Notched	0.900 J/cm	1.69 ft-lb/in	ASTM D256
	0.740 J/cm	1.39 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Notched (ISO)	10.0 kJ/mÂ²	4.76 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 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	1.00 J/cmÂ²	4.76 ft-lb/inÂ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	13.0 J	9.59 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	22.8 Âµm/m-Â°C	12.7 Âµin/in-Â°F	ISO 11359-2
	@Temperature 23.0 - 80.0 Â°C	@Temperature 73.4 - 176 Â°F	
	23.5 Âµm/m-Â°C	13.1 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 95.0 Â°C	@Temperature -40.0 - 203 Â°F	
CTE, linear, Transverse to Flow	114 Âµm/m-Â°C	63.3 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 95.0 Â°C	@Temperature -40.0 - 203 Â°F	
	119 Âµm/m-Â°C	66.1 Âµin/in-Â°F	ISO 11359-2

Thermal Properties	Metric @Temperature 23.0 - 30.0 Â°C	English @Temperature 73.4 - 119 Â°F	Comments
Hot Ball Pressure Test	<= 75.0 Â°C	<= 167 Â°F	IEC 60695-10-2
Deflection Temperature at 0.46 MPa (66 psi)	221 Â°C @Thickness 6.40 mm	430 Â°F @Thickness 0.252 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	188 Â°C	370 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	197 Â°C @Thickness 3.20 mm	387 Â°F @Thickness 0.126 in	unannealed; ASTM D648
	205 Â°C @Thickness 6.40 mm	401 Â°F @Thickness 0.252 in	unannealed; ASTM D648
Vicat Softening Point	175 Â°C	347 Â°F	Rate B/120; ISO 306
	176 Â°C	349 Â°F	Rate B/50; ASTM D1525
	176 Â°C	349 Â°F	Rate B/50; ISO 306
Flammability, UL94	V-0 @Thickness 0.800 mm	V-0 @Thickness 0.0315 in	UL 94 by SABIC-IP

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