

SABIC Innovative Plastics Valox[®] 815 PBT (Europe-Africa-Middle East)

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

Material Notes:

VALOX 815 is a 15% glass reinforced PBT+PET blend with excellent surface finish. Applications: hot air gun housings assemblies, industrial glue guns, appliance housings and handles.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Valox-815-PBT-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.43 g/cc	1.43 g/cc	ASTM D792
Density	1.43 g/cc	0.0517 lb/in ³	ISO 1183
Water Absorption	0.060 % @Time 86400 sec	0.060 % @Time 24.0 hour	ASTM D570
Moisture Absorption	0.0600 %	0.0600 %	23 [°] C / 50% RH; ISO 62
Water Absorption at Saturation	0.26 %	0.26 %	ISO 62
Viscosity	155000 cP	155000 cP	Melt Viscosity, 260 [°] 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
	0.0040 - 0.0060 cm/cm @Thickness 1.50 - 3.20 mm	0.0040 - 0.0060 in/in @Thickness 0.0591 - 0.126 in	SABIC Method
	0.0060 - 0.0090 cm/cm @Thickness 3.20 - 4.60 mm	0.0060 - 0.0090 in/in @Thickness 0.126 - 0.181 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.0060 - 0.010 cm/cm	0.0060 - 0.010 in/in	on Tensile Bar; SABIC Method
	0.0050 - 0.0080 cm/cm @Thickness 1.50 - 3.20 mm	0.0050 - 0.0080 in/in @Thickness 0.0591 - 0.126 in	SABIC Method
	0.0080 - 0.011 cm/cm @Thickness 3.20 - 4.60 mm	0.0080 - 0.011 in/in @Thickness 0.126 - 0.181 in	SABIC Method
Melt Flow	20 g/10 min @Load 5.00 kg, Temperature 250 [°] C	20 g/10 min @Load 11.0 lb, Temperature 482 [°] F	ASTM D1238
	60 g/10 min	60 g/10 min	

Physical Properties	Metric	English	ASTM D1238 Comments
	@Load 5.00 kg, Temperature 265 Å°C	@Load 11.0 lb, Temperature 509 Å°F	
Melt Index of Compound	12 g/10 min	12 g/10 min	MVR [cm ³ /10 min]; ISO 1133
	@Load 1.20 kg, Temperature 265 Å°C	@Load 2.65 lb, Temperature 509 Å°F	
	50 g/10 min	50 g/10 min	MVR [cm ³ /10 min]; ISO 1133
	@Load 5.00 kg, Temperature 265 Å°C	@Load 11.0 lb, Temperature 509 Å°F	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	120	120	ASTM D785
	120	120	ISO 2039-2
Hardness, H358/30	102 MPa	14800 psi	ISO 2039-1
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, 50 mm/min; ASTM D638
	3.0 %	3.0 %	5 mm/min; ISO 527
	4.0 %	4.0 %	Flexural Strain, break, 2 mm/min; ISO 178
Elongation at Yield	3.0 %	3.0 %	Type I, 50 mm/min; ASTM D638
	3.0 %	3.0 %	5 mm/min; ISO 527
Tensile Modulus	6.20 GPa	899 ksi	5 mm/min; ASTM D638
	6.20 GPa	899 ksi	1 mm/min; ISO 527
Flexural Strength	145 MPa	21000 psi	2 mm/min; ISO 178
	155 MPa	22500 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Yield Strength	150 MPa	21800 psi	2 mm/min; ISO 178
	155 MPa	22500 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	5.00 GPa	725 ksi	1.3 mm/min, 50 mm span; ASTM D790

Mechanical Properties	5.20 GPa Metric	754 ksi English	2 mm/min: ISO 178 Comments
Izod Impact, Notched	0.600 J/cm	1.12 ft-lb/in	ASTM D256
	0.600 J/cm @Temperature 0.000 Â°C	1.12 ft-lb/in @Temperature 32.0 Â°F	ASTM D256
	0.600 J/cm @Temperature -30.0 Â°C	1.12 ft-lb/in @Temperature -22.0 Â°F	ASTM D256
Izod Impact, Unnotched	3.90 J/cm	7.31 ft-lb/in	ASTM D4812
	3.90 J/cm @Temperature -30.0 Â°C	7.31 ft-lb/in @Temperature -22.0 Â°F	ASTM D4812
Izod Impact, Notched (ISO)	6.00 kJ/mÂ²	2.86 ft-lb/inÂ²	80*10*4; ISO 180/1A
	6.00 kJ/mÂ² @Temperature 0.000 Â°C	2.86 ft-lb/inÂ² @Temperature 32.0 Â°F	80*10*4; ISO 180/1A
	6.00 kJ/mÂ² @Temperature -30.0 Â°C	2.86 ft-lb/inÂ² @Temperature -22.0 Â°F	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	30.0 kJ/mÂ²	14.3 ft-lb/inÂ²	80*10*4; ISO 180/1U
	25.0 kJ/mÂ² @Temperature -30.0 Â°C	11.9 ft-lb/inÂ² @Temperature -22.0 Â°F	80*10*4; ISO 180/1U
Charpy Impact Unnotched	3.00 J/cmÂ²	14.3 ft-lb/inÂ²	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	3.00 J/cmÂ²	14.3 ft-lb/inÂ²	ISO 179/2C
	3.00 J/cmÂ² @Temperature -30.0 Â°C	14.3 ft-lb/inÂ² @Temperature -22.0 Â°F	ISO 179/2C
	3.00 J/cmÂ² @Temperature -30.0 Â°C	14.3 ft-lb/inÂ² @Temperature -22.0 Â°F	Edgew 80*10*4 sp=62mm; ISO 179/1eU
Charpy Impact, Notched	0.500 J/cmÂ²	2.38 ft-lb/inÂ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	0.700 J/cmÂ²	3.33 ft-lb/inÂ²	ISO 179/2C
	0.400 J/cmÂ²	1.90 ft-lb/inÂ²	

Mechanical Properties	Metric	English	Comments
	@Temperature -30.0 °C	@Temperature -22.0 °F	Edgew 80*10*4 sp=62mm; ISO 179/2C
	0.700 J/cm ²	3.33 ft-lb/in ²	ISO 179/2C
	@Temperature -20.0 °C	@Temperature -4.00 °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	IEC 60093
	5.60e+16 ohm-cm	5.60e+16 ohm-cm	ASTM D257
Surface Resistance	>= 1.00e+15 ohm	>= 1.00e+15 ohm	ROA; IEC 60093
Dielectric Constant	2.9	2.9	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.0	3.0	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
	3.5	3.5	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.6	3.6	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	3.6	3.6	ASTM D150
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	16.0 kV/mm	406 kV/in	in oil; IEC 60243-1
	@Thickness 3.20 mm	@Thickness 0.126 in	
	18.0 kV/mm	457 kV/in	short time; IEC 60243-1
	@Thickness 1.00 mm	@Thickness 0.0394 in	
	22.0 kV/mm	559 kV/in	in air; ASTM D149
	@Thickness 3.20 mm	@Thickness 0.126 in	
	23.6 kV/mm	599 kV/in	in oil; ASTM D149
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	24.0 kV/mm	610 kV/in	in oil; IEC 60243-1

Electrical Properties	@Thickness 1.60 mm Metric	@Thickness 0.0630 in English	Comments
	30.0 kV/mm	762 kV/in	in oil; IEC 60243-1
	@Thickness 0.800 mm	@Thickness 0.0315 in	

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