

SABIC Innovative Plastics ULTEM HU2100 PEI

Category : Polymer , Thermoplastic , Polyetherimide (PEI)

Material Notes:

10% Glass fiber filled, standard flow Polyetherimide (Tg 217C). US FDA and European Food Contact approved. For medical devices and pharmaceutical applications. Healthcare management of change, biocompatible (ISO 10993 or USP Class VI).

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-ULTEM-HU2100-PEI.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.34 g/cc	1.34 g/cc	ASTM D792
Density	1.34 g/cc	0.0484 lb/in ³	ISO 1183
Moisture Absorption	0.600 %	0.600 %	23 ^o C / 50% RH; ISO 62
Water Absorption at Saturation	1.0 %	1.0 %	ISO 62
Linear Mold Shrinkage, Flow	0.0050 - 0.0060 cm/cm @Thickness 3.20 mm	0.0050 - 0.0060 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	5.0 g/10 min @Load 3.80 kg, Temperature 200 ^o C	5.0 g/10 min @Load 8.38 lb, Temperature 392 ^o F	ASTM D1238
Melt Index of Compound	9.0 g/10 min @Load 5.00 kg, Temperature 360 ^o C	9.0 g/10 min @Load 11.0 lb, Temperature 680 ^o F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	115 MPa	16700 psi	Type I, 5 mm/min; ASTM D638
	115 MPa	16700 psi	5 mm/min; ISO 527
Tensile Strength, Yield	114 MPa	16500 psi	Type I, 5 mm/min; ASTM D638
	115 MPa	16700 psi	5 mm/min; ISO 527
Elongation at Break	4.0 %	4.0 %	5 mm/min; ISO 527
	6.0 %	6.0 %	Type I, 5 mm/min; ASTM D638
Elongation at Yield	4.0 %	4.0 %	5 mm/min; ISO 527
	6.0 %	6.0 %	Type I, 5 mm/min; ASTM D638
Tensile Modulus	4.50 GPa	653 ksi	1 mm/min; ISO 527

Mechanical Properties	4.68 GPa Metric	679 ksi English	5 mm/min; ASTM D638 Comments
Flexural Strength	185 MPa	26800 psi	2 mm/min; ISO 178
Flexural Yield Strength	160 MPa	23200 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	4.50 GPa	653 ksi	2 mm/min; ISO 178
	5.50 GPa	798 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	0.530 J/cm	0.993 ft-lb/in	ASTM D256
	0.530 J/cm	0.993 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Unnotched (ISO)	30.0 kJ/m ²	14.3 ft-lb/in ²	80*10*4; ISO 180/1U
	30.0 kJ/m ²	14.3 ft-lb/in ²	80*10*4; ISO 180/1U
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	0.700 J/cm ²	3.33 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	10.0 J	7.38 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	26.0 μm/m-°C	14.4 μin/in-°F	ISO 11359-2
	@Temperature 23.0 - 150 °C	@Temperature 73.4 - 302 °F	
	32.4 μm/m-°C	18.0 μin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
CTE, linear, Transverse to Flow	60.0 μm/m-°C	33.3 μin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	60.0 μm/m-°C	33.3 μin/in-°F	ISO 11359-2
	@Temperature 23.0 - 150 °C	@Temperature 73.4 - 302 °F	
Deflection Temperature at 1.8 MPa (264 psi)	205 °C	401 °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
	205 °C	401 °F	unannealed; ASTM D648

Thermal Properties	@Thickness 3.20 mm Metric	@Thickness 0.126 in English	Comments
Vicat Softening Point	212 Â°C	414 Â°F	Rate B/50; ISO 306
	217 Â°C	423 Â°F	Rate B/120; ISO 306
	223 Â°C	433 Â°F	Rate B/50; ASTM D1525
Glass Transition Temp, Tg	217 Â°C	423 Â°F	
UL RTI, Electrical	170 Â°C	338 Â°F	UL 746B
UL RTI, Mechanical with Impact	170 Â°C	338 Â°F	UL 746B
UL RTI, Mechanical without Impact	170 Â°C	338 Â°F	UL 746B

Electrical Properties	Metric	English	Comments
Dielectric Strength	15.0 kV/mm	381 kV/in	in oil; IEC 60243-1
	@Thickness 3.20 mm	@Thickness 0.126 in	
Comparative Tracking Index	150 V	150 V	IEC 60112

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