

# **Product Data Sheet**

Updated: September 2013. This datasheet replaces all previous versions

# **P-221 AMB**

1-MIL KAPTON® POLYIMIDE FILM

#### PRODUCT DESCRIPTION

The ultimate in electrical insulation tapes, thin, highly conformable. An ideal tape for high performance tabbing and holding lithium ion battery cells as well as wave and solder reflow making it ideal to use in the electrical and electronics markets.

## **FEATURES**

- Outstanding puncture, tear and abrasion resistance even at elevated temperatures.
- Uniform unwinding in long length rolls helps promote use in automated applications.
- A high performance thin and conformable Kapton® backing ensures consistent quality.
- Made with an aggressive to adhere, solvent resistant, high temperature enduring adhesive.

## PRODUCT CONSTRUCTION

**KAPTON® POLYIMIDE FILM** SILICONE, CURED

# **APPLICATION**

- Suited for continuous high temp operating conditions such as splicing high temp insulating materials.
- Used as ground, barrier and phase insulation in small, high performance toroidal coils, high frequency motors, end turn bundling and connection insulation in small motors.
- Recommended for cross over insulation and outer protective wraps on small bobbin and large rotating machine wound coils to bundle conductors and reinforce insulation.
- Applied on printed circuit boards during wave solder masking.

# PROPERTIES, CERTIFICATIONS AND SPECIFICATIONS

Backing Material	1-Mil Kapton® Polyimide Film	
Adhesive	Silicone, Cured	
Color	Amber	
	Imperial	Metric
Total Tape Thickness	2.6 mil	0.066 mm
Tensile Strength	36 lbs/in	63 N/10 mm
Elongation	85%	85%
Adhesion to Steel	24 oz/in	2.7 N/10 mm
Dielectric Strength	7,500 volts	7.5 kV
Insulation Class CSA	356℉	180℃
Insulation Class UL	356℉	180℃
Certifications	UL-510 & CSA C-22-2	
Government Specifications	ASTM D5213 ( Replaces obsolete MIL-P-46112B)	
<b>Boeing Specifications</b>	BAC 5241	

<sup>\*</sup>CAUTION: The above are typical values and should not be used in writing specifications. Customer is responsible to ensure product meets intended application requirements before approved for use.

UL component Recognition Guide OANZ2, File E20392, CSA C-22.2.RoHS Compliant.







For additional information or support, please visit our website at www.nittousa.com or call toll free 800-755-8273

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#### **GENERAL STORAGE CONDITIONS**

Best stored between 50°F-80°F / 10°C-27°C, 25-50% relative humidity; out of direct sunlight.

## PRECAUTION REMINDER

Surface should be clean, free of oil, moisture and dirt before applying. Pressure-sensitive adhesive tapes may require pressure by roller, hand or press when applying. Not doing so may affect the general properties and appearance. Please inspect your surface prior to application; this tape may not adhere well to extremely uneven or distorted surfaces. Please remember to allow adequate time for full adhesive strength.

# WARRANTY INFORMATION

The following is made in lieu of all warranties, expressed or implied, including the warranty of merchantability and fitness for a particular or ordinary purpose. NITTO DENKO AMERICA warrants that its products meet the applicable specifications at the time of shipment from our warehouse and NITTO DENKO AMERICA's sole obligation shall be to replace any such quantity of the product which fails to meet NITTO DENKO AMERICA's specifications or to issue a credit for such merchandise for a period of six (6) months from the date of shipment.

NITTO DENKO AMERICA MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

NITTO DENKO AMERICA shall not be liable for any injury, loss or damage, direct or consequential, arising out of or in connection with the use or the inability to use the product, nor shall any recovery of any kind in total against NITTO DENKO AMERICA be greater in amount than the purchased price of the specific material sold causing the alleged loss, damage or injury. Before using, buyer shall be responsible to determine the suitability of the product for his intended use, and buyer assumes all risk and liability in connection therewith. The foregoing may not be altered except by an agreement signed by an officer of NITTO DENKO AMERICA.

Any delays in or failure by either party hereto in the performance of any obligations hereunder shall be excused if and to the extent caused by occurrences beyond such party's reasonable control, including Acts of God, strikes or other labor disturbances, war, whether declared or not, fire, inability to secure transportation or any other cause or causes which cannot be reasonably controlled by such party.



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