

## SABIC Innovative Plastics Valox<sup>®</sup> 312 PBT

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

### Material Notes:

Unreinforced, For compounding only (not for injection molding), FDA (21 CFR 177.1660) compliant. Medium viscosity. This data was supplied by SABIC-IP for the Americas region.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-Valox-312-PBT.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Valox-312-PBT.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.31 g/cc	1.31 g/cc	ASTM D 792
Water Absorption	0.080 % @Time 86400 sec	0.080 % @Time 24.0 hour	ASTM D 570
Linear Mold Shrinkage, Flow	0.0090 - 0.016 cm/cm @Thickness 0.750 - 2.30 mm	0.0090 - 0.016 in/in @Thickness 0.0295 - 0.0906 in	SABIC Method
	0.015 - 0.023 cm/cm @Thickness 2.30 - 4.60 mm	0.015 - 0.023 in/in @Thickness 0.0906 - 0.181 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.010 - 0.017 cm/cm @Thickness 0.750 - 2.30 mm	0.010 - 0.017 in/in @Thickness 0.0295 - 0.0906 in	SABIC Method
	0.016 - 0.024 cm/cm @Thickness 2.30 - 4.60 mm	0.016 - 0.024 in/in @Thickness 0.0906 - 0.181 in	SABIC Method

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	117	117	ASTM D 785
Tensile Strength, Yield	51.0 MPa	7400 psi	Type I, 50 mm/min; ASTM D 638
Elongation at Break	300 %	300 %	Type I, 50 mm/min; ASTM D 638
Flexural Yield Strength	82.0 MPa	11900 psi	1.3 mm/min, 50 mm span; ASTM D 790
Flexural Modulus	2.34 GPa	339 ksi	1.3 mm/min, 50 mm span; ASTM D 790
Izod Impact, Notched	0.530 J/cm @Temperature 23.0 °C	0.993 ft-lb/in @Temperature 73.4 °F	ASTM D 256

Mechanical Properties <i>Izod Impact, Unnotched</i>	Metric 16.02 J/cm	English 29.02 ft-lb/in	Comments ASTM D 4812
	@Temperature 23.0 Å°C	@Temperature 73.4 Å°F	
Gardner Impact	40.0 J @Temperature 23.0 Å°C	29.5 ft-lb @Temperature 73.4 Å°F	ASTM D 3029

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	81.0 Åµm/m-Å°C	45.0 Åµin/in-Å°F	ASTM E 831
	@Temperature -40.0 - 40.0 Å°C	@Temperature -40.0 - 104 Å°F	
Deflection Temperature at 0.46 MPa (66 psi)	139 Åµm/m-Å°C	77.2 Åµin/in-Å°F	ASTM E 831
	@Temperature 60.0 - 138 Å°C	@Temperature 140 - 280 Å°F	
Deflection Temperature at 1.8 MPa (264 psi)	154 Å°C	309 Å°F	unannealed; ASTM D 648
	@Thickness 6.40 mm	@Thickness 0.252 in	
Deflection Temperature at 1.8 MPa (264 psi)	54.0 Å°C	129 Å°F	unannealed; ASTM D 648
	@Thickness 6.40 mm	@Thickness 0.252 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 4.00e+16 ohm-cm	>= 4.00e+16 ohm-cm	ASTM D 257
Dielectric Constant	3.1	3.1	ASTM D 150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Strength	3.3	3.3	ASTM D 150
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	15.7 kV/mm	399 kV/in	in air; ASTM D 149
	@Thickness 3.20 mm	@Thickness 0.126 in	
Dissipation Factor	23.2 kV/mm	589 kV/in	in oil; ASTM D 149
	@Thickness 1.60 mm	@Thickness 0.0630 in	
Dissipation Factor	0.0020	0.0020	ASTM D 150
	@Frequency 100 Hz	@Frequency 100 Hz	
Dissipation Factor	0.020	0.020	ASTM D 150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

Electrical Properties	0.4193 Metric	0.4193 English	Comments
	@Frequency 1000 Hz	@Frequency 1000 Hz	

## Contact Songhan Plastic Technology Co.,Ltd.

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