

SABIC Innovative Plastics Valox® 4012 PBT (Europe-Africa-Middle East)

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

Material Notes:

VALOX 4012 is a 10% high strength glass fibre reinforced PBT injection moulding resin with improved mechanical properties. Applications: connectors.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Valox-4012-PBT-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.36 g/cc	1.36 g/cc	ASTM D792
Density	1.36 g/cc	0.0491 lb/in ³	ISO 1183
Filler Content	6.0 %	6.0 %	ASTM D229
Moisture Absorption	0.0700 %	0.0700 %	23Â°C / 50% RH; ISO 62
Water Absorption at Saturation	0.20 %	0.20 %	ISO 62
Viscosity	110000 cP	110000 cP	Melt Viscosity, 260Â°C, 1500 sec-1; ISO 11443
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	on Tensile Bar; SABIC Method
	0.0060 - 0.016 cm/cm @Thickness 3.20 mm	0.0060 - 0.016 in/in @Thickness 0.126 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.0070 - 0.010 cm/cm	0.0070 - 0.010 in/in	on Tensile Bar; SABIC Method
Melt Flow	13 g/10 min @Load 1.20 kg, Temperature 250 Â°C	13 g/10 min @Load 2.65 lb, Temperature 482 Â°F	ASTM D1238
Melt Index of Compound	11 g/10 min @Load 1.20 kg, Temperature 250 Â°C	11 g/10 min @Load 2.65 lb, Temperature 482 Â°F	MVR [cm ³ /10 min]; ISO 1133
	18 g/10 min @Load 2.16 kg, Temperature 250 Â°C	18 g/10 min @Load 4.76 lb, Temperature 482 Â°F	MVR [cm ³ /10 min]; ISO 1133
	46 g/10 min @Load 5.00 kg, Temperature 250 Â°C	46 g/10 min @Load 11.0 lb, Temperature 482 Â°F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, H358/30	117 MPa	17000 psi	ISO 2039-1

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	82.0 MPa	11900 psi	Type I, 5 mm/min; ASTM D638
	85.0 MPa	12300 psi	5 mm/min; ISO 527
Tensile Strength, Yield	82.0 MPa	11900 psi	Type I, 5 mm/min; ASTM D638
	85.0 MPa	12300 psi	5 mm/min; ISO 527
Elongation at Break	3.0 %	3.0 %	Type I, 5 mm/min; ASTM D638
	3.5 %	3.5 %	5 mm/min; ISO 527
	6.0 %	6.0 %	Flexural Strain, break, 2 mm/min; ISO 178
Elongation at Yield	3.0 %	3.0 %	Type I, 5 mm/min; ASTM D638
	3.2 %	3.2 %	5 mm/min; ISO 527
Tensile Modulus	4.50 GPa	653 ksi	1 mm/min; ISO 527
	4.70 GPa	682 ksi	5 mm/min; ASTM D638
Flexural Strength	115 MPa	16700 psi	2 mm/min; ISO 178
Flexural Yield Strength	130 MPa	18900 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	3.90 GPa	566 ksi	2 mm/min; ISO 178
	4.10 GPa	595 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	0.690 J/cm	1.29 ft-lb/in	ASTM D256
	0.690 J/cm	1.29 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	ASTM D256
Izod Impact, Notched (ISO)	5.00 kJ/m ²	2.38 ft-lb/in ²	80*10*4; ISO 180/1A
	5.00 kJ/m ²	2.38 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	28.0 kJ/m ²	13.3 ft-lb/in ²	80*10*4; ISO 180/1U
	28.0 kJ/m ²	13.3 ft-lb/in ²	80*10*4; ISO 180/1U
	@Temperature -30.0 °C	@Temperature -22.0 °F	80*10*4; ISO 180/1U
Charpy Impact Unnotched	3.50 J/cm ²	16.7 ft-lb/in ²	ISO 179/2C
	4.00 J/cm ²	19.0 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eU

Mechanical Properties	Metric	English	Comments
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	ISO 179/2C
	4.00 J/cmÂ² @Temperature -30.0 Â°C	19.0 ft-lb/inÂ² @Temperature -22.0 Â°F	Edgew 80*10*4 sp=62mm; ISO 179/1eU
Charpy Impact, Notched	0.500 J/cmÂ²	2.38 ft-lb/inÂ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	0.500 J/cmÂ²	2.38 ft-lb/inÂ²	ISO 179/2C
	0.400 J/cmÂ² @Temperature -30.0 Â°C	1.90 ft-lb/inÂ² @Temperature -22.0 Â°F	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	0.500 J/cmÂ² @Temperature -30.0 Â°C	2.38 ft-lb/inÂ² @Temperature -22.0 Â°F	ISO 179/2C
Dart Drop, Total Energy	3.00 J @Temperature 23.0 Â°C	2.21 ft-lb @Temperature 73.4 Â°F	ASTM D3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	60.0 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	33.3 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ASTM E 831
	60.0 Âµm/m-Â°C @Temperature 23.0 - 80.0 Â°C	33.3 Âµin/in-Â°F @Temperature 73.4 - 176 Â°F	ISO 11359-2
CTE, linear, Transverse to Flow	80.0 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	44.4 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ASTM E 831
	80.0 Âµm/m-Â°C @Temperature 23.0 - 80.0 Â°C	44.4 Âµin/in-Â°F @Temperature 73.4 - 176 Â°F	ISO 11359-2
	85.0 Âµm/m-Â°C @Temperature 23.0 - 150 Â°C	47.2 Âµin/in-Â°F @Temperature 73.4 - 302 Â°F	ISO 11359-2
Deflection Temperature at 0.46 MPa (66 psi)	210 Â°C	410 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
	215 Â°C	419 Â°F	Edgew 120*10*4 sp=100mm; ISO

Thermal Properties	Metric	English	75/Be Comments
Deflection Temperature at 1.8 MPa (264 psi)	150 Â°C	302 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	170 Â°C	338 Â°F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
	150 Â°C @Thickness 3.20 mm	302 Â°F @Thickness 0.126 in	unannealed; ASTM D648
Vicat Softening Point	204 Â°C	399 Â°F	Rate B/120; ISO 306
	206 Â°C	403 Â°F	Rate B/50; ISO 306
	206 Â°C	403 Â°F	Rate B/50; ASTM D1525

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 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	IEC 60250
	3.1 @Frequency 50.0 - 60.0 Hz	3.1 @Frequency 50.0 - 60.0 Hz	IEC 60250
Dielectric Strength	17.0 kV/mm @Thickness 3.20 mm	432 kV/in @Thickness 0.126 in	in oil; IEC 60243-1
	25.0 kV/mm @Thickness 1.60 mm	635 kV/in @Thickness 0.0630 in	in oil; IEC 60243-1
	30.0 kV/mm @Thickness 0.800 mm	762 kV/in @Thickness 0.0315 in	in oil; IEC 60243-1
Dissipation Factor	0.0010 @Frequency 50.0 - 60.0 Hz	0.0010 @Frequency 50.0 - 60.0 Hz	IEC 60250
	0.014 @Frequency 1.00e+6 Hz	0.014 @Frequency 1.00e+6 Hz	IEC 60250
Comparative Tracking Index	>= 150 V	>= 150 V	IEC 60112
	250 V	250 V	IEC 60112

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