

APICAL® T11N7



APICAL® Polyimide possesses an excellent balance of Physical, thermal, electrical and chemical properties over a wide range of temperature (-269°C to 400°C). More precise thickness control, superior web flatness, plus improved adhesion and excellent dimensional stability are standard features with APICAL Polyimide. This coated version of Apical has a thermal stability up to 260°C.

Characteristics

Improved Bond/Peel Strengths
Optimal Flexibility
Excellent Dielectric Properties
Ideal Elongation

Applications

Aircraft Wire and Cable
Traction Equipment
Down Hole Motors
Magnet Wire
Mining Equipment

Construction

| Items | Mils | Microns |
|-------------------|------|---------|
| Nominal Thickness | 0.90 | 22.8 |
| FP | 0.1 | 2.5 |
| PI | 0.70 | 17.8 |
| FP | 0.1 | 2.5 |

Mechanical Properties

| Items | Typical Values | Test Method |
|---------------------------------|----------------|-------------|
| Tensile Strength MD, kpsi (MPa) | 33 (227) | ASTM D882 |
| Tensile Strength TD, kpsi (MPa) | 33 (227) | ASTM D882 |
| Tensile Modulus MD, kpsi (GPa) | 451 (3.1) | ASTM D882 |
| Tensile Modulus TD, kpsi (GPa) | 441 (3.0) | ASTM D882 |
| Elongation MD (TD), % | 83 (83) | ASTM D882 |

Thermal Properties

| Items | Typical Values | Test Method |
|--|----------------|---------------------|
| Heat Shrinkage MD % | 0.07 | 200°C – 2 hrs |
| Heat Shrinkage TD % | 0.02 | 200°C – 2 hrs |
| Heat Seal Strength, FEP-FEP, ginch (g/cm) | 1400 (551) | 350°C, 20sec, 20psi |

Electrical Properties

| Items | Units | Test Method |
|-----------------------------|-------|-------------|
| Dielectric Strength, KV/mil | 7.3 | ASTM D149 |

Physical Properties

| Items | Units | Test Method |
|---|----------|-----------------|
| Water Absorption, % | 1.23 | IPC-TM650-2.6.2 |
| Density, g/cm ³ | 1.60 | ASTM D1505 |
| Yield, ft ² /lb (m ² /kg) | 133 (27) | |

The data noted in these technical data sheets are given as examples and are not intended to be read as guaranteed values .

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