SABIC Innovative Plastics ValoxÂ® 457 PBT (Europe-Africa-Middle East)

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

Material Notes:

VALOX 457 is a 6.5% glass fibre reinforced flame retarded PBT injection moulding resin. Applications: electrical and appliances industries.

Order this product through the following link:
http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Valox-457-PBT-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.45 g/cc	1.45 g/cc	ASTM D792
Density	1.45 g/cc	0.0524 lb/inÂ³	ISO 1183
Filler Content	7.0 %	7.0 %	ASTM D229
Moisture Absorption	0.0600 %	0.0600 %	23Â°C / 50% RH; ISO 62
Water Absorption at Saturation	0.28 %	0.28 %	ISO 62
Viscosity	190000 cP	190000 cP	Melt Viscosity, 260Â°C, 1500 sec-1; ISO 11443
Linear Mold Shrinkage, Flow	0.0080 - 0.010 cm/cm	0.0080 - 0.010 in/in	on Tensile Bar; SABIC Method
Linear Mold Shrinkage, Transverse	0.0090 - 0.012 cm/cm	0.0090 - 0.012 in/in	on Tensile Bar; SABIC Method
Melt Flow	65 g/10 min @Load 5.00 kg, Temperature 266 Â°C	65 g/10 min @Load 11.0 lb, Temperature 511 Â°F	ASTM D1238
Melt Index of Compound	11 g/10 min @Load 2.16 kg, Temperature 250 Â°C	11 g/10 min @Load 4.76 lb, Temperature 482 Â°F	MVR [cm^3/10 min]; ISO 1133
	30 g/10 min @Load 5.00 kg, Temperature 250 Â°C	30 g/10 min @Load 11.0 lb, Temperature 482 Â°F	MVR [cm^3/10 min]; ISO 1133
	55 g/10 min @Load 5.00 kg, Temperature 265 Â°C	55 g/10 min @Load 11.0 lb, Temperature 509 Â°F	MVR [cm^3/10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	120	120	ISO 2039-2
Hardness, H358/30	180 MPa	26100 psi	ISO 2039-1
Tensile Strength at Break	75.0 MPa	10900 psi	Type I, 5 mm/min; ASTM D638

Mechanical Properties	Metric	English	Comments
	75.0 MPa	10900 psi	5 mm/min; ISO 527
Tensile Strength, Yield	75.0 MPa	10900 psi	Type I, 5 mm/min; ASTM D638
	75.0 MPa	10900 psi	5 mm/min; ISO 527
Elongation at Break	3.0 %	3.0 %	Type I, 5 mm/min; ASTM D638
	3.0 %	3.0 %	5 mm/min; ISO 527
	4.0 %	4.0 %	Flexural Strain, break, 2 mm/min; ISO 178
Elongation at Yield	3.0 %	3.0 %	Type I, 5 mm/min; ASTM D638
	3.0 %	3.0 %	5 mm/min; ISO 527
Tensile Modulus	4.10 GPa	595 ksi	5 mm/min; ASTM D638
	4.20 GPa	609 ksi	1 mm/min; ISO 527
Flexural Strength	120 MPa	17400 psi	2 mm/min; ISO 178
Flexural Yield Strength	120 MPa	17400 psi	2 mm/min; ISO 178
Flexural Modulus	3.70 GPa	537 ksi	2 mm/min; ISO 178
Izod Impact, Notched	0.300 J/cm	0.562 ft-lb/in	ASTM D256
	0.300 J/cm @Temperature 0.000 Â°C	0.562 ft-lb/in @Temperature 32.0 Â°F	ASTM D256
	0.300 J/cm @Temperature -30.0 Â°C	0.562 ft-lb/in @Temperature -22.0 Â°F	ASTM D256
Izod Impact, Unnotched	3.50 J/cm	6.56 ft-lb/in	ASTM D4812
	3.20 J/cm @Temperature -30.0 Â°C	5.99 ft-lb/in @Temperature -22.0 Â°F	ASTM D4812
Izod Impact, Notched (ISO)	3.00 kJ/mÂ²	1.43 ft-lb/inÂ²	80*10*4; ISO 180/1A
	3.00 kJ/mÂ² @Temperature 0.000 Â°C	1.43 ft-lb/inÂ² @Temperature 32.0 Â°F	80*10*4; ISO 180/1A
	3.00 kJ/mÂ² @Temperature -30.0 Â°C	1.43 ft-lb/inÂ² @Temperature -22.0 Â°F	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	25.0 kJ/mÂ²	11.9 ft-lb/inÂ²	80*10*4; ISO 180/1U

Mechanical Properties	Metric	English	Comments
	25.0 kJ/mÂ² @Temperature -30.0 Â°C	11.9 ft-lb/inÂ² @Temperature -22.0 Â°F	80*10*4; ISO 180/1U
Charpy Impact Unnotched	3.00 J/cmÂ²	14.3 ft-lb/inÂ²	ISO 179/2C
	3.00 J/cmÂ²	14.3 ft-lb/inÂ²	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	3.00 J/cmÂ² @Temperature -30.0 Â°C	14.3 ft-lb/inÂ² @Temperature -22.0 Â°F	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	3.00 J/cmÂ² @Temperature -30.0 Â°C	14.3 ft-lb/inÂ² @Temperature -22.0 Â°F	ISO 179/2C
Charpy Impact, Notched	0.400 J/cmÂ²	1.90 ft-lb/inÂ²	ISO 179/2C
	0.700 J/cmÂ²	3.33 ft-lb/inÂ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	0.300 J/cmÂ² @Temperature -30.0 Â°C	1.43 ft-lb/inÂ² @Temperature -22.0 Â°F	ISO 179/2C
	0.600 J/cmÂ² @Temperature -30.0 Â°C	2.86 ft-lb/inÂ² @Temperature -22.0 Â°F	Edgew 80*10*4 sp=62mm; ISO 179/1eA

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	57.2 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	31.8 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ISO 11359-2

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
Surface Resistance	>= 1.00e+15 ohm	>= 1.00e+15 ohm	ROA; IEC 60093
Dielectric Constant	3.0 @Frequency 1.00e+6 Hz	3.0 @Frequency 1.00e+6 Hz	ASTM D150
	3.0 @Frequency 1.00e+6	3.0 @Frequency 1.00e+6	IEC 60250

Electrical Properties	Metric	English	Comments
	3.0 @Frequency 50.0 - 60.0 Hz	3.0 @Frequency 50.0 - 60.0 Hz	IEC 60250
	3.5 @Frequency 100 Hz	3.5 @Frequency 100 Hz	IEC 60250
Dielectric Strength	15.0 kV/mm @Thickness 3.20 mm	381 kV/in @Thickness 0.126 in	in oil; ASTM D149
	15.0 kV/mm @Thickness 3.20 mm	381 kV/in @Thickness 0.126 in	in oil; IEC 60243-1
	22.0 kV/mm @Thickness 1.60 mm	559 kV/in @Thickness 0.0630 in	in oil; IEC 60243-1
	22.0 kV/mm @Thickness 1.60 mm	559 kV/in @Thickness 0.0630 in	in oil; ASTM D149
	29.0 kV/mm @Thickness 0.800 mm	737 kV/in @Thickness 0.0315 in	in oil; IEC 60243-1
Dissipation Factor	0.0020 @Frequency 50.0 - 60.0 Hz	0.0020 @Frequency 50.0 - 60.0 Hz	IEC 60250
	0.0020 @Frequency 100 Hz	0.0020 @Frequency 100 Hz	IEC 60250
	0.020 @Frequency 1.00e+6 Hz	0.020 @Frequency 1.00e+6 Hz	IEC 60250
	0.020 @Frequency 1.00e+6 Hz	0.020 @Frequency 1.00e+6 Hz	ASTM D150
Arc Resistance	0.00 - 60 sec	0.00 - 60 sec	UL 746A
Comparative Tracking Index	175 V	175 V	IEC 60112
	175 - 250 V	175 - 250 V	UL 746A
Hot Wire Ignition, HWI	15 - 30 sec	15 - 30 sec	UL 746A
High Amp Arc Ignition, HAI	15 - 30 arcs	15 - 30 arcs	UL 746A
High Voltage Arc-Tracking Rate,			

Electrical Properties	Metric	English	Comments
HVTR	>= 150 mm/min	>= 5.91 in/min	UL 746A

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