

SABIC Innovative Plastics Valox® VX4029 PBT (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polyester, TP , Polybutylene Terephthalate (PBT) , Polybutylene Terephthalate (PBT), 30% Glass Fiber Filled

Material Notes:

VALOX VX4029 is a 30% glass reinforced PBT injection moulding resin with excellent strength, stiffness, dimensional stability and high heat resistance. This grade is a 420 with reduced additive loading. This data was supplied by SABIC-IP for the Europe-Africa-Middle East region.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Valox-VX4029-PBT-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Density	1.54 g/cc	0.0556 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	0.070 %	0.070 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.26 % @Temperature 23.0 °C	0.26 % @Temperature 73.4 °F	ISO 62
Linear Mold Shrinkage, Flow	0.0030 - 0.0070 cm/cm	0.0030 - 0.0070 in/in	on tensile bar; SABIC Method
Linear Mold Shrinkage, Transverse	0.0050 - 0.010 cm/cm	0.0050 - 0.010 in/in	on tensile bar; SABIC Method
Melt Flow	10 g/10 min @Load 2.16 kg, Temperature 250 °C	10 g/10 min @Load 4.76 lb, Temperature 482 °F	[cm ³ /10 min] Melt Volume Rate; ISO 1133
	13 g/10 min @Load 2.16 kg, Temperature 250 °C	13 g/10 min @Load 4.76 lb, Temperature 482 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	122	122	ISO 2039-2
Tensile Strength at Break	130 MPa	18900 psi	5 mm/min; ISO 527
Elongation at Break	2.5 %	2.5 %	5 mm/min; ISO 527
Tensile Modulus	9.50 GPa	1380 ksi	1 mm/min; ISO 527
Flexural Strength	195 MPa	28300 psi	2 mm/min; ISO 178
Flexural Modulus	8.50 GPa	1230 ksi	2 mm/min; ISO 178
Izod Impact, Notched (ISO)	9.00 kJ/m ² @Temperature 23.0 °C	4.28 ft-lb/in ² @Temperature 73.4 °F	80*10*4; ISO 180/1A
	9.00 kJ/m ²	4.28 ft-lb/in ²	

Mechanical Properties	Metric @ Temperature -30.0 °C	English @ Temperature -22.0 °F	80*10*4; ISO 180/1A Comments
Izod Impact, Unnotched (ISO)	50.0 kJ/m ² @Temperature 23.0 °C	23.8 ft-lb/in ² @Temperature 73.4 °F	80*10*4; ISO 180/1U
	60.0 kJ/m ² @Temperature -30.0 °C	28.6 ft-lb/in ² @Temperature -22.0 °F	80*10*4; ISO 180/1U
Charpy Impact Unnotched	5.00 J/cm ² @Temperature 23.0 °C	23.8 ft-lb/in ² @Temperature 73.4 °F	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	6.00 J/cm ² @Temperature -30.0 °C	28.6 ft-lb/in ² @Temperature -22.0 °F	Edgew 80*10*4 sp=62mm; ISO 179/1eU
Charpy Impact, Notched	0.800 J/cm ² @Temperature 23.0 °C	3.81 ft-lb/in ² @Temperature 73.4 °F	ISO 179/2C
	0.800 J/cm ² @Temperature -30.0 °C	3.81 ft-lb/in ² @Temperature -22.0 °F	ISO 179/2C
Taber Abrasion, mg/1000 Cycles	65 @Load 1.00 kg	65 @Load 2.20 lb	CS-17; SABIC Method

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	25.0 µm/m-°C @Temperature 23.0 - 60.0 °C	13.9 µin/in-°F @Temperature 73.4 - 140 °F	ISO 11359-2
CTE, linear, Transverse to Flow	105 µm/m-°C @Temperature 23.0 - 60.0 °C	58.3 µin/in-°F @Temperature 73.4 - 140 °F	ISO 11359-2
Deflection Temperature at 0.46 MPa (66 psi)	220 °C	428 °F	Edgew 120*10*4 sp=100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	205 °C	401 °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
Vicat Softening Point	213 °C	415 °F	Rate B/50; ISO 306
	213 °C	415 °F	Rate B/120; ISO 306
	222 °C	432 °F	Rate A/50; ISO 306
Flammability, UL94	HB @Thickness 1.60 mm	HB @Thickness 0.0630 in	UL 94 by SABIC-IP
Oxygen Index	20 %	20 %	LOI; ISO 4589

Thermal Properties	Metric	English	Comments
Glow Wire Test	@Thickness 1.60 mm	@Thickness 0.0630 in	Glow Wire Flammability Index; IEC 60695-2-12

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	3.1	3.1	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Constant	3.1	3.1	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
Dielectric Strength	16.0 kV/mm	406 kV/in	in oil; IEC 60243-1
	@Thickness 3.20 mm	@Thickness 0.126 in	
Dissipation Factor	0.0010	0.0010	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
Dissipation Factor	0.010	0.010	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	300 V	300 V	IEC 60112

Descriptive Properties	Value	Comments
Ball Pressure Test, 125°C +/- 2°C	PASSES	IEC 60695-10-2

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