

ULTEM™ 1000B Film

PRODUCT DATASHEET

www.marianinc.com

1-800-773-0062

DESCRIPTION

ULTEM™ 1000B film is a high performance thermoplastic Polyetherimide material. The combination of high temperature resistance, flame resistance, low moisture absorption and excellent dielectric properties makes ULTEM film a good candidate for a broad range of electrical and electronic applications. ULTEM film products are thermo-formable and can be heat-sealed to a wide variety of materials.

TYPICAL PROPERTY VALUES ◆

| PROPERTY | TEST METHOD | UNITS | VALUE |
|--|-------------|-----------|------------------------|
| Mechanical | | | |
| Tensile Modulus | ISO R527 | MPa | 3000 |
| Tensile Strength @ Yield | ISO R527 | MPa | 100 |
| Tensile Elongation at @ Yield | ISO R527 | % | 6.5 |
| Tensile Strength @ Break | ISO R527 | % | 60 |
| Tear Strength Initiation @75 µm | ASTM D1004 | N/mm | 360 |
| Tear Strength Propagation @75 µm | ASTM D1938 | N/mm | 3.5 |
| Thermal | | | |
| Coefficient of Thermal Expansion | IPC-TM-650 | ppm/°C | 52 |
| Shrinkage @ 170°C EXT. DIR. | IPC-TM-650 | % | 0.33 |
| Shrinkage @ 170°C CROSS. DIR. | IPC-TM-650 | % | 0.24 |
| Glass Transition Temperature | DMA | °C | 217 |
| Thermal Conductivity | ASTM C177 | W/m°C | 0.22 |
| Physical | | | |
| Specific Gravity | ISO 1183 | g/cc | 1.27 |
| Water Absorption, immersion, 23°C, 24 hr | ASTM D570 | % | 1.25 |
| Water Absorption, 50%RH, 23°C, 24 hr. | ASTM D570 | % | 0.48 |
| Electrical | | | |
| Dielectric Strength @ 125 µm oil | ASTM D149 | Volts/mil | 3,650 |
| Dielectric Constant | IPC-TM-650 | | 3.2 |
| Dissipation Factor | IPC-TM-650 | | 0.005 |
| Volume Resistivity | ASTM D257 | M Ω-cm | 2.5 x 10 ¹⁵ |
| Surface Resistivity | ASTM D257 | M Ω | 1.9 x 10 ¹⁶ |
| Flammability | | | |
| UL Performance (75 - 175 µm) | UL94 | | VTM-0 |

◆ These are typical properties and are not intended for specification purposes. If minimum certifiable properties are required, please contact your local SABIC representative or the SABIC Quality Services Department.

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PRODUCT AVAILABILITY

| | |
|---------------------|--|
| Standard gauges | : 75 µm (0,003") +/-5% - 175 µm (0,020") +/-5% |
| Standard roll width | : 1270 mm (50") |
| Texture | : Smooth / fine matte |
| Color code | : 1000 |
| Color | : Natural amber |



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