

SABIC Innovative Plastics ULTEM 2200 PEI (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polyetherimide (PEI)

Material Notes:

20% Glass fiber filled, standard flow Polyetherimide (Tg 217C). Resin is RoHS compliant. UL94 V0 and 5VA listing.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-ULTEM-2200-PEI-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Density	1.42 g/cc	0.0513 lb/in ³	ISO 1183
Moisture Absorption	0.550 %	0.550 %	23 ^o C / 50% RH; ISO 62
Water Absorption at Saturation	1.0 %	1.0 %	ISO 62
Linear Mold Shrinkage, Flow	0.0030 - 0.0050 cm/cm	0.0030 - 0.0050 in/in	on Tensile Bar; SABIC Method
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, H358/30	150 MPa	21800 psi	ISO 2039-1
Tensile Strength at Break	140 MPa	20300 psi	5 mm/min; ISO 527
Elongation at Break	2.0 %	2.0 %	5 mm/min; ISO 527
Tensile Modulus	6.80 GPa	986 ksi	1 mm/min; ISO 527
Flexural Strength	210 MPa	30500 psi	2 mm/min; ISO 178
Flexural Modulus	6.50 GPa	943 ksi	2 mm/min; ISO 178
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 @Temperature -30.0 ^o C	14.3 ft-lb/in ² @Temperature -22.0 ^o F	80*10*4; ISO 180/1U
Charpy Impact Unnotched	3.50 J/cm ²	16.7 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	3.50 J/cm ² @Temperature -30.0 ^o C	16.7 ft-lb/in ² @Temperature -22.0 ^o F	Edgew 80*10*4 sp=62mm; ISO 179/1eU
Charpy Impact, Notched	0.900 J/cm ²	4.28 ft-lb/in ²	ISO 179/2C

Taber Abrasion, mg/1000 Cycles Mechanical Properties	17 Metric	17 English	CS-17, 1 kg; SABIC Method Comments
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Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	25.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$ @Temperature 23.0 - 150 $\text{Å}^\circ\text{C}$	13.9 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$ @Temperature 73.4 - 302 $\text{Å}^\circ\text{F}$	ISO 11359-2
CTE, linear, Transverse to Flow	60.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$ @Temperature 23.0 - 150 $\text{Å}^\circ\text{C}$	33.3 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$ @Temperature 73.4 - 302 $\text{Å}^\circ\text{F}$	ISO 11359-2
Thermal Conductivity	0.280 W/m-K	1.94 BTU-in/hr-ft $\text{Å}^2\cdot\text{Å}^\circ\text{F}$	ISO 8302
Deflection Temperature at 0.46 MPa (66 psi)	210 $\text{Å}^\circ\text{C}$	410 $\text{Å}^\circ\text{F}$	Edgew 120*10*4 sp=100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	205 $\text{Å}^\circ\text{C}$	401 $\text{Å}^\circ\text{F}$	Edgew 120*10*4 sp=100mm; ISO 75/Ae
Vicat Softening Point	212 $\text{Å}^\circ\text{C}$	414 $\text{Å}^\circ\text{F}$	Rate B/50; ISO 306
	218 $\text{Å}^\circ\text{C}$	424 $\text{Å}^\circ\text{F}$	Rate B/120; ISO 306
	223 $\text{Å}^\circ\text{C}$	433 $\text{Å}^\circ\text{F}$	Rate A/50; ISO 306
Glass Transition Temp, Tg	217 $\text{Å}^\circ\text{C}$	423 $\text{Å}^\circ\text{F}$	
UL RTI, Electrical	170 $\text{Å}^\circ\text{C}$	338 $\text{Å}^\circ\text{F}$	UL 746B
UL RTI, Mechanical with Impact	170 $\text{Å}^\circ\text{C}$	338 $\text{Å}^\circ\text{F}$	UL 746B
UL RTI, Mechanical without Impact	170 $\text{Å}^\circ\text{C}$	338 $\text{Å}^\circ\text{F}$	UL 746B
Flammability, UL94	V-0 @Thickness 0.410 mm	V-0 @Thickness 0.0161 in	UL 94
	5VA @Thickness 1.90 mm	5VA @Thickness 0.0748 in	UL 94
Oxygen Index	46 %	46 %	ISO 4589
Glow Wire Test	960 $\text{Å}^\circ\text{C}$ @Thickness 3.20 mm	1760 $\text{Å}^\circ\text{F}$ @Thickness 0.126 in	IEC 60695-2-12

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	IEC 60093
Surface Resistance	$\geq 1.00\text{e}+15$ ohm	$\geq 1.00\text{e}+15$ ohm	ROA; IEC 60093

Electrical Properties <small>Dielectric Constant</small>	^{3.0} Metric	^{3.0} English	Comments <small>IEC 60250</small>
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.1	3.1	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
Dielectric Strength	16.0 kV/mm	406 kV/in	in oil; IEC 60243-1
	@Thickness 3.20 mm	@Thickness 0.126 in	
	26.0 kV/mm	660 kV/in	in oil; IEC 60243-1
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	34.0 kV/mm	864 kV/in	in oil; IEC 60243-1
	@Thickness 0.800 mm	@Thickness 0.0315 in	
Dissipation Factor	0.00080	0.00080	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
	0.0025	0.0025	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	0.0049	0.0049	IEC 60250
	@Frequency 2.45e+9 Hz	@Frequency 2.45e+9 Hz	
Comparative Tracking Index	>= 100 V	>= 100 V	IEC 60112
	150 V	150 V	IEC 60112

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

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China