

## SABIC Innovative Plastics Valox® VX4015 PBT (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polyester, TP , Polybutylene Terephthalate (PBT) , Polybutylene Terephthalate (PBT), 20% Glass Fiber Filled

### Material Notes:

VALOX VX4015 is a 15% glass reinforced PBT injection moulding resin, with excellent hydrolytical stability. 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-VX4015-PBT-Europe-Africa-Middle-East.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Valox-VX4015-PBT-Europe-Africa-Middle-East.php)

Physical Properties	Metric	English	Comments
Density	1.36 g/cc	0.0491 lb/in <sup>3</sup>	ISO 1183
Moisture Absorption at Equilibrium	0.070 %	0.070 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.31 % @Temperature 23.0 °C	0.31 % @Temperature 73.4 °F	ISO 62
Linear Mold Shrinkage, Flow	0.0050 - 0.0080 cm/cm	0.0050 - 0.0080 in/in	on tensile bar; SABIC Method
Linear Mold Shrinkage, Transverse	0.0060 - 0.0090 cm/cm	0.0060 - 0.0090 in/in	on tensile bar; SABIC Method
Melt Flow	19 g/10 min @Load 5.00 kg, Temperature 250 °C	19 g/10 min @Load 11.0 lb, Temperature 482 °F	[cm <sup>3</sup> /10 min] Melt Volume Rate; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	116	116	ISO 2039-2
Hardness, H358/30	110 MPa	16000 psi	ISO 2039-1
Tensile Strength at Break	80.0 MPa	11600 psi	5 mm/min; ISO 527
Elongation at Break	4.8 %	4.8 %	5 mm/min; ISO 527
Tensile Modulus	4.75 GPa	689 ksi	1 mm/min; ISO 527
Flexural Yield Strength	120 MPa	17400 psi	2 mm/min; ISO 178
Flexural Modulus	4.20 GPa	609 ksi	2 mm/min; ISO 178
Izod Impact, Notched (ISO)	8.00 kJ/m <sup>2</sup> @Temperature -30.0 °C	3.81 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	80*10*4; ISO 180/1A
	12.0 kJ/m <sup>2</sup> @Temperature 23.0 °C	5.71 ft-lb/in <sup>2</sup> @Temperature 73.4 °F	80*10*4; ISO 180/1A
	32.0 kJ/m <sup>2</sup>	15.2 ft-lb/in <sup>2</sup>	

Impact Impact Unnotched (ISO) Mechanical Properties	Metric @ Temperature -30.0 °C	English @ Temperature -22.0 °F	80*10*4; ISO 180/1U Comments
	50.0 kJ/m <sup>2</sup> @Temperature 23.0 °C	23.8 ft-lb/in <sup>2</sup> @Temperature 73.4 °F	80*10*4; ISO 180/1U
Charpy Impact Unnotched	3.40 J/cm <sup>2</sup> @Temperature -30.0 °C	16.2 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	5.50 J/cm <sup>2</sup> @Temperature 23.0 °C	26.2 ft-lb/in <sup>2</sup> @Temperature 73.4 °F	Edgew 80*10*4 sp=62mm; ISO 179/1eU
Charpy Impact, Notched	0.600 J/cm <sup>2</sup> @Temperature -30.0 °C	2.86 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
	1.00 J/cm <sup>2</sup> @Temperature 23.0 °C	4.76 ft-lb/in <sup>2</sup> @Temperature 73.4 °F	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
Taber Abrasion, mg/1000 Cycles	45 @Load 1.00 kg	45 @Load 2.20 lb	CS-17; SABIC Method

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	40.0 µm/m-°C @Temperature 23.0 - 80.0 °C	22.2 µin/in-°F @Temperature 73.4 - 176 °F	ISO 11359-2
CTE, linear, Transverse to Flow	120 µm/m-°C @Temperature 23.0 - 80.0 °C	66.7 µin/in-°F @Temperature 73.4 - 176 °F	ISO 11359-2
Deflection Temperature at 0.46 MPa (66 psi)	210 °C	410 °F	Edgew 120*10*4 sp=100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	170 °C	338 °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
Vicat Softening Point	200 °C	392 °F	Rate B/50; ISO 306
	202 °C	396 °F	Rate B/120; ISO 306

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+14 ohm-cm	>= 1.00e+14 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

Electrical Properties	Metric	English	Comments
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	IEC 60250
	3.5	3.5	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	17.0 kV/mm	432 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	
	0.0030	0.0030	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.0080	0.0080	IEC 60250
	@Frequency 100000 Hz	@Frequency 100000 Hz	
	0.014	0.014	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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