

Product Texts

SILTEM™ STM1700 resin is a flexible polyetherimide(PEI)-siloxane 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.

| Processing/Physical Characteristics | Value | Unit | Test Standard |
|-------------------------------------|-------|---------|---------------|
| ASTM Data | | | |
| Melt Flow Index, MFI | 7 | g/10min | ASTM D 1238 |
| Temperature | 295 | °C | - |
| Load | 6.6 | kg | - |

| Mechanical properties | Value | Unit | Test Standard |
|--|-------|-------------------|---------------|
| ISO Data | | | |
| Tensile Modulus | 2300 | MPa | ISO 527 |
| Yield stress | 68 | MPa | ISO 527 |
| Yield strain | 5 | % | ISO 527 |
| Stress at break | 59 | MPa | ISO 527 |
| Strain at break | 15 | % | ISO 527 |
| Flexural modulus | 2000 | MPa | ISO 178 |
| Izod notched impact strength, +23°C, 4mm | 16 | kJ/m ² | ISO 180/1A |
| Izod notched impact strength, -30°C, 4mm | 8 | kJ/m ² | ISO 180/1A |
| Tear strength | 37 | kN/m | ISO 34-1 |
| ASTM Data | | | |
| Shore D Hardness | 80 | - | ASTM D 2240 |
| Taber Abrasion Resistance | 50 | mg/1000 cycles | ASTM D 1044 |

| Thermal properties | Value | Unit | Test Standard |
|--|-------|------|---------------|
| ISO Data | | | |
| Temp. of deflection under load, 0.45 MPa | 164 | °C | ISO 75-1/-2 |
| Vicat softening temperature, 120°C/h 50N | 180 | °C | ISO 306 |

| Electrical properties | Value | Unit | Test Standard |
|---------------------------------|--------|--------|---------------|
| ASTM Data | | | |
| Dielectric Strength, Short Time | 16.7 | kV/mm | ASTM D 149 |
| Dissipation Factor, 1 MHz | 0.0054 | - | ASTM D 150 |
| Dielectric Constant, 1 MHz | 3.04 | - | ASTM D 150 |
| Surface Resistivity | 1E15 | Ohm | ASTM D 257 |
| Volume Resistivity | >1E15 | Ohm*cm | ASTM D 257 |

| Other properties | Value | Unit | Test Standard |
|------------------|-------|-------------------|----------------|
| Water absorption | 0.76 | % | Sim. to ISO 62 |
| Density | 1200 | kg/m ³ | ISO 1183 |
| Density | 1200 | kg/m ³ | ASTM D 792 |

| Processing Recommendation Injection Molding | Value | Unit | Test Standard |
|---|-----------|------|---------------|
| Pre-drying - Temperature | 105 | °C | - |
| Pre-drying - Time | 4 - 6 | h | - |
| Processing humidity | ≤0.02 | % | - |
| Melt temperature | 320 - 330 | °C | - |
| Mold temperature | 110 - 120 | °C | - |
| Zone 1 | 320 - 330 | °C | - |
| Zone 2 | 320 - 330 | °C | - |
| Zone 3 | 320 - 330 | °C | - |
| Screw speed | 50 - 100 | rpm | - |
| Back pressure | 0.3 - 0.7 | MPa | - |

Characteristics

Processing

Injection Molding

Special Characteristics

Flame retardant, Transparent

Additives

Flame retarding agent

Regional Availability

Europe