

SABIC Innovative Plastics ULTEM STM1600 PEI Copolymer (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polyetherimide (PEI)

Material Notes:

Siltem 1600 is a flexible copolymer designed for wire and cable applications. It offers a halogen free (according VDE 0472) flame retardant solution that also offers low smoke emission and toxicity. It is an amber colored transparent material that can be selfcolored and easily processed on conventional equipment. The material may also have a fit in flexible profiles or injection molded parts.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-ULTEM-STM1600-PEI-Copolymer-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.19 g/cc	1.19 g/cc	ASTM D792
Density	1.19 g/cc	0.0430 lb/in ³	ISO 1183
Water Absorption	0.58 % @Time 86400 sec	0.58 % @Time 24.0 hour	ISO 62-1
Water Absorption at Saturation	0.58 %	0.58 %	ISO 62
Linear Mold Shrinkage, Flow	0.0086 - 0.0101 cm/cm @Thickness 3.20 mm	0.0086 - 0.0101 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	8.6 g/10 min @Load 6.60 kg, Temperature 295 Å°C	8.6 g/10 min @Load 14.6 lb, Temperature 563 Å°F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	72	72	ASTM D2240
Tensile Strength at Break	41.0 MPa	5950 psi	50 mm/min; ISO 527
Tensile Strength, Yield	42.0 MPa	6090 psi	50 mm/min; ISO 527
Elongation at Break	74 %	74 %	50 mm/min; ISO 527
Elongation at Yield	10 %	10 %	50 mm/min; ISO 527
Tensile Modulus	1.38 GPa	200 ksi	1 mm/min; ISO 527
Flexural Yield Strength	55.0 MPa	7980 psi	2 mm/min; ISO 178
Flexural Modulus	1.25 GPa	181 ksi	2 mm/min; ISO 178
Izod Impact, Notched (ISO)	36.0 kJ/m ²	17.1 ft-lb/in ²	80*10*4; ISO 180/1A

Mechanical Properties	25.0 kJ/mÅ² Metric	11.9 ft-lb/inÅ² English	Comments 60-10-4, ISO 180/1A
	@Temperature -30.0 Å°C	@Temperature -22.0 Å°F	
Taber Abrasion, mg/1000 Cycles	50	50	CS-17, 1 kg; ASTM D1044

Thermal Properties	Metric	English	Comments
Transformation Temperature, Tg	195 Å°C	383 Å°F	DMA
Deflection Temperature at 0.46 MPa (66 psi)	144 Å°C	291 Å°F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
Vicat Softening Point	167 Å°C	333 Å°F	Rate B/120; ISO 306
Flammability, UL94	V-0 @Thickness 1.60 mm	V-0 @Thickness 0.0630 in	UL 94 by SABIC-IP
Oxygen Index	48 %	48 %	ASTM D2863

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+16 ohm-cm	>= 1.00e+16 ohm-cm	ASTM D257
Surface Resistance	>= 1.00e+15 ohm	>= 1.00e+15 ohm	ASTM D257
Dielectric Constant	3.02 @Frequency 1.00e+6 Hz	3.02 @Frequency 1.00e+6 Hz	ASTM D150
	3.1 @Frequency 100000 Hz	3.1 @Frequency 100000 Hz	ASTM D150
	3.14 @Frequency 100 Hz	3.14 @Frequency 100 Hz	ASTM D150
Dielectric Strength	16.7 kV/mm @Thickness 3.20 mm	424 kV/in @Thickness 0.126 in	in oil; ASTM D149
Dissipation Factor	0.0055 @Frequency 1.00e+6 Hz	0.0055 @Frequency 1.00e+6 Hz	ASTM D150
	0.0064 @Frequency 100000 Hz	0.0064 @Frequency 100000 Hz	ASTM D150
	0.014 @Frequency 100 Hz	0.014 @Frequency 100 Hz	ASTM D150

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