

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

Category : Polymer , Thermoplastic , Polyetherimide (PEI)

Material Notes:

30% 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-2310R-PEI-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.51 g/cc	1.51 g/cc	ASTM D792
Density	1.51 g/cc	0.0546 lb/in ³	ISO 1183
Water Absorption	0.18 % @Time 86400 sec	0.18 % @Time 24.0 hour	ASTM D570
Moisture Absorption	0.500 %	0.500 %	23Â°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

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, Notched	1.00 J/cm	1.87 ft-lb/in	ASTM D256
Izod Impact, Unnotched	4.30 J/cm	8.06 ft-lb/in	ASTM D4812
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 Â°C	19.0 ft-lb/in ² @Temperature -22.0 Â°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

Mechanical Properties	4.00 J/cm ² Metric	19.0 ft-lb/in ² English	Comments
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	179/1eU
Charpy Impact, Notched	1.00 J/cm ²	4.76 ft-lb/in ²	ISO 179/2C
Taber Abrasion, mg/1000 Cycles	20	20	CS-17, 1 kg; SABIC Method

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	20.0 Âµm/m-Â°C @Temperature 23.0 - 150 Â°C	11.1 Âµin/in-Â°F @Temperature 73.4 - 302 Â°F	ISO 11359-2
CTE, linear, Transverse to Flow	60.0 Âµm/m-Â°C @Temperature 23.0 - 150 Â°C	33.3 Âµin/in-Â°F @Temperature 73.4 - 302 Â°F	ISO 11359-2
Thermal Conductivity	0.300 W/m-K	2.08 BTU-in/hr-ftÂ²- Â°F	ISO 8302
Deflection Temperature at 0.46 MPa (66 psi)	215 Â°C	419 Â°F	Edgew 120*10*4 sp=100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	210 Â°C	410 Â°F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
Vicat Softening Point	213 Â°C	415 Â°F	Rate B/50; ISO 306
	220 Â°C	428 Â°F	Rate B/120; ISO 306
	225 Â°C	437 Â°F	Rate A/50; ISO 306
	228 Â°C	442 Â°F	Rate B/50; ASTM D1525
Glass Transition Temp, Tg	217 Â°C	423 Â°F	
UL RTI, Electrical	180 Â°C	356 Â°F	UL 746B
UL RTI, Mechanical with Impact	170 Â°C	338 Â°F	UL 746B
UL RTI, Mechanical without Impact	180 Â°C	356 Â°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 Â°C	1760 Â°F	IEC 60695-2-12

Thermal Properties	@Thickness 3.20 mm Metric	@Thickness 0.126 in English	Comments
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	3.3	3.3	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	0.0015	0.0015	IEC 60250
	@Frequency 1000 Hz	@Frequency 1000 Hz	
	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	

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

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