

SABIC Innovative Plastics ULTEM 2110R PEI (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polyetherimide (PEI)

Material Notes:

10% Glass fiber filled, enhanced flow Polyetherimide (Tg 217C) with internal mold release. 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-2110R-PEI-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Density	1.34 g/cc	0.0484 lb/in ³	ISO 1183
Moisture Absorption	0.600 %	0.600 %	23 ^o C / 50% RH; ISO 62
Water Absorption at Saturation	1.0 %	1.0 %	ISO 62
Linear Mold Shrinkage, Flow	0.0040 - 0.0060 cm/cm	0.0040 - 0.0060 in/in	on Tensile Bar; SABIC Method
Melt Index of Compound	13 g/10 min @Load 5.00 kg, Temperature 360 ^o C	13 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	140 MPa	20300 psi	ISO 2039-1
Tensile Strength at Break	115 MPa	16700 psi	5 mm/min; ISO 527
Elongation at Break	4.0 %	4.0 %	5 mm/min; ISO 527
Tensile Modulus	4.50 GPa	653 ksi	1 mm/min; ISO 527
Flexural Strength	185 MPa	26800 psi	2 mm/min; ISO 178
Flexural Modulus	4.50 GPa	653 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	0.700 J/cm ²	3.33 ft-lb/in ²	ISO 179/2C

Mechanical Properties	Metric	English	Comments
Taber Abrasion, mg/1000 Cycles	15	15	CS-17, 1 kg; SABIC Method

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	26.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$ @Temperature 23.0 - 150 $\text{Å}^\circ\text{C}$	14.4 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$ @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	0.240 W/m-K	1.67 BTU-in/hr-ft Å^2 - $\text{Å}^\circ\text{F}$	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
	217 $\text{Å}^\circ\text{C}$	423 $\text{Å}^\circ\text{F}$	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	Metric	English	Comments
Dielectric Constant	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	IEC 60250
	3.0	3.0	IEC 60250
Dielectric Strength	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	IEC 60250
	15.0 kV/mm	381 kV/in	in oil; IEC 60243-1
	@Thickness 3.20 mm	@Thickness 0.126 in	
	27.0 kV/mm	686 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
Dissipation Factor	@Thickness 0.800 mm	@Thickness 0.0315 in	
	0.00090	0.00090	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	IEC 60250
	0.0025	0.0025	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	IEC 60250
	0.0046	0.0046	IEC 60250
Comparative Tracking Index	@Frequency 2.45e+9 Hz	@Frequency 2.45e+9 Hz	IEC 60250
	>= 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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