



Cleanroom High Temperature ESD Tape 1258

Technical Data

February, 2006

Product Description

3M™ Cleanroom High Temperature ESD Tape 1258 is a translucent, polyimide film tape with silicone adhesive with unique and extremely low electrostatic discharge properties. For gold tab protection during wave soldering of printed circuit boards.

Construction

Backing	Adhesive	Color	Standard Roll Sizes
Polyimide	Silicone	Gold	1/4 in., 1/2 in., 3/4 in., 1 in. x 36 yds. (6 mm, 13 mm, 19 mm, 25 mm x 33 m)

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.

		ASTM Test Method
Adhesion to Steel:	20 oz./in. width (22 N/100 mm)	D-3330
Tensile Strength at Break:	33 lbs./in. width (578 N/100 mm)	D-3759
Elongation at Break:	60%	D-3759
Backing Thickness:	1.0 mil (.03 mm)	D-3652
Total Tape Thickness:	2.7 mils (.07 mm)	D-3652
Temperature Use Range:	-100°F to +500°F (-73°C to +260°C)	
Dielectric Strength:	7000 volts	
Insulation Resistance:	> 1*10 ⁶ ohms	
Static Charge:	(measured at 50% RH, 70°F (21°C) in an ESD controlled environment)	
Removal from Roll:	< 150 volts	
Removal from PWB:	< 50 volts	

General Information

- Product is packaged in cleanroom.
- Rolls are wound onto plastic cores and bagged with Class 100 clean film.
- 3M tape 1258 employs a proprietary technology that results in extremely low electrostatic discharge at unwind and removal from the PWB. Conventional polyimide tapes can typically generate over 10,000 volts during use which can damage board mounted electronic components. 3M tape 1258 overcomes this problem without any of the typical drawbacks of conventional “anti-static” or “static-free” tapes (e.g., variable adhesion and opacity).
- At room temperature the properties of polyimide and polyester film are similar. However, as the temperature increases or decreases, the properties of the polyimide film are less affected than polyester.
- Polyimide film does not soften at elevated temperatures; thus, the film provides an excellent release surface at elevated temperatures.

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Application Ideas

- Mask for printed circuit boards during wave solder or solder dip process.
- Used as release surface in fabrication of parts cured at elevated temperatures.

Key Attributes

Features	Advantages	Benefits
Polyimide film	Dimensionally stable at high temperatures	Helps promote high productivity
Silicone adhesive	Flame retardant and chemical resistant	Protects surfaces, helping reduce replacement
Low static	High temperature performance reduces adhesive transfer	Improves productivity
	Virtually eliminates circuit board degradation due to electrostatic discharge	Reduces costly board waste due to component failure

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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