

## SABIC Innovative Plastics Valox® 357X PBT (Europe-Africa-Middle East)

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

### Material Notes:

VALOX 357X is an impact modified, flame retarded PBT+PC blend. Applications like bobbins, switches and enclosures.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-Valox-357X-PBT-Europe-Africa-Middle-East.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Valox-357X-PBT-Europe-Africa-Middle-East.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.34 g/cc	1.34 g/cc	ASTM D792
Density	1.34 g/cc	0.0484 lb/in <sup>3</sup>	ISO 1183
Moisture Absorption	0.150 %	0.150 %	23 <sup>o</sup> C / 50% RH; ISO 62
Water Absorption at Saturation	0.50 %	0.50 %	ISO 62
Viscosity	310000 cP	310000 cP	Melt Viscosity, 260 <sup>o</sup> C, 1500 sec-1; ISO 11443
Linear Mold Shrinkage, Flow	0.011 - 0.018 cm/cm	0.011 - 0.018 in/in	on Tensile Bar; SABIC Method
	0.010 - 0.014 cm/cm @Thickness 3.20 mm	0.010 - 0.014 in/in @Thickness 0.126 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.0090 - 0.018 cm/cm	0.0090 - 0.018 in/in	on Tensile Bar; SABIC Method
Melt Flow	9.6 g/10 min @Load 5.00 kg, Temperature 250 <sup>o</sup> C	9.6 g/10 min @Load 11.0 lb, Temperature 482 <sup>o</sup> F	ASTM D1238
	13 g/10 min @Load 5.00 kg, Temperature 265 <sup>o</sup> C	13 g/10 min @Load 11.0 lb, Temperature 509 <sup>o</sup> F	ASTM D1238
	13 g/10 min @Load 5.00 kg, Temperature 266 <sup>o</sup> C	13 g/10 min @Load 11.0 lb, Temperature 511 <sup>o</sup> F	ASTM D1238
Melt Index of Compound	8.0 g/10 min @Load 5.00 kg, Temperature 250 <sup>o</sup> C	8.0 g/10 min @Load 11.0 lb, Temperature 482 <sup>o</sup> F	MVR [cm <sup>3</sup> /10 min]; ISO 1133
	10 g/10 min @Load 5.00 kg, Temperature 265 <sup>o</sup> C	10 g/10 min @Load 11.0 lb, Temperature 509 <sup>o</sup> F	MVR [cm <sup>3</sup> /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
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Hardness, Rockwell R Mechanical Properties	115 Metric	115 English	ISO 2039-2 Comments
Hardness, H358/30	115 MPa	16700 psi	ISO 2039-1
Tensile Strength at Break	40.0 MPa	5800 psi	Type I, 50 mm/min; ASTM D638
	40.0 MPa	5800 psi	50 mm/min; ISO 527
Tensile Strength, Yield	50.0 MPa	7250 psi	Type I, 50 mm/min; ASTM D638
	50.0 MPa	7250 psi	50 mm/min; ISO 527
Elongation at Break	30 %	30 %	Type I, 50 mm/min; ASTM D638
	30 %	30 %	50 mm/min; ISO 527
Elongation at Yield	5.0 %	5.0 %	Type I, 50 mm/min; ASTM D638
	5.0 %	5.0 %	50 mm/min; ISO 527
Tensile Modulus	2.00 GPa	290 ksi	50 mm/min; ASTM D638
	2.20 GPa	319 ksi	1 mm/min; ISO 527
Flexural Yield Strength	78.0 MPa	11300 psi	1.3 mm/min, 50 mm span; ASTM D790
	80.0 MPa	11600 psi	2 mm/min; ISO 178
Flexural Modulus	2.00 GPa	290 ksi	2 mm/min; ISO 178
	2.10 GPa	305 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	5.00 J/cm	9.37 ft-lb/in	ASTM D256
	1.50 J/cm	2.81 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	1.90 J/cm	3.56 ft-lb/in	ASTM D256
	@Temperature 0.000 °C	@Temperature 32.0 °F	
Izod Impact, Unnotched	NB	NB	ASTM D4812
	NB	NB	ASTM D4812
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Notched (ISO)	40.0 kJ/m <sup>2</sup>	19.0 ft-lb/in <sup>2</sup>	80*10*4; ISO 180/1A
	15.0 kJ/m <sup>2</sup>	7.14 ft-lb/in <sup>2</sup>	80*10*4; ISO 180/1A
	@Temperature -30.0	@Temperature -22.0	

Mechanical Properties	°C Metric	°F English	Comments
	20.0 kJ/m <sup>2</sup> @Temperature 0.000 °C	9.52 ft-lb/in <sup>2</sup> @Temperature 32.0 °F	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	NB	NB	80*10*4; ISO 180/1U
	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	80*10*4; ISO 180/1U
Charpy Impact Unnotched	NB	NB	ISO 179/2C
	NB	NB	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	ISO 179/2C
Charpy Impact, Notched	4.00 J/cm <sup>2</sup>	19.0 ft-lb/in <sup>2</sup>	ISO 179/2C
	4.50 J/cm <sup>2</sup>	21.4 ft-lb/in <sup>2</sup>	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	2.00 J/cm <sup>2</sup> @Temperature -30.0 °C	9.52 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	2.00 J/cm <sup>2</sup> @Temperature -30.0 °C	9.52 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	ISO 179/2C
Dart Drop, Total Energy	35.0 J @Temperature 23.0 °C	25.8 ft-lb @Temperature 73.4 °F	ASTM D3763
Taber Abrasion, mg/1000 Cycles	33	33	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
	>= 1.00e+15 ohm-cm	>= 1.00e+15 ohm-cm	IEC 60093
Surface Resistance	>= 1.00e+15 ohm	>= 1.00e+15 ohm	ROA; IEC 60093
	3.0	3.0	

Electrical Properties	Metric	English	Comments
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.0	3.0	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	
Dielectric Strength	17.0 kV/mm	432 kV/in	in oil; ASTM D149
	@Thickness 3.20 mm	@Thickness 0.126 in	
	17.0 kV/mm	432 kV/in	in oil; IEC 60243-1
	@Thickness 3.20 mm	@Thickness 0.126 in	
	25.0 kV/mm	635 kV/in	in oil; ASTM D149
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	25.0 kV/mm	635 kV/in	in oil; IEC 60243-1
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	34.0 kV/mm	864 kV/in	in oil; IEC 60243-1
	@Thickness 0.800 mm	@Thickness 0.0315 in	
Dissipation Factor	0.0013	0.0013	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	0.0020	0.0020	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
	0.013	0.013	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	>= 100 V	>= 100 V	IEC 60112
	175 - 250 V	175 - 250 V	UL 746A
	225 V	225 V	IEC 60112
Hot Wire Ignition, HWI	15 - 30 sec	15 - 30 sec	UL 746A
High Amp Arc Ignition, HAI	>= 120 arcs	>= 120 arcs	UL 746A

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