

# LINQTAPE™ PIT1N-Series

1 mil high temperature resistant polyimide film



## PRODUCT DESCRIPTION

High temperature resistant insulating film of 1 mil thick polyimide film.



## PRODUCT APPLICATION

Used for high temperature electrical applications in semiconductor, smartcard, electronic, automotive and general manufacturing industries.



## PRODUCT FEATURES

High performance polyimide film with excellent electrical and temperature insulating properties. Can be used in applications up to 400°C (752°F).



## PRODUCT DESCRIPTION

**LINQTAPE™ PIT1N-Series** is a high performance, flexible, high-temperature resistant polyimide film for many high temperature applications. Polyimide is preferred over polyester for many high temperature applications. These applications include but are not limited to semiconductor, smartcard, electronic, automotive and general manufacturing industries.

**LINQTAPE™ PIT1N-Series** provides an excellent balance of electrical, mechanical, thermal, and chemical properties over a wide range of temperatures. It can be used in applications that may see temperatures up to 400°C (752°F).

**LINQTAPE™ PIT1N-Series** comes in 33 meter (36 yard) length rolls of varying widths. The base polyimide film (backing) thickness is 1-mil ( $25 \pm 2\mu\text{m}$ ) thick. LINQTAPE PIT-N polyimide films are available in a range of thicknesses, starting from 0,5 mil ( $12.7\mu\text{m}$ ) thickness and up. Custom thicknesses are available upon request.



## PRODUCT APPLICATION



### ► Benefits

- Low dielectric constant and water absorption
- Polishable to Angstrom level finishes
- Excellent dimensional and high temperature stability
- Excellent machinability
- Low outgassing and non-contaminating
- Low coefficient of thermal expansion

### ► Applications

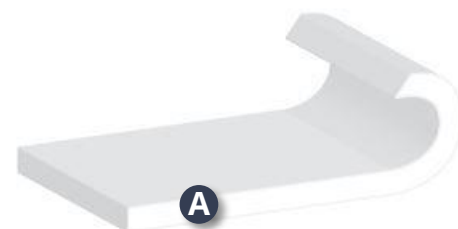
- Flexible cables (ie. In laptop hinge)
- Used for printed electronics works
- Flexible circuit boards
- Insulating film for magnet wire and medical tubing
- High temperature harness wrapping.



## PRODUCT FEATURES

TYPICAL PROPERTIES	UNIT	VALUE
Color		Amber
Film (Backing) Thickness	µm (mil)	25.4 µm (1 mil)
Density	g/cc	1.44
Tensile Strength	Mpa psi	165 24,000
Elongation @ break	%	>40
Glass Transition Temperature (Tg)	°C	>400
Thermal Conductivity	W/mK	0.50
Coefficient Thermal Expansion (CTE)	ppm/°C	55
Specific Heat Capacity	kJ/(kg°C)	1.15
Water Absorption (ASTM)	%	0.32
Dielectric Constant (@1 kHz)		3.5
Dielectric Strength	V/mil	>6000
Temperature Resistance	°C °F	400 752
UL-94 Flammability Rating*		V-0

### ▶ PRODUCT CROSS-SECTION



**A** Polyimide Film: 25.4µm

### ▶ PRODUCT NOMENCLATURE

**PIT:** Polyimide Tape / Film  
**1:** 1 mil Backing Thickness  
**N:** No Adhesive

*\*NOTE: Since UL classification must be tested for every unique film backing, thickness and adhesive combination, the listed UL rating is only an expected outcome if this material were to be tested. Please contact CAPLINQ to discuss options for obtaining UL certification*

## STORAGE AND HANDLING

LINQTAPE™ PIT1N-Series is supplied in rolls and should be kept in a cool (10°C – 25°C) dry place (40% – 75% humidity) away from direct sunlight or temperature extremes. Once removed from packaging it should be protected against dust and other impurities.

## DATA RANGES

The data contained herein may be reported as a typical value and/or range values based on actual test data and are verified on a periodic basis.

The above figures are typical material properties only and are not to be used for product specification purposes. To generate a specification for this product, please contact our Quality Manager and request a copy of the current stock specification. The information and recommendations supplied in this document are believed to be accurate but no guarantee of their accuracy is made; they are for guidance only and should not be construed as a warranty. All implied warranties are expressly disclaimed, including without limitations any warranty of merchantability and fitness for use. It is recommended that purchasers before using this product conduct their own tests to determine whether the product is suitable for their particular purposes under their own operating conditions.



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