

Polyimide Film

Dexlu Item No.: D010001



Properties

Polyimide film (similar to Kapton HN) is kind of special engineering plastic film which is achieved by polycondensation of PMDA and ODA in strong polar solvents and through the process of forming film and imine treatment at high temperature. Polyimide film (similar to Kapton HN) possesses excellent physical, chemical, and electrical properties, atomic radiation resistant, corrosion and solvent resistant, low & high temperature resistant, It performs successfully in the wide range of temperature as low as -452F(-269c) and as high as +500F(+260c). Because of its unique excellent properties, polyimide film (similar to Kapton HN) 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 | 40 | 50 | 75 | 100 | 125 |
| 1 | Density | | g/cm ³ | 1.42 ±0.02 | | | | | | |
| 2 | Tensile Strength | MD ≥ | MPa | 138 | 170 | 165 | 150 | 145 | 130 | |
| | | TD ≥ | | 138 | 165 | 160 | 139 | 130 | 110 | |
| 3 | Elongation | | % | ≥35 | ≥50 | ≥60 | | | | |
| 4 | Shrinkage (only for reference) | 150°C 30min ≤ | % | 0.15 | | | | | | |
| | | 400°C 30min ≤ | | 4.0 | 2.0 | | | 1.9 | 1.8 | |
| 5 | Breakdown Strength≥ (48~62Hz) | Average | MV/m | 120 | 180 | 170 | 160 | 145 | 120 | 115 |
| | | Individual | | 110 | 140 | 135 | 130 | 120 | 100 | 90 |
| 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. For wrapping of magnet wire and cable, slot liner insulation, interlayer insulation in motor, transformer etc.
2. The backing material for Polyimide pressure-sensitive adhesive tape, F46 (FEP) tape.
3. The substrates or overlay of Flexible Printed Circuits Board (F-PCB).
4. Polyimide tubing.

Specification

1. Width: 520, 540, 1000mm, or slit into your required width
2. Thickness (mil/mm): 1.0/0.025; 2.0/0.05; 3.0/0.075; 4.0/0.10; 5.0/0.125; 6.0/0.15; 7.0/0.175 THK tolerance: ±10%
3. Min Qty: 100kgs/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.