

BASF Ultradur® B 4300 M5 25% Mineral Filled PBT

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

Material Notes:

Description: Is a PBT-HI, injection-molding grade reinforced with 25% of minerals, for the production of parts with good surface quality and low warpage, e.g. housings and visible parts of domestic appliances. Information provided by BASF

Order this product through the following link:

http://www.lookpolymers.com/polymer_BASF-Ultradur-B-4300-M5-25-Mineral-Filled-PBT.php

Physical Properties	Metric	English	Comments
Bulk Density	0.600 - 0.900 g/cc	0.0217 - 0.0325 lb/in ³	
Density	1.51 g/cc	0.0546 lb/in ³	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	117	117	[ml/g]; Viscosity number; ISO 1628
Linear Mold Shrinkage, Flow	0.0174 cm/cm	0.0174 in/in	Sheet
	0.018 cm/cm	0.018 in/in	60x60x2 mm; ISO 294
Linear Mold Shrinkage, Transverse	0.0168 cm/cm	0.0168 in/in	60x60x2 mm; ISO 294
	0.0178 cm/cm	0.0178 in/in	Sheet
Melt Flow	18.12 g/10 min @Load 2.16 kg, Temperature 250 °C	18.12 g/10 min @Load 4.76 lb, Temperature 482 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	170 MPa	24700 psi	ISO 2039-1
Tensile Strength, Yield	60.0 MPa	8700 psi	50 mm/min; ISO 527-2
Elongation at Break	4.5 %	4.5 %	50mm/min; ISO 527-2
Elongation at Yield	3.0 %	3.0 %	50 mm/min; ISO 527-2
Modulus of Elasticity	4.00 GPa	580 ksi	ISO 527-2
Charpy Impact Unnotched	7.00 J/cm ²	33.3 ft-lb/in ²	ISO 179/1eU
Charpy Impact, Notched	0.400 J/cm ²	1.90 ft-lb/in ²	ISO 179/1eA
Dart Drop, Total Energy	20.0 J	14.8 ft-lb	W₅₀₁ housing; ISO 6603-1

Mechanical Properties Tensile Creep Modulus, 1000 hours	7000 MPa Metric	280000 psi English	Comments ISO 899-1
	@Strain <=0.500 %	@Strain <=0.500 %	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	7.00 - 11.0 $\mu\text{m}/\text{m}\cdot\text{°C}$ @Temperature 23.0 - 80.0 °C	3.89 - 6.11 $\mu\text{in}/\text{in}\cdot\text{°F}$ @Temperature 73.4 - 176 °F	DIN 53752
Specific Heat Capacity	1.50 $\text{J}/\text{g}\cdot\text{°C}$	0.359 $\text{BTU}/\text{lb}\cdot\text{°F}$	IEC 1006
Melting Point	220 - 225 °C	428 - 437 °F	DSC; ISO 11357-3
Maximum Service Temperature, Air	120 °C	248 °F	at 50% loss of tensile strength after 20000h; IEC 216-1
	130 °C	266 °F	at 50% loss of tensile strength after 5000h; IEC 216-1
	200 °C	392 °F	
Deflection Temperature at 0.46 MPa (66 psi)	195 °C	383 °F	ISO 75-2
Deflection Temperature at 1.8 MPa (264 psi)	90.0 °C	194 °F	ISO 75-2
Decomposition Temperature	$\geq 290 \text{°C}$	$\geq 554 \text{°F}$	
Flammability, UL94	HB @Thickness 1.60 mm	HB @Thickness 0.0630 in	
	HB @Diameter 0.800 mm	HB @Diameter 0.0315 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	$\geq 1.00\text{e}+16 \text{ ohm}\cdot\text{cm}$	$\geq 1.00\text{e}+16 \text{ ohm}\cdot\text{cm}$	
Surface Resistance	$1.00\text{e}+13 \text{ ohm}$	$1.00\text{e}+13 \text{ ohm}$	IEC 93
Dielectric Constant	3.6 @Frequency 1.00e+6 Hz	3.6 @Frequency 1.00e+6 Hz	IEC 250
	3.6 @Frequency 100 Hz	3.6 @Frequency 100 Hz	IEC 250
Dielectric Strength	100 kV/mm	2540 kV/in	IEC 243/1
Dissipation Factor	0.0012	0.0012	IEC 250

Electrical Properties	@Frequency 100 Hz Metric	@Frequency 100 Hz English	Comments
	0.015	0.015	
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	IEC 250
Comparative Tracking Index	150 V	150 V	Test solution B; IEC 112
	225 V	225 V	Test solution A; IEC 112

Processing Properties	Metric	English	Comments
Melt Temperature	250 °C	482 °F	for shrinkage test, Optimal
	250 - 275 °C	482 - 527 °F	Injection-molding
Mold Temperature	40.0 - 80.0 °C	104 - 176 °F	Injection molding
	60.0 °C	140 °F	for shrinkage test, Optimal

Descriptive Properties	Value	Comments
Color	Natural, Colored, Black and Special Colors	
Commercial Status	Europe	
Ignition Temperature	350°C	ASTM D1929
Primary Processing Technique	Injection Molding	

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