

SABIC Innovative Plastics Valox® 815 PBT

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

Material Notes:

15% GR PBT+ PET, excellent surface finish. Typical applications are hot air gun housing 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.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.43 g/cc	1.43 g/cc	ASTM D792
Water Absorption	0.060 %	0.060 %	ASTM D570
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Flow	0.0040 - 0.0060 cm/cm	0.0040 - 0.0060 in/in	SABIC Method
	@Thickness 1.50 - 3.20 mm	@Thickness 0.0591 - 0.126 in	
	0.0060 - 0.0090 cm/cm	0.0060 - 0.0090 in/in	SABIC Method
	@Thickness 3.20 - 4.60 mm	@Thickness 0.126 - 0.181 in	
Linear Mold Shrinkage, Transverse	0.0050 - 0.0080 cm/cm	0.0050 - 0.0080 in/in	SABIC Method
	@Thickness 1.50 - 3.20 mm	@Thickness 0.0591 - 0.126 in	
	0.0080 - 0.011 cm/cm	0.0080 - 0.011 in/in	SABIC Method
	@Thickness 3.20 - 4.60 mm	@Thickness 0.126 - 0.181 in	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	119	119	ASTM D785
Tensile Strength at Break	89.0 MPa	12900 psi	Type I, 5 mm/min; ASTM D638
Flexural Strength	137 MPa	19900 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	4.48 GPa	650 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	0.370 J/cm	0.693 ft-lb/in	ASTM D256
Izod Impact, Unnotched	2.67 J/cm	5.00 ft-lb/in	ASTM D4812

Thermal Properties	Metric	English	Comments
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Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	45.0 Âµm/m-Â°C	25.0 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
	54.0 Âµm/m-Â°C	30.0 Âµin/in-Â°F	ASTM E 831
	@Temperature 60.0 - 138 Â°C	@Temperature 140 - 280 Â°F	
Deflection Temperature at 0.46 MPa (66 psi)	210 Â°C	410 Â°F	unannealed; ASTM D648
	@Thickness 6.40 mm	@Thickness 0.252 in	
Deflection Temperature at 1.8 MPa (264 psi)	160 Â°C	320 Â°F	unannealed; ASTM D648
	@Thickness 6.40 mm	@Thickness 0.252 in	
UL RTI, Electrical	125 Â°C	257 Â°F	UL 746B
UL RTI, Mechanical with Impact	110 Â°C	230 Â°F	UL 746B
UL RTI, Mechanical without Impact	125 Â°C	257 Â°F	UL 746B
Flammability, UL94	HB	HB	UL 94
	@Thickness 1.47 mm	@Thickness 0.0579 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	5.60e+16 ohm-cm	5.60e+16 ohm-cm	ASTM D257
Dielectric Constant	3.5	3.5	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.6	3.6	ASTM D150
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	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	
Dissipation Factor	0.0020	0.0020	ASTM D150
	@Frequency 100 Hz	@Frequency 100 Hz	
Arc Resistance	120 - 180 sec	120 - 180 sec	Tungsten; ASTM D495
Comparative Tracking Index	250 - 400 V	250 - 400 V	UL 746A
Hot Wire Ignition, HWI	30 - 60 sec	30 - 60 sec	UL 746A

High Amp Arc Ignition, HAI Electrical Properties	30 - 60 arcs Metric	30 - 60 arcs English	UL 746A Comments
High Voltage Arc-Tracking Rate, HVTR	10.0 - 25.4 mm/min	0.394 - 1.00 in/min	UL 746A

Descriptive Properties	Value	Comments
Specific Volume	0.7cm ³ /g	ASTM D792

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