

SABIC Innovative Plastics Valox[®] ENH4550 PBT (Europe-Africa-Middle East)

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-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.52 g/cc	1.52 g/cc	ASTM D792
Density	1.52 g/cc	0.0549 lb/in ³	ISO 1183
Filler Content	25 %	25 %	ASTM D229
Moisture Absorption	0.0600 %	0.0600 %	23 [°] C / 50% RH; ISO 62
Water Absorption at Saturation	0.23 %	0.23 %	ISO 62
Viscosity	160000 cP	160000 cP	Melt Viscosity, 260 [°] C, 1500 sec-1; ISO 11443
	210000 cP	210000 cP	Melt Viscosity, 250 [°] 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	25 g/10 min	25 g/10 min	ASTM D1238
	@Load 5.00 kg, Temperature 265 [°] C	@Load 11.0 lb, Temperature 509 [°] F	
Melt Index of Compound	27 g/10 min	27 g/10 min	ASTM D1238
	@Load 5.00 kg, Temperature 250 [°] C	@Load 11.0 lb, Temperature 482 [°] F	
Melt Index of Compound	17 g/10 min	17 g/10 min	MVR [cm ³ /10 min]; ISO 1133
	@Load 5.00 kg, Temperature 265 [°] C	@Load 11.0 lb, Temperature 509 [°] F	
Melt Index of Compound	20 g/10 min	20 g/10 min	MVR [cm ³ /10 min]; ISO 1133
	@Load 5.00 kg, Temperature 250 [°] C	@Load 11.0 lb, Temperature 482 [°] F	

Physical Properties	Metric	English	Comments
Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	124	124	ISO 2039-2
Hardness, H358/30	174 MPa	25200 psi	ISO 2039-1
Tensile Strength at Break	112 MPa	16200 psi	5 mm/min; ISO 527
	115 MPa	16700 psi	Type I, 5 mm/min; ASTM D638
Tensile Strength, Yield	112 MPa	16200 psi	5 mm/min; ISO 527
	115 MPa	16700 psi	Type I, 5 mm/min; ASTM D638
Elongation at Break	2.0 %	2.0 %	Type I, 5 mm/min; ASTM D638
	2.0 %	2.0 %	5 mm/min; ISO 527
	2.0 %	2.0 %	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	10.3 GPa	1490 ksi	5 mm/min; ASTM D638
	10.4 GPa	1510 ksi	1 mm/min; ISO 527
Flexural Strength	165 MPa	23900 psi	1.3 mm/min, 50 mm span; ASTM D790
	175 MPa	25400 psi	2 mm/min; ISO 178
Flexural Yield Strength	165 MPa	23900 psi	1.3 mm/min, 50 mm span; ASTM D790
	175 MPa	25400 psi	2 mm/min; ISO 178
Flexural Modulus	8.50 GPa	1230 ksi	1.3 mm/min, 50 mm span; ASTM D790
	9.20 GPa	1330 ksi	2 mm/min; ISO 178
Izod Impact, Notched	0.700 J/cm	1.31 ft-lb/in	ASTM D256
	0.700 J/cm	1.31 ft-lb/in	ASTM D256
	@Temperature 0.000 Â°C	@Temperature 32.0 Â°F	
	0.700 J/cm	1.31 ft-lb/in	ASTM D256
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Izod Impact, Unnotched			ASTM D4812

Mechanical Properties	5.50 J/cm Metric	10.3 ft-lb/in English	Comments
	5.50 J/cm	10.3 ft-lb/in	
	@Temperature -30.0 °C	@Temperature -22.0 °F	ASTM D4812
Izod Impact, Notched (ISO)	8.00 kJ/m ²	3.81 ft-lb/in ²	80*10*4; ISO 180/1A
	8.00 kJ/m ²	3.81 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature 0.000 °C	@Temperature 32.0 °F	
	8.00 kJ/m ²	3.81 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Unnotched (ISO)	40.0 kJ/m ²	19.0 ft-lb/in ²	80*10*4; ISO 180/1U
	38.0 kJ/m ²	18.1 ft-lb/in ²	80*10*4; ISO 180/1U
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact Unnotched	4.50 J/cm ²	21.4 ft-lb/in ²	ISO 179/2C
	4.00 J/cm ²	19.0 ft-lb/in ²	ISO 179/2C
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	0.500 J/cm ²	2.38 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	0.900 J/cm ²	4.28 ft-lb/in ²	ISO 179/2C
	0.900 J/cm ²	4.28 ft-lb/in ²	ISO 179/2C
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Dart Drop, Total Energy	6.00 J	4.43 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	ASTM D257
	1.00e+15 ohm-cm	1.00e+15 ohm-cm	IEC 60093
Surface Resistance	>= 1.00e+15 ohm	>= 1.00e+15 ohm	ROA; IEC 60093
Dielectric Constant	3.4	3.4	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

Electrical Properties	Metric	English	Comments
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	IEC 60250
Dielectric Strength	19.0 kV/mm	483 kV/in	in oil; ASTM D149
	@Thickness 3.20 mm	@Thickness 0.126 in	
	19.0 kV/mm	483 kV/in	in oil; IEC 60243-1
	@Thickness 3.20 mm	@Thickness 0.126 in	
	21.0 kV/mm	533 kV/in	in air; ASTM D149
	@Thickness 3.20 mm	@Thickness 0.126 in	
	24.0 kV/mm	610 kV/in	in oil; ASTM D149
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	24.0 kV/mm	610 kV/in	in oil; IEC 60243-1
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	30.0 kV/mm	762 kV/in	in oil; IEC 60243-1
	@Thickness 0.800 mm	@Thickness 0.0315 in	
	30.0 kV/mm	762 kV/in	in oil; ASTM D149
	@Thickness 0.800 mm	@Thickness 0.0315 in	
Dissipation Factor	0.12	0.12	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	0.12	0.12	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
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

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