

## SABIC Innovative Plastics ULTEM 1010R PEI (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polyetherimide (PEI)

### Material Notes:

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-1010R-PEI-Europe-Africa-Middle-East.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-ULTEM-1010R-PEI-Europe-Africa-Middle-East.php)

Physical Properties	Metric	English	Comments
Density	1.27 g/cc	0.0459 lb/in <sup>3</sup>	ISO 1183
Moisture Absorption	0.700 %	0.700 %	23 <sup>o</sup> C / 50% RH; ISO 62
Water Absorption at Saturation	1.25 %	1.25 %	ISO 62
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	on Tensile Bar; SABIC Method
Melt Index of Compound	13 g/10 min @Load 5.00 kg, Temperature 340 <sup>o</sup> C	13 g/10 min @Load 11.0 lb, Temperature 644 <sup>o</sup> F	MVR [cm <sup>3</sup> /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, H358/30	140 MPa	20300 psi	ISO 2039-1
Tensile Strength at Break	85.0 MPa	12300 psi	50 mm/min; ISO 527
Tensile Strength, Yield	105 MPa	15200 psi	50 mm/min; ISO 527
Elongation at Break	60 %	60 %	50 mm/min; ISO 527
Elongation at Yield	6.0 %	6.0 %	50 mm/min; ISO 527
Tensile Modulus	3.30 GPa	479 ksi	1 mm/min; ISO 527
Flexural Yield Strength	160 MPa	23200 psi	2 mm/min; ISO 178
Flexural Modulus	3.30 GPa	479 ksi	2 mm/min; ISO 178
Izod Impact, Notched (ISO)	5.00 kJ/m <sup>2</sup>	2.38 ft-lb/in <sup>2</sup>	80*10*4; ISO 180/1A
	5.00 kJ/m <sup>2</sup> @Temperature -30.0 <sup>o</sup> C	2.38 ft-lb/in <sup>2</sup> @Temperature -22.0 <sup>o</sup> F	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	NB	NB	80*10*4; ISO 180/1U
	NB @Temperature -30.0 <sup>o</sup> C	NB @Temperature -22.0 <sup>o</sup> F	80*10*4; ISO 180/1U

Mechanical Properties	Metric	English	Comments
Taber Abrasion, mg/1000 Cycles	10	10	CS-17, 1 kg, SABIC Method

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	0.240 W/m-K	1.67 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)	190 $\text{Å}^\circ\text{C}$	374 $\text{Å}^\circ\text{F}$	Edgew 120*10*4 sp=100mm; ISO 75/Ae
Vicat Softening Point	211 $\text{Å}^\circ\text{C}$	412 $\text{Å}^\circ\text{F}$	Rate B/50; ISO 306
	212 $\text{Å}^\circ\text{C}$	414 $\text{Å}^\circ\text{F}$	Rate B/120; ISO 306
	215 $\text{Å}^\circ\text{C}$	419 $\text{Å}^\circ\text{F}$	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 0.750 mm	V-0 @Thickness 0.0295 in	UL 94
	5VA @Thickness 3.00 mm	5VA @Thickness 0.118 in	UL 94
Oxygen Index	44 %	44 %	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
	2.9	2.9	
Dielectric Strength	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	IEC 60250
	28.0 kV/mm	711 kV/in	
Dissipation Factor	@Thickness 1.60 mm	@Thickness 0.0630 in	in oil; IEC 60243-1
	0.00050	0.00050	
Comparative Tracking Index	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	IEC 60250
	0.0025	0.0025	
Dissipation Factor	@Frequency 2.45e+9 Hz	@Frequency 2.45e+9 Hz	IEC 60250
	0.0060	0.0060	
Comparative Tracking Index	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	IEC 60250
	>= 100 V	>= 100 V	IEC 60112
	150 V	150 V	IEC 60112

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

## Contact Songhan Plastic Technology Co.,Ltd.

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