



# Technical Data Sheet

## 3M™ Double Coated Tape 9731



[Product Details](#)



[Regulatory Info/SDS](#)

### 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 to Silicone 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

Attribute Name	Test Method	Test Condition	Value
Adhesive Type		Faceside	350 Acrylic Adhesive <sup>1</sup>
Adhesive Type		Backside	Silicone Adhesive <sup>2</sup>
Adhesive Carrier			Clear PET (Polyester)
Total Tape Thickness	ASTM D3652		0.14 mm (5.5 mil)
Adhesive Thickness		Faceside	0.041 mm (1.6 mil) <sup>1</sup>
Adhesive Thickness		Backside	0.07 mm (2.9 mil) <sup>3</sup>
Carrier Thickness			0.025 mm (1 mil)

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

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

<sup>3</sup> 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.

Attribute Name	Value
Primary Liner Type	58# Polycoated Kraft <sup>1</sup>
Secondary Liner Type	Fluoropolymer non-Silicone <sup>1</sup>
Primary Liner Thickness	0.17 mm (6.6 mil)
Secondary Liner Thickness	0.07 mm (2.9 mil)
Primary Liner Color	Tan
Secondary Liner Color	Clear

<sup>1</sup> Inner liner is primary (stays with die-cut part); Outer liner is secondary (removed first)

## Typical Performance Characteristics

### 180° Peel Adhesion

Test Method: ASTM D3330

Dwell Time	Temperature	Test Condition	Substrate	Value
15 min	22 °C (72 °F)	Silicone Side	Stainless Steel	4.4 N/cm (40 oz/in) <sup>1</sup>
15 min	22 °C (72 °F)	Acrylic Side	Stainless Steel	7.7 N/cm (71 oz/in) <sup>1</sup>
72 h	22 °C (72 °F)	Acrylic Side	ABS	8.1 N/cm (74 oz/in) <sup>1</sup>
72 h	22 °C (72 °F)	Acrylic Side	Polycarbonate (PC)	6.5 N/cm (60 oz/in) <sup>1</sup>
72 h	22 °C (72 °F)	Acrylic Side	Polypropylene (PP)	4.8 N/cm (44 oz/in) <sup>1</sup>
72 h	22 °C (72 °F)	Silicone Side	Stainless Steel	4.5 N/cm (42 oz/in) <sup>1</sup>
72 h	22 °C (72 °F)	Acrylic Side	Stainless Steel	10.1 N/cm (93 oz/in) <sup>1</sup>
72 h	22 °C (72 °F)	Silicone Side	ABS	4.3 N/cm (39 oz/in) <sup>1</sup>
72 h	22 °C (72 °F)	Silicone Side	Polycarbonate (PC)	4.5 N/cm (42 oz/in) <sup>1</sup>
72 h	22 °C (72 °F)	Silicone Side	Polypropylene (PP)	4.4 N/cm (40 oz/in) <sup>1</sup>
72 h	70 °C (158 °F)	Silicone Side	Stainless Steel	5.2 N/cm (48 oz/in) <sup>1</sup>
72 h	70 °C (158 °F)	Acrylic Side	Stainless Steel	13.2 N/cm (121 oz/in) <sup>1</sup>

<sup>1</sup> 12 in/min (300 mm/min)

Attribute Name	Value
Short Term Temperature Resistance	177 °C (350 °F) <sup>1</sup>
Long Term Temperature Resistance	121 °C (250 °F) <sup>2</sup>

<sup>1</sup> Short Term (minutes, hour)

<sup>2</sup> Long Term (day, weeks)

## Electrical and Thermal Properties

Attribute Name	Test Method	Temperature	Value
Dielectric Strength	ASTM D1000		8,000 V <sup>1</sup>
Surface Resistivity (350 Acrylic)	ASTM D257	22 °C (72 °F)	7.4 x 10 <sup>15</sup> Ω-cm <sup>2</sup>
Surface Resistivity (Silicone)	ASTM D257	22 °C (72 °F)	2.6 x 10 <sup>15</sup> Ω-cm <sup>3</sup>
Volume Resistivity	ASTM D257	22 °C (72 °F)	3.4 x 10 <sup>15</sup> Ω-cm

<sup>1</sup> RMS Voltage/Thickness

<sup>2</sup> 350 Acrylic

<sup>3</sup> Silicone

## Handling/Application Information

### Application Examples

- Applications where bonding Silicone 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.

### **Storage and Shelf Life**

Store under normal conditions of 60°F to 80°F (16° to 27°C) and 40% to 60% relative humidity in the original carton. To obtain best performance, use this product within 18 months from date of manufacture.

### **Available Sizes**

Attribute Name	Width	Value
Core Size (ID)		76.2 mm (3 in)
Maximum Available Width		965 mm (38 in)
Maximum Length	1/4 in to 3/8 in widths	32.9 m (36 yd)
Maximum Length	1 to 38 in	98.9 mm (108 yd)
Minimum Available Width		6.35 mm (1/4 in)
Normal Slitting Tolerance		±0.8 mm (±1/32 in)
Note		Subject to Minimum Order Requirements

### **Recognition/Certification**

**MSDS:** 3M has not prepared a MSDS for these products which are not subject to the MSDS requirements of the Occupational Safety and Health Administration's Hazard Communication Standard, 29 C.F.R. 1910.1200(b)(6)(v). When used under reasonable conditions or in accordance with the 3M directions for use, these products should not present a health and safety hazard. However, use or processing of these products in a manner not in accordance with the directions for use may affect their performance and present potential health and safety hazards.

### **Automotive Disclaimer**

**Select Automotive Applications:** This product is an industrial product and has not been designed or tested for use in certain automotive applications, such as automotive electric powertrain battery or high voltage applications, which may require the product to be manufactured in a IATF certified facility, meet a Ppk of 1.33 for all properties, undergo an automotive production part approval process (PPAP), or fully adhere to automotive design or quality system requirements (e.g., IATF 16949 or VDA 6.3). Customer assumes all responsibility and risk if customer chooses to use this product in these applications.

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## **ISO Statement**

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

3M  
Industrial Adhesives and Tapes Division  
Converter Markets  
3M Center, Building 225-3S-06  
St. Paul, MN 55144-1000  
800-223-7427 • 651-778-4244 (fax)  
[www.3M.com](http://www.3M.com)

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