



**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 <sup>1</sup>             | TYPICAL VALUE | Unit              | Standard       |
|---------------------------------------------|---------------|-------------------|----------------|
| <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 (2) (5) | 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         |





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| <b>PHYSICAL</b>                               |               |                         |                   |
| 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                    | 0.009         | -                       | 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 (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 |
|-----------------------------|---------------|------|
| <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   |

