

SABIC Innovative Plastics Valox® 325M PBT (Europe) (Unverified Data**)

Categories:	Polymer ; Thermoplastic ; Polyester, TP ; Polybutylene Terephthalate (PBT) ; Polybutylene Terephthalate (PBT), Unreinforced, Molded
Material Notes:	VALOX 325M is an unreinforced general purpose PBT injection moulding resin with high flow characteristics and internal mould release. Applications : key buttons for business machines. This data was supplied by SABIC-IP for the Europe-Africa-Middle East region.
Vendors:	No vendors are listed for this material. Please click here if you are a supplier and would like information on how to add your listing to this material.

Physical Properties	Metric	English	Comments
Density	1.31 g/cc	0.0473 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	0.080 %	0.080 %	23°C/50% RH; ISO 62
Water Absorption at Saturation	0.34 %	0.34 %	ISO 62
Linear Mold Shrinkage, Flow	0.011 - 0.018 cm/cm	0.011 - 0.018 in/in	tensile bar; SABIC Method
Linear Mold Shrinkage, Transverse	0.0090 - 0.018 cm/cm	0.0090 - 0.018 in/in	Tensile Bar; SABIC Method
Melt Flow	30 g/10 min @Load 1.20 kg, Temperature 250 °C	30 g/10 min @Load 2.65 lb, Temperature 482 °F	Melt Volume Rate (cm ³ /10 min); ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	117	117	ISO 2039-2
Tensile Strength at Break	50.0 MPa	7250 psi	50 mm/min; ISO 527
Tensile Strength, Yield	55.0 MPa	7980 psi	50 mm/min; ISO 527
Elongation at Break	25 %	25 %	50 mm/min; ISO 527
Elongation at Yield	6.0 %	6.0 %	50 mm/min; ISO 527
Tensile Modulus	2.40 GPa	348 ksi	1 mm/min; ISO 527
Flexural Yield Strength	80.0 MPa	11600 psi	2 mm/min; ISO 178
Flexural Modulus	2.30 GPa	334 ksi	2 mm/min; ISO 178
Izod Impact, Notched (ISO)	6.00 kJ/m ² @Thickness 4.00 mm, Temperature -30.0 °C	2.86 ft-lb/in ² @Thickness 0.157 in, Temperature -22.0 °F	80*10*4; ISO 180/1A
	6.00 kJ/m ² @Thickness 4.00 mm, Temperature 23.0 °C	2.86 ft-lb/in ² @Thickness 0.157 in, Temperature 73.4 °F	80*10*4; ISO 180/1A
Izod Impact, Unnotched	NB @Thickness 3.00 mm,	NB @Thickness 0.118 in,	80*10*3; ISO 180/1U

(ISO) 	Temperature -30.0 °C	Temperature -22.0 °F	
	NB @Thickness 3.00 mm, Temperature 23.0 °C	NB @Thickness 0.118 in, Temperature 73.4 °F	80*10*3; ISO 180/1U
Charpy Impact Unnotched 	NB @Thickness 4.00 mm, Temperature -30.0 °C	NB @Thickness 0.157 in, Temperature -22.0 °F	Edgew 80*10*4 sp□62mm; ISO 179/1eU
	NB @Thickness 4.00 mm, Temperature 23.0 °C	NB @Thickness 0.157 in, Temperature 73.4 °F	Edgew 80*10*4 sp□62mm; ISO 179/1eU
Charpy Impact, Notched 	0.300 J/cm ² @Temperature 23.0 °C	1.43 ft-lb/in ² @Temperature 73.4 °F	ISO 179/2C
	0.300 J/cm ² @Thickness 4.00 mm, Temperature -30.0 °C	1.43 ft-lb/in ² @Thickness 0.157 in, Temperature -22.0 °F	V-notch Edgew 80*10*4 sp□62mm; ISO 179/1eA
	0.600 J/cm ² @Thickness 4.00 mm, Temperature 23.0 °C	2.86 ft-lb/in ² @Thickness 0.157 in, Temperature 73.4 °F	V-notch Edgew 80*10*4 sp□62mm; ISO 179/1eA
Taber Abrasion, mg/1000 Cycles	9.0	9.0	CS-17, 1 kg; SABIC Method

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	IEC 60093
Dielectric Constant 	3.1 @Frequency 1.00e□6 Hz	3.1 @Frequency 1.00e□6 Hz	IEC 60250
	3.3 @Frequency 50.0 - 60.0 Hz	3.3 @Frequency 50.0 - 60.0 Hz	IEC 60250
Dielectric Strength	18.0 kV/mm @Thickness 3.20 mm	457 kV/in @Thickness 0.126 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
	0.020 @Frequency 1.00e□6 Hz	0.020 @Frequency 1.00e□6 Hz	IEC 60250
Comparative Tracking Index	600 V	600 V	IEC 60112

Thermal Properties	Metric	English	Comments
CTE, linear	130 □m/m-°C @Temperature 23.0 - 80.0 °C	72.2 □in/in-°F @Temperature 73.4 - 176 °F	Flow; ISO 11359-2
CTE, linear, Transverse to Flow	130 □m/m-°C @Temperature 23.0 - 80.0 °C	72.2 □in/in-°F @Temperature 73.4 - 176 °F	ISO 11359-2
Thermal Conductivity	0.160 W/m-□	1.11 BTU-in/hr-ft ² -°F	ISO 8302
Deflection Temperature at 0.46 MPa (66 psi)	110 °C @Thickness 4.00 mm	230 °F @Thickness 0.157 in	Edgew 120*10*4 sp□100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	50.0 °C @Thickness 4.00 mm	122 °F @Thickness 0.157 in	Edgew 120*10*4 sp□100mm; ISO 75/Ae

Vicat Softening Point	175 °C	347 °F	Rate B/120; ISO 306
	175 °C	347 °F	Rate B/50; ISO 306
UL RTI, Electrical	120 °C	248 °F	UL 746B
UL RTI, Mechanical with Impact	120 °C	248 °F	UL 746B
UL RTI, Mechanical without Impact	140 °C	284 °F	UL 746B
Flammability, UL94 	HB @Thickness 1.50 mm	HB @Thickness 0.0591 in	UL 94
	HB @Thickness 3.00 mm	HB @Thickness 0.118 in	UL 94
Oxygen Index	20 %	20 %	ISO 4589

Descriptive Properties

Ball Pressure Test, 125°C	PASSES	IEC 60695-10-2
Hardness, H358/30 (MPa)	85	ISO 2039-1