

SABIC Innovative Plastics Valox® IQ357 PBT+PC

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

Material Notes:

Valox® Resin IQ357: Environmentally responsible, low carbon footprint iQ® PBT + PC alloy. UL94 V-0 @0.63 mm. Impact modified.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Valox-IQ357-PBTPC.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.35 g/cc	1.35 g/cc	ASTM D792
Density	1.32 g/cc	0.0477 lb/in ³	ISO 1183
Moisture Absorption	0.0800 %	0.0800 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.080 %	0.080 %	ISO 62
Linear Mold Shrinkage, Flow	0.011 - 0.014 cm/cm @Thickness 3.20 mm	0.011 - 0.014 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	9.3 g/10 min @Load 5.00 kg, Temperature 250 °C	9.3 g/10 min @Load 11.0 lb, Temperature 482 °F	ASTM D1238
Melt Index of Compound	7.0 g/10 min @Load 5.00 kg, Temperature 250 °C	7.0 g/10 min @Load 11.0 lb, Temperature 482 °F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	40.0 MPa	5800 psi	50 mm/min; ISO 527
	41.0 MPa	5950 psi	Type I, 50 mm/min; ASTM D638
Tensile Strength, Yield	48.0 MPa	6960 psi	Type I, 50 mm/min; ASTM D638
	48.0 MPa	6960 psi	50 mm/min; ISO 527
Elongation at Break	74 %	74 %	Type I, 50 mm/min; ASTM D638
	74.8 %	74.8 %	50 mm/min; ISO 527
Elongation at Yield	4.6 %	4.6 %	50 mm/min; ISO 527
	4.9 %	4.9 %	Type I, 50 mm/min; ASTM D638
Tensile Modulus	2.00 GPa	290 ksi	5 mm/min; ASTM D638
	2.19 GPa	318 ksi	1 mm/min; ISO 527

Mechanical Properties	Metric	English	Comments
Flexural Yield Strength	75.0 MPa	10900 psi	2 mm/min; ISO 178
	75.0 MPa	10900 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.05 GPa	297 ksi	2 mm/min; ISO 178
	2.10 GPa	305 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	4.90 J/cm	9.18 ft-lb/in	ASTM D256
	1.67 J/cm	3.13 ft-lb/in	ASTM D256
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Izod Impact, Notched (ISO)	31.0 kJ/mÂ²	14.8 ft-lb/inÂ²	80*10*4; ISO 180/1A
	10.0 kJ/mÂ²	4.76 ft-lb/inÂ²	80*10*4; ISO 180/1A
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Charpy Impact, Notched	3.40 J/cmÂ²	16.2 ft-lb/inÂ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	50.0 J	36.9 ft-lb	ASTM D3763
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	81.6 Âµm/m-Â°C	45.3 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
	81.6 Âµm/m-Â°C	45.3 Âµin/in-Â°F	ISO 11359-2
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
CTE, linear, Transverse to Flow	97.4 Âµm/m-Â°C	54.1 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
	97.4 Âµm/m-Â°C	54.1 Âµin/in-Â°F	ISO 11359-2
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
Deflection Temperature at 0.46 MPa (66 psi)	122 Â°C	252 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
	127 Â°C	261 Â°F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	

Thermal Properties	Metric	English	Comments
Dimensional Change at 1.8 MPa (264 psi)	84.0 Â°C	183 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	88.0 Â°C	190 Â°F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	130 Â°C	266 Â°F	Rate B/50; ASTM D1525
	130 Â°C	266 Â°F	Rate B/50; ISO 306
	133 Â°C	271 Â°F	Rate B/120; ISO 306
UL RTI, Electrical	120 Â°C	248 Â°F	UL 746B
UL RTI, Mechanical with Impact	120 Â°C	248 Â°F	UL 746B
UL RTI, Mechanical without Impact	140 Â°C	284 Â°F	UL 746B
Flammability, UL94	V-0	V-0	UL 94 by SABIC-IP
	@Thickness 0.630 mm	@Thickness 0.0248 in	
	5VA	5VA	UL 94 by SABIC-IP
	@Thickness 3.00 mm	@Thickness 0.118 in	

Electrical Properties	Metric	English	Comments
Arc Resistance	60 - 120 sec	60 - 120 sec	UL 746A
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	>= 150 mm/min	>= 5.91 in/min	UL 746A

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