

## SABIC Innovative Plastics Valox<sup>®</sup> 3706 PBT+PC

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

### Material Notes:

Impact modified PBT+PC resin. Outdoor enclosure. Not available in all colors.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-Valox-3706-PBTPC.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Valox-3706-PBTPC.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.30 g/cc	1.30 g/cc	ASTM D792
Linear Mold Shrinkage, Flow	0.012 - 0.014 cm/cm @Thickness 3.20 mm	0.012 - 0.014 in/in @Thickness 0.126 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.012 - 0.014 cm/cm @Thickness 3.20 mm	0.012 - 0.014 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	19 g/10 min @Load 5.00 kg, Temperature 266 Å°C	19 g/10 min @Load 11.0 lb, Temperature 511 Å°F	ASTM D1238
Melt Index of Compound	17 g/10 min @Load 5.00 kg, Temperature 265 Å°C	17 g/10 min @Load 11.0 lb, Temperature 509 Å°F	MVR [cm <sup>3</sup> /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	39.0 MPa	5660 psi	Type I, 50 mm/min; ASTM D638
Tensile Strength, Yield	48.0 MPa	6960 psi	Type I, 50 mm/min; ASTM D638
Elongation at Break	50 %	50 %	Type I, 50 mm/min; ASTM D638
Elongation at Yield	6.0 %	6.0 %	Type I, 50 mm/min; ASTM D638
Tensile Modulus	1.96 GPa	284 ksi	50 mm/min; ASTM D638
Flexural Yield Strength	78.0 MPa	11300 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	1.99 GPa	289 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	6.67 J/cm	12.5 ft-lb/in	ASTM D256
Dart Drop, Total Energy	49.0 J @Temperature 23.0 Å°C	36.1 ft-lb @Temperature 73.4 Å°F	ASTM D3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	79.2 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	44.0 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ASTM E 831
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
CTE, linear, Transverse to Flow	86.4 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	48.0 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ASTM E 831
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
Deflection Temperature at 0.46 MPa (66 psi)	126 $\text{Å}^\circ\text{C}$	259 $\text{Å}^\circ\text{F}$	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Deflection Temperature at 1.8 MPa (264 psi)	85.0 $\text{Å}^\circ\text{C}$	185 $\text{Å}^\circ\text{F}$	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	135 $\text{Å}^\circ\text{C}$	275 $\text{Å}^\circ\text{F}$	Rate B/50; ASTM D1525
UL RTI, Electrical	100 $\text{Å}^\circ\text{C}$	212 $\text{Å}^\circ\text{F}$	UL 746B
UL RTI, Mechanical with Impact	85.0 $\text{Å}^\circ\text{C}$	185 $\text{Å}^\circ\text{F}$	UL 746B
UL RTI, Mechanical without Impact	100 $\text{Å}^\circ\text{C}$	212 $\text{Å}^\circ\text{F}$	UL 746B
Flammability, UL94	V-0	V-0	UL 94
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	5VA	5VA	UL 94
	@Thickness 2.49 mm	@Thickness 0.0980 in	

Electrical Properties	Metric	English	Comments
Arc Resistance	60 - 120 sec	60 - 120 sec	Tungsten; ASTM D495
Comparative Tracking Index	250 - 400 V	250 - 400 V	UL 746A
Hot Wire Ignition, HWI	30 - 60 sec	30 - 60 sec	UL 746A
High Amp Arc Ignition, HAI	$\geq 120$ arcs	$\geq 120$ arcs	UL 746A
High Voltage Arc-Tracking Rate, HVTR	$\geq 150$ mm/min	$\geq 5.91$ in/min	UL 746A

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