

SABIC Innovative Plastics ULTEM 2200F PEI

Category : Polymer , Thermoplastic , Polyetherimide (PEI)

Material Notes:

20% Glass fiber filled, standard 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-2200F-PEI.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.42 g/cc	1.42 g/cc	ASTM D792
Density	1.42 g/cc	0.0513 lb/in ³	ISO 1183
Water Absorption	0.19 % @Time 86400 sec	0.19 % @Time 24.0 hour	ASTM D570
Moisture Absorption	0.550 %	0.550 %	23 ^o C / 50% RH; ISO 62
Moisture Absorption at Equilibrium	1.1 %	1.1 %	ASTM D570
Water Absorption at Saturation	1.0 %	1.0 %	ISO 62
Linear Mold Shrinkage, Flow	0.0030 - 0.0050 cm/cm @Thickness 3.20 mm	0.0030 - 0.0050 in/in @Thickness 0.126 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.0030 - 0.0050 cm/cm @Thickness 3.20 mm	0.0030 - 0.0050 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	6.0 g/10 min @Load 6.60 kg, Temperature 337 ^o C	6.0 g/10 min @Load 14.6 lb, Temperature 639 ^o F	ASTM D1238
Melt Index of Compound	7.0 g/10 min @Load 5.00 kg, Temperature 360 ^o C	7.0 g/10 min @Load 11.0 lb, Temperature 680 ^o F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	114	114	ASTM D785
Tensile Strength at Break	131 MPa	19000 psi	Type I, 5 mm/min; ASTM D638
	131 MPa	19000 psi	5 mm/min; ISO 527
Tensile Strength, Yield	131 MPa	19000 psi	Type I, 5 mm/min; ASTM D638
	131 MPa	19000 psi	5 mm/min; ISO 527

Elongation at Break Mechanical Properties	4.0 % Metric	4.0 % English	Type I, 5 mm/min; ASTM D638 Comments
	4.0 %	4.0 %	5 mm/min; ISO 527
Elongation at Yield	4.0 %	4.0 %	Type I, 5 mm/min; ASTM D638
	4.0 %	4.0 %	5 mm/min; ISO 527
Tensile Modulus	6.89 GPa	999 ksi	5 mm/min; ASTM D638
	6.89 GPa	999 ksi	1 mm/min; ISO 527
Flexural Yield Strength	225 MPa	32600 psi	1.3 mm/min, 50 mm span; ASTM D790
	228 MPa	33100 psi	2 mm/min; ISO 178
Flexural Modulus	6.85 GPa	994 ksi	1.3 mm/min, 50 mm span; ASTM D790
	6.89 GPa	999 ksi	2 mm/min; ISO 178
Izod Impact, Notched	0.640 J/cm	1.20 ft-lb/in	ASTM D256
	0.700 J/cm	1.31 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	4.64 J/cm	8.69 ft-lb/in	ASTM D256
	@Thickness 3.20 mm	@Thickness 0.126 in	
Izod Impact, Unnotched	4.80 J/cm	8.99 ft-lb/in	ASTM D4812
Izod Impact, Notched (ISO)	64.0 kJ/m ²	30.5 ft-lb/in ²	80*10*4; ISO 180/1A
	70.0 kJ/m ²	33.3 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	6.50 J/cm ²	30.9 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	8.00 J	5.90 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	25.0 Åµm/m-Å°C	13.9 Åµin/in-Å°F	ASTM E 831
	@Temperature -20.0 - 150 Å°C	@Temperature -4.00 - 302 Å°F	
	25.0 Åµm/m-Å°C	13.9 Åµin/in-Å°F	ISO 11359-2

Thermal Properties	Metric @Temperature 23.0 - 150 Â°C	English @Temperature 73.4 - 302 Â°F	Comments
CTE, linear, Transverse to Flow	50.0 Âµm/m-Â°C	27.8 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 150 Â°C	@Temperature -40.0 - 302 Â°F	
	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	
Deflection Temperature at 1.8 MPa (264 psi)	205 Â°C	401 Â°F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
	208 Â°C	406 Â°F	
	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D648
Vicat Softening Point	212 Â°C	414 Â°F	Rate B/50; ISO 306
	218 Â°C	424 Â°F	Rate B/120; ISO 306
	220 Â°C	428 Â°F	Rate B/50; ASTM D1525
Glass Transition Temp, Tg	217 Â°C	423 Â°F	
Oxygen Index	50 %	50 %	ASTM D2863

Electrical Properties	Metric	English	Comments
Volume Resistivity	7.00e+16 ohm-cm	7.00e+16 ohm-cm	ASTM D257
Dielectric Constant	3.5	3.5	ASTM D150
	@Frequency 1000 Hz	@Frequency 1000 Hz	
Dielectric Strength	26.3 kV/mm	668 kV/in	in oil; ASTM D149
	@Thickness 1.60 mm	@Thickness 0.0630 in	
Dissipation Factor	0.0015	0.0015	ASTM D150
	@Frequency 1000 Hz	@Frequency 1000 Hz	
	0.0049	0.0049	ASTM D150
	@Frequency 2.45e+9 Hz	@Frequency 2.45e+9 Hz	

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

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