

## SABIC Innovative Plastics Valox® VX5005 PBT (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polycarbonate/Polybutylene Terephthalate (PBT) Blend, Glass Filled , Polyester, TP , Polybutylene Terephthalate (PBT)

### Material Notes:

VALOX VX5005 is a 5% glass fibre reinforced, impact modified PBT+PC blend with low warpage characteristics. 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-VX5005-PBT-Europe-Africa-Middle-East.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Valox-VX5005-PBT-Europe-Africa-Middle-East.php)

Physical Properties	Metric	English	Comments
Density	1.32 g/cc	0.0477 lb/in <sup>3</sup>	ISO 1183
Moisture Absorption at Equilibrium	0.11 %	0.11 %	23 <sup>o</sup> C / 50% RH; ISO 62
Water Absorption at Saturation	0.19 % @Temperature 23.0 <sup>o</sup> C	0.19 % @Temperature 73.4 <sup>o</sup> F	ISO 62
Linear Mold Shrinkage, Flow	0.0040 - 0.0080 cm/cm	0.0040 - 0.0080 in/in	on tensile bar; SABIC Method
Linear Mold Shrinkage, Transverse	0.0050 - 0.0090 cm/cm	0.0050 - 0.0090 in/in	on tensile bar; SABIC Method
Melt Flow	8.0 g/10 min @Load 2.16 kg, Temperature 250 <sup>o</sup> C	8.0 g/10 min @Load 4.76 lb, Temperature 482 <sup>o</sup> F	[cm <sup>3</sup> /10 min] Melt Volume Rate; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	45.0 MPa	6530 psi	5 mm/min; ISO 527
Tensile Strength, Yield	59.0 MPa	8560 psi	5 mm/min; ISO 527
Elongation at Break	20 %	20 %	5 mm/min; ISO 527
Tensile Modulus	2.90 GPa	421 ksi	1 mm/min; ISO 527
Flexural Yield Strength	85.0 MPa	12300 psi	2 mm/min; ISO 178
Flexural Modulus	2.65 GPa	384 ksi	2 mm/min; ISO 178
Izod Impact, Unnotched (ISO)	55.0 kJ/m <sup>2</sup> @Temperature 23.0 <sup>o</sup> C	26.2 ft-lb/in <sup>2</sup> @Temperature 73.4 <sup>o</sup> F	80*10*4; ISO 180/1U
	55.0 kJ/m <sup>2</sup> @Temperature -30.0 <sup>o</sup> C	26.2 ft-lb/in <sup>2</sup> @Temperature -22.0 <sup>o</sup> F	80*10*4; ISO 180/1U

Mechanical Properties Charpy Impact Unnotched	Metric	English	Comments
	5.50 J/cm <sup>2</sup> @Temperature 23.0 Â°C	26.2 ft-lb/in <sup>2</sup> @Temperature 73.4 Â°F	Edgew 10*10*4 sp=62mm; ISO 179/1eU
	5.50 J/cm <sup>2</sup> @Temperature -30.0 Â°C	26.2 ft-lb/in <sup>2</sup> @Temperature -22.0 Â°F	Edgew 80*10*4 sp=62mm; ISO 179/1eU

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	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	95.0 Âµm/m-Â°C @Temperature 23.0 - 80.0 Â°C	52.8 Âµin/in-Â°F @Temperature 73.4 - 176 Â°F	ISO 11359-2
Deflection Temperature at 0.46 MPa (66 psi)	120 Â°C	248 Â°F	Edgew 120*10*4 sp=100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	100 Â°C	212 Â°F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
Vicat Softening Point	132 Â°C	270 Â°F	Rate B/50; ISO 306
	135 Â°C	275 Â°F	Rate B/120; ISO 306
Flammability, UL94	HB @Thickness 1.60 mm	HB @Thickness 0.0630 in	UL 94 by SABIC-IP
Oxygen Index	21 %	21 %	LOI; ISO 4589
Glow Wire Test	750 Â°C @Thickness 1.00 mm	1380 Â°F @Thickness 0.0394 in	Glow Wire Flammability Index; IEC 60695-2-12
	850 Â°C @Thickness 3.00 mm	1560 Â°F @Thickness 0.118 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	2.9 @Frequency 1.00e+6 Hz	2.9 @Frequency 1.00e+6 Hz	IEC 60250
	3.0	3.0	

Electrical Properties	@Frequency 50.0 - 60.0 Metric Hz	@Frequency 50.0 - 60.0 English Hz	IEC 60250 Comments
Dielectric Strength	14.0 kV/mm @Thickness 3.20 mm	356 kV/in @Thickness 0.126 in	in oil; IEC 60243-1
Dissipation Factor	0.0040 @Frequency 1.00e+6 Hz	0.0040 @Frequency 1.00e+6 Hz	IEC 60250
	0.0090 @Frequency 50.0 - 60.0 Hz	0.0090 @Frequency 50.0 - 60.0 Hz	IEC 60250
Comparative Tracking Index	>= 100 V	>= 100 V	IEC 60112
	200 V	200 V	IEC 60112

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

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