

SABIC Innovative Plastics Valox® 315 PBT (Europe-Africa-Middle East)

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

Material Notes:

VALOX 315 is compliant with food contact regulations acc. to EC Reg. No. 10/2011. VALOX 315 can be applied for injection moulding and extrusion puposes.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Valox-315-PBT-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Density	1.31 g/cc	0.0473 lb/in ³	ISO 1183
Moisture Absorption	0.0800 %	0.0800 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.34 %	0.34 %	ISO 62
Linear Mold Shrinkage, Flow	0.011 - 0.018 cm/cm	0.011 - 0.018 in/in	on Tensile Bar; SABIC Method
Linear Mold Shrinkage, Transverse	0.0090 - 0.018 cm/cm	0.0090 - 0.018 in/in	on Tensile Bar; SABIC Method
Melt Index of Compound	6.0 g/10 min	6.0 g/10 min	MVR [cm ³ /10 min]; ISO 1133
	@Load 1.20 kg, Temperature 250 °C	@Load 2.65 lb, Temperature 482 °F	
	9.0 g/10 min	9.0 g/10 min	MVR [cm ³ /10 min]; ISO 1133
	@Load 2.16 kg, Temperature 250 °C	@Load 4.76 lb, Temperature 482 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	117	117	ISO 2039-2
Hardness, H358/30	110 MPa	16000 psi	ISO 2039-1
Tensile Strength at Break	30.0 MPa	4350 psi	50 mm/min; ISO 527
Tensile Strength, Yield	55.0 MPa	7980 psi	50 mm/min; ISO 527
Elongation at Break	100 %	100 %	50 mm/min; ISO 527
Elongation at Yield	3.5 %	3.5 %	50 mm/min; ISO 527
Tensile Modulus	2.40 GPa	348 ksi	1 mm/min; ISO 527
Flexural Yield Strength	75.0 MPa	10900 psi	2 mm/min; ISO 178
Flexural Modulus	2.30 GPa	334 ksi	2 mm/min; ISO 178
Izod Impact, Notched (ISO)	6.00 kJ/m ²	2.86 ft-lb/in ²	80*10*4; ISO 180/1A

Mechanical Properties	5.00 kJ/m ² Metric	2.38 ft-lb/in ² English	Comments 80*10*4, ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Unnotched (ISO)	NB	NB	80*10*4; ISO 180/1U
	NB	NB	80*10*4; ISO 180/1U
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact Unnotched	NB	NB	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	NB	NB	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	0.500 J/cm ²	2.38 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	0.400 J/cm ²	1.90 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	120 µm/m-°C	66.7 µin/in-°F	ISO 11359-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
CTE, linear, Transverse to Flow	130 µm/m-°C	72.2 µin/in-°F	ISO 11359-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
Deflection Temperature at 0.46 MPa (66 psi)	120 °C	248 °F	Edgew 120*10*4 sp=100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	55.0 °C	131 °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
Vicat Softening Point	170 °C	338 °F	Rate B/50; ISO 306
	170 °C	338 °F	Rate B/120; ISO 306
	220 °C	428 °F	Rate A/50; ISO 306
Flammability, UL94	HB	HB	UL 94 by SABIC-IP
	@Thickness 1.60 mm	@Thickness 0.0630 in	
Oxygen Index	21 %	21 %	ISO 4589
Glow Wire Test	850 °C	1560 °F	IEC 60695-2-12
	@Thickness 1.00 mm	@Thickness 0.0394 in	
	960 °C	1760 °F	IEC 60695-2-12

Thermal Properties	@Thickness 2.02 mm Metric	@Thickness 0.0795 in English	Comments
Electrical Properties	Metric	English	Comments
Volume Resistivity	$\geq 1.00 \times 10^{15}$ ohm-cm	$\geq 1.00 \times 10^{15}$ ohm-cm	IEC 60093
Surface Resistance	$\geq 1.00 \times 10^{15}$ ohm	$\geq 1.00 \times 10^{15}$ ohm	ROA; IEC 60093
Dielectric Constant	2.4	2.4	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	2.9	2.9	
Dielectric Strength	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	IEC 60250
	3.3	3.3	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	IEC 60250
Dielectric Strength	15.0 kV/mm	381 kV/in	in oil; IEC 60243-1
	@Thickness 3.20 mm	@Thickness 0.126 in	
	24.0 kV/mm	610 kV/in	
Dissipation Factor	@Thickness 1.60 mm	@Thickness 0.0630 in	in oil; IEC 60243-1
	29.0 kV/mm	737 kV/in	in oil; IEC 60243-1
	@Thickness 0.800 mm	@Thickness 0.0315 in	in oil; IEC 60243-1
Dissipation Factor	0.00030	0.00030	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
	0.0020	0.0020	
Comparative Tracking Index	@Frequency 100 Hz	@Frequency 100 Hz	IEC 60250
	0.020	0.020	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	IEC 60250
Comparative Tracking Index	≥ 350 V	≥ 350 V	IEC 60112
	600 V	600 V	IEC 60112

Descriptive Properties	Value	Comments
Ball Pressure Test, 125°C +/- 2°C	PASSES	IEC 60695-10-2

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