

SABIC Innovative Plastics Valox[®] 357 PBT (Asia Pacific)

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

Material Notes:

PBT + PC, Unreinforced, impact modified, UL94V-0 rated. Applications like bobbins, switches and enclosures.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Valox-357-PBT-Asia-Pacific.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.34 g/cc	1.34 g/cc	ASTM D792
Density	1.34 g/cc	0.0484 lb/in ³	ISO 1183
Water Absorption	0.080 % @Time 86400 sec	0.080 % @Time 24.0 hour	ASTM D570
Moisture Absorption	0.150 %	0.150 %	23 [°] C / 50% RH; ISO 62
Water Absorption at Saturation	0.50 %	0.50 %	ISO 62
Linear Mold Shrinkage, Flow	0.0080 - 0.011 cm/cm @Thickness 0.750 - 2.30 mm	0.0080 - 0.011 in/in @Thickness 0.0295 - 0.0906 in	SABIC Method
	0.010 - 0.014 cm/cm @Thickness 2.30 - 4.60 mm	0.010 - 0.014 in/in @Thickness 0.0906 - 0.181 in	SABIC Method
	0.010 - 0.014 cm/cm @Thickness 3.20 mm	0.010 - 0.014 in/in @Thickness 0.126 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.0090 - 0.013 cm/cm @Thickness 0.750 - 2.30 mm	0.0090 - 0.013 in/in @Thickness 0.0295 - 0.0906 in	SABIC Method
	0.012 - 0.016 cm/cm @Thickness 2.30 - 4.60 mm	0.012 - 0.016 in/in @Thickness 0.0906 - 0.181 in	SABIC Method
Melt Flow	9.6 g/10 min @Load 5.00 kg, Temperature 250 [°] C	9.6 g/10 min @Load 11.0 lb, Temperature 482 [°] F	ASTM D1238
Melt Index of Compound	8.0 g/10 min @Load 5.00 kg, Temperature 250 [°] C	8.0 g/10 min @Load 11.0 lb, Temperature 482 [°] F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	117	117	ASTM D785
Tensile Strength at Break	48.0 MPa	6960 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	110 %	110 %	Type I, 50 mm/min; ASTM D638
Elongation at Yield	5.0 %	5.0 %	Type I, 50 mm/min; ASTM D638
Tensile Modulus	2.02 GPa	293 ksi	5 mm/min; ASTM D638
Flexural Strength	83.0 MPa	12000 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Yield Strength	83.0 MPa	12000 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.06 GPa	299 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	5.34 J/cm	10.0 ft-lb/in	ASTM D256
	1.53 J/cm	2.87 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Unnotched	32.04 J/cm	60.02 ft-lb/in	ASTM D4812
Izod Impact, Notched (ISO)	45.0 kJ/m ²	21.4 ft-lb/in ²	80*10*4; ISO 180/1A
	10.0 kJ/m ²	4.76 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	4.50 J/cm ²	21.4 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Gardner Impact	43.0 J	31.7 ft-lb	ASTM D3029
	43.0 J	31.7 ft-lb	ASTM D3029
Dart Drop, Total Energy	35.0 J	25.8 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	72.0 Åµm/m-Å°C	40.0 Åµin/in-Å°F	ISO 11359-2
	@Temperature -40.0 - 40.0 Å°C	@Temperature -40.0 - 104 Å°F	

Thermal Properties	91.8 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$ Metric	51.0 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$ English	Comments ASTM E 831
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
	124 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	68.9 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ASTM E 831
	@Temperature 60.0 - 138 $\text{Å}^\circ\text{C}$	@Temperature 140 - 280 $\text{Å}^\circ\text{F}$	
CTE, linear, Transverse to Flow	84.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	46.7 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ASTM E 831
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
	84.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	46.7 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	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)	138 $\text{Å}^\circ\text{C}$	280 $\text{Å}^\circ\text{F}$	unannealed; ASTM D648
	@Thickness 6.40 mm	@Thickness 0.252 in	
Deflection Temperature at 1.8 MPa (264 psi)	84.0 $\text{Å}^\circ\text{C}$	183 $\text{Å}^\circ\text{F}$	Flatw 80*10*4 sp=64mm; ISO 75/Af
	99.0 $\text{Å}^\circ\text{C}$	210 $\text{Å}^\circ\text{F}$	unannealed; ASTM D648
	@Thickness 6.40 mm	@Thickness 0.252 in	
Vicat Softening Point	134 $\text{Å}^\circ\text{C}$	273 $\text{Å}^\circ\text{F}$	Rate B/50; ASTM D1525
	145 $\text{Å}^\circ\text{C}$	293 $\text{Å}^\circ\text{F}$	Rate B/50; ISO 306
	150 $\text{Å}^\circ\text{C}$	302 $\text{Å}^\circ\text{F}$	Rate B/120; ISO 306
UL RTI, Electrical	120 $\text{Å}^\circ\text{C}$	248 $\text{Å}^\circ\text{F}$	UL 746B
UL RTI, Mechanical with Impact	120 $\text{Å}^\circ\text{C}$	248 $\text{Å}^\circ\text{F}$	UL 746B
UL RTI, Mechanical without Impact	140 $\text{Å}^\circ\text{C}$	284 $\text{Å}^\circ\text{F}$	UL 746B
Flammability, UL94	HB	HB	UL 94
	@Thickness 0.460 mm	@Thickness 0.0181 in	
	V-0	V-0	UL 94
	@Thickness 0.630 mm	@Thickness 0.0248 in	
	5VA	5VA	UL 94
	@Thickness 3.00 mm	@Thickness 0.118 in	
Oxygen Index	30 %	30 %	ASTM D2863

Electrical Properties	Metric	English	Comments
-----------------------	--------	---------	----------

Volume Resistivity Electrical Properties	$\geq 1.20 \times 10^{16}$ ohm-cm Metric	$\geq 1.20 \times 10^{16}$ ohm-cm English	ASTM D257 Comments
Dielectric Constant	3.2	3.2	ASTM D150
	@Frequency 100 Hz	@Frequency 100 Hz	
	3.2	3.2	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Strength	18.5 kV/mm	470 kV/in	in air; ASTM D149
	@Thickness 3.20 mm	@Thickness 0.126 in	
	18.5 kV/mm	470 kV/in	
	@Thickness 3.20 mm	@Thickness 0.126 in	in oil; ASTM D149
	25.2 kV/mm	640 kV/in	in oil; ASTM D149
	@Thickness 1.60 mm	@Thickness 0.0630 in	
Dissipation Factor	0.0030	0.0030	ASTM D150
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.030	0.030	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
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	15 - 30 arcs	15 - 30 arcs	UL 746A
High Voltage Arc-Tracking Rate, HVTR	80.0 - 150 mm/min	3.15 - 5.91 in/min	UL 746A

Descriptive Properties	Value	Comments
Specific Volume	0.75cm ³ /g	ASTM D792
UV-light, water exposure/immersion	F2	UL 746C

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215, Fengxian District, Shanghai City, China