

SABIC Innovative Plastics ULTEM 2300R PEI (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polyetherimide (PEI)

Material Notes:

30% Glass fiber filled, standard 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-2300R-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 %	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

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 ^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

Mechanical Properties	Metric	English	Comments
	4.00 J/cm ^Å ²	19.0 ft-lb/in ^Å ²	ISO 179/1eU; 10*4 sp=62mm, ISO 179/1eU
	@Temperature -30.0 Å°C	@Temperature -22.0 Å°F	
Charpy Impact, Notched	1.00 J/cm ^Å ²	4.76 ft-lb/in ^Å 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 Åµm/m-Å°C	11.1 Åµin/in-Å°F	ISO 11359-2
	@Temperature 23.0 - 150 Å°C	@Temperature 73.4 - 302 Å°F	
CTE, linear, Transverse to Flow	60.0 Åµm/m-Å°C	33.3 Åµin/in-Å°F	ISO 11359-2
	@Temperature 23.0 - 150 Å°C	@Temperature 73.4 - 302 Å°F	
Thermal Conductivity	0.300 W/m-K	2.08 BTU-in/hr-ftÅ ² -Å°F	ISO 8302
Deflection Temperature at 0.46 MPa (66 psi)	215 Å°C	419 Å°F	Edgew 120*10*4 sp=100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	210 Å°C	410 Å°F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
Vicat Softening Point	213 Å°C	415 Å°F	Rate B/50; ISO 306
	220 Å°C	428 Å°F	Rate B/120; ISO 306
	225 Å°C	437 Å°F	Rate A/50; ISO 306
	228 Å°C	442 Å°F	Rate B/50; ASTM D1525
Glass Transition Temp, Tg	217 Å°C	423 Å°F	
UL RTI, Electrical	180 Å°C	356 Å°F	UL 746B
UL RTI, Mechanical with Impact	170 Å°C	338 Å°F	UL 746B
UL RTI, Mechanical without Impact	180 Å°C	356 Å°F	UL 746B
Flammability, UL94	V-0	V-0	UL 94
	@Thickness 0.250 mm	@Thickness 0.00984 in	
	5VA	5VA	UL 94
	@Thickness 1.20 mm	@Thickness 0.0472 in	
Oxygen Index	48 %	48 %	ISO 4589
Glow Wire Test	960 Å°C	1760 Å°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	
Dielectric Strength	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	
Dielectric Strength	@Thickness 1.60 mm	@Thickness 0.0630 in	in oil; IEC 60243-1
	35.0 kV/mm	889 kV/in	
	@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	
Dissipation Factor	0.0023	0.0023	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dissipation Factor	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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