BASF Ultrason S 2010 G4 20% Glass Filled PSU

Category : Polymer , Thermoplastic , Polysulfone (PSU) , Polysulfone, 20% Glass Fiber Reinforced

Material Notes:

Ultrason S 2010 G4 is a 20% glass reinforced, medium viscosity injection molding PSU grade with high rigidity and strength.

Order this product through the following link:
http://www.lookpolymers.com/polymer_BASF-Ultrason-S-2010-G4-20-Glass-Filled-PSU.php

Physical Properties	Metric	English	Comments
Density	1.39 g/cc	0.0502 lb/in³	ISO 1183
Water Absorption	0.70 %	0.70 %	ISO 62
Moisture Absorption at Equilibrium	0.20 %	0.20 %	23°C/50% R.H.; ISO 62
Viscosity Test	63 cm³/g	63 cm³/g	Viscosity number
Linear Mold Shrinkage, Flow	0.0031 cm/cm	0.0031 in/in	ISO 294
Linear Mold Shrinkage, Transverse	0.0052 cm/cm	0.0052 in/in	ISO 294
Melt Flow	40 g/10 min @Load 10.0 kg, Temperature 360 °C	40 g/10 min @Load 22.0 lb, Temperature 680 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	170 MPa	24700 psi	ISO 2039-1
Tensile Strength at Break	110 MPa	16000 psi	5mm/min; ISO 527-2
Tensile Strength, Yield	110 MPa	16000 psi	50mm/min; ISO 527-2
Elongation at Break	2.2 %	2.2 %	5mm/min; ISO 527-2
Elongation at Yield	2.2 %	2.2 %	50mm/min; ISO 527-2
Tensile Modulus	6.80 GPa	986 ksi	ISO 527-2
Flexural Strength	164 MPa	23800 psi	ISO Data
Shear Modulus	0.0250 GPa @Temperature 200 °C	3.63 ksi @Temperature 392 °F	ISO 6721
	0.800 GPa @Temperature 175 °C	116 ksi @Temperature 347 °F	ISO 6721
	0.900 GPa @Temperature 100 °C	131 ksi @Temperature 212 °F	ISO 6721

Mechanical Properties	Metric	English	Comments
	0.950 GPa @Temperature 50.0 °C	138 ksi @Temperature 122 °F	ISO 6721
Izod Impact, Notched (ISO)	7.00 kJ/m²	3.33 ft-lb/in²	ISO 180/A
	7.00 kJ/m² @Temperature -30.0 °C	3.33 ft-lb/in² @Temperature -22.0 °F	ISO 180/A
Charpy Impact Unnotched	4.50 J/cm²	21.4 ft-lb/in²	ISO 179/1eU
	4.50 J/cm² @Temperature -30.0 °C	21.4 ft-lb/in² @Temperature -22.0 °F	ISO 179/1eU
Charpy Impact, Notched	0.700 J/cm²	3.33 ft-lb/in²	ISO 179/1eA
	0.750 J/cm² @Temperature -30.0 °C	3.57 ft-lb/in² @Temperature -22.0 °F	ISO 179/1eA
Tensile Creep Modulus, 1000 hours	6000 MPa	870000 psi	ISO 899

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	26.0 µm/m-°C @Temperature 23.0 - 80.0 °C	14.4 µin/in-°F @Temperature 73.4 - 176 °F	ISO 11359-1/-2
	28.0 µm/m-°C @Temperature 140 - 180 °C	15.6 µin/in-°F @Temperature 284 - 356 °F	ISO 11359-1/-2
Maximum Service Temperature, Air	180 °C	356 °F	short cycle operations
Deflection Temperature at 0.46 MPa (66 psi)	188 °C	370 °F	ISO 75
Deflection Temperature at 1.8 MPa (264 psi)	183 °C	361 °F	ISO 75
Glass Transition Temp, Tg	187 °C	369 °F	ISO 11357-1/-3
UL RTI, Electrical	160 °C	320 °F	50% decrease of tensile strength after 20000h; 746B
Flammability, UL94	V-1 @Thickness 1.60 mm	V-1 @Thickness 0.0630 in	
	V-0 @Thickness 3.20 mm	V-0 @Thickness 0.126 in	
Oxygen Index	40 %	40 %	ISO 4589-1/-2

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+13 ohm-cm	>= 1.00e+13 ohm-cm	IEC 60093
Surface Resistance	>= 1.00e+14 ohm	>= 1.00e+14 ohm	IEC 60093
Dielectric Constant	3.5 @Frequency 100 Hz	3.5 @Frequency 100 Hz	IEC 60250
	3.5 @Frequency 1.00e+6 Hz	3.5 @Frequency 1.00e+6 Hz	IEC 60250
Dielectric Strength	46.0 kV/mm	1170 kV/in	IEC 60243-1 3
Dissipation Factor	0.0010 @Frequency 100 Hz	0.0010 @Frequency 100 Hz	IEC 60250
	0.0060 @Frequency 1.00e+6 Hz	0.0060 @Frequency 1.00e+6 Hz	IEC 60250
Comparative Tracking Index	125 V	125 V	Test liquid A & B; IEC 60112

Processing Properties	Metric	English	Comments
Melt Temperature	350 - 390 °C	662 - 734 °F	Injection molding
Mold Temperature	130 - 180 °C	266 - 356 °F	Injection molding

Descriptive Properties	Value	Comments
Color	Natural and Black	
Commercial Status	North America and Europe	
Impact Modified	No	
Primary Processing Technique	Injection Molding and Extrution	

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