

## SABIC Innovative Plastics Valox® 325 PBT (Europe-Africa-Middle East)

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

### Material Notes:

VALOX 325 is a general purpose, unreinforced PBT injection moulding resin. Applications: sprinklers and nozzles, pumps, doorhandles, tank covers, pens and pencils.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-Valox-325-PBT-Europe-Africa-Middle-East.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Valox-325-PBT-Europe-Africa-Middle-East.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.31 g/cc	1.31 g/cc	ASTM D792
Density	1.31 g/cc	0.0473 lb/in <sup>3</sup>	ISO 1183
Moisture Absorption	0.0800 %	0.0800 %	23 <sup>o</sup> C / 50% RH; ISO 62
Water Absorption at Saturation	0.34 %	0.34 %	ISO 62
Viscosity	215000 cP	215000 cP	Melt Viscosity, 260 <sup>o</sup> C, 1500 sec-1; ISO 11443
Linear Mold Shrinkage, Flow	0.011 - 0.020 cm/cm	0.011 - 0.020 in/in	on Tensile Bar; SABIC Method
Linear Mold Shrinkage, Transverse	0.0090 - 0.018 cm/cm	0.0090 - 0.018 in/in	on Tensile Bar; SABIC Method
Melt Flow	50 g/10 min	50 g/10 min	ASTM D1238
	@Load 5.00 kg, Temperature 265 <sup>o</sup> C	@Load 11.0 lb, Temperature 509 <sup>o</sup> F	
Melt Index of Compound	50 g/10 min	50 g/10 min	ASTM D1238
	@Load 5.00 kg, Temperature 266 <sup>o</sup> C	@Load 11.0 lb, Temperature 511 <sup>o</sup> F	
Melt Index of Compound	14 g/10 min	14 g/10 min	MVR [cm <sup>3</sup> /10 min]; ISO 1133
	@Load 2.16 kg, Temperature 250 <sup>o</sup> C	@Load 4.76 lb, Temperature 482 <sup>o</sup> F	
Melt Index of Compound	30 g/10 min	30 g/10 min	MVR [cm <sup>3</sup> /10 min]; ISO 1133
	@Load 5.00 kg, Temperature 250 <sup>o</sup> C	@Load 11.0 lb, Temperature 482 <sup>o</sup> F	
Melt Index of Compound	48 g/10 min	48 g/10 min	MVR [cm <sup>3</sup> /10 min]; ISO 1133
	@Load 5.00 kg, Temperature 265 <sup>o</sup> C	@Load 11.0 lb, Temperature 509 <sup>o</sup> F	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	118	118	ISO 2039-2

Hardness: H358/30 Mechanical Properties	135 MPa Metric	19600 psi English	ISO 2039-1 Comments
Tensile Strength at Break	35.0 MPa	5080 psi	Type I, 50 mm/min; ASTM D638
	55.0 MPa	7980 psi	50 mm/min; ISO 527
Tensile Strength, Yield	55.0 MPa	7980 psi	Type I, 50 mm/min; ASTM D638
	55.0 MPa	7980 psi	50 mm/min; ISO 527
Elongation at Break	100 %	100 %	50 mm/min; ISO 527
	250 %	250 %	Type I, 50 mm/min; ASTM D638
Elongation at Yield	3.0 %	3.0 %	Type I, 50 mm/min; ASTM D638
	3.0 %	3.0 %	50 mm/min; ISO 527
Tensile Modulus	2.40 GPa	348 ksi	50 mm/min; ASTM D638
	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	2.10 GPa	305 ksi	2 mm/min; ISO 178
Izod Impact, Notched	0.500 J/cm	0.937 ft-lb/in	ASTM D256
	0.500 J/cm	0.937 ft-lb/in	ASTM D256
	@Temperature 0.000 °C	@Temperature 32.0 °F	
	0.500 J/cm	0.937 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Unnotched	NB	NB	ASTM D4812
	12.4 J/cm	23.2 ft-lb/in	
	@Temperature -30.0 °C	@Temperature -22.0 °F	ASTM D4812
Izod Impact, Notched (ISO)	6.00 kJ/m <sup>2</sup>	2.86 ft-lb/in <sup>2</sup>	80*10*4; ISO 180/1A
	6.00 kJ/m <sup>2</sup>	2.86 ft-lb/in <sup>2</sup>	
	@Temperature 0.000 °C	@Temperature 32.0 °F	80*10*4; ISO 180/1A
	6.00 kJ/m <sup>2</sup>	2.86 ft-lb/in <sup>2</sup>	
	@Temperature -30.0 °C	@Temperature -22.0 °F	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	NB	NB	80*10*4; ISO 180/1U

Mechanical Properties	Metric	English	Comments
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	80*10*4; ISO 180/1U
Charpy Impact Unnotched	NB	NB	ISO 179/2C
	NB	NB	ISO 179/2C
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	ISO 179/2C
Charpy Impact, Notched	0.600 J/cmÂ²	2.86 ft-lb/inÂ²	ISO 179/2C
	0.500 J/cmÂ²	2.38 ft-lb/inÂ²	ISO 179/2C
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	ISO 179/2C
Taber Abrasion, mg/1000 Cycles	9.0	9.0	CS-17, 1 kg; SABIC Method

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	130 Âµm/m-Â°C @Temperature 23.0 - 80.0 Â°C	72.2 Âµin/in-Â°F @Temperature 73.4 - 176 Â°F	ISO 11359-2
CTE, linear, Transverse to Flow	130 Âµm/m-Â°C @Temperature 23.0 - 80.0 Â°C	72.2 Âµin/in-Â°F @Temperature 73.4 - 176 Â°F	ISO 11359-2
Thermal Conductivity	0.160 W/m-K	1.11 BTU-in/hr-ftÂ²- Â°F	ISO 8302
Deflection Temperature at 0.46 MPa (66 psi)	115 Â°C	239 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
Deflection Temperature at 1.8 MPa (264 psi)	50.0 Â°C	122 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Af
Vicat Softening Point	175 Â°C	347 Â°F	Rate B/50; ASTM D1525
	175 Â°C	347 Â°F	Rate B/50; ISO 306
	175 Â°C	347 Â°F	Rate B/120; ISO 306
	220 Â°C	428 Â°F	Rate A/50; ISO 306
	220 Â°C	428 Â°F	Rate A/50; ASTM D1525
UL RTI, Electrical	120 Â°C	248 Â°F	UL 746B
UL RTI, Mechanical with Impact	120 Â°C	248 Â°F	UL 746B
UL RTI, Mechanical without Impact	140 Â°C	284 Â°F	UL 746B

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+15 ohm-cm	>= 1.00e+15 ohm-cm	ASTM D257
	>= 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	2.9	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
	3.1	3.1	ASTM D150
Dielectric Strength	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	IEC 60250
	3.1	3.1	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	IEC 60250
Dielectric Strength	16.0 kV/mm	406 kV/in	in oil; ASTM D149
	@Thickness 3.20 mm	@Thickness 0.126 in	
	16.0 kV/mm	406 kV/in	short time; IEC 60243-1
	@Thickness 1.00 mm	@Thickness 0.0394 in	
	16.0 kV/mm	406 kV/in	in oil; IEC 60243-1
	@Thickness 3.20 mm	@Thickness 0.126 in	
	25.0 kV/mm	635 kV/in	in oil; ASTM D149
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	25.0 kV/mm	635 kV/in	in oil; IEC 60243-1
	@Thickness 1.60 mm	@Thickness 0.0630 in	
31.0 kV/mm	787 kV/in	in oil; IEC 60243-1	
@Thickness 0.800 mm	@Thickness 0.0315 in		
31.0 kV/mm	787 kV/in	in oil; ASTM D149	
@Thickness 0.800 mm	@Thickness 0.0315 in		
Dissipation Factor	0.00030	0.00030	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
Dissipation Factor	0.020	0.020	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

Electrical Properties	0.020 Metric	0.020 English	Comments ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	>= 350 V	>= 350 V	IEC 60112
	600 V	600 V	IEC 60112

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