

Polyimide Film

(BOPI-Biaxial Oriented Polyimide Film)



Dexlu Item No.: D010002

Properties

BOPI (Biaxial Oriented Polyimide film, similar to Kapton HN) is achieved by polycondensation of PMDA and ODA in strong polar solvents, through the process of film forming, and then being stretched and Oriented by biax during the course of imine at high temperature. BOPI film (similar to Kapton HN) is a special kind of polyimide film. Because of biaxial orientation process, BOPI film possesses higher physical, chemical, and electrical properties. It performs successfully in low & high temperature as range of temperature from -452F(-269c) to +500F(+260c) and can be exposed at +752F(400c) in short time. It is widely used as insulation material in F~H class electric motors, electric locomotive, high temperature cables, backing or cover film of FPCB(flexible printed circuit) applications, aerospace industries and so on.

Data Form

| Item | Properties | | Unit | Values | | | | | |
|------|-----------------------------------|---------------|-------------------|-----------------------|-----|-----|-----|-----|-----|
| | | | μm | 12.5 | 25 | 30 | 40 | 50 | 75 |
| 1 | Density | | g/cm ³ | 1.42±0.02 | | | | | |
| 2 | Tensile Strength | MD ≥ | MPa | 160 | 185 | 175 | 160 | 155 | 150 |
| | | TD ≥ | | 155 | 170 | 160 | 150 | 140 | 135 |
| 3 | Elongation at rupture ≥ | | % | 60 | | | | | |
| 4 | Shrinkage (only for reference) | 150°C 30min ≤ | % | 0.15 | | | | | |
| | | 400°C 30min ≤ | | 2.0 | | | | | |
| 5 | Breakdown Strength(48~62Hz) | Average | MV/m | 210 | 210 | 190 | 170 | 160 | 150 |
| | | Individual | | 190 | 190 | 180 | 160 | 135 | 120 |
| 6 | *Surface Resistance | 200°C | Ω | ≥1.0×10 ¹³ | | | | | |
| 7 | *Volume Resistance | 200°C | Ω·m | ≥1.0×10 ¹⁰ | | | | | |
| 8 | *Dielectric Constant (48~62Hz) | | --- | 3.5 | | | | | |
| 9 | *Loss Tangent (48~62Hz) | | --- | ≤0.004 | | | | | |

The items marked * are the inherent properties of Polyimide Film, which are not showed on the testing report for outgoing factory.

Application

1. Electric magnetic wire and cable coiling, motor slot liners, transformer interlayer insulation.
2. The backing material of pressure-sensitive adhesive tape, F46(FEP) tape.
3. The substrates of Flexible Printed Circuits Board (F-PCB).

Specification

1. Width: 1000mm, or Slit into tapes; Thickness tolerance: +-10%
2. Min Qty: 200kgs each size in a lot. Packing: 25--50 Kgs/carton.

Note: The values noted in above technical specification are given only for our customers' reference and should not be used in writing specifications.