



# Technical Data Sheet

3M™ Silicone /Acrylic Double Coated Tape  
9699



[Product Details](#)



[Regulatory Info/SDS](#)

## Product Description

3M™ Differential Double Coated Tape 9699 features a firm, silicone pressure sensitive adhesive coated on one side of a polyester film carrier and a high performance acrylic pressure sensitive adhesive coated on the other side of the carrier. The silicone adhesive provides good bond to Silicone Rubber and strong holding power to various silicone surfaces. The acrylic adhesive offers good shear resistance and adhesion to a variety of surfaces. The polyester carrier provides dimensional stability and improved handling with ease of die cutting and lamination. This double coated differential adhesive tape product offers a unique solution for wide web lamination of silicone materials (e.g. foams, rubber, films, etc.) to many other surfaces, including low surface energy materials.

## 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	Silicone <sup>1</sup>
Adhesive Carrier			PET (Polyester)
Adhesive Type		Backside	Acrylic <sup>2</sup>
Adhesive Thickness		Faceside	0.04 mm (1.6 mil) <sup>1</sup>
Carrier Thickness			0.025 mm (1 mil)
Adhesive Thickness		Backside	0.05 mm (2 mil) <sup>2</sup>
Total Tape Thickness	ASTM D3652		0.116 mm (4.6 mil)
Primary Liner Type			Polycoated Kraft <sup>3</sup>
Primary Liner Thickness			0.05 mm (2 mil)
Primary Liner Color			White
Secondary Liner Type			PET <sup>3</sup>
Secondary Liner Thickness			0.09 mm (3.5 mil)
Secondary Liner Color			Clear

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

## 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	Silicone Rubber	3.8 N/cm (35 oz/in) <sup>1</sup>
20 min	22 °C (72 °F)	Silicone Side	Stainless Steel	4.4 N/cm (40 oz/in) <sup>1</sup>
20 min	22 °C (72 °F)	Acrylic Side	Stainless Steel	8.2 N/cm (75 oz/in) <sup>1</sup>
72 h	22 °C (72 °F)	Acrylic Side	ABS	7.7 N/cm (70 oz/in) <sup>1</sup>
72 h	22 °C (72 °F)	Silicone Side	ABS	4.2 N/cm (38 oz/in) <sup>1</sup>

Dwell Time	Temperature	Test Condition	Substrate	Value
72 h	22 °C (72 °F)	Acrylic Side	Polycarbonate (PC)	11.5 N/cm (105 oz/in) <sup>1</sup>
72 h	22 °C (72 °F)	Silicone Side	Polycarbonate (PC)	4.7 N/cm (43 oz/in) <sup>1</sup>
72 h	22 °C (72 °F)	Acrylic Side	Polypropylene (PP)	4.9 N/cm (45 oz/in) <sup>1</sup>
72 h	22 °C (72 °F)	Silicone Side	Polypropylene (PP)	4.9 N/cm (45 oz/in) <sup>1</sup>
72 h	22 °C (72 °F)	Acrylic Side	Stainless Steel	9.5 N/cm (87 oz/in) <sup>1</sup>
72 h	70 °C (158 °F)	Silicone Side	Silicone Rubber	5.7 N/cm (52 oz/in) <sup>1</sup>
72 h	70 °C (158 °F)	Acrylic Side	Stainless Steel	11 N/cm (102 oz/in) <sup>1</sup>
72 h	70 °C (158 °F)	Silicone Side	Stainless Steel	5.6 N/cm (51 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>

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

### Static Shear

Dwell Time: 10 min

Test Method: ASTM D3654

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

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

Attribute Name	Value
Short Term Temperature Resistance	149 °C (300 °F) <sup>1</sup>
Long Term Temperature Resistance	93 °C (200 °F) <sup>2</sup>

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

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

## Typical Environmental Characteristics

### Environmental Resistance

**UV Resistance:** When properly applied, nameplates and decorative trim parts are not adversely affected by outdoor exposure.

**Chemical Resistance:** When properly applied, nameplate and decorative trim parts will hold securely after exposure to numerous chemicals including oil, mild acids and alkalis.

**Bond Build-up:** The bond strength of 3M™ Adhesive 9699 increases as a function of time and temperature.

**Temperature/Heat Resistance:** Adhesive 9699 is usable for short periods (minutes, hours) at temperatures up to 350°F (177°C) and for intermittent longer periods (days, weeks) up to 250°F (121°C).

**Lower Temperature Service Limit:** -40°F (-40°C).

## Handling/Application Information

### Application Examples

- Silicone gasket bonding
- Attaching Silicone Rubber to other substrates.
- Attaching silicone foam to other substrates
- Bonding dissimilar materials

## Storage and Shelf Life

It is suggested that products are stored at room temperature conditions of 70°F (21°C) and 50% relative humidity. If stored properly, product retains its performance and properties for 6 months from date of manufacture.

## Available Sizes

Attribute Name	Value
Core Size (ID)	76.2 mm (3 in)

## Available Sizes - Detailed

36" x 60 yds  
36" x 180 yds  
38" x 180 yds

## Recognition/Certification

**TSCA:**This product is defined as an article under the Toxic Substances Control Act and therefore, it is exempt from inventory listing requirements

**MSDS:**3M has not prepared a MSDS for this product which is not subjected 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, this product should not present a health and safety hazard. However, use or processing of the product in a manner not in accordance with the directions for use may affect its performance and present potential health and safety hazards.

**UL:**These products have been recognized by Underwriters Laboratories, Inc. under UI 746C and UL 969. For more information on the UL Certification, please visit the website at <http://www.3M.com/converter>, select UL Recognized Materials, then select the specific product area.

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## 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.

## **For Additional Information**

For more information contact your local 3M representative or call 800-223-7427

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