BASF Ultradur B 4300 G6 30% Glass Filled PBT

Category : Polymer , Thermoplastic , Polyester, TP , Polybutylene Terephthalate (PBT) , Polybutylene Terephthalate (PBT), 30% Glass Fiber Filled

Material Notes:

Ultradur B4300 G6 is an easy flowing injection molding PBT with 30% glass fiber reinforcement for rigid, tough, and dimensionally stable parts.Applications: Program switches, thermostat parts, small-motor housings for vehicles, headlamp frames, cams, automotive windscreen wiper arms, PCBs, housings, consoles, contact mounts and covers.

Order this product through the following link:
http://www.lookpolymers.com/polymer_BASF-Ultradur-B-4300-G6-30-Glass-Filled-PBT.php

Physical Properties	Metric	English	Comments
Density	1.53 g/cc	0.0553 lb/in³	ISO 1183
Water Absorption	0.40 %	0.40 %	DIN 53495/1L
Moisture Absorption at Equilibrium	0.20 %	0.20 %	23°C/50% R.H.
Viscosity Test	102 cm³/g	102 cm³/g	Viscosity number; ISO 1628
Linear Mold Shrinkage, Flow	0.0020 cm/cm	0.0020 in/in	Sheet
	0.0034 cm/cm	0.0034 in/in	60x60x2mm; ISO 294
Linear Mold Shrinkage, Transverse	0.0107 cm/cm	0.0107 in/in	60x60x2mm; ISO 294
	0.011 cm/cm	0.011 in/in	Sheet
Melt Flow	16.8 g/10 min @Load 2.16 kg, Temperature 250 °C	16.8 g/10 min @Load 4.76 lb, Temperature 482 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	190 MPa	27600 psi	ISO 2039-1
Tensile Strength at Break	135 MPa	19600 psi	5mm/min; ISO 527-2
Tensile Strength	75.0 MPa @Temperature 100 °C	10900 psi @Temperature 212 °F	ISO 527
	100 MPa @Temperature 50.0 °C	14500 psi @Temperature 122 °F	ISO 527
	140 MPa @Temperature 23.0 °C	20300 psi @Temperature 73.4 °F	ISO 527
	170 MPa	24700 psi	ISO 527

Mechanical Properties	@Temperature -20.0 °C Metric	@Temperature -4.00 °F English	Comments
Tensile Stress	40.0 MPa @Strain 0.500 %, Temperature 40.0 °C	5800 psi @Strain 0.500 %, Temperature 104 °F	ISO 527
	40.0 MPa @Strain 2.00 %, Temperature 140 °C	5800 psi @Strain 2.00 %, Temperature 284 °F	ISO 527
	50.0 MPa @Strain 4.00 %, Temperature 140 °C	7250 psi @Strain 4.00 %, Temperature 284 °F	ISO 527
	50.0 MPa @Strain 0.500 %, Temperature -40.0 °C	7250 psi @Strain 0.500 %, Temperature -40.0 °F	ISO 527
	52.0 MPa @Strain 5.00 %, Temperature 140 °C	7540 psi @Strain 5.00 %, Temperature 284 °F	ISO 527
	100 MPa @Strain 2.00 %, Temperature 40.0 °C	14500 psi @Strain 2.00 %, Temperature 104 °F	ISO 527
	105 MPa @Strain 3.00 %, Temperature 40.0 °C	15200 psi @Strain 3.00 %, Temperature 104 °F	ISO 527
	170 MPa @Strain 2.00 %, Temperature -40.0 °C	24700 psi @Strain 2.00 %, Temperature -40.0 °F	ISO 527
	200 MPa @Strain 3.00 %, Temperature -40.0 °C	29000 psi @Strain 3.00 %, Temperature -40.0 °F	ISO 527
	20.0 MPa @Strain 1.00 %, Time 3.60e+6 sec	2900 psi @Strain 1.00 %, Time 1000 hour	140°C; DIN 50014-23/50-2
	25.0 MPa @Strain 1.00 %, Time 3.60e+6 sec	3630 psi @Strain 1.00 %, Time 1000 hour	100°C; DIN 50014-23/50-2
	30.0 MPa @Strain 1.00 %, Time 3.60e+6 sec	4350 psi @Strain 1.00 %, Time 1000 hour	60°C; DIN 50014-23/50-2
	30.0 MPa	4350 psi	

Mechanical Properties	Metric	English	Comments
	@Strain 2.00 %, Time 3.60e+6 sec	@Strain 2.00 %, Time 1000 hour	140°C; DIN 50014-23/50-2
	35.0 MPa @Strain 3.00 %, Time 3.60e+6 sec	5080 psi @Strain 3.00 %, Time 1000 hour	140°C; DIN 50014-23/50-2
	35.0 MPa @Strain 2.00 %, Time 3.60e+6 sec	5080 psi @Strain 2.00 %, Time 1000 hour	100°C; DIN 50014-23/50-2
	40.0 MPa @Strain 3.00 %, Time 3.60e+6 sec	5800 psi @Strain 3.00 %, Time 1000 hour	100°C; DIN 50014-23/50-2
	40.0 MPa @Strain 0.600 %, Time 3.60e+6 sec	5800 psi @Strain 0.600 %, Time 1000 hour	DIN 50014-23/50-2
	55.0 MPa @Strain 2.00 %, Time 3.60e+6 sec	7980 psi @Strain 2.00 %, Time 1000 hour	60°C; DIN 50014-23/50-2
	60.0 MPa @Strain 1.00 %, Time 3.60e+6 sec	8700 psi @Strain 1.00 %, Time 1000 hour	DIN 50014-23/50-2
	80.0 MPa @Strain 1.60 %, Time 3.60e+6 sec	11600 psi @Strain 1.60 %, Time 1000 hour	DIN 50014-23/50-2
Elongation at Break	2.5 %	2.5 %	5mm/min; ISO 527-2
Modulus of Elasticity	10.0 GPa	1450 ksi	ISO 527-2
Flexural Strength	200 MPa	29000 psi	ISO 178
Charpy Impact Unnotched	6.70 J/cm²	31.9 ft-lb/in²	ISO 179/1eU
Charpy Impact, Notched	1.10 J/cm²	5.24 ft-lb/in²	ISO 179/1eA
Dart Drop, Total Energy	<= 5.00 J	<= 3.69 ft-lb	ISO 6603-1
Tensile Creep Modulus, 1000 hours	7500 MPa	1.09e+6 psi	ISO 899

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

Thermal Properties	Metric	English	Comments
Specific Heat Capacity	1.50 J/g-°C	0.359 BTU/lb-°F	IEC 1006
Thermal Conductivity	0.270 W/m-K	1.87 BTU-in/hr-ft²-°F	DIN 52612
Melting Point	220 - 225 °C	428 - 437 °F	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
Deflection Temperature at 1.8 MPa (264 psi)	215 °C	419 °F	ISO 75
Flammability, UL94	HB @Thickness 0.800 mm	HB @Thickness 0.0315 in	
	HB @Thickness 1.60 mm	HB @Thickness 0.0630 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 60093
Surface Resistance	1.00e+13 ohm	1.00e+13 ohm	IEC 60093
Dielectric Constant	3.8 @Frequency 1.00e+6 Hz	3.8 @Frequency 1.00e+6 Hz	IEC 60250
	4.0 @Frequency 100 Hz	4.0 @Frequency 100 Hz	IEC 60250
Dielectric Strength	100 kV/mm	2540 kV/in	IEC 243/1
Dissipation Factor	0.0025 @Frequency 100 Hz	0.0025 @Frequency 100 Hz	IEC 60250
	0.017 @Frequency 1.00e+6 Hz	0.017 @Frequency 1.00e+6 Hz	IEC 60250

Electrical Properties	Metric	English	Comments
	375 V	375 V	Test solution A; IEC 60112

Processing Properties	Metric	English	Comments
Melt Temperature	260 °C	500 °F	
	250 - 275 °C	482 - 527 °F	Injection molding
Mold Temperature	60.0 - 100 °C	140 - 212 °F	

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