

SABIC Innovative Plastics Valox[®] IQ420HP PBT (Europe-Africa-Middle East)

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

Material Notes:

Environmentally responsible, low carbon footprint Valox iQ* resin - Valox* iQ420HP resin is made using iQ-PBT resin and 30% glass fiber reinforcement. Valox* iQ420HP may be used for the production of food contact articles intended for repeat use (and not for single use) in contact with all food types, and under all conditions of use per FDA table of food types, with the exception of irradiation and cooking/baking at temperatures above 250 degrees F. This includes microwaving within these same temperature constraints. If colorants are added to the resin, these must be evaluated separately for their appropriateness for food contact applications.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Valox-IQ420HP-PBT-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.54 g/cc	1.54 g/cc	ASTM D792
Density	1.54 g/cc	0.0556 lb/in ³	ISO 1183
Moisture Absorption	0.100 %	0.100 %	23 [°] C / 50% RH; ISO 62
Water Absorption at Saturation	0.090 %	0.090 %	ISO 62
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm @Thickness 3.20 mm	0.0050 - 0.0070 in/in @Thickness 0.126 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.0080 - 0.010 cm/cm @Thickness 3.20 mm	0.0080 - 0.010 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	52 g/10 min @Load 5.00 kg, Temperature 250 [°] C	52 g/10 min @Load 11.0 lb, Temperature 482 [°] F	ASTM D1238
Melt Index of Compound	38 g/10 min @Load 5.00 kg, Temperature 250 [°] C	38 g/10 min @Load 11.0 lb, Temperature 482 [°] F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	114 MPa	16500 psi	Type I, 5 mm/min; ASTM D638
	139 MPa	20200 psi	5 mm/min; ISO 527
Tensile Strength, Yield	114 MPa	16500 psi	Type I, 5 mm/min; ASTM D638
	139 MPa	20200 psi	5 mm/min; ISO 527
Elongation at Break	1.6 %	1.6 %	5 mm/min; ISO 527

Mechanical Properties	Metric	English	Comments
Elongation at Yield	1.6 %	1.6 %	5 mm/min; ISO 527
	2.2 %	2.2 %	Type I, 5 mm/min; ASTM D638
Tensile Modulus	10.7 GPa	1550 ksi	1 mm/min; ISO 527
	11.8 GPa	1710 ksi	5 mm/min; ASTM D638
Flexural Yield Strength	210 MPa	30500 psi	1.3 mm/min, 50 mm span; ASTM D790
	210 MPa	30500 psi	2 mm/min; ISO 178
Flexural Modulus	9.10 GPa	1320 ksi	1.3 mm/min, 50 mm span; ASTM D790
	9.10 GPa	1320 ksi	2 mm/min; ISO 178
Izod Impact, Notched	0.820 J/cm	1.54 ft-lb/in	ASTM D256
	0.830 J/cm	1.55 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Unnotched	7.70 J/cm	14.4 ft-lb/in	ASTM D4812
Izod Impact, Notched (ISO)	8.00 kJ/m ²	3.81 ft-lb/in ²	80*10*4; ISO 180/1A
	8.00 kJ/m ²	3.81 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	1.40 J/cm ²	6.66 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	7.00 J	5.16 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	25.0 Åµm/m-Å°C	13.9 Åµin/in-Å°F	ASTM E 831
	@Temperature -40.0 - 40.0 Å°C	@Temperature -40.0 - 104 Å°F	
	25.0 Åµm/m-Å°C	13.9 Åµin/in-Å°F	ISO 11359-2
	@Temperature -40.0 - 40.0 Å°C	@Temperature -40.0 - 104 Å°F	
CTE, linear, Transverse to Flow	89.0 Åµm/m-Å°C	49.4 Åµin/in-Å°F	ASTM E 831
	@Temperature -40.0 -	@Temperature -40.0 -	

Thermal Properties	40.0 Å°C Metric	104 Å°F English	Comments
	89.0 Åµm/m-Å°C	49.4 Åµin/in-Å°F	ISO 11359-2
	@Temperature -40.0 - 40.0 Å°C	@Temperature -40.0 - 104 Å°F	
Hot Ball Pressure Test	<= 200 Å°C	<= 392 Å°F	IEC 60695-10-2
Deflection Temperature at 0.46 MPa (66 psi)	217 Å°C	423 Å°F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
Deflection Temperature at 1.8 MPa (264 psi)	205 Å°C	401 Å°F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	203 Å°C	397 Å°F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	206 Å°C	403 Å°F	Rate B/50; ASTM D1525
	206 Å°C	403 Å°F	Rate B/50; ISO 306
	206 Å°C	403 Å°F	Rate B/120; ISO 306

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