

SABIC Innovative Plastics Valox[®] ENH4565 PBT (Europe-Africa-Middle East)

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

Material Notes:

33% GF reinforced, Non-Brominated & Non-Chlorinated Flame Retardant, PBT resin, Good thermal shock resistance and low CTE.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Valox-ENH4565-PBT-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.60 g/cc	1.60 g/cc	ASTM D792
Density	1.61 g/cc	0.0582 lb/in ³	ISO 1183
Moisture Absorption	0.0600 %	0.0600 %	23 [°] C / 50% RH; ISO 62
Water Absorption at Saturation	0.23 %	0.23 %	ISO 62
Linear Mold Shrinkage, Flow	0.0010 - 0.0040 cm/cm	0.0010 - 0.0040 in/in	on Tensile Bar; SABIC Method
	0.0010 - 0.0040 cm/cm @Thickness 3.20 mm	0.0010 - 0.0040 in/in @Thickness 0.126 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.0040 - 0.0080 cm/cm	0.0040 - 0.0080 in/in	on Tensile Bar; SABIC Method
	0.0040 - 0.0080 cm/cm @Thickness 3.20 mm	0.0040 - 0.0080 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	24 g/10 min @Load 5.00 kg, Temperature 250 [°] C	24 g/10 min @Load 11.0 lb, Temperature 482 [°] F	ASTM D1238
Melt Index of Compound	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
	20 g/10 min @Load 5.00 kg, Temperature 265 [°] C	20 g/10 min @Load 11.0 lb, Temperature 509 [°] F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	137 MPa	19900 psi	Type I, 5 mm/min; ASTM D638
	140 MPa	20300 psi	5 mm/min; ISO 527
Tensile Strength, Yield	137 MPa	19900 psi	Type I, 5 mm/min; ASTM D638
	140 MPa	20300 psi	5 mm/min; ISO 527

Mechanical Properties	Metric	English	Comments
	2.4 %	2.4 %	5 mm/min; ISO 527
Elongation at Yield	2.4 %	2.4 %	Type I, 5 mm/min; ASTM D638
	2.4 %	2.4 %	5 mm/min; ISO 527
Tensile Modulus	11.5 GPa	1670 ksi	1 mm/min; ISO 527
	11.6 GPa	1680 ksi	5 mm/min; ASTM D638
Flexural Yield Strength	180 MPa	26100 psi	1.3 mm/min, 50 mm span; ASTM D790
	185 MPa	26800 psi	2 mm/min; ISO 178
Flexural Modulus	9.40 GPa	1360 ksi	1.3 mm/min, 50 mm span; ASTM D790
	9.40 GPa	1360 ksi	2 mm/min; ISO 178
Izod Impact, Notched	0.800 J/cm	1.50 ft-lb/in	ASTM D256
	0.600 J/cm	1.12 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Unnotched	8.00 J/cm	15.0 ft-lb/in	ASTM D4812
	6.00 J/cm	11.2 ft-lb/in	ASTM D4812
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Notched (ISO)	14.0 kJ/m ²	6.66 ft-lb/in ²	80*10*4; ISO 180/1A
	14.0 kJ/m ²	6.66 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact Unnotched	6.00 J/cm ²	28.6 ft-lb/in ²	ISO 179/2C
	6.00 J/cm ²	28.6 ft-lb/in ²	ISO 179/2C
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	1.20 J/cm ²	5.71 ft-lb/in ²	ISO 179/2C
	1.20 J/cm ²	5.71 ft-lb/in ²	ISO 179/2C
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	9.00 J	6.64 ft-lb	

Dart Drop, Total Energy Mechanical Properties	@Temperature 23.0 Metric @C	English @Temperature 73.4 Â°F	ASTM D3763 Comments
Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	19.0 Âµm/m-Â°C	10.6 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
	19.0 Âµm/m-Â°C	10.6 Âµin/in-Â°F	ISO 11359-2
CTE, linear, Transverse to Flow	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	ASTM E 831
	19.0 Âµm/m-Â°C	10.6 Âµin/in-Â°F	ISO 11359-2
	@Temperature 23.0 - 80.0 Â°C	@Temperature 73.4 - 176 Â°F	ISO 11359-2
CTE, linear, Parallel to Flow	20.0 Âµm/m-Â°C	11.1 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 150 Â°C	@Temperature -40.0 - 302 Â°F	
	70.0 Âµm/m-Â°C	38.9 Âµin/in-Â°F	ISO 11359-2
CTE, linear, Transverse to Flow	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	ASTM E 831
	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	ISO 11359-2
Deflection Temperature at 0.46 MPa (66 psi)	80.0 Âµm/m-Â°C	44.4 Âµin/in-Â°F	ISO 11359-2
	@Temperature 23.0 - 80.0 Â°C	@Temperature 73.4 - 176 Â°F	
	98.0 Âµm/m-Â°C	54.4 Âµin/in-Â°F	ASTM E 831
Deflection Temperature at 1.8 MPa (264 psi)	@Temperature -40.0 - 150 Â°C	@Temperature -40.0 - 302 Â°F	ASTM E 831
	218 Â°C	424 Â°F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	206 Â°C	403 Â°F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
	205 Â°C	401 Â°F	Rate B/50; ASTM D1525
UL RTI, Electrical	130 Â°C	266 Â°F	UL 746B
UL RTI, Mechanical with Impact	140 Â°C	284 Â°F	UL 746B
UL RTI, Mechanical without Impact	140 Â°C	284 Â°F	UL 746B

Thermal Properties Flammability, UL94	V-0 Metric	V-0 English	Comments UL94
	@Thickness 0.750 mm	@Thickness 0.0295 in	

Descriptive Properties	Value	Comments
Ball Pressure Test, 125Å°C +/- 2Å°C	Pass	IEC 60695-10-2

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