

3M™ Circuit Plating Tape 851

Product Description

3M™ Circuit Plating Tape 851 is a green polyester film tape with a unique conformable adhesive for printed circuit board masking during electroplating, solder stripping, and other high temperature processes up to 155°C.

Key Features

- Polyester backing helps reduce stretch and recovery of tape associated with uneven stop-off line
- Thick adhesive coating helps reduce undercutting by blocking out solutions between fingers
- Specially designed adhesive that generally performs better when no ovens are used to heat tape and boards
- Product is wound on a polyethylene tape core

Product Construction

Polyester Film Backing: 0.9 mil

Silicone/Rubber Blend Adhesive: 2.7 mil

Material Description

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

3M™ Circuit Plating Tape 851	
Property	Value
Backing	Transparent Polyester
Adhesive	Silicone/Rubber Blend
Color	Translucent Green
Standard Roll Length	66 meters (72 yards), 132 meters (144 yards)

Applications

- Masking printed circuit boards during solder stripping, etching, and precious metal plating of fingers
- Sealing during LED potting
- Color coding, marking, and visual identification of components, equipment, or process areas
- Splicing of silicone coated papers

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Typical Physical Properties and Performance Characteristics

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes. Final product specifications and testing methods will be outlined in the product's Certificate of Analysis (COA) that is shipped with the commercialized product.

3M™ Circuit Plating Tape 851		
Property	Method*	Value
Adhesion to Stainless Steel	D-3330	33 oz/in width (36 N/100 mm)
Tensile Strength at Break	D-3759	28 lb/in width (490 N/100 mm)
Elongation at Break	D-3759	127%
Backing Thickness	D-3652	0.9 mil (0.02 mm)
Total Tape Thickness	D-3652	3.6 mil (0.10 mm)
Temperature Use Range**	3M Test Method	-40° to 155°C (-40° to 311°F)

*Methods listed as ASTM are tested in accordance with the ASTM method noted

**Temperature use range is defined as the maximum time at the stated temperature after which the tape may be removed cleanly

Application Techniques

Note: Be sure to follow the manufacturer's precautions and directions when using solvents.

- Low-stretch polyester film can be applied by machine or by hand.
- Tape must be firmly pressed down by equipment with rubber-covered rollers or a rubber-covered platen press. Hand rolling usually does not provide enough pressure. A vivid outline of the circuit leads usually indicates adequate pressure was used.
- Solvent clean-up of the board is recommended to facilitate subsequent soldering.

Storage and Shelf Life

The shelf life of 3M™ Circuit Plating Tape 851 is 18 months from the date of manufacture when stored in original packaging materials and stored at 16° to 27°C (60° to 80°F) and 50% relative humidity.

Certificate of Analysis (COA)

The 3M Certificate of Analysis (COA) for this product is established when the product is manufactured and is deemed commercially available from 3M. The COA contains the 3M specifications, test methods, and test results for the product's performance attributes that the product will be supplied against. Contact your local 3M representative for this product's COA.

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

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