

## SABIC Innovative Plastics Ultem HFATX200 PEI+PCE

Category : Polymer , Thermoplastic , Polyetherimide (PEI) , Polyetherimide (PEI) + PCE

### Material Notes:

High flow Polyetherimide blend with internal mold release. ECO Conforming. This data was supplied by SABIC-IP for the Americas region.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-Ultem-HFATX200-PEIPCE.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Ultem-HFATX200-PEIPCE.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.25 g/cc	1.25 g/cc	ASTM D 792
Density	1.25 g/cc	0.0452 lb/in <sup>3</sup>	ISO 1183
Moisture Absorption at Equilibrium	0.50 %	0.50 %	23 <sup>o</sup> C / 50% RH; ISO 62
Water Absorption at Saturation	0.90 % @Temperature 23.0 <sup>o</sup> C	0.90 % @Temperature 73.4 <sup>o</sup> F	ISO 62
Linear Mold Shrinkage, Flow	0.0060 - 0.0080 cm/cm	0.0060 - 0.0080 in/in	on tensile bar; SABIC Method
	0.0060 - 0.0080 cm/cm @Thickness 3.20 mm	0.0060 - 0.0080 in/in @Thickness 0.126 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.0060 - 0.0080 cm/cm @Thickness 3.20 mm	0.0060 - 0.0080 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	8.0 g/10 min @Load 6.60 kg, Temperature 295 <sup>o</sup> C	8.0 g/10 min @Load 14.6 lb, Temperature 563 <sup>o</sup> F	ASTM D 1238
	40 g/10 min @Load 5.00 kg, Temperature 340 <sup>o</sup> C	40 g/10 min @Load 11.0 lb, Temperature 644 <sup>o</sup> F	[cm <sup>3</sup> /10 min] Melt Volume Rate; ISO 1133
	66 g/10 min @Load 6.60 kg, Temperature 337 <sup>o</sup> C	66 g/10 min @Load 14.6 lb, Temperature 639 <sup>o</sup> F	ASTM D 1238

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	82.0 MPa	11900 psi	Type I, 5 mm/min; ASTM D 638
	84.0 MPa	12200 psi	5 mm/min; ISO 527
Tensile Strength, Yield	92.0 MPa	13300 psi	Type I, 5 mm/min; ASTM D 638
	95.0 MPa	13800 psi	5 mm/min; ISO 527

Mechanical Properties	Metric	English	Comments
	27 %	27 %	5 mm/min; ISO 527
Elongation at Yield	6.7 %	6.7 %	5 mm/min; ISO 527
	7.0 %	7.0 %	Type I, 5 mm/min; ASTM D 638
Tensile Modulus	2.90 GPa	421 ksi	5 mm/min; ASTM D 638
	3.08 GPa	447 ksi	1 mm/min; ISO 527
Flexural Yield Strength	138 MPa	20000 psi	2 mm/min; ISO 178
	146 MPa	21200 psi	1.3 mm/min, 50 mm span; ASTM D 790
Flexural Modulus	2.95 GPa	428 ksi	2 mm/min; ISO 178
	3.20 GPa	464 ksi	1.3 mm/min, 50 mm span; ASTM D 790
Izod Impact, Notched	0.450 J/cm	0.843 ft-lb/in	ASTM D 256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	0.480 J/cm	0.899 ft-lb/in	ASTM D 256
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	15.0 J/cm	28.1 ft-lb/in	reverse notched; ASTM D 256
	@Thickness 3.20 mm	@Thickness 0.126 in	
Izod Impact, Notched (ISO)	4.00 kJ/m <sup>2</sup>	1.90 ft-lb/in <sup>2</sup>	80*10*4; ISO 180/1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	5.00 kJ/m <sup>2</sup>	2.38 ft-lb/in <sup>2</sup>	80*10*4; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Unnotched (ISO)	125 kJ/m <sup>2</sup>	59.5 ft-lb/in <sup>2</sup>	80*10*4; ISO 180/1U
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	131 kJ/m <sup>2</sup>	62.3 ft-lb/in <sup>2</sup>	80*10*4; ISO 180/1U
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	11.5 J/cm <sup>2</sup>	54.7 ft-lb/in <sup>2</sup>	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	

Mechanical Properties	Metric $\text{cm}^2$	English $\text{in}^2$	Comments
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	Edgew 80*10*4 sp=62mm, ISO 179/1eU
Charpy Impact, Notched	0.500 J/cmÂ²	2.38 ft-lb/inÂ²	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
	0.600 J/cmÂ²	2.86 ft-lb/inÂ²	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
Impact Test	35.0 J	25.8 ft-lb	Instrumented Impact Total Energy; ASTM D 3763
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	53.0 Âµm/m-Â°C	29.4 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 150 Â°C	@Temperature -40.0 - 302 Â°F	
	53.0 Âµm/m-Â°C	29.4 Âµin/in-Â°F	ISO 11359-2
	@Temperature 23.0 - 150 Â°C	@Temperature 73.4 - 302 Â°F	
CTE, linear, Transverse to Flow	53.0 Âµm/m-Â°C	29.4 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 150 Â°C	@Temperature -40.0 - 302 Â°F	
	53.0 Âµm/m-Â°C	29.4 Âµin/in-Â°F	ISO 11359-2
	@Temperature 23.0 - 150 Â°C	@Temperature 73.4 - 302 Â°F	
Deflection Temperature at 0.46 MPa (66 psi)	199 Â°C	390 Â°F	unannealed; ASTM D 648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Deflection Temperature at 1.8 MPa (264 psi)	175 Â°C	347 Â°F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
	180 Â°C	356 Â°F	
	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D 648
	186 Â°C	367 Â°F	unannealed; ASTM D 648
	@Thickness 6.40 mm	@Thickness 0.252 in	
Vicat Softening Point	192 Â°C	378 Â°F	Rate B/50; ISO 306
	201 Â°C	394 Â°F	Rate B/120; ISO 306

Thermal Properties	201 Å°C Metric	394 Å°F English	Rate B/50, ASTM D 1525 Comments
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Descriptive Properties	Value	Comments
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Ball Pressure Test, 125Å°C +/- 2Å°C	Passes	IEC 60695-10-2
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