

LEXAN™ SCP13 FILM

PRODUCT DATASHEET

DESCRIPTION

LEXAN™ SCP13 is a transparent one side matt, one side polished polycarbonate film, which has been developed for applications where vacuum forming is required.

LEXAN SCP13 offers:

- high temperature resistance
- low shrinkage at vacuum forming
- superior dimensional stability

This makes it specifically suitable for Surface Mount Device (SMD) component packaging tape.

TYPICAL PROPERTY VALUES

| PROPERTY | TEST | UNITS | VALUE+ |
|---|------------|-------------------|--------------------|
| MECHANICAL | | | |
| Tensile stress, yield | ISO 527 | MPa | 60 |
| Tensile stress, break | ISO 527 | MPa | 70 |
| Tensile modulus | ISO 527 | MPa | 2350 |
| Tensile strain, break | ISO 527 | % | 120 |
| Gardner impact strength, 0.75 mm | ASTM D3029 | J | 14 |
| Tear strength, initiation | ASTM D1004 | kN/m | 245-315 |
| Tear strength, propagation | ASTM D1922 | kN/m | 10-20 |
| Burst strength, Mullen, 0.025 mm | ASTM D774 | N/mm ² | 0.30 |
| Fold endurance, double 0.25 mm | MIT | double folds | 200 |
| THERMAL | | | |
| Coefficient of linear thermal expansion | DIN 53752 | 1/°C | 7x10 ⁻⁵ |
| temperature under load, 1.82 N/mm ² | ISO 75 | °C | 135 |
| Thermal conductivity | DIN 52612 | W/m.°C | 0.20 |
| Special heat | ASMT C351 | kJ/kg °C | 1.25 |
| Strain relief, 135°C | ASTM D1204 | % | <0.2 |
| Tensile heat distortion, 0.35 N/mm ² | ASTM D1637 | °C | 150 |
| Brittleness temperature | ASTM D746 | °C | -135 |
| PHYSICAL | | | |
| Density | ISO 1183 | g/cm ³ | 1.20 |
| Water absorption, saturation, 23 °C | ISO 62 | % | 0.35 |
| OPTICAL | | | |
| Light Transmission | ASTM D1003 | % | 90 |
| Yellowness Index | ASTM D1925 | -- | <1.0 |
| Reflective index, 25 °C | DIN 53491 | -- | 1.586 |

| PROPERTY | TEST | UNITS | VALUE+ |
|--|-----------|--------|------------------|
| ELECTRICAL | | | |
| Dielectric strength at 23°C in Oil, Short Time, 250 micron | IEC 243-1 | kV/mm | 67 |
| Relative permittivity | IEC 250 | | |
| 50 Hz | | - | 2.99 |
| 1 MHz | | - | 2.93 |
| Dissipation factor | IEC 250 | | |
| 50 Hz | | - | 0.001 |
| 1 MHz | | - | 0.011 |
| Volume resistivity | IEC 93 | Ohm.cm | 10 ¹⁵ |
| Surface resistivity | IEC 93 | Ohm | 10 ¹⁵ |
| Arc resistance, tungsten electrodes | ASTM D495 | sec | 120 |

+ Typical values only. Variations within normal tolerances are possible for the various textures.

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CONFIGURATION

| TEXTURE | GAUGES (MM) | COLOUR |
|---------------|-------------|--------|
| matt/polished | 0.200 | 112 |
| | 0.250 | |
| | 0.300 | |

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