



ULTEM™ Resin SILTEM-STM1500

Europe-Africa-Middle East: COMMERCIAL

SILTEM STM1500 is a flexible siloxane-polyetherimide copolymer for cable and wire coatings. RoHS compliant.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Taber Abrasion, CS-17, 1 kg	60	mg/1000cy	SABIC Method
Tensile Stress, yield, 50 mm/min	20	MPa	ISO 527
Tensile Stress, break, 50 mm/min	25	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	15	%	ISO 527
Tensile Strain, break, 50 mm/min	110	%	ISO 527
Tensile Modulus, 1 mm/min	590	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	20	MPa	ISO 178
Flexural Stress, break, 2 mm/min	18	MPa	ISO 178
Flexural Modulus, 2 mm/min	470	MPa	ISO 178
IMPACT			
Izod Impact, unnotched 80*10*4 +23°C	NB	kJ/m ²	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	NB	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	25	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	15	kJ/m ²	ISO 180/1A
THERMAL			
CTE, 23°C to 80°C, flow	1.1E-04	1/°C	ISO 11359-2
CTE, 23°C to 80°C, xflow	9.E-05	1/°C	ISO 11359-2
Ball Pressure Test, 75°C +/- 2°C	PASSES	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	75	°C	ISO 306
Vicat Softening Temp, Rate B/120	78	°C	ISO 306
PHYSICAL			
Mold Shrinkage on Tensile Bar, flow (2) (5)	1.2 - 1.4	%	SABIC Method
Density	1.18	g/cm ³	ISO 1183
Water Absorption, (23°C/sat)	0.12	%	ISO 62

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. Not to be used for part or tool design.
(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

(4) Internal measurements according to UL standards.

(5) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

(6) Needs hard coat to consistently pass 60 sec Vertical Burn.

Source GMD, last updated:

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TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
PHYSICAL			
Melt Volume Rate, MVR at 320°C/2.16 kg	8	cm ³ /10 min	ISO 1133
ELECTRICAL			
Volume Resistivity	4.7E+14	Ohm-cm	IEC 60093
Surface Resistivity, ROA	>1.E+15	Ohm	IEC 60093
Dielectric Strength, in oil, 3.2 mm	19	kV/mm	IEC 60243-1
Relative Permittivity, 100 Hz	3	-	IEC 60250
Dissipation Factor, 100 Hz	0.009	-	IEC 60250
Comparative Tracking Index	175	V	IEC 60112
Comparative Tracking Index, M	100	V	IEC 60112
FLAME CHARACTERISTICS			
UL Compliant, 94V-1 Flame Class Rating (3)(4)	1.6	mm	UL 94 by SABIC-IP
Glow Wire Flammability Index 960°C, passes at	3.2	mm	IEC 60695-2-12
Oxygen Index (LOI)	48	%	ISO 4589

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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Profile Extrusion		
Drying Temperature	105 - 110	°C
Drying Time	5 - 7	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	285 - 320	°C
Barrel - Zone 1 Temperature	280 - 290	°C
Barrel - Zone 2 Temperature	300 - 310	°C
Barrel - Zone 3 Temperature	310 - 320	°C
Barrel - Zone 4 Temperature	310 - 325	°C
Hopper Temperature	60 - 100	°C
Adapter Temperature	315 - 325	°C
Die Temperature	300 - 320	°C
Calibrator Temperature	60 - 80	°C

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