

## SABIC Innovative Plastics Valox<sup>®</sup> 780 PBT

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

### Material Notes:

40% gl/min, UL94 V-0 rated. Nonblooming flame retardant. Circuit breaker handles/housings, motor coil housings.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-Valox-780-PBT.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Valox-780-PBT.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.77 g/cc	1.77 g/cc	ASTM D792
Water Absorption	0.020 %	0.020 %	ASTM D570
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Flow	0.0030 - 0.0040 cm/cm	0.0030 - 0.0040 in/in	SABIC Method
	@Thickness 1.50 - 3.20 mm	@Thickness 0.0591 - 0.126 in	
	0.0040 - 0.0060 cm/cm	0.0040 - 0.0060 in/in	SABIC Method
	@Thickness 3.20 - 4.60 mm	@Thickness 0.126 - 0.181 in	
Linear Mold Shrinkage, Transverse	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 - 0.0080 cm/cm	0.0060 - 0.0080 in/in	SABIC Method
	@Thickness 3.20 - 4.60 mm	@Thickness 0.126 - 0.181 in	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	116	116	ASTM D785
Tensile Strength at Break	99.0 MPa	14400 psi	Type I, 5 mm/min; ASTM D638
Flexural Strength	165 MPa	23900 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	10.34 GPa	1500 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	0.530 J/cm	0.993 ft-lb/in	ASTM D256
Izod Impact, Unnotched	3.73 J/cm	6.99 ft-lb/in	ASTM D4812

Thermal Properties	Metric	English	Comments
	25.2 $\mu$ m/m- $^{\circ}$ C	14.0 $\mu$ in/in- $^{\circ}$ F	

Thermal Properties	Metric	English	Comments
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
	28.8 Âµm/m-Â°C	16.0 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)	193 Â°C	379 Â°F	unannealed; ASTM D648
	@Thickness 6.40 mm	@Thickness 0.252 in	
UL RTI, Electrical	130 Â°C	266 Â°F	UL 746B
UL RTI, Mechanical with Impact	130 Â°C	266 Â°F	UL 746B
UL RTI, Mechanical without Impact	140 Â°C	284 Â°F	UL 746B
Flammability, UL94	V-0	V-0	UL 94
	@Thickness 0.810 mm	@Thickness 0.0319 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	3.50e+15 ohm-cm	3.50e+15 ohm-cm	ASTM D257
Dielectric Constant	3.8	3.8	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.9	3.9	ASTM D150
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	18.1 kV/mm	460 kV/in	in air; ASTM D149
	@Thickness 3.20 mm	@Thickness 0.126 in	
	25.5 kV/mm	648 kV/in	in oil; ASTM D149
	@Thickness 1.60 mm	@Thickness 0.0630 in	
Dissipation Factor	0.0070	0.0070	ASTM D150
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.020	0.020	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Arc Resistance	60 - 120 sec	60 - 120 sec	Tungsten; ASTM D495
Comparative Tracking Index	175 - 250 V	175 - 250 V	UL 746A

Electrical Properties Hot Wire Ignition, HWI	Metric 0.0 - 120 sec	English 0.0 - 120 sec	Comments UL 746A
High Amp Arc Ignition, HAI	0.00 - 15 arcs	0.00 - 15 arcs	UL 746A
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	0.56cm <sup>3</sup> /g	ASTM D792

## Contact Songhan Plastic Technology Co.,Ltd.

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