

# 3M™ Double Coated Dielectric Tape 3514

## Product Description

3M™ Double Coated Dielectric Tape 3514 features a thin polyester film for dimensional stability and improved handling with ease of diecutting and laminating. 3M™ Double Coated Dielectric Tape 3514 features a medium-firm acrylic adhesive that provides a combination of high wet grab and initial adhesion and good shear holding power to a wide variety of materials.

## UL Component Recognition

3514 is UL listed under UL 510 under OANZ2 File E230409

## Product Construction

Properties	3M™ Double Coated Dielectric Tape 3514
Faceside <sup>1</sup> Adhesive Type/ Thickness	Acrylic/0.0023" (0.058 mm)
Carrier Type/ Thickness	Clear PET <sup>3</sup> 0.001" (0.025 mm)
Backside <sup>2</sup> Adhesive Type/ Thickness	Acrylic/0.0023" (0.058 mm)
Liner Color, Type, Print	Natural, Polycoated Kraft, no print
Liner Caliper (approximate)	0.0045" (0.11 mm)
Total Tape Thickness (w/o liner)	0.0056" (0.14 mm)

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

<sup>1</sup> Faceside adhesive is on the interior of the roll, exposed when unwound.

<sup>2</sup> Backside adhesive is on the exterior of the roll, exposed when liner is removed.

<sup>3</sup> PET (Polyester). The caliper listed is based on a calculation from manufacturing controlled adhesive coat weights using a density of 1.012 g/cc.

## Typical Physical Properties and Performance Characteristics

Properties	Typical Values	Test Method
<b>Adhesion to stainless steel</b>	Oz/in (N/100 mm)	
15 minute RT	71 (77)	ASTM D3330 90 degree
72 hour RT	93 (101)	
72 hour 158°F (70°C)	121 (132)	
72 hour RT	140 (153)	ASTM D3330 180 degree, 2 mil al foil

Adhesion to other surfaces		
ABS	74 (81)	ASTM D3330 90 degree, 2 mil al foil, 72 hour RT
Polycarbonate (PC)	60 (65)	
Polypropylene (PP)	44 (48)	
Polyester (PET)	77 (84)	
High Density Polyethylene (HDPE)	33 (36)	

Shear Strength		
1000 grams at 72°F (22°C)	10,000 minutes	ASTM D3654 modified - (.5 inch <sup>2</sup> sample size)
500 grams at 158°F (70°C)	10,000 minutes	

Relative High Temperature Operating Ranges:		
Long Term (days, weeks)	200°F (93°C)	
Short Term (minutes, hours)	350°F (177°C)	

## Available Sizes

Roll Lengths (subject to minimum order requirements):

Standard		36 yd (33 m)
Maximum Length	1/4" to 1" wide	144 yd (132 m)
	1" to 48" wide	360 yd (329 m)
Available Widths	Minimum	1/4" (6.35 mm)
	Maximum	48" (1220 mm)
Normal Slitting Tolerance		± 1/32" (0.8 mm)
Core Size		3.0" (76.2 mm)

Splice-free rolls available upon request.

## Features

- An acrylic adhesive that provides very high adhesion to a wide variety of materials, excellent shear holding power, high temperature resistance and excellent UV resistance.
- 3M acrylic adhesive provides exceptional temperature and chemical resistance and withstands tough application environment.
- 3M™ Double Coated Dielectric Tape 3514 has a moisture resistant liner which can withstand high humidity conditions with minimal cockling or wrinkling.
- 3M™ Double Coated Dielectric Tape 3514 has a film carrier, which can add dimensional stability to substrates. The carrier also provides easier handling during slitting and die-cutting.

## Application Techniques

Bond strength is dependent upon the amount of adhesive-to-surface contact developed. Firm application pressure helps develop better adhesive contact and improves bond strength.

To obtain optimum adhesion, the bonding surfaces must be clean, dry and well unified. Some typical surface cleaning solvents are isopropyl alcohol or heptane.\*

Ideal tape application temperature range is 70°F to 100°F (21°C to 38°C). Initial tape application to surfaces at temperatures below 50°F (10°C) is not recommended because the adhesive becomes too firm to adhere readily. However, once properly applied, low temperature holding is generally satisfactory.

\* Carefully read and follow the manufacturer's precautions and directions for use when working with solvents.

## Storage

Store in original cartons at 70°F (21°C) and 50% relative humidity.

## Shelf Life

If stored under proper conditions, product retains its performance and properties for two years from date of manufacture.

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