



Low Static, Non-Silicone Polyimide Film Tape

7419

Technical Data

April, 2006

Product Description

3M™ Low Static, Non-Silicone Polyimide Film Tape 7419 is designed for masking or protecting surfaces during soldering operations or other very high temperature processes where clean, residue free removal is desired. 3M tape 7419 utilizes a non-silicone adhesive formulation which eliminates concerns about silicone contamination on the masked areas. It also has designed in static dissipative performance attributes and produces very low static charge during unwind and removal making it desirable in static sensitive applications. 3M tape 7419 has been designed to remove cleanly from a variety of typical electronic substrates including FR-4, polyimide, gold, copper, and silicon after high temperature processing

Product Construction

Backing	Adhesive	Color	Standard Roll Length
Polyimide	Acrylic	Amber	33 meters

Typical Physical Properties

Note: The following technical information and data should be considered representative or typical only, and should not be used for specification purposes.

	ASTM Test Method
Adhesion to Stainless Steel:	D-3330, Part F
Initial	8 oz./in. width (9 N/100 mm)
24 hrs @ Room Temp	8 oz./in. width (9 N/100 mm)
10 min @ 260°C	17 oz./in. width (19 N/100 mm)
Adhesion to Copper:	D-3330, Part F
Initial	6 oz./in. width (7 N/100 mm)
24 hrs @ Room Temp	7 oz./in. width (8 N/100 mm)
10 min @ 260°C	10 oz./in. width (11 N/100 mm)
Backing Thickness:	1.0 mil (0.025 mm) D-3652
Total Tape Thickness:	1.8 mils (0.046 mm) D-3652
Static Charge:	
Removal from roll:	< 100 volts
Dielectric Strength:	6000 volts
Surface Resistivity:	5 x 10 ⁶ ohms/sq ESD Method S-11
Temperature Use Range*:	10 min at 260°C

*Temperature use range is defined as the maximum time at the stated temperature after which the 3M tape 7419 may be removed cleanly, without staining, from a copper substrate.

General Information

- Splice-free maximum roll length is 36.1 yards -0/+2 yards (33 meters -0/+2 meters).
- Typical slit roll width tolerance: target ± .031 inches (± 0.8 mm).
- Product provided on plastic cores and individually packed.
Core ID = 3.020 inches ± .004 inches (76.7 mm ± 0.1 mm).
- Substrate should be smooth, clean, dry and oil-free to insure good wet-out and adequate adhesion.
- Tape may not bond or conform to low surface energy, rough or sharply curved surfaces.

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Application Ideas

- Masking or protecting residue sensitive areas on printed circuit boards during high temperature operations such as wave soldering and solder reflow.

Features

- Specially formulated acrylic adhesive is resistant to typical solder mask temperatures for short periods of time. Stays firmly in place during processing and removes cleanly from typical electronic substrates even after 10 min @ 500°F (260°C).
- Non-silicone adhesive formulation eliminates the potential for silicone contamination which can interfere with subsequent bonding or conformal coating operations.
- 3M™ Low Static, Non-Silicone Polyimide Film Tape 7419 includes designed in static dissipative attributes to manage static levels produced during roll unwind and removal from board after processing. Typical polyimide masking tapes can produce static levels of 1000 V or greater while 3M tape 7419 consistently produces < 100 V making it a perfect choice for static sensitive applications.
- The high temperature acrylic adhesive also has excellent chemical resistance and should be considered for demanding chemical masking applications.

Shelf Life

To obtain best performance, use this product within 18 months from date of delivery and store under normal conditions of 60° to 80°F (16° to 27°C) and 40 to 60% relative humidity in the original carton.

For Additional Information

To request additional product information or to arrange for sales assistance, call toll free 1-800-251-8634. Address correspondence to: 3M Electronics Markets Materials Division, Building 21-1W-10, 900 Bush Avenue, St. Paul, MN 55144-1000. Our fax number is 651-778-4244 or 1-877-369-2923. In Canada, phone: 1-800-634-3577. In Puerto Rico, phone: 1-787-750-3000. In Mexico, phone: 52-70-04-00.

Product Use

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