

## SABIC Innovative Plastics Valox® 855 PBT (Europe-Africa-Middle East)

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

### Material Notes:

VALOX 855 is 15% glass reinforced PBT+PET blend with improved surface appearance. Applications: external housings, steam irons, appliance housings and lighting parts.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-Valox-855-PBT-Europe-Africa-Middle-East.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Valox-855-PBT-Europe-Africa-Middle-East.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.50 g/cc	1.50 g/cc	ASTM D792
Density	1.50 g/cc	0.0542 lb/in <sup>3</sup>	ISO 1183
Filler Content	15 %	15 %	ASTM D229
Moisture Absorption	0.0600 %	0.0600 %	23Â°C / 50% RH; ISO 62
Water Absorption at Saturation	0.45 %	0.45 %	ISO 62
Viscosity	135000 cP	135000 cP	Melt Viscosity, 260Â°C, 1500 sec-1; ISO 11443
Linear Mold Shrinkage, Flow	0.0040 - 0.0080 cm/cm	0.0040 - 0.0080 in/in	on Tensile Bar; SABIC Method
	0.0060 cm/cm @Thickness 3.20 mm	0.0060 in/in @Thickness 0.126 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.0060 - 0.010 cm/cm	0.0060 - 0.010 in/in	on Tensile Bar; SABIC Method
Melt Flow	79 g/10 min @Load 5.00 kg, Temperature 266 Â°C	79 g/10 min @Load 11.0 lb, Temperature 511 Â°F	ASTM D1238
Melt Index of Compound	11 g/10 min @Load 1.20 kg, Temperature 265 Â°C	11 g/10 min @Load 2.65 lb, Temperature 509 Â°F	MVR [cm <sup>3</sup> /10 min]; ISO 1133
	32 g/10 min @Load 5.00 kg, Temperature 250 Â°C	32 g/10 min @Load 11.0 lb, Temperature 482 Â°F	MVR [cm <sup>3</sup> /10 min]; ISO 1133
	60 g/10 min @Load 5.00 kg, Temperature 265 Â°C	60 g/10 min @Load 11.0 lb, Temperature 509 Â°F	MVR [cm <sup>3</sup> /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	120	120	ISO 2039-2

Mechanical Properties <small>Hardness, H30W, 30</small>	Metric <small>120 MPa</small>	English <small>16000 psi</small>	Comments <small>ISO 2130-1</small>
Tensile Strength at Break	100 MPa	14500 psi	Type I, 5 mm/min; ASTM D638
	100 MPa	14500 psi	5 mm/min; ISO 527
Tensile Strength, Yield	100 MPa	14500 psi	Type I, 5 mm/min; ASTM D638
	100 MPa	14500 psi	5 mm/min; ISO 527
Elongation at Break	3.0 %	3.0 %	Type I, 5 mm/min; ASTM D638
	3.0 %	3.0 %	5 mm/min; ISO 527
	3.0 %	3.0 %	Flexural Strain, break, 2 mm/min; ISO 178
Elongation at Yield	2.0 %	2.0 %	Type I, 5 mm/min; ASTM D638
	2.0 %	2.0 %	5 mm/min; ISO 527
Tensile Modulus	6.50 GPa	943 ksi	5 mm/min; ASTM D638
	6.50 GPa	943 ksi	1 mm/min; ISO 527
Flexural Strength	148 MPa	21500 psi	1.3 mm/min, 50 mm span; ASTM D790
	150 MPa	21800 psi	2 mm/min; ISO 178
Flexural Yield Strength	148 MPa	21500 psi	1.3 mm/min, 50 mm span; ASTM D790
	150 MPa	21800 psi	2 mm/min; ISO 178
Flexural Modulus	5.20 GPa	754 ksi	1.3 mm/min, 50 mm span; ASTM D790
	5.40 GPa	783 ksi	2 mm/min; ISO 178
Izod Impact, Notched	0.550 J/cm	1.03 ft-lb/in	ASTM D256
	0.550 J/cm	1.03 ft-lb/in	ASTM D256
	@Temperature 0.000 Â°C	@Temperature 32.0 Â°F	
	0.550 J/cm	1.03 ft-lb/in	ASTM D256
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Izod Impact, Unnotched	4.00 J/cm	7.49 ft-lb/in	ASTM D4812
	4.00 J/cm	7.49 ft-lb/in	ASTM D4812
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	

Mechanical Properties	Metric	English	Comments
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
	@Temperature 0.000 °C	@Temperature 32.0 °F	
	6.00 kJ/m <sup>2</sup>	2.86 ft-lb/in <sup>2</sup>	80*10*4; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Unnotched (ISO)	25.0 kJ/m <sup>2</sup>	11.9 ft-lb/in <sup>2</sup>	80*10*4; ISO 180/1U
	23.0 kJ/m <sup>2</sup>	10.9 ft-lb/in <sup>2</sup>	80*10*4; ISO 180/1U
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact Unnotched	2.00 J/cm <sup>2</sup>	9.52 ft-lb/in <sup>2</sup>	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	2.50 J/cm <sup>2</sup>	11.9 ft-lb/in <sup>2</sup>	ISO 179/2C
	1.50 J/cm <sup>2</sup>	7.14 ft-lb/in <sup>2</sup>	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	2.50 J/cm <sup>2</sup>	11.9 ft-lb/in <sup>2</sup>	ISO 179/2C
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	0.600 J/cm <sup>2</sup>	2.86 ft-lb/in <sup>2</sup>	ISO 179/2C
	0.800 J/cm <sup>2</sup>	3.81 ft-lb/in <sup>2</sup>	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	0.400 J/cm <sup>2</sup>	1.90 ft-lb/in <sup>2</sup>	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	0.600 J/cm <sup>2</sup>	2.86 ft-lb/in <sup>2</sup>	ISO 179/2C
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Dart Drop, Total Energy	6.00 J	4.43 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Taber Abrasion, mg/1000 Cycles	17	17	CS-17, 1 kg; SABIC Method

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	ASTM D257

Electrical Properties	Metric <small>≥ 1.00e+15 ohm-cm</small>	English <small>≥ 1.00e+15 ohm-cm</small>	Comments
Surface Resistance	≥ 1.00e+15 ohm	≥ 1.00e+15 ohm	ROA; IEC 60093
Dielectric Constant	3.3	3.3	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.3	3.3	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.3	3.3	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
	3.5	3.5	ASTM D150
	@Frequency 100 Hz	@Frequency 100 Hz	
	3.5	3.5	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	18.0 kV/mm	457 kV/in	in oil; ASTM D149
	@Thickness 3.20 mm	@Thickness 0.126 in	
	18.0 kV/mm	457 kV/in	in oil; IEC 60243-1
	@Thickness 3.20 mm	@Thickness 0.126 in	
	21.0 kV/mm	533 kV/in	short time; IEC 60243-1
	@Thickness 1.00 mm	@Thickness 0.0394 in	
	25.0 kV/mm	635 kV/in	in oil; IEC 60243-1
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	25.0 kV/mm	635 kV/in	in oil; ASTM D149
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	33.0 kV/mm	838 kV/in	in oil; ASTM D149
	@Thickness 0.800 mm	@Thickness 0.0315 in	
	33.0 kV/mm	838 kV/in	in oil; IEC 60243-1
	@Thickness 0.800 mm	@Thickness 0.0315 in	
Dissipation Factor	0.0010	0.0010	ASTM D150
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.0010	0.0010	

Electrical Properties	@Frequency 50.0 - 60.0 Metric Hz	@Frequency 50.0 - 60.0 English Hz	IEC 60250 Comments
	0.0015	0.0015	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.010	0.010	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	0.015	0.015	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

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