

SABIC Innovative Plastics ULTEM HU1100 PEI

Category : Polymer , Thermoplastic , Polyetherimide (PEI)

Material Notes:

Standard flow Polyetherimide (Tg 217C). ECO Conforming. For medical devices and pharmaceutical applications. Healthcare management of change, biocompatible (ISO 10993 or USP Class VI), food contact compliant. EtO and steam sterilizable.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-ULTEM-HU1100-PEI.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.36 g/cc	1.36 g/cc	ASTM D792
Density	1.27 g/cc	0.0459 lb/in ³	ISO 1183
Moisture Absorption	0.700 %	0.700 %	23Â°C / 50% RH; ISO 62
Water Absorption at Saturation	1.25 %	1.25 %	ISO 62
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	8.8 g/10 min @Load 6.60 kg, Temperature 337 Â°C	8.8 g/10 min @Load 14.6 lb, Temperature 639 Â°F	ASTM D1238
Melt Index of Compound	16 g/10 min @Load 5.00 kg, Temperature 220 Â°C	16 g/10 min @Load 11.0 lb, Temperature 428 Â°F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	85.0 MPa	12300 psi	Type I, 5 mm/min; ASTM D638
	85.0 MPa	12300 psi	5 mm/min; ISO 527
Tensile Strength, Yield	105 MPa	15200 psi	5 mm/min; ISO 527
	110 MPa	16000 psi	Type I, 5 mm/min; ASTM D638
Elongation at Break	60 %	60 %	5 mm/min; ISO 527
	70 %	70 %	Type I, 5 mm/min; ASTM D638
Elongation at Yield	6.0 %	6.0 %	5 mm/min; ISO 527
	7.0 %	7.0 %	Type I, 5 mm/min; ASTM D638
Tensile Modulus	3.20 GPa	464 ksi	1 mm/min; ISO 527

Mechanical Properties	3.72 GPa Metric	540 ksi English	5 mm/min: ASTM D638 Comments
Flexural Yield Strength	160 MPa	23200 psi	2 mm/min; ISO 178
	173 MPa	25100 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	3.30 GPa	479 ksi	2 mm/min; ISO 178
	3.43 GPa	497 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	0.370 J/cm	0.693 ft-lb/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
Charpy Impact, Notched	0.400 J/cmÂ²	1.90 ft-lb/inÂ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	38.0 J @Temperature 23.0 Â°C	28.0 ft-lb @Temperature 73.4 Â°F	ASTM D3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	55.0 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	30.6 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ASTM E 831
	55.0 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	30.6 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ISO 11359-2
CTE, linear, Transverse to Flow	55.0 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	30.6 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ASTM E 831
	55.0 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	30.6 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ISO 11359-2
Deflection Temperature at 1.8 MPa (264 psi)	188 Â°C	370 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	198 Â°C @Thickness 6.40 mm	388 Â°F @Thickness 0.252 in	unannealed; ASTM D648
Vicat Softening Point	211 Â°C	412 Â°F	Rate B/50; ASTM D1525

Thermal Properties	211 Â°C Metric	412 Â°F English	Rate B/50; ISO 306 Comments
	212 Â°C	414 Â°F	Rate B/120; ISO 306
Glass Transition Temp, Tg	217 Â°C	423 Â°F	

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