BASF Ultradur® B 4300 G10 50% Glass Filled PBT

Category : Polymer , Thermoplastic , Polyester, TP , Polybutylene Terephthalate (PBT) , Polybutylene Terephthalate (PBT), 50% Glass Fiber Filled

Material Notes:

Description: Injection-molding grades containing 50% of glass fibers, for industrial parts, rigid, tough and dimensionally stable, for example for program switches, thermostat parts, small-motor housings for vehicles, headlamp frames, cams, automotive windscreen wiper arms, PCBs, housings, consoles, contact mounts and covers.Information provided by BASF

Order this product through the following link:
http://www.lookpolymers.com/polymer_BASF-Ultradur-B-4300-G10-50-Glass-Filled-PBT.php

Physical Properties	Metric	English	Comments
Density	1.73 g/cc	0.0625 lb/in³	ISO 1183
Water Absorption	0.40 %	0.40 %	Saturation; DIN 53495/1L
Moisture Absorption at Equilibrium	0.20 %	0.20 %	23°C; 50% RH
Viscosity Measurement	97	97	[ml/g]; Viscosity number; ISO 1628
	70 @Temperature 290 °C	70 @Temperature 554 °F	20 mins plasticating
	75 @Temperature 300 °C	75 @Temperature 572 °F	10 mins plasticating
	75 @Temperature 280 °C	75 @Temperature 536 °F	30 mins plasticating
	90 @Temperature 270 °C	90 @Temperature 518 °F	30 mins plasticating
	95 @Temperature 290 °C	95 @Temperature 554 °F	10 mins plasticating
	100 @Temperature 260 °C	100 @Temperature 500 °F	30 mins plasticating
	100 @Temperature 300 °C	100 @Temperature 572 °F	5 mins plasticating
	105 @Temperature 280 °C	105 @Temperature 536 °F	10 mins plasticating
	106 @Temperature 250 °C	106 @Temperature 482 °F	30 mins plasticating

Physical Properties	Metric	English	Comments
	110 @Temperature 270 °C	110 @Temperature 518 °F	10 mins plasticating
	115 @Temperature 260 °C	115 @Temperature 500 °F	10 mins plasticating
	115 @Temperature 240 °C	115 @Temperature 464 °F	30 mins plasticating
	117 @Temperature 250 °C	117 @Temperature 482 °F	10 mins plasticating
	120 @Temperature 240 °C	120 @Temperature 464 °F	10 mins plasticating
Linear Mold Shrinkage, Flow	0.0020 cm/cm	0.0020 in/in	Sheet
Linear Mold Shrinkage, Transverse	0.0090 cm/cm	0.0090 in/in	Sheet
Melt Flow	5.19 g/10 min @Load 2.16 kg, Temperature 250 °C	5.19 g/10 min @Load 4.76 lb, Temperature 482 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	220 MPa @Load 98.0 kg, Time 30.0 sec	31900 psi @Load 216 lb, Time 0.00833 hour	ISO 2039-1
Tensile Strength, Yield	140 MPa	20300 psi	50 mm/min; ISO 527-2
Elongation at Yield	1.5 %	1.5 %	50 mm/min; ISO 527-2
Modulus of Elasticity	16.0 GPa	2320 ksi	ISO 527-2
Charpy Impact Unnotched	5.50 J/cm² @Temperature 23.0 °C	26.2 ft-lb/in² @Temperature 73.4 °F	ISO 179/1eU
	6.90 J/cm² @Temperature -30.0 °C	32.8 ft-lb/in² @Temperature -22.0 °F	ISO 179/1eU
Charpy Impact, Notched	1.10 J/cm² @Temperature 23.0 °C	5.23 ft-lb/in² @Temperature 73.4 °F	ISO 179/1eA
Dart Drop, Total Energy	5.00 J	3.69 ft-lb	W₅₀₁ housing; ISO 6603-1

Thermal Properties	Metric	English	Comments

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	2.00 - 3.00 µm/m-°C @Temperature 23.0 - 80.0 °C	1.11 - 1.67 µin/in-°F @Temperature 73.4 - 176 °F	DIN 53752
Specific Heat Capacity	1.40 J/g-°C	0.335 BTU/lb-°F	IEC 1006
Thermal Conductivity	0.360 W/m-K	2.50 BTU-in/hr-ft²-°F	DIN 52612
Melting Point	220 - 225 °C	428 - 437 °F	DSC; ISO 11357-3
Maximum Service Temperature, Air	140 °C	284 °F	at 50% loss of tensile strength after 20000h; IEC 216-1
	160 °C	320 °F	at 50% loss of tensile strength after 5000h; IEC 216-1
	210 °C	410 °F	
Deflection Temperature at 0.46 MPa (66 psi)	220 °C	428 °F	ISO 75-2
Deflection Temperature at 1.8 MPa (264 psi)	215 °C	419 °F	ISO 75-2
Decomposition Temperature	>= 290 °C	>= 554 °F	
Flammability, UL94	HB @Thickness 1.60 mm	HB @Thickness 0.0630 in	
	HB @Thickness 0.800 mm	HB @Thickness 0.0315 in	
Flame Spread	<= 100 mm/min	<= 3.94 in/min	DIN 75200
Glow Wire Test	<= 750 °C @Thickness 3.00 mm	<= 1380 °F @Thickness 0.118 in	IEC 695

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+16 ohm-cm	1.00e+16 ohm-cm	IEC 93
Surface Resistance	1.00e+13 ohm	1.00e+13 ohm	IEC 93
Dielectric Constant	4.0 @Frequency 100 Hz	4.0 @Frequency 100 Hz	IEC 250
	4.0 @Frequency 1.00e+6 Hz	4.0 @Frequency 1.00e+6 Hz	IEC 250
Dielectric Strength	100 kV/mm	2540 kV/in	IEC 243/1
	0.0012	0.0012	

Electrical Properties	Metric	English	Comments
Dissipation Factor	@Frequency 100 Hz	@Frequency 100 Hz	IEC 250
	0.015 @Frequency 1.00e+6 Hz	0.015 @Frequency 1.00e+6 Hz	IEC 250
Comparative Tracking Index	125 V	125 V	Test solution B; IEC 112
	425 V	425 V	Test solution A; IEC 112

Processing Properties	Metric	English	Comments
Processing Temperature	80.0 °C	176 °F	Hopper Throat
Zone 1	260 °C	500 °F	Feeding zone
Zone 2	265 °C	509 °F	Compression
Zone 3	270 °C	518 °F	Metering-zone
Zone 4	270 °C	518 °F	Nozzle
Melt Temperature	260 °C	500 °F	for shrinkage test
	250 - 275 °C	482 - 527 °F	Injection-molding
	270 °C	518 °F	Optimal
Mold Temperature	80.0 °C	176 °F	for shrinkage test, Optimal
	80.0 - 120 °C	176 - 248 °F	
Drying Temperature	80.0 - 120 °C	176 - 248 °F	
Dry Time	4 hour	4 hour	

Descriptive Properties	Value	Comments
Color	Natural, Colored, Special Colors and Black	
Commercial Status	Europe	
Ignition Temperature	350°C	ASTM D1929
Peripheral screw speed	< 0.25 m/s	
Primary Processing Technique	Injection Molding	

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