

BASF Ultradur® S 4090 G2 10% Glass Filled PBT

Category : Polymer , Thermoplastic , ASA Polymer , Polyester, TP , Polybutylene Terephthalate (PBT) , PBT + ASA Blend, Glass Fiber Reinforced

Material Notes:

Description: Is a PBT + ASA, easy-flowing injection-molding grades with 10% glass fibers; for rigid, tough and dimensionally stable technical parts e. g. housings, consoles, contact carriers, covers. Information provided by BASF

Order this product through the following link:

http://www.lookpolymers.com/polymer_BASF-Ultradur-S-4090-G2-10-Glass-Filled-PBT.php

Physical Properties	Metric	English	Comments
Density	1.31 g/cc	0.0473 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	10 mins plasticating
	@Temperature 300 °C	@Temperature 572 °F	
	75	75	30 mins plasticating
	@Temperature 280 °C	@Temperature 536 °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	30 mins plasticating
	@Temperature 260 °C	@Temperature 500 °F	
	100	100	5 mins plasticating
	@Temperature 300 °C	@Temperature 572 °F	
	105	105	10 mins plasticating
	@Temperature 280 °C	@Temperature 536 °F	
	106	106	30 mins plasticating
	@Temperature 250 °C	@Temperature 482 °F	
	110	110	

Physical Properties	Metric @ Temperature 270 °C	English @ Temperature 518 °F	10 mins plasticating Comments
	115 @Temperature 260 °C	115 @Temperature 500 °F	10 mins plasticating
	115 @Temperature 240 °C	115 @Temperature 464 °F	30 mins plasticating
	117 @Temperature 250 °C	117 @Temperature 482 °F	10 mins plasticating
	120 @Temperature 240 °C	120 @Temperature 464 °F	10 mins plasticating
Linear Mold Shrinkage, Flow	0.0046 cm/cm	0.0046 in/in	Sheet
Linear Mold Shrinkage, Transverse	0.0085 cm/cm	0.0085 in/in	Sheet
Melt Flow	45.85 g/10 min @Load 2.16 kg, Temperature 275 °C	45.85 g/10 min @Load 4.76 lb, Temperature 527 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	140 MPa	20300 psi	ISO 2039-1
Tensile Strength	35.0 MPa @Temperature 100 °C	5080 psi @Temperature 212 °F	ISO 527
	60.0 MPa @Temperature 50.0 °C	8700 psi @Temperature 122 °F	ISO 527
	80.0 MPa @Temperature 23.0 °C	11600 psi @Temperature 73.4 °F	ISO 527
	115 MPa @Temperature -40.0 °C	16700 psi @Temperature -40.0 °F	ISO 527
Tensile Strength, Yield	75.0 MPa	10900 psi	50 mm/min; ISO 527-2
Elongation at Yield	2.9 %	2.9 %	50 mm/min; ISO 527-2
Modulus of Elasticity	4.50 GPa	653 ksi	ISO 527-2
Flexural Strength	119 MPa	17300 psi	ISO 178
Charpy Impact Unnotched	2.70 J/cm² @Temperature -30.0 °C	12.8 ft-lb/in² @Temperature -22.0 °F	ISO 179/1eU

Mechanical Properties	Metric ¹ /cm ²	English ¹ /lb/in ²	Comments
	@Temperature 23.0 °C	@Temperature 73.4 °F	ISO 179/1eB
Charpy Impact, Notched	0.600 J/cm ² @Temperature 23.0 °C	2.86 ft-lb/in ² @Temperature 73.4 °F	ISO 179/1eA
Dart Drop, Total Energy	5.00 J	3.69 ft-lb	W ₅₀₁ housing; ISO 6603-1
Tensile Creep Modulus, 1000 hours	3300 MPa @Strain <=0.500 %	479000 psi @Strain <=0.500 %	ISO 899-1

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	5.50 µm/m-°C @Temperature 23.0 - 80.0 °C	3.06 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	0.270 W/m-K	1.87 BTU-in/hr-ft ² -°F	DIN 52612
Melting Point	220 - 225 °C	428 - 437 °F	DSC; 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)	190 °C	374 °F	ISO 75-2
Deflection Temperature at 1.8 MPa (264 psi)	105 °C	221 °F	ISO 75-2
Decomposition Temperature	>= 300 °C	>= 572 °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	2.00e+15 ohm-cm	2.00e+15 ohm-cm	IEC 93
Surface Resistance	1.00e+14 ohm	1.00e+14 ohm	IEC 93

Electrical Properties <i>Dielectric Constant</i>	^{3.4} Metric	^{3.4} English	Comments <i>IEC 250</i>
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.6	3.6	IEC 250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	117 kV/mm	2970 kV/in	IEC 243/1
Dissipation Factor	0.0030	0.0030	IEC 250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.021	0.021	IEC 250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	125 V	125 V	Test solution B; IEC 112
	375 V	375 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	270 °C	518 °F	Nozzle
Melt Temperature	250 - 275 °C	482 - 527 °F	Injection-molding
	270 °C	518 °F	for shrinkage test, Optimal
Mold Temperature	60.0 - 100 °C	140 - 212 °F	
	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 and Black	
Commercial Status	Europe	
Ignition Temperature	>400°C	ASTM D1929

Descriptive Properties	Value	Comments
Primary Processing Technique	Injection Molding	

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com
Email : sales@lookpolymers.com
Tel : +86 021-51131842
Mobile : +86 13061808058
Skype : lookpolymers
Address : United North Road 215,Fengxian District, Shanghai City,China