



# **Technical Data Sheet**

3M™ Double Coated Tape 9731

English-US **Last Revision Date:** August, 2024

Supersedes: July, 2024





Product Details

Regulatory Info/SDS

# **Product Description**

 $3M^{\text{TM}}$  Double Coated Tape 9731 has a 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. Wind direction is silicone adhesive side on the outside of the roll.

### **Product Features**

- Silicone adhesive bonds to Silicone Rubber and silicone products.
- 3M<sup>™</sup> Adhesive 350 provides adhesion to a wide variety of substrates.
- 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 Thickness		Silicone Side	0.07 mm (2.9 mil)
Adhesive Type		Silicone Side	Silicone
Adhesive Carrier			Clear PET (Polyester)
Carrier Thickness			0.02 mm (1.0 mil)
Adhesive Type		Acrylic Side	350 Acrylic Adhesive
Adhesive Thickness		Acrylic Side	0.04 mm (1.6 mil)
Total Tape Thickness	ASTM D3652		0.14 mm (5.5 mil)
Density			1.06 g/cm <sup>3</sup>

Attribute Name	Test Condition	Value
Liner	Silicone Side	Clear PET
Liner Thickness	Silicone Side	3 mil
Liner Print		None
Liner	Acrylic Side	Brown PCK
Liner Thickness	Acrylic Side	4.2 mil (58#)

# **Typical Performance Characteristics**

### 90° Peel Adhesion

Backing: 2 mil Aluminum Foil Test Method: ASTM D3330

Dwell Time	Temperature	Test Condition	Substrate	Value
20 min	22 °C (72 °F)	Silicone Side	Stainless Steel	4.9 N/cm (45 oz/in) <sup>1</sup>
72 h	22 °C (72 °F)	Silicone Side	Stainless Steel	5.4 N/cm (49 oz/in) <sup>1</sup>
72 h	70 °C (158 °F)	Silicone Side	Stainless Steel	4.3 N/cm (39 oz/in) 1
72 h	22 °C (72 °F)	Silicone Side	ABS	3.7 N/cm (34 oz/in) <sup>1</sup>

<b>Dwell Time</b>	Temperature	Test Condition	Substrate	Value
72 h	22 °C (72 °F)	Silicone Side	Polypropylene (PP)	5.3 N/cm (48 oz/in) <sup>1</sup>
72 h	22 °C (72 °F)	Silicone Side	Glass	5.3 N/cm (48 oz/in) <sup>1</sup>
20 min	22 °C (72 °F)	Acrylic Side	Stainless Steel	6.5 N/cm (59 oz/in) <sup>1</sup>
72 h	22 °C (72 °F)	Acrylic Side	Stainless Steel	7.0 N/cm (64 oz/in) <sup>1</sup>
72 h	70 °C (158 °F)	Acrylic Side	Stainless Steel	10.8 N/cm (99 oz/in) <sup>1</sup>
72 h	22 °C (72 °F)	Acrylic Side	ABS	3.3 N/cm (30 oz/in) <sup>1</sup>
72 h	22 °C (72 °F)	Acrylic Side	Polypropylene (PP)	5.8 N/cm (53 oz/in) <sup>1</sup>
72 h	22 °C (72 °F)	Acrylic Side	Glass	7.9 N/cm (72 oz/in) <sup>1</sup>

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

# 180° Peel Adhesion

Backing: 2 mil Aluminum Foil Test Method: ASTM D3330

<b>Dwell Time</b>	Temperature	<b>Test Condition</b>	Substrate	Value
20 min	22 °C (72 °F)	Silicone Side	Stainless Steel	4.6 N/cm (42 oz/in) <sup>1</sup>
72 h	22 °C (72 °F)	Silicone Side	Stainless Steel	4.8 N/cm (44 oz/in) <sup>1</sup>
72 h	70 °C (158 °F)	Silicone Side	Stainless Steel	5.9 N/cm (54 oz/in) <sup>1</sup>
72 h	22 °C (72 °F)	Silicone Side	ABS	3.4 N/cm (31 oz/in) <sup>1</sup>
72 h	22 °C (72 °F)	Silicone Side	Polypropylene (PP)	5.4 N/cm (49 oz/in) <sup>1</sup>
72 h	22 °C (72 °F)	Silicone Side	Glass	5.1 N/cm (47 oz/in) <sup>1</sup>
72 h	22 °C (72 °F)	Silicone Side	Silicone Rubber	6.1 N/cm (55 oz/in) <sup>1</sup>
20 min	22 °C (72 °F)	Acrylic Side	Stainless Steel	6.5 N/cm (59 oz/in) <sup>1</sup>
72 h	22 °C (72 °F)	Acrylic Side	Stainless Steel	8.6 N/cm (78 oz/in) <sup>1</sup>
72 h	70 °C (158 °F)	Acrylic Side	Stainless Steel	13.2 N/cm (120 oz/in)
72 h	22 °C (72 °F)	Acrylic Side	ABS	4.2 N/cm (38 oz/in) <sup>1</sup>
72 h	22 °C (72 °F)	Acrylic Side	Polypropylene (PP)	7.3 N/cm (67 oz/in) <sup>1</sup>
72 h	22 °C (72 °F)	Acrylic Side	Glass	9.7 N/cm (88 oz/in) <sup>1</sup>

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

# **Static Shear**

Substrate: Stainless Steel

Dwell Time: 72 h

Test Method: ASTM D3654

Temperature	Test Condition	Value
22 °C (72 °F)	1000g Silicone Side	10,000 min <sup>1</sup>
70 °C (158 °F)	500g Silicone Side	946 min <sup>1</sup>
22 °C (72 °F)	1000g Acrylic Side	10,000 min <sup>1</sup>
70 °C (158 °F)	500g Acrylic Side	10,000 min <sup>1</sup>

<sup>&</sup>lt;sup>1</sup> 1 in x 1 in sample area, test terminated after 10,000 minutes

# **Typical Environmental Performance**

Substrate: Stainless Steel Temperature: 32 °C (90 °F)

Dwell Time: 72 h

Backing: 2 mil Aluminum Foil Test Method: ASTM D3330 Environmental Condition: 90%RH

Attribute Name	Test Condition	Value
180° Peel Adhesion	Silicone Side	5.5 N/cm (50 oz/in) <sup>1</sup>
90° Peel Adhesion	Silicone Side	5.4 N/cm (49 oz/in) <sup>1</sup>
180° Peel Adhesion	Acrylic Side	10.5 N/cm (96 oz/in) <sup>1</sup>
90° Peel Adhesion	Acrylic Side	8.2 N/cm (75 oz/in) <sup>1</sup>

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

### **Storage and Shelf Life**

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

#### **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.

### **Information**

**Technical Information:** The technical information, guidance, and other statements contained in this document or otherwise provided by 3M are based upon records, tests, or experience that 3M believes to be reliable, but the accuracy, completeness, and representative nature of such information is not guaranteed. Such information is intended for people with knowledge and technical skills sufficient to assess and apply their own informed judgment to the information. No license under any 3M or third party intellectual property rights is granted or implied with this information.

**Product Selection and Use:** Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. As a result, customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer's application, including conducting a workplace hazard assessment and reviewing all applicable regulations and standards (e.g., OSHA, ANSI, etc.). Failure to properly evaluate, select, and use a 3M product and appropriate safety products, or to meet all applicable safety regulations, may result in injury, sickness, death, and/or harm to property.

Warranty, Limited Remedy, and Disclaimer: Unless a different warranty is specifically stated on the applicable 3M product packaging or product literature (in which case such warranty governs), 3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ARISING OUT OF A COURSE OF DEALING, CUSTOM, OR USAGE OF TRADE. If a 3M product does not conform to this warranty, then the sole and exclusive remedy is, at 3M's option, replacement of the 3M product or refund of the purchase price.

**Limitation of Liability:** Except for the limited remedy stated above, and except to the extent prohibited by law, 3M will not be liable for any loss or damage arising from or related to the 3M product, whether direct, indirect, special, incidental, or consequential (including, but not limited to, lost profits or business opportunity), regardless of the legal or equitable theory asserted, including, but not limited to, warranty, contract, negligence, or strict liability.

**Disclaimer:** 3M industrial and occupational products are intended, labeled, and packaged for sale to trained industrial and occupational customers for workplace use. Unless specifically stated otherwise on the applicable product packaging or literature, these products are not intended, labeled, or packaged for sale to or use by consumers (e.g., for home, personal, primary or secondary school, recreational/sporting, or other uses not described in the applicable product packaging or literature), and must be selected and used in compliance with applicable health and safety regulations and standards (e.g., U.S. OSHA, ANSI), as well as all product literature, user instructions, warnings, and limitations, and the user must take any action required under any recall, field action or other product use notice. Misuse of 3M industrial and occupational products may result in injury, sickness, or death. For help with product selection and use, consult your on-site safety professional, industrial hygienist, or other subject matter expert. For additional product information, visit www 3M com.

3M<sup>™</sup> Industrial Adhesives and Tapes Division 3M Center, St. Paul, MN 55144-1000 3M.com/iatd 3M is a trademark of 3M Company. ©3M 2024 (8/24)