

SABIC Innovative Plastics Valox® IQ3001 PBT (Asia Pacific)

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

Material Notes:

Valox IQ3001 is an unfilled environmentally responsible iQ-PBT resin modified with elastomer. Targeted for flexible hinge applications.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Valox-IQ3001-PBT-Asia-Pacific.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.31 g/cc	1.31 g/cc	ASTM D792
Density	1.31 g/cc	0.0473 lb/in ³	ISO 1183
Moisture Absorption	0.0700 %	0.0700 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.11 %	0.11 %	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	26 g/10 min @Load 1.20 kg, Temperature 250 °C	26 g/10 min @Load 2.65 lb, Temperature 482 °F	ASTM D1238
Melt Index of Compound	24 g/10 min @Load 1.20 kg, Temperature 250 °C	24 g/10 min @Load 2.65 lb, Temperature 482 °F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	50.0 MPa	7250 psi	50 mm/min; ISO 527
	51.0 MPa	7400 psi	Type I, 50 mm/min; ASTM D638
Tensile Strength, Yield	55.0 MPa	7980 psi	50 mm/min; ISO 527
	56.0 MPa	8120 psi	Type I, 50 mm/min; ASTM D638
Elongation at Break	60 %	60 %	Type I, 50 mm/min; ASTM D638
	60 %	60 %	50 mm/min; ISO 527
Elongation at Yield	5.0 %	5.0 %	Type I, 50 mm/min; ASTM D638
	5.0 %	5.0 %	50 mm/min; ISO 527

Tensile Modulus Mechanical Properties	2.60 GPa Metric	377 ksi English	5 mm/min; ASTM D638 Comments
	2.60 GPa	377 ksi	1 mm/min; ISO 527
Flexural Yield Strength	80.0 MPa	11600 psi	2 mm/min; ISO 178
	82.0 MPa	11900 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.40 GPa	348 ksi	2 mm/min; ISO 178
	2.50 GPa	363 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	0.280 J/cm	0.525 ft-lb/in	ASTM D256
	0.270 J/cm	0.506 ft-lb/in	ASTM D256
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Izod Impact, Unnotched	17.0 J/cm	31.8 ft-lb/in	ASTM D4812
Izod Impact, Notched (ISO)	4.00 kJ/mÂ²	1.90 ft-lb/inÂ²	80*10*4; ISO 180/1A
	4.00 kJ/mÂ²	1.90 ft-lb/inÂ²	80*10*4; ISO 180/1A
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Charpy Impact, Notched	1.10 J/cmÂ²	5.23 ft-lb/inÂ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	23.0 J	17.0 ft-lb	ASTM D3763
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	85.0 Âµm/m-Â°C	47.2 Âµin/in-Â°F	ISO 11359-2
	@Temperature -30.0 - 80.0 Â°C	@Temperature -22.0 - 176 Â°F	
	85.0 Âµm/m-Â°C	47.2 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 150 Â°C	@Temperature -40.0 - 302 Â°F	
CTE, linear, Transverse to Flow	79.0 Âµm/m-Â°C	43.9 Âµin/in-Â°F	ISO 11359-2
	@Temperature -30.0 - 80.0 Â°C	@Temperature -22.0 - 176 Â°F	
	79.0 Âµm/m-Â°C	43.9 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 150 Â°C	@Temperature -40.0 - 302 Â°F	

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	148 Â°C	298 Â°F	unannealed; ASTM D648
	@Thickness 6.40 mm	@Thickness 0.252 in	
Deflection Temperature at 1.8 MPa (264 psi)	48.0 Â°C	118 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	54.0 Â°C	129 Â°F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	177 Â°C	351 Â°F	Rate B/50; ASTM D1525
	177 Â°C	351 Â°F	Rate B/120; ISO 306
	178 Â°C	352 Â°F	Rate B/50; ISO 306

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