

SABIC Innovative Plastics Valox[®] V3004 PBT (Asia Pacific)

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

Material Notes:

Unfilled PBT modified with elastomer. Targeted for flexible hinge, automotive connectors, film applications.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Valox-V3004-PBT-Asia-Pacific.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.29 g/cc	1.29 g/cc	ASTM D792
Density	1.29 g/cc	0.0466 lb/in ³	ISO 1183
Moisture Absorption	0.0800 %	0.0800 %	23 [°] C / 50% RH; ISO 62
Water Absorption at Saturation	0.20 %	0.20 %	ISO 62
Linear Mold Shrinkage, Flow	0.021 - 0.027 cm/cm @Thickness 3.20 mm	0.021 - 0.027 in/in @Thickness 0.126 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.021 - 0.027 cm/cm @Thickness 3.20 mm	0.021 - 0.027 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	23 g/10 min @Load 2.16 kg, Temperature 250 [°] C	23 g/10 min @Load 4.76 lb, Temperature 482 [°] F	ASTM D1238
Melt Index of Compound	21 g/10 min @Load 2.16 kg, Temperature 250 [°] C	21 g/10 min @Load 4.76 lb, Temperature 482 [°] F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	22.0 MPa	3190 psi	Type I, 50 mm/min; ASTM D638
	30.0 MPa	4350 psi	50 mm/min; ISO 527
Tensile Strength, Yield	50.0 MPa	7250 psi	50 mm/min; ISO 527
	51.0 MPa	7400 psi	Type I, 50 mm/min; ASTM D638
Elongation at Break	200 %	200 %	50 mm/min; ISO 527
	300 %	300 %	Type I, 50 mm/min; ASTM D638
Elongation at Yield	3.7 %	3.7 %	50 mm/min; ISO 527
	4.0 %	4.0 %	Type I, 50 mm/min; ASTM D638

Tensile Modulus Mechanical Properties	2.35 GPa Metric	341 ksi English	1 mm/min; ISO 527 Comments
	2.40 GPa	348 ksi	50 mm/min; ASTM D638
Flexural Yield Strength	74.0 MPa	10700 psi	2 mm/min; ISO 178
	82.0 MPa	11900 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.10 GPa	305 ksi	2 mm/min; ISO 178
	2.30 GPa	334 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	0.510 J/cm	0.955 ft-lb/in	ASTM D256
	0.450 J/cm	0.843 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Notched (ISO)	6.00 kJ/m ²	2.86 ft-lb/in ²	80*10*4; ISO 180/1A
	4.00 kJ/m ²	1.90 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	0.700 J/cm ²	3.33 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	60.0 J	44.3 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	91.8 µm/m-°C	51.0 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	91.8 µm/m-°C	51.0 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
CTE, linear, Transverse to Flow	75.0 µm/m-°C	41.7 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	75.0 µm/m-°C	41.7 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
Deflection Temperature at 0.46 MPa (66 psi)	120 °C	248 °F	unannealed; ASTM D648

Thermal Properties	@Thickness 3.20 mm Metric	@Thickness 0.126 in English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	48.0 Â°C	118 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	52.0 Â°C	126 Â°F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	110 Â°C	230 Â°F	Rate B/50; ISO 306
	167 Â°C	333 Â°F	Rate B/50; ASTM D1525
	170 Â°C	338 Â°F	Rate B/120; ISO 306

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