

## SABIC Innovative Plastics Valox® IQ507 PBT+PC

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polycarbonate/Polybutylene Terephthalate (PBT) Blend, Glass Filled , Polyester, TP , Polybutylene Terephthalate (PBT)

### Material Notes:

Valox iQ507 resin: Environmentally responsible, sustainable, and low carbon footprint resin that is 30% glass fiber reinforced PBT+PC alloy.

Valox iQ507 offers good mechanical and thermal characteristics, along with reduced warpage characteristics.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-Valox-IQ507-PBTPC.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Valox-IQ507-PBTPC.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.51 g/cc	1.51 g/cc	ASTM D792
Density	1.51 g/cc	0.0546 lb/in <sup>3</sup>	ISO 1183
Moisture Absorption	0.0800 %	0.0800 %	23 <sup>o</sup> C / 50% RH; ISO 62
Water Absorption at Saturation	0.10 %	0.10 %	ISO 62
Linear Mold Shrinkage, Flow	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 @Thickness 3.20 mm	0.0040 - 0.0080 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	50 g/10 min @Load 5.00 kg, Temperature 250 <sup>o</sup> C	50 g/10 min @Load 11.0 lb, Temperature 482 <sup>o</sup> F	ASTM D1238
Melt Index of Compound	38 g/10 min @Load 5.00 kg, Temperature 250 <sup>o</sup> C	38 g/10 min @Load 11.0 lb, Temperature 482 <sup>o</sup> F	MVR [cm <sup>3</sup> /10 min]; ISO 1133
	43 g/10 min @Load 5.00 kg, Temperature 220 <sup>o</sup> C	43 g/10 min @Load 11.0 lb, Temperature 428 <sup>o</sup> F	MVR [cm <sup>3</sup> /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	119	119	ASTM D785
Tensile Strength at Break	96.0 MPa	13900 psi	5 mm/min; ISO 527
	105 MPa	15200 psi	Type I, 5 mm/min; ASTM D638
	132 MPa	19100 psi	Type I, 10 mm/min; SABIC - Japan Method
Tensile Strength, Yield	96.0 MPa	13900 psi	5 mm/min; ISO 527

Mechanical Properties	Metric 103 MPa	English 15000 psi	Comments Type I, 5 mm/min; ASTM D638
Elongation at Break	1.0 %	1.0 %	Type I, 5 mm/min; ASTM D638
	1.0 %	1.0 %	5 mm/min; ISO 527
	7.0 %	7.0 %	Type I, 10 mm/min; SABIC - Japan Method
Elongation at Yield	1.0 %	1.0 %	Type I, 5 mm/min; ASTM D638
	1.0 %	1.0 %	5 mm/min; ISO 527
Tensile Modulus	10.2 GPa	1480 ksi	1 mm/min; ISO 527
	12.8 GPa	1860 ksi	5 mm/min; ASTM D638
Flexural Yield Strength	187 MPa	27100 psi	2 mm/min; ISO 178
	196 MPa	28400 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	8.91 GPa	1290 ksi	2 mm/min; ISO 178
	9.06 GPa	1310 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	0.840 J/cm	1.57 ft-lb/in	ASTM D256
	0.700 J/cm	1.31 ft-lb/in	ASTM D256
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Izod Impact, Unnotched	5.93 J/cm	11.1 ft-lb/in	ASTM D4812
Izod Impact, Notched (ISO)	8.00 kJ/mÂ²	3.81 ft-lb/inÂ²	80*10*4; ISO 180/1A
	7.00 kJ/mÂ²	3.33 ft-lb/inÂ²	80*10*4; ISO 180/1A
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Charpy Impact, Notched	2.10 J/cmÂ²	9.99 ft-lb/inÂ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	7.00 J	5.16 ft-lb	ASTM D3763
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	21.0 Âµm/m-Â°C	11.7 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	

Thermal Properties	21.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$ Metric	11.7 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$ English	Comments ISO 11359-2
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
CTE, linear, Transverse to Flow	81.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	45.0 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ASTM E 831
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
	81.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	45.0 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ISO 11359-2
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
Deflection Temperature at 0.46 MPa (66 psi)	212 $\text{Å}^\circ\text{C}$	414 $\text{Å}^\circ\text{F}$	Flatw 80*10*4 sp=64mm; ISO 75/Bf
Deflection Temperature at 1.8 MPa (264 psi)	186 $\text{Å}^\circ\text{C}$	367 $\text{Å}^\circ\text{F}$	Flatw 80*10*4 sp=64mm; ISO 75/Af
	182 $\text{Å}^\circ\text{C}$	360 $\text{Å}^\circ\text{F}$	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	190 $\text{Å}^\circ\text{C}$	374 $\text{Å}^\circ\text{F}$	Rate B/120; ISO 306
	192 $\text{Å}^\circ\text{C}$	378 $\text{Å}^\circ\text{F}$	Rate B/50; ASTM D1525
	192 $\text{Å}^\circ\text{C}$	378 $\text{Å}^\circ\text{F}$	Rate B/50; ISO 306

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