SABIC Innovative Plastics ULTEM HU1004 PEI (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polyetherimide (PEI)

Material Notes:

High Temperature, Transparent, Polyetherimide Blend with Improved Ductility and Enhanced Hydrostability. Healthcare management of change, biocompatible (ISO 10993 or USP Class VI) and FDA and EUFC food approved. RoHS compliant and UL94 V0 listed.

Order this product through the following link:
http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-ULTEM-HU1004-PEI-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.28 g/cc	1.28 g/cc	ASTM D792
Density	1.28 g/cc	0.0462 lb/inÂ³	ISO 1183
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm @Thickness 3.20 mm	0.0050 - 0.0070 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	10 g/10 min @Load 6.60 kg, Temperature 337 Â°C	10 g/10 min @Load 14.6 lb, Temperature 639 Â°F	ASTM D1238
Melt Index of Compound	14 g/10 min @Load 5.00 kg, Temperature 360 Â°C	14 g/10 min @Load 11.0 lb, Temperature 680 Â°F	MVR [cm^3/10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	80.0 MPa	11600 psi	50 mm/min; ISO 527
	90.0 MPa	13100 psi	Type I, 5 mm/min; ASTM D638
Tensile Strength, Yield	95.0 MPa	13800 psi	Type I, 5 mm/min; ASTM D638
	97.0 MPa	14100 psi	50 mm/min; ISO 527
Elongation at Break	80 %	80 %	50 mm/min; ISO 527
	85 %	85 %	Type I, 5 mm/min; ASTM D638
Elongation at Yield	7.0 %	7.0 %	Type I, 5 mm/min; ASTM D638
	7.0 %	7.0 %	50 mm/min; ISO 527
Tensile Modulus	2.90 GPa	421 ksi	5 mm/min; ASTM D638
Flexural Yield Strength	136 MPa	19700 psi	2 mm/min; ISO 178
	140 MPa	20300 psi	1.3 mm/min, 50 mm span; ASTM D790

Mechanical Properties	Metric	English	Comments
Flexural Modulus	2.80 GPa	406 ksi	2 mm/min; ISO 178
	3.00 GPa	435 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	0.700 J/cm	1.31 ft-lb/in	ASTM D256
	33.0 J/cm @Thickness 3.20 mm	61.8 ft-lb/in @Thickness 0.126 in	ASTM D256
Izod Impact, Notched (ISO)	6.00 kJ/mÂ²	2.86 ft-lb/inÂ²	80*10*4; ISO 180/1A
	6.00 kJ/mÂ² @Temperature -30.0 Â°C	2.86 ft-lb/inÂ² @Temperature -22.0 Â°F	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	NB	NB	80*10*4; ISO 180/1U
	NB @Temperature -30.0 Â°C	NB @Temperature -22.0 Â°F	80*10*4; ISO 180/1U
Charpy Impact, Notched	1.10 J/cmÂ²	5.23 ft-lb/inÂ²	ISO 179/2C
Dart Drop, Total Energy	93.0 J @Temperature 23.0 Â°C	68.6 ft-lb @Temperature 73.4 Â°F	ASTM D3763
	93.0 J @Temperature -20.0 Â°C	68.6 ft-lb @Temperature -4.00 Â°F	ASTM D3763
	99.0 J @Temperature 0.000 Â°C	73.0 ft-lb @Temperature 32.0 Â°F	ASTM D3763
Impact	90 @Temperature -20.0 Â°C	90 @Temperature -4.00 Â°F	Instrumented Impact Ductility, %; ASTM D3763
	100 @Temperature 23.0 Â°C	100 @Temperature 73.4 Â°F	Instrumented Impact Ductility, %; ASTM D3763
	100 @Temperature 0.000 Â°C	100 @Temperature 32.0 Â°F	Instrumented Impact Ductility, %; ASTM D3763

Thermal Properties	Metric	English	Comments
	50.0 Âµm/m-Â°C	27.8 Âµin/in-Â°F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	@Temperature 23.0 - 150 Â°C	@Temperature 73.4 - 302 Â°F	ISO 11359-2
	56.0 Âµm/m-Â°C @Temperature -20.0 - 150 Â°C	31.1 Âµin/in-Â°F @Temperature -4.00 - 302 Â°F	ASTM E 831
CTE, linear, Transverse to Flow	50.0 Âµm/m-Â°C @Temperature 23.0 - 150 Â°C	27.8 Âµin/in-Â°F @Temperature 73.4 - 302 Â°F	ISO 11359-2
	55.0 Âµm/m-Â°C @Temperature -20.0 - 150 Â°C	30.6 Âµin/in-Â°F @Temperature -4.00 - 302 Â°F	ASTM E 831
Thermal Conductivity	0.190 W/m-K	1.32 BTU-in/hr-ftÂ²-Â°F	ASTM C177
Deflection Temperature at 0.46 MPa (66 psi)	205 Â°C	401 Â°F	Edgew 120*10*4 sp=100mm; ISO 75/Be
	214 Â°C @Thickness 6.40 mm	417 Â°F @Thickness 0.252 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	190 Â°C	374 Â°F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
	204 Â°C @Thickness 6.40 mm	399 Â°F @Thickness 0.252 in	unannealed; ASTM D648
Vicat Softening Point	212 Â°C	414 Â°F	Rate B/50; ISO 306
	212 Â°C	414 Â°F	Rate B/120; ISO 306
	219 Â°C	426 Â°F	Rate A/50; ISO 306
Flammability, UL94	V-0 @Thickness 0.750 mm	V-0 @Thickness 0.0295 in	UL 94
Oxygen Index	46 %	46 %	ASTM D2863

Optical Properties	Metric	English	Comments
Transmission, Visible	90 %	90 %	transparent; thickness not quantified

Descriptive Properties	Value	Comments
NBS Smoke Density, Flaming, Ds 4 min	0.7	ASTM E 662

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