SABIC Innovative Plastics ValoxÂ® ENH4550 PBT

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

Material Notes:

25% GF reinforced, Non-Brominated & Non-Chlorinated Flame Retardant, PBT resin.

Order this product through the following link:
http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Valox-ENH4550-PBT.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.53 g/cc	1.53 g/cc	ASTM D792
Density	1.52 g/cc	0.0549 lb/inÂ³	ISO 1183
Moisture Absorption	0.0600 %	0.0600 %	23Â°C / 50% RH; ISO 62
Water Absorption at Saturation	0.23 %	0.23 %	ISO 62
Viscosity	210000 cP	210000 cP	Melt Viscosity, 250Â°C, 1500 sec-1; ISO 11443
Linear Mold Shrinkage, Flow	0.0010 - 0.0050 cm/cm	0.0010 - 0.0050 in/in	on Tensile Bar; SABIC Method
	0.0010 - 0.0050 cm/cm @Thickness 3.20 mm	0.0010 - 0.0050 in/in @Thickness 0.126 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.0060 - 0.012 cm/cm	0.0060 - 0.012 in/in	on Tensile Bar; SABIC Method
	0.0050 - 0.011 cm/cm @Thickness 3.20 mm	0.0050 - 0.011 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	27 g/10 min @Load 5.00 kg, Temperature 250 Â°C	27 g/10 min @Load 11.0 lb, Temperature 482 Â°F	ASTM D1238
Melt Index of Compound	20 g/10 min @Load 5.00 kg, Temperature 250 Â°C	20 g/10 min @Load 11.0 lb, Temperature 482 Â°F	MVR [cm^3/10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	105 MPa	15200 psi	Type I, 5 mm/min; ASTM D638
	112 MPa	16200 psi	5 mm/min; ISO 527
Tensile Strength, Yield	105 MPa	15200 psi	Type I, 5 mm/min; ASTM D638
	112 MPa	16200 psi	5 mm/min; ISO 527
Elongation at Break	2.0 %	2.0 %	Flexural Strain, break, 2 mm/min; ISO 178

Mechanical Properties	Metric	English	Comments
	2.0 %	2.0 %	5 mm/min; ISO 527
	2.0 %	2.0 %	Type I, 5 mm/min; ASTM D638
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	9.90 GPa	1440 ksi	5 mm/min; ASTM D638
	10.35 GPa	1501 ksi	1 mm/min; ISO 527
Flexural Yield Strength	161 MPa	23400 psi	1.3 mm/min, 50 mm span; ASTM D790
	170 MPa	24700 psi	2 mm/min; ISO 178
Flexural Modulus	9.10 GPa	1320 ksi	1.3 mm/min, 50 mm span; ASTM D790
	9.40 GPa	1360 ksi	2 mm/min; ISO 178
Izod Impact, Notched	0.620 J/cm	1.16 ft-lb/in	ASTM D256
	0.590 J/cm @Temperature -30.0 Â°C	1.11 ft-lb/in @Temperature -22.0 Â°F	ASTM D256
Izod Impact, Unnotched	5.15 J/cm	9.65 ft-lb/in	ASTM D4812
	4.70 J/cm @Temperature -30.0 Â°C	8.81 ft-lb/in @Temperature -22.0 Â°F	ASTM D4812
Izod Impact, Notched (ISO)	7.00 kJ/mÂ²	3.33 ft-lb/inÂ²	80*10*4; ISO 180/1A
	7.00 kJ/mÂ² @Temperature -30.0 Â°C	3.33 ft-lb/inÂ² @Temperature -22.0 Â°F	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	33.0 kJ/mÂ²	15.7 ft-lb/inÂ²	80*10*4; ISO 180/1U
	29.0 kJ/mÂ² @Temperature -30.0 Â°C	13.8 ft-lb/inÂ² @Temperature -22.0 Â°F	80*10*4; ISO 180/1U
Charpy Impact Unnotched	3.60 J/cmÂ²	17.1 ft-lb/inÂ²	ISO 179/2C
	3.30 J/cmÂ² @Temperature -30.0 Â°C	15.7 ft-lb/inÂ² @Temperature -22.0 Â°F	ISO 179/2C
Charpy Impact, Notched	0.500 J/cmÂ²	2.38 ft-lb/inÂ²	Edgew 80*10*4 sp=62mm; ISO

Mechanical Properties	Metric	English	Comments
	0.700 J/cmÂ²	3.33 ft-lb/inÂ²	ISO 179/2C
	0.700 J/cmÂ² @Temperature -30.0 Â°C	3.33 ft-lb/inÂ² @Temperature -22.0 Â°F	ISO 179/2C
Dart Drop, Total Energy	6.00 J @Temperature 23.0 Â°C	4.43 ft-lb @Temperature 73.4 Â°F	ASTM D3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	22.0 Âµm/m-Â°C @Temperature 23.0 - 80.0 Â°C	12.2 Âµin/in-Â°F @Temperature 73.4 - 176 Â°F	ISO 11359-2
	22.0 Âµm/m-Â°C @Temperature -40.0 - 150 Â°C	12.2 Âµin/in-Â°F @Temperature -40.0 - 302 Â°F	ASTM E 831
	27.0 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	15.0 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ASTM E 831
	30.0 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	16.7 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ISO 11359-2
CTE, linear, Transverse to Flow	71.0 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	39.4 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ASTM E 831
	76.0 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	42.2 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ISO 11359-2
	77.0 Âµm/m-Â°C @Temperature -40.0 - 150 Â°C	42.8 Âµin/in-Â°F @Temperature -40.0 - 302 Â°F	ASTM E 831
	91.0 Âµm/m-Â°C @Temperature 23.0 - 80.0 Â°C	50.6 Âµin/in-Â°F @Temperature 73.4 - 176 Â°F	ISO 11359-2
Deflection Temperature at 0.46 MPa (66 psi)	219 Â°C	426 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
	216 Â°C @Thickness 3.20 mm	421 Â°F @Thickness 0.126 in	unannealed; ASTM D648

Thermal Properties	Metric	English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	201 Â°C	394 Â°F	Flatw 80*10*4 sp=64mm, ISO 75/Af
	204 Â°C @Thickness 3.20 mm	399 Â°F @Thickness 0.126 in	unannealed; ASTM D648
Vicat Softening Point	202 Â°C	396 Â°F	Rate B/50; ASTM D1525
	206 Â°C	403 Â°F	Rate B/50; ISO 306
	206 Â°C	403 Â°F	Rate B/120; ISO 306

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 - 1.00e+16 ohm-cm	1.00e+15 - 1.00e+16 ohm-cm	ASTM D257
	1.00e+15 - 1.00e+16 ohm-cm	1.00e+15 - 1.00e+16 ohm-cm	IEC 60093
Dielectric Strength	21.0 kV/mm @Thickness 3.20 mm	533 kV/in @Thickness 0.126 in	in air; ASTM D149
	21.0 kV/mm @Thickness 3.20 mm	533 kV/in @Thickness 0.126 in	in oil; ASTM D149
Arc Resistance	60 - 120 sec	60 - 120 sec	Tungsten; ASTM D495
Comparative Tracking Index	300 V	300 V	IEC 60112
	250 - 400 V	250 - 400 V	UL 746A
Hot Wire Ignition, HWI	>= 120 sec	>= 120 sec	UL 746A
High Amp Arc Ignition, HAI	>= 120 arcs	>= 120 arcs	UL 746A
High Voltage Arc-Tracking Rate, HVTR	0.000 - 10.0 mm/min	0.000 - 0.394 in/min	UL 746A

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