

# ULTEM™ RESIN SILTEM-STM1500

REGION EUROPE

## DESCRIPTION

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

## TYPICAL PROPERTY VALUES

Revision 20180906

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL</b>			
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
<b>IMPACT</b>			
Izod Impact, unnotched 80*10*4 +23°C	NB	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	NB	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	25	kJ/m <sup>2</sup>	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	15	kJ/m <sup>2</sup>	ISO 180/1A
<b>THERMAL</b>			
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
<b>PHYSICAL</b>			
Mold Shrinkage on Tensile Bar, flow	1.2 – 1.4	%	SABIC method
Density	1.18	g/cm <sup>3</sup>	ISO 1183
Water Absorption, (23°C/sat)	0.12	%	ISO 62
Melt Volume Rate, MVR at 320°C/2.16 kg	8	cm <sup>3</sup> /10 min	ISO 1133
<b>ELECTRICAL</b>			
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	0.0091	-	IEC 60250
Comparative Tracking Index	175	V	IEC 60112
Comparative Tracking Index, M	100	V	IEC 60112
<b>FLAME CHARACTERISTICS</b>			
UL Compliant, 94V-1 Flame Class Rating	1.6	mm	UL 94 by SABIC-IP

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Glow Wire Flammability Index 960°C, passes at	3.2	mm	IEC 60695-2-12
Oxygen Index (LOI)	48	%	ISO 4589
<b>PROFILE EXTRUSION</b>			
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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