

BASF Ultradur® B 4040 G6 30% Glass Filled PBT + PET

Category : Polymer , Thermoplastic , Polyester, TP , Polybutylene Terephthalate (PBT) , PBT + PET Blend, Glass Filled , Polyethylene Terephthalate (PET)

Material Notes:

PBT + PET, injection-molding grade containing 30% 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-4040-G6-30-Glass-Filled-PBT-PET.php

Physical Properties	Metric	English	Comments
Bulk Density	0.600 - 0.900 g/cc	0.0217 - 0.0325 lb/in ³	
Density	1.55 g/cc	0.0560 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	105	105	[ml/g]; Viscosity number; ISO 1628
	70	70	20 mins plasticating
	@Temperature 290 °C	@Temperature 554 °F	
	75	75	30 mins plasticating
	@Temperature 280 °C	@Temperature 536 °F	
	75	75	10 mins plasticating
	@Temperature 300 °C	@Temperature 572 °F	
	90	90	30 mins plasticating
	@Temperature 270 °C	@Temperature 518 °F	
	95	95	10 mins plasticating
@Temperature 290 °C	@Temperature 554 °F		
100	100	5 mins plasticating	
@Temperature 300 °C	@Temperature 572 °F		
100	100	30 mins plasticating	
@Temperature 260 °C	@Temperature 500 °F		
105	105	10 mins plasticating	
@Temperature 280 °C	@Temperature 536 °F		

Physical Properties	Metric	English	Comments
	@Temperature 250 °C	@Temperature 482 °F	
	110	110	10 mins plasticating
	@Temperature 270 °C	@Temperature 518 °F	
	115	115	10 mins plasticating
	@Temperature 260 °C	@Temperature 500 °F	
	115	115	30 mins plasticating
	@Temperature 240 °C	@Temperature 464 °F	
	117	117	10 mins plasticating
	@Temperature 250 °C	@Temperature 482 °F	
	120	120	10 mins plasticating
	@Temperature 240 °C	@Temperature 464 °F	
Linear Mold Shrinkage, Flow	0.0018 cm/cm	0.0018 in/in	Sheet
Linear Mold Shrinkage, Transverse	0.0099 cm/cm	0.0099 in/in	Sheet
Melt Flow	27.9 g/10 min @Load 2.16 kg, Temperature 275 °C	27.9 g/10 min @Load 4.76 lb, Temperature 527 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	145 MPa	21000 psi	50 mm/min; ISO 527-2
Elongation at Yield	2.4 %	2.4 %	50 mm/min; ISO 527-2
Modulus of Elasticity	10.5 GPa	1520 ksi	ISO 527-2
Charpy Impact Unnotched	5.50 J/cm ²	26.2 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	W₅₀₁ housing; ISO 6603-1

Thermal Properties	Metric	English	Comments
Specific Heat Capacity	1.60 J/g-°C	0.382 BTU/lb-°F	IEC 1006
Melting Point	220 - 250 °C	428 - 482 °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

Thermal Properties	Metric	English	5000h- IEC 216-1 Comments
	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)	202 °C	396 °F	ISO 75-2
Decomposition Temperature	>= 290 °C	>= 554 °F	
Flammability, UL94	HB	HB	
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	HB	HB	
	@Diameter 0.800 mm	@Diameter 0.0315 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	7.40e+15 ohm-cm	7.40e+15 ohm-cm	IEC 93
Surface Resistance	>= 1.00e+15 ohm	>= 1.00e+15 ohm	IEC 93
Dielectric Constant	3.8	3.8	IEC 250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	4.0	4.0	IEC 250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	18.0 kV/mm	457 kV/in	IEC 243/1
Dissipation Factor	0.0016	0.0016	IEC 250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.0174	0.0174	IEC 250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	250 V	250 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 Processing Properties	270 °C Metric	518 °F English	Nozzle Comments
Melt Temperature	250 - 280 °C	482 - 536 °F	Injection-molding
	270 °C	518 °F	for shrinkage test, Optimal
Mold Temperature	60.0 - 100 °C	140 - 212 °F	Injection molding
	80.0 °C	176 °F	for shrinkage test, Optimal
Drying Temperature	80.0 - 120 °C	176 - 248 °F	
Dry Time	4 hour	4 hour	

Descriptive Properties	Value	Comments
Color	Natural, Colored, Black and Special Colors	
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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