

July, 2011

## 3M™ Double Coated Tape 9687C

### Product Description

Finite Element Analysis (FEA) data is available for this product at: [3m.com/FEA](http://3m.com/FEA)



3M™ Double Coated Tapes with 3M™ Adhesive 300MP feature a thin polyester film for dimensional stability and improved handling with ease of die cutting and laminating. 3M adhesive 300MP offers excellent adhesion to many plastics and good shear strength and provides exceptional temperature and chemical resistance that withstands tough application environments. For information on storage and usage tips regarding the 3M adhesive 300MP products, please refer to technical bulletin, 3M™ Laminating Adhesives 300MP – Tips for storing, handling and slitting in roll form (70-0709-3905-6).

### Product Features

3M™ Double Coated Tape 9693 clear 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		Attribute Modifier	Notes
Total Tape Thickness without liner	0.3 mm	12 mil		
Carrier Thickness	0.051 mm	2 mil		
Adhesive Type	300MP		Faceside	Faceside adhesive is on the interior of the roll, exposed when unwound and liner removed.
Adhesive Type	300MP		Backside	Backside adhesive is on the exterior of the roll, exposed when liner is removed.
Adhesive Carrier	Clear PET (Polyester)			
Liner	PET			
Liner Color	Clear		Primary	
Liner Thickness	0.051 mm	2 mil		

Adhesive Thickness		Attribute Modifier	Notes
0.2 mm		Backside	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.
7.7 mil		Backside	Backside adhesive is on the exterior of the roll, exposed when liner is removed.
0.058 mm	2.3 mil	Faceside	Faceside adhesive is on the interior of the roll, exposed when unwound and liner removed.

Property: Adhesive Thickness

## Typical Performance Characteristics

90° Peel Adhesion		Dwell/Cure Time	Dwell Time Units	Temp C	Temp F	Substrate	Backing	Notes
5.5 N/cm		15	min	22C	72F	Stainless Steel	2 mil Aluminum Foil	

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Typical Performance Characteristics (continued)

90° Peel Adhesion		Dwell/Cure Time	Dwell Time Units	Temp C	Temp F	Substrate	Backing	Notes
50 oz/in		15	min	22C	72F	Stainless Steel	2 mil Aluminum Foil	12 in/min (300 mm/min)
5.8 N/cm	53 oz/in	72	hr	22C	72F	Stainless Steel	2 mil Aluminum Foil	12 in/min (300 mm/min)
11.4 N/cm	104 oz/in	72	hr	70C	158F	Stainless Steel	2 mil Aluminum Foil	12 in/min (300 mm/min)
5.6 N/cm	51 oz/in	72	hr	22C	72F	ABS	2 mil Aluminum Foil	12 in/min (300 mm/min)
6.8 N/cm	62 oz/in	72	hr	22C	72F	Polycarbonate (PC)	2 mil Aluminum Foil	12 in/min (300 mm/min)
5.6 N/cm	51 oz/in	72	hr	22C	72F	Polyester (PET)	Aluminum Foil	

Property: 90° Peel Adhesion  
 Method: ASTM D3330  
 Environmental Condition: 52%RH

Relative High Temperature Operating Ranges	Test Condition
149 °C	300 °F Short Term (minutes, hours)
93 °C	200 °F Long Term (days, weeks)

Property: Relative High Temperature Operating Ranges

Property	Values	Test Method	Test Conditions	Notes	Dwell Time	Dwell Units	Temp C	Temp F	Environmental Condition	Substrate	Backing
Static Shear	4770 min	ASTM D3654	1000 g @ Room Temperature	0.5 in² sample size							
180° Peel Adhesion	5.5 N/cm 50 oz/in	ASTM D3330		12 in/min (300 mm/min)	72	hr	22C	72F	52%RH	Stainless Steel	Aluminum Foil

Available Sizes

Property	Values	Width	Attribute Modifier
Note	Subject to Minimum Order Requirements		

Table continued on next page

**Available Sizes (continued)**

Property	Values		Width	Attribute Modifier
Maximum Length	329 m	360 yd	1 in to 54 in	
Minimum Available Width	102 mm	4 in		
Maximum Available Width	1372 mm	54 in		
Normal Slitting Tolerance	± 0.8 mm	± 1/32 in		
Core Size	152.4 mm	6 in		ID

**Handling/Application Information****Application Ideas**

- Cellular phone lens attachment
- Foam Lamination
- Nameplates
- Appliques
- Decorate Trim
- Thermal and sound dampening applications in the electronics and appliance industry.

**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. These cleaning recommendations may not be compliant 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.

# 3M™ Double Coated Tape 9687C

## Liner Configure Guide

General purpose steel rule die cutting  
Steel rule cutting many nameplates on common sheet  
Kiss cutting, steel rule  
Rotary die-cutting  
Selective die-cutting (cut adhesive before laminate)  
Thermoforming  
Part inspection  
Embossed metal parts  
Metal parts (punch press)

### Conditions

**Width:** 1/2 to 2 in widths

58# PCK (Polycoated Kraft)  
83# PCK  
83# PCK  
PET  
Double-lined  
HDPE (High density Polyethylene)  
HDPE, PET  
White PP (polypropylene), HDPE  
PET

## Adding Liners

1. Rotary processing, tape only, on a densified (outside of #4994) kraft liner. In this process the tape waste will stay with the 83# PCK liner, leaving adhesive die-cuts dispensable from the #4994 (densified kraft) liner.
2. Rotary processing for finished parts. Current process limitations prevent the supply of 3M™ Adhesive 300MP on a DK liner.

## Storage and Shelf Life

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

If stored under proper conditions, product retains its performance and properties for 24 months from date of manufacture.

## Trademarks

3M is a trademark of 3M Company.

## References

Property	Values
3m.com Product Page	<a href="https://www.3m.com/3M/en_US/company-us/all-3m-products/-/3M-Double-Coated-Tape-9687C?N=5002385+3293242535&amp;rt=rud">https://www.3m.com/3M/en_US/company-us/all-3m-products/-/3M-Double-Coated-Tape-9687C?N=5002385+3293242535&amp;rt=rud</a>
Safety Data Sheet (SDS)	<a href="https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&amp;msdsLocale=en_US&amp;co=ptn&amp;q=9687C">https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&amp;msdsLocale=en_US&amp;co=ptn&amp;q=9687C</a>

## ISO Statement

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

## 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, the products should not present a health and safety hazard. However, use or processing of the products in a manner not in accordance with the directions for use may affect their performance and present potential health and safety hazards.

TSCA: These products are defined as articles under the Toxic Substances Control Act and therefore, are exempt from inventory listing requirements.

## Information

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