

SABIC Innovative Plastics Valox® DR48V PBT (Europe-Africa-Middle East)

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

Material Notes:

VALOX DR48V is a 17% glass reinforced, flame retardant injection moulding PBT resin. Applications: lamp sockets, connectors, switches, electrical housings and bases, bobbins, trimmers and electromotor housings.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Valox-DR48V-PBT-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.52 g/cc	1.52 g/cc	ASTM D792
Density	1.52 g/cc	0.0549 lb/in ³	ISO 1183
Filler Content	17 %	17 %	ASTM D229
Moisture Absorption	0.0700 %	0.0700 %	23Â°C / 50% RH; ISO 62
Water Absorption at Saturation	0.17 %	0.17 %	ISO 62
Viscosity	175000 cP	175000 cP	Melt Viscosity, 260Â°C, 1500 sec-1; ISO 11443
Linear Mold Shrinkage, Flow	0.0035 - 0.0055 cm/cm	0.0035 - 0.0055 in/in	on Tensile Bar; SABIC Method
	0.0030 - 0.0090 cm/cm @Thickness 3.20 mm	0.0030 - 0.0090 in/in @Thickness 0.126 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.0060 - 0.0090 cm/cm	0.0060 - 0.0090 in/in	on Tensile Bar; SABIC Method
Melt Flow	25 g/10 min	25 g/10 min	ASTM D1238
	@Load 5.00 kg, Temperature 250 Â°C	@Load 11.0 lb, Temperature 482 Â°F	
	50 g/10 min	50 g/10 min	ASTM D1238
	@Load 5.00 kg, Temperature 265 Â°C	@Load 11.0 lb, Temperature 509 Â°F	
Melt Index of Compound	8.0 g/10 min	8.0 g/10 min	MVR [cm ³ /10 min]; ISO 1133
	@Load 2.16 kg, Temperature 250 Â°C	@Load 4.76 lb, Temperature 482 Â°F	
	22 g/10 min	22 g/10 min	MVR [cm ³ /10 min]; ISO 1133
	@Load 5.00 kg, Temperature 250 Â°C	@Load 11.0 lb, Temperature 482 Â°F	
	40 g/10 min	40 g/10 min	MVR [cm ³ /10 min]; ISO 1133
	@Load 5.00 kg, Temperature 265 Â°C	@Load 11.0 lb, Temperature 509 Â°F	

Physical Properties	Metric	English	Comments
Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	120	120	ISO 2039-2
Hardness, H358/30	218 MPa	31600 psi	ISO 2039-1
Tensile Strength at Break	105 MPa	15200 psi	Type I, 5 mm/min; ASTM D638
	105 MPa	15200 psi	5 mm/min; ISO 527
Tensile Strength, Yield	105 MPa	15200 psi	Type I, 5 mm/min; ASTM D638
	105 MPa	15200 psi	5 mm/min; ISO 527
Elongation at Break	3.0 %	3.0 %	Type I, 5 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, 5 mm/min; ASTM D638
	3.0 %	3.0 %	5 mm/min; ISO 527
Tensile Modulus	7.00 GPa	1020 ksi	5 mm/min; ASTM D638
	7.00 GPa	1020 ksi	1 mm/min; ISO 527
Flexural Strength	160 MPa	23200 psi	1.3 mm/min, 50 mm span; ASTM D790
	160 MPa	23200 psi	2 mm/min; ISO 178
Flexural Yield Strength	160 MPa	23200 psi	1.3 mm/min, 50 mm span; ASTM D790
	160 MPa	23200 psi	2 mm/min; ISO 178
Flexural Modulus	5.70 GPa	827 ksi	2 mm/min; ISO 178
	5.80 GPa	841 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	0.600 J/cm	1.12 ft-lb/in	ASTM D256
	0.600 J/cm	1.12 ft-lb/in	ASTM D256
	@Temperature 0.000 Å°C	@Temperature 32.0 Å°F	
	0.600 J/cm	1.12 ft-lb/in	ASTM D256
	@Temperature -30.0 Å°C	@Temperature -22.0 Å°F	
Izod Impact, Unnotched	3.80 J/cm	7.12 ft-lb/in	ASTM D4812

Mechanical Properties	Metric J/cm	English ft-lb/in	Comments
	@Temperature -30.0 °C	@Temperature -22.0 °F	ASTM D4812
Izod Impact, Notched (ISO)	6.00 kJ/m ²	2.86 ft-lb/in ²	80*10*4; ISO 180/1A
	6.00 kJ/m ² @Temperature 0.000 °C	2.86 ft-lb/in ² @Temperature 32.0 °F	80*10*4; ISO 180/1A
	6.00 kJ/m ² @Temperature -30.0 °C	2.86 ft-lb/in ² @Temperature -22.0 °F	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	35.0 kJ/m ²	16.7 ft-lb/in ²	80*10*4; ISO 180/1U
	30.0 kJ/m ² @Temperature -30.0 °C	14.3 ft-lb/in ² @Temperature -22.0 °F	80*10*4; ISO 180/1U
Charpy Impact Unnotched	2.50 J/cm ²	11.9 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	3.50 J/cm ²	16.7 ft-lb/in ²	ISO 179/2C
	2.60 J/cm ² @Temperature -30.0 °C	12.4 ft-lb/in ² @Temperature -22.0 °F	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	3.00 J/cm ² @Temperature -30.0 °C	14.3 ft-lb/in ² @Temperature -22.0 °F	ISO 179/2C
Charpy Impact, Notched	0.400 J/cm ²	1.90 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	0.700 J/cm ²	3.33 ft-lb/in ²	ISO 179/2C
	0.400 J/cm ² @Temperature -30.0 °C	1.90 ft-lb/in ² @Temperature -22.0 °F	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	0.700 J/cm ² @Temperature -30.0 °C	3.33 ft-lb/in ² @Temperature -22.0 °F	ISO 179/2C
Dart Drop, Total Energy	4.00 J @Temperature 23.0 °C	2.95 ft-lb @Temperature 73.4 °F	ASTM D3763
Taber Abrasion, mg/1000 Cycles	16	16	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	2.00e+14 ohm	2.00e+14 ohm	ROA; IEC 60093
Dielectric Constant	3.3	3.3	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.3	3.3	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.6	3.6	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	
	19.0 kV/mm	483 kV/in	short time; IEC 60243-1
	@Thickness 1.00 mm	@Thickness 0.0394 in	
	23.0 kV/mm	584 kV/in	in oil; IEC 60243-1
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	23.0 kV/mm	584 kV/in	in oil; ASTM D149
	@Thickness 1.60 mm	@Thickness 0.0630 in	
Dissipation Factor	0.0020	0.0020	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
	0.020	0.020	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 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	>= 150 V	>= 150 V	IEC 60112

Electrical Properties	Metric	English	Comments
	UVFV	UVFV	IEC 60712

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