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Technical Data | August 2016

3M™ Low Static Polyimide Film Tape 5433 (Linered)

Product Description

3M™ Low Static Polyimide Film Tape 5433 is a clear PET linered version of 3M™ Low Static Polyimide Film Tape 5419. It is a translucent, polyimide film-backed amber silicone adhesive tape with extremely low electrostatic discharge properties.

Key Features

- Polyimide film does not soften at elevated temperatures, thus the film provides an excellent release surface at elevated temperatures
- Dimensionally stable at high temperatures to help prevent rework and enable high productivity
- Flame retardant, chemical and radiation resistant to help protect surfaces and reduce replacement costs
- Silicone adhesive's high temperature performance reduces adhesive transfer to help eliminate cleaning, enabling high productivity
- Halogen Free*

*Halogen Free is defined as having maximum 900ppm bromine, maximum 900ppm chlorine, and maximum 1500ppm total bromine and chlorine, per 61429-2-21

Key Attributes

3M™ Low Static Polyimide Film Tape 5433 (Linered)		
Features	**Advantages**	**Benefits**
Polyimide film	Dimensionally stable at high temperatures Flame retardant and chemical resistant	Helps promote high productivity Protects surfaces, helping reduce replacement
Silicone adhesive	High temperature performance reduces adhesive transfer	Helps promote high productivity
Low static	Virtually eliminates circuit board degradation due to electrostatic discharge	Helps reduce costly board waste due to component failure
Unique release liner	Easy release from silicone adhesive	Capability to product die cut parts

Product Construction/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™ Low Static Polyimide Film Tape 5433 (Linered)	
Property	**Value**
Backing Material	Polymide
Adhesive Type	Silicone
Tape Color	Amber
Liner	Clear PET
Product Form	Roll
Standard Roll Length	36 yards (33 meters)

Applications

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

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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 products Certificate of Analysis (COA) that is shipped with the commercialized product.

3M™ Low Static Polyimide Film Tape 5433 (Linered)		
Property	**Method***	**Value**
Adhesion to Steel	D-3330	20 oz./in. width (22 N/100 mm)
Tensile Strength at Break	D-3759	33 lbs./in. width (578 N/100 mm)
Elongation at Break	D-3759	60%
Backing Thickness	D-3652	1 mil (0.03 mm)
Liner Thickness	D-3652	3 mil (0.08 mm)
Total Tape Thickness	D-3652	2.7 mil (0.07 mm)
Temperature Use Range	-	-73° to 260°C) -100° to 500°F
Dielectric Strength	D-149	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 Liner	-	<100 volts
Removal from PWB	-	Dependent on PWB substrate, generally less than 500 volts
Outgassing	E-595	%TLM = 0.58; %CVCM = 0.24
Flame Retardancy	per UL-510 product category: OANZ2 File E230409	Pass

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

Storage and Shelf Life

The shelf life of 3M™ Low Static Polyimide Film Tape 5433 (Linered) is three years from the date of manufacture when stored in the original packaging materials and stored at 21°C (70°F) and 50% relative humidity.

Certificate of Analysis (COA)

The 3M Certificate of Analysis (COA) for this product is established when the product is commercially available from 3M. The commercially available product will have a COA specification established. The COA contains the 3M specifications and test methods for the products performance limits that the product will be supplied against. The 3M product is supplied to 3M COA test specifications and the COA test methods. Contact your local 3M representative for this product's COA.

This technical data sheet may contain preliminary data and may not match the COA specification limits and/or test methods that may be used for COA purposes.

Final product specifications and testing methods will be outlined in the products Certificate of Analysis (COA) that is shipped with the commercialized product.

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

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