

BASF Ultradur B 4300 G4 20% Glass Filled PBT

Category : Polymer , Thermoplastic , Polyester, TP , Polybutylene Terephthalate (PBT) , Polybutylene Terephthalate (PBT), 20% Glass Fiber Filled

Material Notes:

Ultradur B4300 G4 is an easy flowing injection molding PBT with 20% 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-G4-20-Glass-Filled-PBT.php

Physical Properties	Metric	English	Comments
Density	1.45 g/cc	0.0524 lb/in ³	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	107 cm ³ /g	107 cm ³ /g	Viscosity number; ISO 1628
Linear Mold Shrinkage, Flow	0.0039 cm/cm	0.0039 in/in	Sheet
	0.0043 cm/cm	0.0043 in/in	60x60x2mm; ISO 294
Linear Mold Shrinkage, Transverse	0.0116 cm/cm	0.0116 in/in	60x60x2mm; ISO 294
	0.0128 cm/cm	0.0128 in/in	Sheet
Melt Flow	20.3 g/10 min	20.3 g/10 min	ISO 1133
	@Load 2.16 kg, Temperature 250 °C	@Load 4.76 lb, Temperature 482 °F	

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	180 MPa	26100 psi	ISO 2039-1
Tensile Strength at Break	120 MPa	17400 psi	5mm/min; ISO 527-2
Tensile Strength	60.0 MPa	8700 psi	ISO 527
	@Temperature 100 °C	@Temperature 212 °F	
	83.0 MPa	12000 psi	ISO 527
	@Temperature 50.0 °C	@Temperature 122 °F	
	110 MPa	16000 psi	ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	155 MPa	22500 psi	ISO 527

Mechanical Properties	@Temperature -20.0 °C Metric	@Temperature -4.00 °F English	Comments
Tensile Stress	20.0 MPa	2900 psi	ISO 527
	@Strain 1.00 %, Temperature 140 °C	@Strain 1.00 %, Temperature 284 °F	
	35.0 MPa	5080 psi	ISO 527
	@Strain 3.00 %, Temperature 140 °C	@Strain 3.00 %, Temperature 284 °F	
	40.0 MPa	5800 psi	ISO 527
	@Strain 5.00 %, Temperature 140 °C	@Strain 5.00 %, Temperature 284 °F	
	55.0 MPa	7980 psi	ISO 527
	@Strain 1.00 %, Temperature 40.0 °C	@Strain 1.00 %, Temperature 104 °F	
	70.0 MPa	10200 psi	ISO 527
	@Strain 1.00 %, Temperature -40.0 °C	@Strain 1.00 %, Temperature -40.0 °F	
	82.0 MPa	11900 psi	ISO 527
	@Strain 3.00 %, Temperature 40.0 °C	@Strain 3.00 %, Temperature 104 °F	
	85.0 MPa	12300 psi	ISO 527
	@Strain 4.00 %, Temperature 40.0 °C	@Strain 4.00 %, Temperature 104 °F	
	142 MPa	20600 psi	ISO 527
	@Strain 2.00 %, Temperature -40.0 °C	@Strain 2.00 %, Temperature -40.0 °F	
	175 MPa	25400 psi	ISO 527
	@Strain 3.00 %, Temperature -40.0 °C	@Strain 3.00 %, Temperature -40.0 °F	
Elongation at Break	3.0 %	3.0 %	5mm/min; ISO 527
Modulus of Elasticity	7.10 GPa	1030 ksi	ISO 527-2
Flexural Strength	170 MPa	24700 psi	ISO 178
Charpy Impact Unnotched	5.80 J/cm ²	27.6 ft-lb/in ²	ISO 179/1eU
Charpy Impact, Notched	0.800 J/cm ²	3.81 ft-lb/in ²	ISO 179/1eA
Dart Drop, Total Energy	5.00 J	3.69 ft-lb	ISO 6603-1

Thermal Properties	Metric	English	Comments
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Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	1.00 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ @Temperature 23.0 - 80.0 $^\circ\text{C}$	22 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$ @Temperature 73.4 - 176 $^\circ\text{F}$	DIN 53752
Specific Heat Capacity	1.60 J/g- $^\circ\text{C}$	0.382 BTU/lb- $^\circ\text{F}$	IEC 1006
Thermal Conductivity	0.250 W/m-K	1.74 BTU-in/hr-ft 2 - $^\circ\text{F}$	DIN 52612
Melting Point	220 - 250 $^\circ\text{C}$	428 - 482 $^\circ\text{F}$	ISO 11357-3
Maximum Service Temperature, Air	135 $^\circ\text{C}$	275 $^\circ\text{F}$	at 50% loss of tensile strength after 20000h; IEC 216-1
	150 $^\circ\text{C}$	302 $^\circ\text{F}$	at 50% loss of tensile strength after 5000h; IEC 216-1
	210 $^\circ\text{C}$	410 $^\circ\text{F}$	
Deflection Temperature at 0.46 MPa (66 psi)	220 $^\circ\text{C}$	428 $^\circ\text{F}$	ISO 75-2
Deflection Temperature at 1.8 MPa (264 psi)	205 $^\circ\text{C}$	401 $^\circ\text{F}$	ISO 75-2
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 $^\circ\text{C}$ @Thickness 3.00 mm	≤ 1380 $^\circ\text{F}$ @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	3.7 @Frequency 100 Hz	3.7 @Frequency 100 Hz	IEC 60250
	3.7 @Frequency 1.00e+6 Hz	3.7 @Frequency 1.00e+6 Hz	IEC 60250
Dielectric Strength	100 kV/mm	2540 kV/in	IEC 112
Dissipation Factor	0.0012 @Frequency 100 Hz	0.0012 @Frequency 100 Hz	IEC 60250

Electrical Properties	Metric	English	Comments
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	IEC 60250
Comparative Tracking Index	150 V	150 V	Test Solution B; IEC 112
	300 V	300 V	Test solution A; IEC 60112

Processing Properties	Metric	English	Comments
Melt Temperature	260 °C	500 °F	for shrinkage test
	250 - 275 °C	482 - 527 °F	Injection molding
Mold Temperature	60.0 - 100 °C	140 - 212 °F	
	80.0 °C	176 °F	for shrinkage test

Descriptive Properties	Value	Comments
Color	Natural, Colored, Black and Special Colors	
Commercial Status	North America and Europe	
Form	Pellets	
Impact Modified	No	
NSF Std. 61	Yes	
Primary Processing Technique	Injection Molding	
Processing	Injection Molding	
Special characteristic	Heat stabilized or stable to heat	
	Light stabilized or stable to light	
	Lubricant	
	Release agent	
	U.V. stabilized or stable to weather	

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