

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

Category : Polymer , Thermoplastic , Polyetherimide (PEI)

Material Notes:

Transparent, enhanced flow Polyetherimide (Tg 217C). Resin is RoHS compliant. UL94 V0 and 5VA listing. US FDA and EU Food Contact compliant.

Order this product through the following link:

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

Physical Properties	Metric	English	Comments
Density	1.27 g/cc	0.0459 lb/in ³	ISO 1183
Moisture Absorption	0.700 %	0.700 %	23 ^o 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	13 g/10 min	MVR [cm ³ /10 min]; ISO 1133
	@Load 5.00 kg, Temperature 340 ^o C	@Load 11.0 lb, Temperature 644 ^o F	
	25 g/10 min	25 g/10 min	MVR [cm ³ /10 min]; ISO 1133
	@Load 5.00 kg, Temperature 360 ^o C	@Load 11.0 lb, Temperature 680 ^o F	

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	3.20 GPa	464 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 ²	2.38 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature -30.0 ^o C	@Temperature -22.0 ^o F	

Mechanical Properties ¹ (ISO)	Metric	English	Comments ² ISO 180/1U
	NB	NB	
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	80*10*4; ISO 180/1U
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 Âµm/m-Â°C @Temperature 23.0 - 150 Â°C	27.8 Âµin/in-Â°F @Temperature 73.4 - 302 Â°F	ISO 11359-2
CTE, linear, Transverse to Flow	50.0 Âµm/m-Â°C @Temperature 23.0 - 150 Â°C	27.8 Âµin/in-Â°F @Temperature 73.4 - 302 Â°F	ISO 11359-2
Thermal Conductivity	0.210 W/m-K	1.46 BTU-in/hr-ftÂ²- Â°F	ISO 8302
Deflection Temperature at 0.46 MPa (66 psi)	200 Â°C	392 Â°F	Edgew 120*10*4 sp=100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	190 Â°C	374 Â°F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
Vicat Softening Point	211 Â°C	412 Â°F	Rate B/50; ISO 306
	212 Â°C	414 Â°F	Rate B/120; ISO 306
	215 Â°C	419 Â°F	Rate A/50; ISO 306
Glass Transition Temp, Tg	217 Â°C	423 Â°F	
UL RTI, Electrical	170 Â°C	338 Â°F	UL 746B
UL RTI, Mechanical with Impact	170 Â°C	338 Â°F	UL 746B
UL RTI, Mechanical without Impact	170 Â°C	338 Â°F	UL 746B
Flammability, UL94	V-0 @Thickness 1.50 mm	V-0 @Thickness 0.0591 in	UL 94
	5VA @Thickness 3.00 mm	5VA @Thickness 0.118 in	UL 94
Oxygen Index	47 %	47 %	ISO 4589
Glow Wire Test	960 Â°C @Thickness 3.20 mm	1760 Â°F @Thickness 0.126 in	IEC 60695-2-12

Optical Properties	Metric	English	Comments
Transmission, Visible	90 %	90 %	transparent; thickness not quantified

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	2.9	2.9	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Constant	2.9	2.9	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
Dielectric Strength	16.0 kV/mm	406 kV/in	in oil; IEC 60243-1
	@Thickness 3.20 mm	@Thickness 0.126 in	
Dielectric Strength	25.0 kV/mm	635 kV/in	in oil; IEC 60243-1
	@Thickness 1.60 mm	@Thickness 0.0630 in	
Dielectric Strength	33.0 kV/mm	838 kV/in	in oil; IEC 60243-1
	@Thickness 0.800 mm	@Thickness 0.0315 in	
Dissipation Factor	0.00050	0.00050	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
Dissipation Factor	0.0025	0.0025	IEC 60250
	@Frequency 2.45e+9 Hz	@Frequency 2.45e+9 Hz	
Dissipation Factor	0.0060	0.0060	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	>= 100 V	>= 100 V	IEC 60112
	150 V	150 V	

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

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