

3M™ Polyimide Film Tape 5413

Product Description

3M™ Polyimide Film Tape 5413 with DuPont™ Kapton® polyimide film and silicone adhesive used for PCB solder masking and other high temperature applications. This product is amber colored and 2.7 mil (69 microns) thick.

Features and Benefits

- The DuPont™ Kapton® polyimide film does not soften at elevated temperatures, thus the film provides an excellent release surface at elevated temperatures
- Is dimensionally stable at high temperatures, which helps reduce rework, helping to enable high productivity
- Is flame retardant, chemical and radiation resistant which helps protect surfaces to help reduce replacement costs
- The silicone adhesive's high temperature performance helps reduce adhesive transfer which helps to eliminate cleaning, enabling high productivity
- Polyethylene tape core instead of cardboard

Product Construction

3M™ Polyimide Film Tape 5413	
Backing	Dupont™ Kapton® Polyimide Film
Adhesive	Silicone
Color	Amber
Standard Roll Length	33 m (36 yd)

Application Ideas

- Mask for protection of gold fingers of printed circuit boards during wave solder or solder dip process.
- Release surface in fabrication of parts cured at elevated temperatures.



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.

3M™ Polyimide Film Tape 5413		
Property	Value	ASTM Test Method
Adhesion to Steel:	22 oz/in width (24 N/100 mm)	D-3330
Tensile Strength at Break:	33 lb/in width (578 N/100 mm)	D-3579
Elongation at Break:	62%	D-3579
Backing Thickness:	1.0 mil (0.03 mm)	D-3652
Total Tape Thickness:	2.7 mil (0.07 mm)	D-3652
Temperature Use Range:	-73° to 260°C (-100° to 500°F)	—
Dielectric Strength:	7000 volts	D-149
Outgassing:	%TLM = 1.50; %CVCN = 0.50	—
Flame Retardancy:	Pass	per UL-510 product category: 0ANZ2 File E230409

Key Attributes

Features	Advantages	Benefits
Thin DuPont™ Kapton® polyimide film	Dimensionally stable at high temperatures Flame retardant, chemical and radiation resistant	No rework – high productivity Helps protect surfaces, helping reduce replacement costs
Silicone adhesive	High temperature performance helps reduce adhesive transfer	Virtually no cleaning required – helps increase productivity
High adhesive to film bond	Helps reduce adhesive transfer	Virtually no cleaning required – helps increase productivity

Storage and Shelf Life

The shelf life of 3M™ Polyimide Film Tape 5413 is 36 months from the date of manufacture when stored in original cartons at 21°C (70°F) and 50% relative humidity.

Regulatory

For regulatory information about this product, contact your 3M representative.

Technical Information

The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

Product Use

Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. Given the variety of factors that can affect the use and performance of a 3M product, user is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application.

Warranty, Limited Remedy, and Disclaimer

Unless an additional warranty is specifically stated on the applicable 3M product packaging or product literature, 3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY OR CONDITION ARISING OUT OF A COURSE OF DEALING, CUSTOM OR USAGE OF TRADE. If the 3M product does not conform to this warranty, then the sole and exclusive remedy is, at 3M's option, replacement of the 3M product or refund of the purchase price.

Limitation of Liability

Except where prohibited by law, 3M will not be liable for any loss or damage arising from the 3M product, whether direct, indirect, special, incidental or consequential, regardless of the legal theory asserted, including warranty, contract, negligence or strict liability.



Electronics Materials Solutions Division

3M Center, Building 225-3S-06
St. Paul, MN 55144-1000
1-800-251-8634 phone
651-778-4244 fax
www.3M.com/electronics

DuPont™ and Kapton® are trademarks of E. I. du Pont de Nemours and Company or its affiliates.
3M is a trademark of 3M Company.
Please recycle.
© 3M 2014. All rights reserved.
70-0703-2532-2

