

SABIC Innovative Plastics Valox[®] IQ357 PBT+PC (Europe-Africa-Middle East)

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-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.35 g/cc	1.35 g/cc	ASTM D792
Density	1.34 g/cc	0.0484 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
Viscosity	295000 cP	295000 cP	Melt Viscosity, 260 [°] C, 1500 sec-1; ISO 11443
Linear Mold Shrinkage, Flow	0.011 - 0.018 cm/cm	0.011 - 0.018 in/in	on Tensile Bar; SABIC Method
	0.011 - 0.014 cm/cm @Thickness 3.20 mm	0.011 - 0.014 in/in @Thickness 0.126 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.0090 - 0.018 cm/cm	0.0090 - 0.018 in/in	on Tensile Bar; SABIC Method
Melt Flow	9.0 g/10 min @Load 5.00 kg, Temperature 250 [°] C	9.0 g/10 min @Load 11.0 lb, Temperature 482 [°] F	ASTM D1238
	18 g/10 min @Load 5.00 kg, Temperature 265 [°] C	18 g/10 min @Load 11.0 lb, Temperature 509 [°] F	ASTM D1238
	18 g/10 min @Load 5.00 kg, Temperature 266 [°] C	18 g/10 min @Load 11.0 lb, Temperature 511 [°] 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
	15 g/10 min @Load 5.00 kg, Temperature 265 [°] C	15 g/10 min @Load 11.0 lb, Temperature 509 [°] F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	113	113	ISO 2039-2
Hardness, H358/30	112 MPa	16200 psi	ISO 2039-1
Tensile Strength at Break	41.0 MPa	5950 psi	Type I, 50 mm/min; ASTM D638
	41.0 MPa	5950 psi	50 mm/min; ISO 527
Tensile Strength, Yield	51.0 MPa	7400 psi	Type I, 50 mm/min; ASTM D638
	51.0 MPa	7400 psi	50 mm/min; ISO 527
Elongation at Break	20 %	20 %	50 mm/min; ISO 527
	22 %	22 %	Type I, 50 mm/min; ASTM D638
Elongation at Yield	4.0 %	4.0 %	Type I, 50 mm/min; ASTM D638
	5.0 %	5.0 %	50 mm/min; ISO 527
Tensile Modulus	2.05 GPa	297 ksi	50 mm/min; ASTM D638
	2.05 GPa	297 ksi	1 mm/min; ISO 527
Flexural Yield Strength	75.0 MPa	10900 psi	1.3 mm/min, 50 mm span; ASTM D790
	75.0 MPa	10900 psi	2 mm/min; ISO 178
Flexural Modulus	2.10 GPa	305 ksi	1.3 mm/min, 50 mm span; ASTM D790
	2.10 GPa	305 ksi	2 mm/min; ISO 178
Izod Impact, Notched	4.00 J/cm	7.49 ft-lb/in	ASTM D256
	0.850 J/cm	1.59 ft-lb/in	ASTM D256
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
	1.50 J/cm	2.81 ft-lb/in	ASTM D256
	@Temperature 0.000 Â°C	@Temperature 32.0 Â°F	
Izod Impact, Unnotched	NB	NB	ASTM D4812
	NB	NB	ASTM D4812
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Izod Impact, Notched (ISO)	30.0 kJ/mÂ²	14.3 ft-lb/inÂ²	80*10*4; ISO 180/1A
	7.00 kJ/mÂ²	3.33 ft-lb/inÂ²	

Mechanical Properties	Metric	English	Comments
	@Temperature -30.0 °C	@Temperature -22.0 °F	ISO 180/1A
	13.0 kJ/m ² @Temperature 0.000 °C	6.19 ft-lb/in ² @Temperature 32.0 °F	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	NB	NB	80*10*4; ISO 180/1U
	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	80*10*4; ISO 180/1U
Charpy Impact Unnotched	NB	NB	ISO 179/2C
	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	ISO 179/2C
Charpy Impact, Notched	2.00 J/cm ²	9.52 ft-lb/in ²	ISO 179/2C
	3.40 J/cm ²	16.2 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	0.900 J/cm ² @Temperature -30.0 °C	4.28 ft-lb/in ² @Temperature -22.0 °F	ISO 179/2C
Dart Drop, Total Energy	50.0 J @Temperature 23.0 °C	36.9 ft-lb @Temperature 73.4 °F	ASTM D3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	81.6 µm/m-°C @Temperature -40.0 - 40.0 °C	45.3 µin/in-°F @Temperature -40.0 - 104 °F	ASTM E 831
	81.6 µm/m-°C @Temperature -40.0 - 40.0 °C	45.3 µin/in-°F @Temperature -40.0 - 104 °F	ISO 11359-2
CTE, linear, Transverse to Flow	97.4 µm/m-°C @Temperature -40.0 - 40.0 °C	54.1 µin/in-°F @Temperature -40.0 - 104 °F	ASTM E 831
	97.4 µm/m-°C @Temperature -40.0 - 40.0 °C	54.1 µin/in-°F @Temperature -40.0 - 104 °F	ISO 11359-2

Thermal Properties	125 Â°C Metric	257 Â°F English	Flatw 80*10*4 sp=64mm; ISO 75/Bf Comments
Deflection Temperature at 0.46 MPa (67 psi)	125 Â°C @Thickness 3.20 mm	257 Â°F @Thickness 0.126 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	90.0 Â°C @Thickness 3.20 mm	194 Â°F @Thickness 0.126 in	Flatw 80*10*4 sp=64mm; ISO 75/Af unannealed; ASTM D648
Vicat Softening Point	135 Â°C	275 Â°F	Rate B/50; ASTM D1525
	135 Â°C	275 Â°F	Rate B/50; ISO 306
	140 Â°C	284 Â°F	Rate B/120; ISO 306
	170 Â°C	338 Â°F	Rate A/50; ISO 306
	170 Â°C	338 Â°F	Rate A/50; ASTM D1525
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

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+15 ohm-cm	>= 1.00e+15 ohm-cm	ASTM D257
	1.00e+15 ohm-cm	1.00e+15 ohm-cm	IEC 60093
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	>= 150 mm/min	>= 5.91 in/min	UL 746A

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