SABIC Innovative Plastics ULTEM 2310F PEI

Category : Polymer , Thermoplastic , Polyetherimide (PEI)

Material Notes:

30% Glass fiber filled, enhanced flow Polyetherimide (Tg 217C). ECO Conforming. US FDA Food Contact compliant in recognized colors.

Order this product through the following link:
http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-ULTEM-2310F-PEI.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.51 g/cc	1.51 g/cc	ASTM D792
Density	1.51 g/cc	0.0546 lb/inÂ³	ISO 1183
Moisture Absorption	0.500 %	0.500 %	23Â°C / 50% RH; ISO 62
Water Absorption at Saturation	0.90 %	0.90 %	ISO 62
Linear Mold Shrinkage, Flow	0.0020 - 0.0040 cm/cm @Thickness 3.20 mm	0.0020 - 0.0040 in/in @Thickness 0.126 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.0020 - 0.0040 cm/cm @Thickness 3.20 mm	0.0020 - 0.0040 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	7.6 g/10 min @Load 6.60 kg, Temperature 337 Â°C	7.6 g/10 min @Load 14.6 lb, Temperature 639 Â°F	ASTM D1238
Melt Index of Compound	8.0 g/10 min @Load 5.00 kg, Temperature 360 Â°C	8.0 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	158 MPa	22900 psi	Type I, 5 mm/min; ASTM D638
	165 MPa	23900 psi	5 mm/min; ISO 527
Tensile Strength, Yield	165 MPa	23900 psi	5 mm/min; ISO 527
	168 MPa	24400 psi	Type I, 5 mm/min; ASTM D638
Elongation at Break	2.0 %	2.0 %	5 mm/min; ISO 527
	3.0 %	3.0 %	Type I, 5 mm/min; ASTM D638
Elongation at Yield	2.0 %	2.0 %	5 mm/min; ISO 527
	3.0 %	3.0 %	Type I, 5 mm/min; ASTM D638

Mechanical Properties	Metric	English	Comments
Tensile Modulus	9.23 GPa	1340 ksi	5 mm/min; ASTM D638
	9.50 GPa	1380 ksi	1 mm/min; ISO 527
Flexural Strength	220 MPa	31900 psi	2.6 mm/min, 100 mm span; ASTM D790
Flexural Yield Strength	220 MPa	31900 psi	1.3 mm/min, 50 mm span; ASTM D790
	225 MPa	32600 psi	2 mm/min; ISO 178
Flexural Modulus	8.50 GPa	1230 ksi	2 mm/min; ISO 178
	9.25 GPa	1340 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	0.850 J/cm	1.59 ft-lb/in	ASTM D256
	0.900 J/cm @Temperature -30.0 Â°C	1.69 ft-lb/in @Temperature -22.0 Â°F	ASTM D256
	4.37 J/cm @Thickness 3.20 mm	8.19 ft-lb/in @Thickness 0.126 in	ASTM D256
Izod Impact, Notched (ISO)	10.0 kJ/mÂ²	4.76 ft-lb/inÂ²	80*10*4; ISO 180/1A
	10.0 kJ/mÂ² @Temperature -30.0 Â°C	4.76 ft-lb/inÂ² @Temperature -22.0 Â°F	80*10*4; ISO 180/1A
Charpy Impact, Notched	1.00 J/cmÂ²	4.76 ft-lb/inÂ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	10.0 J @Temperature 23.0 Â°C	7.38 ft-lb @Temperature 73.4 Â°F	ASTM D3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	16.0 Âµm/m-Â°C @Temperature -20.0 - 150 Â°C	8.89 Âµin/in-Â°F @Temperature -4.00 - 302 Â°F	ASTM E 831
	16.0 Âµm/m-Â°C @Temperature 23.0 - 150 Â°C	8.89 Âµin/in-Â°F @Temperature 73.4 - 302 Â°F	ISO 11359-2
CTE, linear, Transverse to Flow	41.0 Âµm/m-Â°C @Temperature -20.0 - 150 Â°C	22.8 Âµin/in-Â°F @Temperature -4.00 - 302 Â°F	ASTM E 831

Thermal Properties	Metric	English	Comments
	41.0 Âµm/m-Â°C @Temperature 23.0 - 150 Â°C	22.8 Âµin/in-Â°F @Temperature 73.4 - 302 Â°F	ISO 11359-2
Deflection Temperature at 1.8 MPa (264 psi)	210 Â°C	410 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	208 Â°C @Thickness 3.20 mm	406 Â°F @Thickness 0.126 in	unannealed; ASTM D648
	210 Â°C @Thickness 6.40 mm	410 Â°F @Thickness 0.252 in	unannealed; ASTM D648
Vicat Softening Point	213 Â°C	415 Â°F	Rate B/50; ISO 306
	220 Â°C	428 Â°F	Rate B/120; ISO 306
	228 Â°C	442 Â°F	Rate B/50; ASTM D1525
Glass Transition Temp, Tg	217 Â°C	423 Â°F	

Descriptive Properties	Value	Comments
Ball Pressure Test, 125Â°C +/- 2Â°C	Passes	IEC 60695-10-2

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