

SABIC Innovative Plastics ULTEM 2210R PEI (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polyetherimide (PEI)

Material Notes:

20% 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-2210R-PEI-Europe-Africa-Middle-East.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	0.26 % @Time 86400 sec	0.26 % @Time 24.0 hour	ASTM D570
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	10 g/10 min @Load 5.00 kg, Temperature 360 ^o C	10 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, Notched	0.900 J/cm	1.69 ft-lb/in	ASTM D256
Izod Impact, Unnotched	4.80 J/cm	8.99 ft-lb/in	ASTM D4812
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	14.3 ft-lb/in ² @Temperature -22.0	80*10*4; ISO 180/1U

Mechanical Properties	°C Metric	°F English	Comments
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 °C	16.7 ft-lb/in ² @Temperature -22.0 °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	17	17	CS-17, 1 kg; SABIC Method

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	25.0 µm/m-°C @Temperature 23.0 - 150 °C	13.9 µin/in-°F @Temperature 73.4 - 302 °F	ISO 11359-2
CTE, linear, Transverse to Flow	60.0 µm/m-°C @Temperature 23.0 - 150 °C	33.3 µin/in-°F @Temperature 73.4 - 302 °F	ISO 11359-2
Thermal Conductivity	0.280 W/m-K	1.94 BTU-in/hr-ft ² -°F	ISO 8302
Deflection Temperature at 0.46 MPa (66 psi)	210 °C	410 °F	Edgew 120*10*4 sp=100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	205 °C	401 °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
Vicat Softening Point	212 °C	414 °F	Rate B/50; ISO 306
	218 °C	424 °F	Rate B/120; ISO 306
	223 °C	433 °F	Rate A/50; ISO 306
	226 °C	439 °F	Rate B/50; ASTM D1525
Glass Transition Temp, Tg	217 °C	423 °F	
UL RTI, Electrical	170 °C	338 °F	UL 746B
UL RTI, Mechanical with Impact	170 °C	338 °F	UL 746B
UL RTI, Mechanical without Impact	170 °C	338 °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 Thermal Properties	46 % Metric	46 % English	ISO 4589 Comments
Glow Wire Test	960 Å°C @Thickness 3.20 mm	1760 Å°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	>= 1.00e+15 ohm	>= 1.00e+15 ohm	ROA; IEC 60093
Dielectric Constant	3.0 @Frequency 1.00e+6 Hz	3.0 @Frequency 1.00e+6 Hz	IEC 60250
	3.1 @Frequency 50.0 - 60.0 Hz	3.1 @Frequency 50.0 - 60.0 Hz	IEC 60250
Dielectric Strength	16.0 kV/mm @Thickness 3.20 mm	406 kV/in @Thickness 0.126 in	in oil; IEC 60243-1
	26.0 kV/mm @Thickness 1.60 mm	660 kV/in @Thickness 0.0630 in	in oil; IEC 60243-1
	34.0 kV/mm @Thickness 0.800 mm	864 kV/in @Thickness 0.0315 in	in oil; IEC 60243-1
Dissipation Factor	0.00080 @Frequency 50.0 - 60.0 Hz	0.00080 @Frequency 50.0 - 60.0 Hz	IEC 60250
	0.0025 @Frequency 1.00e+6 Hz	0.0025 @Frequency 1.00e+6 Hz	IEC 60250
	0.0049 @Frequency 2.45e+9 Hz	0.0049 @Frequency 2.45e+9 Hz	IEC 60250

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

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