

SABIC Innovative Plastics Ultem 1100R PEI (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polyetherimide (PEI)

Material Notes:

Standard flow Polyetherimide (Tg 217C) with internal mold release. ECO Conforming. This data was supplied by SABIC-IP for the Europe-Africa-Middle East region.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Ultem-1100R-PEI-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Density	1.37 g/cc	0.0495 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	0.65 %	0.65 %	23 ^o C / 50% RH; ISO 62
Water Absorption at Saturation	1.2 % @Temperature 23.0 ^o C	1.2 % @Temperature 73.4 ^o F	ISO 62
Linear Mold Shrinkage, Flow	0.0040 - 0.0060 cm/cm	0.0040 - 0.0060 in/in	on tensile bar; SABIC Method
Melt Flow	12 g/10 min @Load 5.00 kg, Temperature 340 ^o C	12 g/10 min @Load 11.0 lb, Temperature 644 ^o F	[cm ³ /10 min] Melt Volume Rate; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	85.0 MPa	12300 psi	50 mm/min; ISO 527
Tensile Strength, Yield	110 MPa	16000 psi	50 mm/min; ISO 527
Elongation at Break	10 %	10 %	50 mm/min; ISO 527
Elongation at Yield	6.0 %	6.0 %	50 mm/min; ISO 527
Tensile Modulus	3.50 GPa	508 ksi	1 mm/min; ISO 527
Flexural Yield Strength	140 MPa	20300 psi	2 mm/min; ISO 178
Flexural Modulus	3.30 GPa	479 ksi	2 mm/min; ISO 178
Izod Impact, Notched (ISO)	4.00 kJ/m ² @Temperature 23.0 ^o C	1.90 ft-lb/in ² @Temperature 73.4 ^o F	80*10*4; ISO 180/1A
	4.00 kJ/m ² @Temperature -30.0 ^o C	1.90 ft-lb/in ² @Temperature -22.0 ^o F	80*10*4; ISO 180/1A
	10	10	

Taber Abrasion, mg/1000 Cycles Mechanical Properties	Metric @Load 1.00 kg	English @Load 2.20 lb	CS-17: SABIC Method Comments
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Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	50.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$ @Temperature 23.0 - 150 $\text{Å}^\circ\text{C}$	27.8 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$ @Temperature 73.4 - 302 $\text{Å}^\circ\text{F}$	ISO 11359-2
CTE, linear, Transverse to Flow	50.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$ @Temperature 23.0 - 150 $\text{Å}^\circ\text{C}$	27.8 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$ @Temperature 73.4 - 302 $\text{Å}^\circ\text{F}$	ISO 11359-2
Thermal Conductivity	0.260 W/m-K	1.80 BTU-in/hr-ft $\text{Å}^2\cdot\text{Å}^\circ\text{F}$	ISO 8302
Deflection Temperature at 0.46 MPa (66 psi)	200 $\text{Å}^\circ\text{C}$	392 $\text{Å}^\circ\text{F}$	Edgew 120*10*4 sp=100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	185 $\text{Å}^\circ\text{C}$	365 $\text{Å}^\circ\text{F}$	Edgew 120*10*4 sp=100mm; ISO 75/Ae
Vicat Softening Point	200 $\text{Å}^\circ\text{C}$	392 $\text{Å}^\circ\text{F}$	Rate B/50; ISO 306
	205 $\text{Å}^\circ\text{C}$	401 $\text{Å}^\circ\text{F}$	Rate B/120; ISO 306
	210 $\text{Å}^\circ\text{C}$	410 $\text{Å}^\circ\text{F}$	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
Oxygen Index	47 %	47 %	LOI; 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	Glow Wire Flammability Index; 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
Dielectric Constant	3.5 @Frequency 50.0 - 60.0 Hz	3.5 @Frequency 50.0 - 60.0 Hz	IEC 60250
Dielectric Strength	17.2 kV/mm @Thickness 3.20 mm	437 kV/in @Thickness 0.126 in	in oil; IEC 60243-1

Electrical Properties	Metric	English	Comments
Dissipation Factor	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	IEC 60250
Comparative Tracking Index	>= 100 V	>= 100 V	IEC 60112
	175 V	175 V	IEC 60112

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

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