

## P-221 AMB

### 1-MIL KAPTON® POLYIMIDE FILM

#### PRODUCT DESCRIPTION

The ultimate in electrical insulation tapes - both thin and 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

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

\*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.

### 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 warrants for a period of one (1) year from the date of delivery that products sold to the Customer will be free of defects in workmanship and material. Such warranty will apply only if the Customer notifies Nitto in writing of these defects in reasonable detail, within two (2) weeks after a defect is discovered or should have been reasonably discovered by the Customer. This warranty does not extend i) to products which have been subject to misuse or neglect, ii) to products which have been altered or repaired by personnel other than personnel employed by Nitto or employed by Customer and certified by Nitto or iii) to damage caused, directly or indirectly, by the operation or maintenance performed by any untrained individuals.

THIS WARRANTY IS EXCLUSIVE AND IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND ANY OTHER WARRANTIES ARE HEREBY DISCLAIMED AND EXCLUDED.

If the warranty in the first paragraph is breached, the exclusive remedy of Customer and the exclusive obligation of Nitto will be as Nitto elects: to repair or replace the defective product within a reasonable period of time. Return of products to Nitto is allowed only after a Return Material Authorization Number (RMA) has been issued by Nitto. Such RMA will be issued after Nitto receives the notice described in the first paragraph. No shipments of returned products will be accepted without an RMA number. Repair or replacement of the products returned to Nitto will occur only after Nitto has received the returned products and determined that the returned goods were in breach of warranty. Customer will bear all expenses and risk of loss in connection with the return of any products, and Nitto will reimburse Customer for the cost of surface transportation to Nitto of returned products.

IN NO EVENT WILL NITTO BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, OR SPECIAL DAMAGES WHICH ARISE IN CONNECTION WITH THE FAILURE OF, OR DEFECTIVE PERFORMANCE OF, ANY PRODUCT SOLD OR THE BREACH OF WARRANTY EVEN IF NITTO HAD NOTICE OF THE POSSIBILITY HEREOF.

Customer's recovery of any equitable amount or any kind will not be greater than the amount paid for this product. Customer hereby waives all other remedies, statutory or otherwise including the remedies of specific performance or replevin.