

SABIC Innovative Plastics ULTEM HU1004 PEI (Asia Pacific)

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.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-ULTEM-HU1004-PEI-Asia-Pacific.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/in ³	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

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

Thermal Properties	Metric	English	Comments
	50.0 Åµm/m-Å°C	27.8 Åµin/in-Å°F	

CTE, linear, Parallel to Flow Thermal Properties	Metric @ Temperature 23.0 - 150 Â°C	English @ Temperature 73.4 - 302 Â°F	ISO 11359-2 Comments
	56.0 Âµm/m-Â°C	31.1 Âµin/in-Â°F	ASTM E 831
	@Temperature -20.0 - 150 Â°C	@Temperature -4.00 - 302 Â°F	
CTE, linear, Transverse to Flow	50.0 Âµm/m-Â°C	27.8 Âµin/in-Â°F	ISO 11359-2
	@Temperature 23.0 - 150 Â°C	@Temperature 73.4 - 302 Â°F	
	55.0 Âµm/m-Â°C	30.6 Âµin/in-Â°F	ASTM E 831
	@Temperature -20.0 - 150 Â°C	@Temperature -4.00 - 302 Â°F	
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	417 Â°F	unannealed; ASTM D648
	@Thickness 6.40 mm	@Thickness 0.252 in	
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	399 Â°F	unannealed; ASTM D648
	@Thickness 6.40 mm	@Thickness 0.252 in	
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	V-0	UL 94
	@Thickness 0.750 mm	@Thickness 0.0295 in	
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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