

SABIC Innovative Plastics ULTEM 2310 PEI (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polyetherimide (PEI)

Material Notes:

30% Glass fiber filled, enhanced 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-2310-PEI-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Density	1.51 g/cc	0.0546 lb/in ³	ISO 1183
Moisture Absorption	0.500 %	0.500 %	23 ^o 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	0.0020 - 0.0040 in/in	on Tensile Bar; SABIC Method
Melt Index of Compound	8.0 g/10 min @Load 5.00 kg, Temperature 360 ^o C	8.0 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	165 MPa	23900 psi	ISO 2039-1
Tensile Strength at Break	165 MPa	23900 psi	5 mm/min; ISO 527
Elongation at Break	2.0 %	2.0 %	5 mm/min; ISO 527
Tensile Modulus	9.50 GPa	1380 ksi	1 mm/min; ISO 527
Flexural Strength	225 MPa	32600 psi	2 mm/min; ISO 178
Flexural Modulus	8.50 GPa	1230 ksi	2 mm/min; ISO 178
Izod Impact, Unnotched (ISO)	40.0 kJ/m ²	19.0 ft-lb/in ²	80*10*4; ISO 180/1U
	40.0 kJ/m ² @Temperature -30.0 ^o C	19.0 ft-lb/in ² @Temperature -22.0 ^o F	80*10*4; ISO 180/1U
Charpy Impact Unnotched	4.00 J/cm ²	19.0 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	4.00 J/cm ² @Temperature -30.0 ^o C	19.0 ft-lb/in ² @Temperature -22.0 ^o F	Edgew 80*10*4 sp=62mm; ISO 179/1eU
Charpy Impact, Notched	1.00 J/cm ²	4.76 ft-lb/in ²	ISO 179/2C

Taber Abrasion, mg/1000 Cycles Mechanical Properties	20 Metric	20 English	CS-17, 1 kg; SABIC Method Comments
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Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	20.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$ @Temperature 23.0 - 150 $\text{Å}^\circ\text{C}$	11.1 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$ @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	0.330 W/m-K	2.29 BTU-in/hr-ft $\text{Å}^2\cdot\text{Å}^\circ\text{F}$	ISO 8302
Deflection Temperature at 0.46 MPa (66 psi)	215 $\text{Å}^\circ\text{C}$	419 $\text{Å}^\circ\text{F}$	Edgew 120*10*4 sp=100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	210 $\text{Å}^\circ\text{C}$	410 $\text{Å}^\circ\text{F}$	Edgew 120*10*4 sp=100mm; ISO 75/Ae
Vicat Softening Point	213 $\text{Å}^\circ\text{C}$	415 $\text{Å}^\circ\text{F}$	Rate B/50; ISO 306
	220 $\text{Å}^\circ\text{C}$	428 $\text{Å}^\circ\text{F}$	Rate B/120; ISO 306
	225 $\text{Å}^\circ\text{C}$	437 $\text{Å}^\circ\text{F}$	Rate A/50; ISO 306
Glass Transition Temp, Tg	217 $\text{Å}^\circ\text{C}$	423 $\text{Å}^\circ\text{F}$	
UL RTI, Electrical	180 $\text{Å}^\circ\text{C}$	356 $\text{Å}^\circ\text{F}$	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	180 $\text{Å}^\circ\text{C}$	356 $\text{Å}^\circ\text{F}$	UL 746B
Flammability, UL94	V-0 @Thickness 0.250 mm	V-0 @Thickness 0.00984 in	UL 94
	5VA @Thickness 1.20 mm	5VA @Thickness 0.0472 in	UL 94
Oxygen Index	48 %	48 %	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 Dielectric Constant	3.3 Metric	3.3 English	Comments IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
	3.4	3.4	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Strength	15.0 kV/mm	381 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	
	35.0 kV/mm	889 kV/in	in oil; IEC 60243-1
	@Thickness 0.800 mm	@Thickness 0.0315 in	
Dissipation Factor	0.0016	0.0016	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
	0.0023	0.0023	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	0.0053	0.0053	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, 125Â°C +/- 2Â°C	PASSES	IEC 60695-10-2

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