

SABIC Innovative Plastics Valox[®] ENH4530 PBT (Europe-Africa-Middle East)

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

Material Notes:

15% GF PBT, Non-Brominated & Non-Chlorinated Flame retardant

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Valox-ENH4530-PBT-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.45 g/cc	1.45 g/cc	ASTM D792
Density	1.45 g/cc	0.0524 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	0.15 %	0.15 %	ISO 62
Viscosity	150000 cP	150000 cP	Melt Viscosity, 260 [°] C, 1500 sec-1; ISO 11443
Linear Mold Shrinkage, Flow	0.0030 - 0.0080 cm/cm	0.0030 - 0.0080 in/in	on Tensile Bar; SABIC Method
Melt Flow	24 g/10 min @Load 5.00 kg, Temperature 265 [°] C	24 g/10 min @Load 11.0 lb, Temperature 509 [°] F	ASTM D1238
Melt Index of Compound	17 g/10 min @Load 5.00 kg, Temperature 265 [°] C	17 g/10 min @Load 11.0 lb, Temperature 509 [°] F	MVR [cm ³ /10 min]; ISO 1133
	18 g/10 min @Load 5.00 kg, Temperature 250 [°] C	18 g/10 min @Load 11.0 lb, Temperature 482 [°] F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	98	98	ISO 2039-2
Hardness, H358/30	128 MPa	18600 psi	ISO 2039-1
Tensile Strength at Break	80.0 MPa	11600 psi	Type I, 5 mm/min; ASTM D638
	80.0 MPa	11600 psi	5 mm/min; ISO 527
Tensile Strength, Yield	80.0 MPa	11600 psi	Type I, 5 mm/min; ASTM D638
	80.0 MPa	11600 psi	5 mm/min; ISO 527

Elongation at Break Mechanical Properties	3.0 % Metric	3.0 % English	Type I, 5 mm/min; ASTM D638 Comments
	3.0 %	3.0 %	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	7.30 GPa	1060 ksi	5 mm/min; ASTM D638
	7.50 GPa	1090 ksi	1 mm/min; ISO 527
Flexural Strength	120 MPa	17400 psi	1.3 mm/min, 50 mm span; ASTM D790
	130 MPa	18900 psi	2 mm/min; ISO 178
Flexural Yield Strength	120 MPa	17400 psi	1.3 mm/min, 50 mm span; ASTM D790
	130 MPa	18900 psi	2 mm/min; ISO 178
Flexural Modulus	5.80 GPa	841 ksi	1.3 mm/min, 50 mm span; ASTM D790
	6.40 GPa	928 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	4.00 J/cm	7.49 ft-lb/in	ASTM D4812
	3.60 J/cm	6.74 ft-lb/in	ASTM D4812
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Izod Impact, Notched (ISO)	6.00 kJ/mÂ²	2.86 ft-lb/inÂ²	80*10*4; ISO 180/1A
	6.00 kJ/mÂ²	2.86 ft-lb/inÂ²	80*10*4; ISO 180/1A
	@Temperature 0.000 Â°C	@Temperature 32.0 Â°F	
	6.00 kJ/mÂ²	2.86 ft-lb/inÂ²	80*10*4; ISO 180/1A
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	

Mechanical Properties	Metric	English	Comments
ISO Impact, Unnotched (ISO)	23.0 kJ/m ²	10.9 ft-lb/in ²	80*10*4; ISO 180/1U
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Charpy Impact Unnotched	3.50 J/cm ²	16.7 ft-lb/in ²	ISO 179/2C
	2.50 J/cm ²	11.9 ft-lb/in ²	ISO 179/2C
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Charpy Impact, Notched	0.600 J/cm ²	2.86 ft-lb/in ²	ISO 179/2C
	0.600 J/cm ²	2.86 ft-lb/in ²	ISO 179/2C
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	28.5 Âµm/m-Â°C	15.8 Âµin/in-Â°F	ISO 11359-2
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
	42.0 Âµm/m-Â°C	23.3 Âµin/in-Â°F	ISO 11359-2
	@Temperature 23.0 - 150 Â°C	@Temperature 73.4 - 302 Â°F	
CTE, linear, Transverse to Flow	70.0 Âµm/m-Â°C	38.9 Âµin/in-Â°F	ISO 11359-2
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
	173 Âµm/m-Â°C	96.1 Âµin/in-Â°F	ISO 11359-2
	@Temperature 23.0 - 150 Â°C	@Temperature 73.4 - 302 Â°F	
Deflection Temperature at 0.46 MPa (66 psi)	220 Â°C	428 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
	220 Â°C	428 Â°F	
	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	200 Â°C	392 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	200 Â°C	392 Â°F	
	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D648
Vicat Softening Point	205 Â°C	401 Â°F	Rate B/50; ASTM D1525
	205 Â°C	401 Â°F	
			Rate B/50; ISO 306

Thermal Properties	Metric 203 Å°C	English 400 Å°F	Comments Rate B/120; ISO 306
	217 Å°C	423 Å°F	Rate A/50; ASTM D1525
	220 Å°C	428 Å°F	Rate A/50; ISO 306

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	3.7	3.7	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.7	3.7	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Strength	17.0 kV/mm	432 kV/in	in oil; ASTM D149
	@Thickness 3.20 mm	@Thickness 0.126 in	
	17.0 kV/mm	432 kV/in	in oil; IEC 60243-1
	@Thickness 3.20 mm	@Thickness 0.126 in	
	21.0 kV/mm	533 kV/in	in oil; ASTM D149
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	21.0 kV/mm	533 kV/in	in oil; IEC 60243-1
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	28.0 kV/mm	711 kV/in	in oil; IEC 60243-1
	@Thickness 0.800 mm	@Thickness 0.0315 in	
	28.0 kV/mm	711 kV/in	in oil; ASTM D149
	@Thickness 0.800 mm	@Thickness 0.0315 in	
Dissipation Factor	0.15	0.15	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	0.15	0.15	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

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