



# Technical Data Sheet

## 3M™ Double Coated Tape 9731

### Product Description

3M™ Double Coated Tapes 9731 has a firm, silicone pressure sensitive adhesive coated on one side of a polyester film carrier and a high performance acrylic adhesive coated on the other side of the carrier.



### Product Features

- Silicone adhesive provides good bond toSilicone Rubber, strong holding power to various silicone surfaces, good temperature performance and good solvent resistance.
- 3M™ Adhesive 350 provides very high adhesion to a wide variety of materials, excellent shear holding power, high temperature resistance and excellent UV resistance.
- A thin polyester carrier provides dimensional stability and improved handling with ease of die cutting and lamination compared to adhesive transfer tapes.

### Technical Information Note

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

### Typical Physical Properties

Property
Values
Additional Information
Adhesive Type
Silicone
Acrylic
Adhesive Type
350 Acrylic Adhesive
View 
Test Name: Faceside
Notes: Faceside adhesive is on the interior of the roll, exposed when unwound and liner removed.
Adhesive Type
Silicone Adhesive
View 
Test Name: Backside
Notes: Backside adhesive is on the exterior of the roll, exposed when liner is removed.
Adhesive Carrier
Clear PET (Polyester)

Liner

PCK

PET

Primary Liner Type

58# Polycoated Kraft

View 

Notes: Inner liner is primary (stays with die-cut part); Outer liner is secondary (removed first)

Secondary Liner Type

Fluoropolymer non-Silicone

View 

Notes: Inner liner is primary (stays with die-cut part); Outer liner is secondary (removed first)

Liner Thickness

0.17 mm

Primary Liner Thickness

0.17 mm

Secondary Liner Thickness

0.07 mm

Liner Color

Tan

View 

Test Name: Primary

Liner Color

Clear

View 

Test Name: Secondary

Adhesive Thickness

0.07 mm

View 

Test Name: Backside


Notes: The caliper listed is based on a calculation from manufacturing controlled adhesive coat weight. While past data pages have listed nominal thicknesses of 1 and 2 mils, the coat weight (and theoretical caliper) has not changed.

Carrier Thickness

0.025 mm

Total Tape Thickness (mil)

5.5 mil

View 

Test Method: ASTM D3652

Total Tape Thickness (mm)


0.14 mm

View 

Test Method: ASTM D3652

Adhesive Thickness

2.9 mil

View 

Test Name: Backside

Notes: Backside adhesive is on the exterior of the roll, exposed when liner is removed.

Adhesive Thickness

0.041 mm


View 

Test Name: Faceside

Notes: Faceside adhesive is on the interior of the roll, exposed when unwound and liner removed.

Adhesive Thickness

1.6 mil

View 

Test Name: Faceside

Notes: Faceside adhesive is on the interior of the roll, exposed when unwound and liner removed.

Carrier Thickness

1 mil






Liner Print

None

Liner Thickness

4.2 mil

## Typical Performance Characteristics


Property	Values	Additional Information
180° Peel Adhesion	8.1 N/cm	<a href="#">View</a> 
Test Method: ASTM D3330		
Test Name: 350 Acrylic Substrate: ABS		
180° Peel Adhesion	74 oz/in	<a href="#">View</a> 
Test Method: ASTM D3330		
Test Name: 350 Acrylic Substrate: ABS		
180° Peel Adhesion	6.5 N/cm	<a href="#">View</a> 
Test Method: ASTM D3330		
Test Name: 350 Acrylic Substrate: Polycarbonate (PC)		
180° Peel Adhesion	60 oz/in	<a href="#">View</a> 
Test Method: ASTM D3330		
Test Name: 350 Acrylic Substrate: Polycarbonate (PC)		
180° Peel Adhesion	4.8 N/cm	<a href="#">View</a> 

Test Method: ASTM D3330

Test Name: 350 Acrylic  
Substrate: Polypropylene (PP)

180° Peel Adhesion

44 oz/in

View 

Test Method: ASTM D3330

Test Name: 350 Acrylic  
Substrate: Polypropylene (PP)

180° Peel Adhesion

4.3 N/cm

View 

Test Method: ASTM D3330

Test Name: Silicone  
Substrate: ABS

180° Peel Adhesion

39 oz/in

View 

Test Method: ASTM D3330

Test Name: Silicone  
Substrate: ABS

180° Peel Adhesion

4.5 N/cm


View 

Test Method: ASTM D3330

Test Name: Silicone  
Substrate: Polycarbonate (PC)

180° Peel Adhesion

42 oz/in

View 

Test Method: ASTM D3330

Test Name: Silicone  
Substrate: Polycarbonate (PC)


180° Peel Adhesion

4.4 N/cm

View 

Test Method: ASTM D3330

Test Name: Silicone  
Substrate: Polypropylene (PP)

180° Peel Adhesion	
40 oz/in	
View 	
Test Method: ASTM D3330	
Test Name: Silicone	
Substrate: Polypropylene (PP)	

Short Term Temperature Resistance
350 °F


Short Term Temperature Resistance
177 °C

Long Term Temperature Resistance
121 °C

Long Term Temperature Resistance
250 °F

Static Shear
6090 min
View 

Test Method: ASTM D3654
Test Name: Faceside
Notes: 0.5 in² sample size

Static Shear
>10,000 min
View 

Test Method: ASTM D3654
Test Name: Backside
Notes: 0.5 in² sample size

Static Shear
>10,000 min
View 

Test Method: ASTM D3654
-------------------------

Test Name: Faceside

Notes: 0.5 in² sample size

Static Shear

>10,000 min

View 

Test Method: ASTM D3654

Test Name: Backside

Notes: 0.5 in² sample size

180° Peel Adhesion

4.4 N/cm

View 

Test Method: ASTM D3330

Test Name: Silicone  
Dwell/Cure Time: 15.0  
Dwell Time Units: min  
Temp C: 23°C  
Temp F: 73°F  
Substrate: Stainless Steel

180° Peel Adhesion

40 oz/in

View 

Test Method: ASTM D3330

Test Name: Silicone  
Dwell/Cure Time: 15.0  
Dwell Time Units: min  
Temp C: 23°C  
Temp F: 73°F  
Substrate: Stainless Steel

180° Peel Adhesion

4.5 N/cm

View 

Test Method: ASTM D3330

Test Name: Silicone  
Dwell/Cure Time: 72.0  
Dwell Time Units: hr  
Temp C: 23°C  
Temp F: 73°F  
Substrate: Stainless Steel

180° Peel Adhesion

42 oz/in

View 

Test Method: ASTM D3330

Test Name: Silicone  
Dwell/Cure Time: 72.0  
Dwell Time Units: hr  
Temp C: 23°C  
Temp F: 73°F  
Substrate: Stainless Steel

180° Peel Adhesion

5.2 N/cm

View 

Test Method: ASTM D3330

Test Name: Silicone  
Dwell/Cure Time: 72.0  
Dwell Time Units: hr  
Temp C: 70°C  
Temp F: 158°F  
Substrate: Stainless Steel

180° Peel Adhesion

48 oz/in

View 

Test Method: ASTM D3330

Test Name: Silicone  
Dwell/Cure Time: 72.0  
Dwell Time Units: hr  
Temp C: 70C  
Temp F: 158F  
Substrate: Stainless Steel

180° Peel Adhesion

7.7 N/cm

View 

Test Method: ASTM D3330

Test Name: 350 Acrylic  
Dwell/Cure Time: 15.0  
Dwell Time Units: min  
Temp C: 23°C  
Temp F: 73°F  
Substrate: Stainless Steel

180° Peel Adhesion

71 oz/in

View 

Test Method: ASTM D3330

Test Name: 350 Acrylic  
Dwell/Cure Time: 15.0  
Dwell Time Units: min  
Temp C: 23°C  
Temp F: 73°F  
Substrate: Stainless Steel

180° Peel Adhesion

10.1 N/cm



View

Test Method: ASTM D3330
Test Name: 350 Acrylic
Dwell/Cure Time: 72.0
Dwell Time Units: hr
Temp C: 23°C
Temp F: 73°F
Substrate: Stainless Steel

180° Peel Adhesion
93 oz/in
View

Test Method: ASTM D3330
Test Name: 350 Acrylic
Dwell/Cure Time: 72.0
Dwell Time Units: hr
Temp C: 23°C
Temp F: 73°F
Substrate: Stainless Steel

180° Peel Adhesion
13.2 N/cm
View


Test Method: ASTM D3330
Test Name: 350 Acrylic
Dwell/Cure Time: 72.0
Dwell Time Units: hr
Temp C: 70°C
Temp F: 158°F
Substrate: Stainless Steel

180° Peel Adhesion
121 oz/in
View


Test Method: ASTM D3330
Test Name: 350 Acrylic
Dwell/Cure Time: 72.0
Dwell Time Units: hr
Temp C: 70°C
Temp F: 158°F
Substrate: Stainless Steel

### Available Sizes


Property
Values
Additional Information
Note
Subject to Minimum Order Requirements

Maximum Length
32.9 m
View 


| Width: 1/4 in to 3/8 in widths |

Maximum Length
36 yd
View 

| Width: 1/4 in to 3/8 in widths |

Maximum Length
98.9 mm
View 

| Width: 1 to 38 in |

Maximum Length
108 yd
View 

| Width: 1 to 38 in |

Minimum Available Width
6.35 mm

|  |

Minimum Available Width
1/4 in

|  |

Maximum Available Width
965 mm

|  |

Maximum Available Width
38 in

|  |

Normal Slitting Tolerance
±0.8 mm

|  |

Normal Slitting Tolerance
±1/32 in

|  |


Core Size (ID)
----------------

76.2 mm


Core Size (ID)
3 in

## Electrical and Thermal Properties

Property
Values
Additional Information

Dielectric Strength
8000 V
View 


Test Method: ASTM D1000
Notes: RMS Voltage/Thickness

Volume Resistivity
3.4 x 10^15 Ω-cm
View 

Test Method: ASTM D257
------------------------

Surface Resistivity
7.4 x 10^15 Ω-cm
View 

Test Method: ASTM D257
Test Name: 350 Acrylic

Surface Resistivity
2.6 x 10^15 Ω-cm
View 

Test Method: ASTM D257
Test Name: Silicone

## Storage and Shelf Life

Store at room temperature conditions of 65°F to 75°F (21°C to 24°C) and 40% to 60% relative humidity. If stored properly, product retains its performance and properties for 18 months from date of manufacture.

## Recognition/Certification

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## Bottom Matter

3M  
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## Handling/Application Information

### Application Examples

- Applications where bondingSilicone Rubber to low surface energy materials is necessary.

### 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.

\*Note: Carefully read and follow the manufacturer’s precautions and directions for use when working with solvents. These cleaning recommendations may not be in compliance with the rules of certain air quality management districts in California; consult applicable rules before use.

### Application Equipment

To apply adhesives in a wide web format, lamination equipment is required to ensure acceptable quality. To learn more about working with pressure-sensitive adhesives please refer to technical bulletin, Lamination Techniques for Converters of Laminating Adhesives (70-0704-1430-8).

For additional dispenser information, contact your local 3M sales representative, or the toll free 3M sales assistance number at 1-800-362-3550.

## References

Property Values
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Family Group

Link Tags:

- 9731

• 9731RW

• 9731-100

• 9731-050

Products	Adhesive Type	Adhesive Carrier	Liner	Primary Liner Type	Secondary Liner Type	Liner Thickness	Primary Liner Thickness	Secondary Liner Thickness	Liner Color	Adhesive Thickness	Carrier Thickness	Total Tape Thickness (mm)	Short Term Temperat Resistanc	Long Term Temperat Resistanc
9731	Silicone Adhesive	Clear PET (Polyester)	PCK	58# Polycoated Kraft	Fluoropolymer non-Silicone	0.17 mm	0.17 mm	0.07 mm	Clear	0.041 mm	0.025 mm	0.14 mm	177 °C	250 °F
9731-100	Silicone Adhesive	Clear PET (Polyester)	PCK	58# Polycoated Kraft	Fluoropolymer non-Silicone	0.074 mm	0.074 mm	0.107 mm	Clear	0.053 mm	0.014 mm	0.1 mm	177 °C	200 °F
9731-050	Silicone Adhesive	Clear PET (Polyester)	PCK	58# Polycoated Kraft	Fluoropolymer non-Silicone	0.074 mm	0.074 mm	0.107 mm	Clear	0.02 mm	0.014 mm	0.05 mm	177 °C	200 °F
9731RW	350 Acrylic Adhesive	Clear PET (Polyester)	PCK	Fluoropolymer non-Silicone	Polycoated Kraft	0.07 mm	0.07 mm	0.17 mm	Tan	0.07 mm	0.025 mm	0.14 mm	177 °C	250 °F

ISO Statement

This Industrial Adhesives and Tapes Division product was manufactured under a 3M quality system registered to ISO 9001 standards.

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