

BASF Ultradur S 4090 G4 20% Glass Filled PBT

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

Material Notes:

Ultradur S 4090 G4 is a 20% glass reinforced PBT+ASA blend. It produces moldings with good surface finish, is resistant to chemicals and stress cracking, and has low shrinkage and warpage. Applications: Plug connectors, housings and sunroof.

Order this product through the following link:

http://www.lookpolymers.com/polymer_BASF-Ultradur-S-4090-G4-20-Glass-Filled-PBT.php

Physical Properties	Metric	English	Comments
Density	1.39 g/cc	0.0502 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	105 cm ³ /g	105 cm ³ /g	Viscosity number; ISO 1628
Linear Mold Shrinkage, Flow	0.0016 cm/cm	0.0016 in/in	Sheet
	0.0043 cm/cm	0.0043 in/in	60x60x2mm; ISO 294
Linear Mold Shrinkage, Transverse	0.0074 cm/cm	0.0074 in/in	60x60x2mm; ISO 294
	0.0082 cm/cm	0.0082 in/in	Sheet
Melt Flow	32.0 g/10 min	32.0 g/10 min	ISO 1133
	@Load 2.16 kg, Temperature 275 °C	@Load 4.76 lb, Temperature 527 °F	

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	153 MPa	22200 psi	ISO 2039-1
Tensile Strength at Break	100 MPa	14500 psi	5mm/min; ISO 527-2
Tensile Strength	60.0 MPa	8700 psi	ISO 527
	@Temperature 100 °C	@Temperature 212 °F	
	95.0 MPa	13800 psi	ISO 527
	@Temperature 50.0 °C	@Temperature 122 °F	
	120 MPa	17400 psi	ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	165 MPa	23900 psi	ISO 527
	@Temperature -40.0 °C	@Temperature -40.0 °F	

Elongation at Break Mechanical Properties	2.5 % Metric	2.5 % English	5mm/min: ISO 527-2 Comments
Modulus of Elasticity	6.90 GPa	1000 ksi	ISO 527-2
Flexural Strength	151 MPa	21900 psi	ISO 178
Charpy Impact Unnotched	5.50 J/cm ²	26.2 ft-lb/in ²	ISO 179/1eU
Charpy Impact, Notched	0.700 J/cm ²	3.33 ft-lb/in ²	ISO 179/1eA
Dart Drop, Total Energy	<= 5.00 J	<= 3.69 ft-lb	ISO 6603-1
Tensile Creep Modulus, 1000 hours	4700 MPa	682000 psi	ISO 899-1

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	4.00 µm/m-°C @Temperature 23.0 - 80.0 °C	2.22 µin/in-°F @Temperature 73.4 - 176 °F	DIN 53752
Specific Heat Capacity	1.50 J/g-°C	0.359 BTU/lb-°F	IEC 1006
Thermal Conductivity	0.280 W/m-K	1.94 BTU-in/hr-ft ² -°F	DIN 52612
Melting Point	220 - 225 °C	428 - 437 °F	ISO 11357-3
Maximum Service Temperature, Air	110 °C	230 °F	at 50% loss of tensile strength after 20000h; IEC 216-1
	140 °C	284 °F	at 50% loss of tensile strength after 5000h; IEC 216-1
	170 °C	338 °F	
Deflection Temperature at 0.46 MPa (66 psi)	205 °C	401 °F	ISO 75-2
Deflection Temperature at 1.8 MPa (264 psi)	160 °C	320 °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	760 °C @Thickness 3.00 mm	1400 °F @Thickness 0.118 in	IEC 695

Electrical Properties	Metric	English	Comments
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Volume Resistivity Electrical Properties	2.00e+15 ohm-cm Metric	2.00e+15 ohm-cm English	IEC 60093 Comments
Surface Resistance	1.00e+14 ohm	1.00e+14 ohm	IEC 60093
Dielectric Constant	3.6	3.6	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.7	3.7	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	96.0 kV/mm	2440 kV/in	IEC 243/1
Dissipation Factor	0.0030	0.0030	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.019	0.019	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	125 V	125 V	Test solution B; IEC 112
	450 V	450 V	Test solution A; IEC 60112

Processing Properties	Metric	English	Comments
Melt Temperature	250 - 275 °C	482 - 527 °F	Injection molding
	270 °C	518 °F	for shrinkage test
Mold Temperature	60.0 - 100 °C	140 - 212 °F	
	80.0 °C	176 °F	for shrinkage test

Descriptive Properties	Value	Comments
Color	Natural	
Commercial Status	Active America	
Form	Pellets	
Impact Modified	No	
Primary Processing Technique	Injection Molding	
Processing	Injection Molding	
Special characteristic	Heat stabilized or stable to heat	
	Light stabilized or stable to light	

Descriptive Properties	Lubricant Value	Comments
U.V. stabilized or stable to weather		

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