

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

Category : Polymer , Thermoplastic , Polyetherimide (PEI)

Material Notes:

Enhanced flow Polyetherimide (Tg 217C) with low ionic contamination of less than 0.1 ppm each of leachable chloride and sulphates. ECO Conforming. Factory Mutual FM4910 compliant in recognized colors. 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-1010X-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 at Equilibrium	0.70 %	0.70 %	23 ^o C / 50% RH; ISO 62
Water Absorption at Saturation	1.25 % @Temperature 23.0 ^o C	1.25 % @Temperature 73.4 ^o F	ISO 62
Melt Flow	13 g/10 min @Load 5.00 kg, Temperature 340 ^o C	13 g/10 min @Load 11.0 lb, Temperature 644 ^o F	[cm ³ /10 min] Melt Volume Rate; ISO 1133
	25 g/10 min @Load 5.00 kg, Temperature 360 ^o C	25 g/10 min @Load 11.0 lb, Temperature 680 ^o F	[cm ³ /10 min] Melt Volume Rate; 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	3.20 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 @Temperature 23.0 ^o C	2.38 ft-lb/in ² @Temperature 73.4 ^o F	80*10*4; ISO 180/1A

Mechanical Properties	Metric	English	Comments
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	80*10*4, ISO 180/1A
Izod Impact, Unnotched (ISO)	NB @Temperature 23.0 Â°C	NB @Temperature 73.4 Â°F	80*10*4; ISO 180/1U
	NB @Temperature -30.0 Â°C	NB @Temperature -22.0 Â°F	80*10*4; ISO 180/1U
Charpy Impact, Notched	0.500 J/cmÂ² @Temperature 23.0 Â°C	2.38 ft-lb/inÂ² @Temperature 73.4 Â°F	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
Taber Abrasion, mg/1000 Cycles	10 @Load 1.00 kg	10 @Load 2.20 lb	CS-17; 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
Oxygen Index	47 %	47 %	LOI; ISO 4589

Electrical Properties	Metric	English	Comments
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Volume Resistivity Electrical Properties	1.00e+15 ohm-cm Metric	1.00e+15 ohm-cm English	IEC 60093 Comments
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	
	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	
	25.0 kV/mm	635 kV/in	in oil; IEC 60243-1
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	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	
	0.0025	0.0025	IEC 60250
	@Frequency 2.45e+9 Hz	@Frequency 2.45e+9 Hz	
	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	IEC 60112

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

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