



3M™ Double Coated Tape 9690

Last Revision Date: May, 2022

Product Description

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






3M™ Double Coated Tapes with 3M™ Laminating 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.

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	Acrylic	
Adhesive Carrier	Clear PET (Polyester)	
Liner	83# Polycoated Kraft, "3M" print	
Liner Thickness	0.16 mm	
Liner Color	Tan	View
Test Name: Primary		
Adhesive Thickness	0.058 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	0.013 mm	

Total Tape Thickness	5.5 mil	View 
Test Method: ASTM D3652		
Total Tape Thickness	0.14 mm	View 
Test Method: ASTM D3652		
Adhesive Thickness	2.3 mil	View 
Test Name: Backside		
Notes: Backside adhesive is on the exterior of the roll, exposed when liner is removed.		
Adhesive Thickness	0.071 mm	View 
Test Name: Faceside		
Notes: Faceside adhesive is on the interior of the roll, exposed when unwound and liner removed.		
Adhesive Thickness	2.8 mil	View 
Test Name: Faceside		
Notes: Faceside adhesive is on the interior of the roll, exposed when unwound and liner removed.		
Carrier Thickness	0.5 mil	
Liner Print	None	
Liner Thickness	6.2 mil	

Typical Performance Characteristics


Property	Values	Additional Information
90° Peel Adhesion	115 oz/in	View 
Test Method: ASTM D3330		
Dwell/Cure Time: 72.0		
Dwell Time Units: hr		
Temp C: 70C		
Temp F: 158F		
Environmental Condition: 50%RH		
Substrate: Stainless Steel		
Backing: 2 mil Aluminum Foil		
Notes: 12 in/min (300 mm/min)		
90° Peel Adhesion	6 N/cm	View 
Test Method: ASTM D3330		

Dwell/Cure Time: 72.0
Dwell Time Units: hr
Temp C: 23C
Temp F: 72F
Environmental Condition: 50%RH
Substrate: ABS
Backing: 2 mil Aluminum Foil

Notes: 12 in/min (300 mm/min)

90° Peel Adhesion

55 oz/in

View 

Test Method: ASTM D3330

Dwell/Cure Time: 72.0
Dwell Time Units: hr
Temp C: 23C
Temp F: 72F
Environmental Condition: 50%RH
Substrate: ABS
Backing: 2 mil Aluminum Foil

Notes: 12 in/min (300 mm/min)

90° Peel Adhesion

5.5 N/cm

View 

Test Method: ASTM D3330

Dwell/Cure Time: 72.0
Dwell Time Units: hr
Temp C: 23C
Temp F: 72F
Environmental Condition: 50%RH
Substrate: Polycarbonate (PC)
Backing: 2 mil Aluminum Foil

Notes: 12 in/min (300 mm/min)

90° Peel Adhesion

50 oz/in

View 

Test Method: ASTM D3330

Dwell/Cure Time: 72.0
Dwell Time Units: hr
Temp C: 23C
Temp F: 72F
Environmental Condition: 50%RH
Substrate: Polycarbonate (PC)
Backing: 2 mil Aluminum Foil

Notes: 12 in/min (300 mm/min)

90° Peel Adhesion

5.5 N/cm

View 

Test Method: ASTM D3330

Dwell/Cure Time: 72.0
Dwell Time Units: hr
Temp C: 23C
Temp F: 72F
Environmental Condition: 50%RH
Substrate: Polyester (PET)
Backing: Aluminum Foil

90° Peel Adhesion






50 oz/in

View 

Test Method: ASTM D3330


Dwell/Cure Time: 72.0
Dwell Time Units: hr
Temp C: 23C
Temp F: 72F
Environmental Condition: 50%RH


Substrate: Polyester (PET)
Backing: Aluminum Foil


Short Term Temperature Resistance	250 °F	
Short Term Temperature Resistance	121 °C	
Long Term Temperature Resistance	93 °C	
Long Term Temperature Resistance	200 °F	
Static Shear	1500 min	View 
Test Method: ASTM D3654 Notes: 0.5 in ² sample size		
Static Shear	500 min	View 
Test Method: ASTM D3654 Notes: 0.5 in ² sample size		
90° Peel Adhesion Stainless Steel	115 oz/in	View 
Test Method: ASTM D3330 Test Name: 90° Peel Adhesion Dwell/Cure Time: 72.0 Dwell Time Units: hr Temp C: 23C Temp F: 72F Environmental Condition: 50%RH Substrate: Stainless Steel Backing: 2 mil PET Notes: 12 in/min (300 mm/min)		
180° Peel Adhesion	13.7 N/cm	View 
Test Method: ASTM D3330 Dwell/Cure Time: 72.0 Dwell Time Units: hr Temp C: 23C Temp F: 72F Environmental Condition: 50%RH Substrate: Stainless Steel Backing: Aluminum Foil Notes: 12 in/min (300 mm/min)		
180° Peel Adhesion	125 oz/in	View 
Test Method: ASTM D3330 Dwell/Cure Time: 72.0 Dwell Time Units: hr Temp C: 23C		


Temp F: 72F
 Environmental Condition: 50%RH
 Substrate: Stainless Steel
 Backing: Aluminum Foil

Notes: 12 in/min (300 mm/min)



90° Peel Adhesion Stainless Steel	4.9 N/cm	View 
<p>Test Method: ASTM D3330</p> <p>Test Name: 90° Peel Adhesion Dwell/Cure Time: 15.0 Dwell Time Units: min Temp C: 23C Temp F: 72F Environmental Condition: 50%RH Substrate: Stainless Steel Backing: 2 mil PET</p> <p>Notes: 12 in/min (300 mm/min)</p>		

90° Peel Adhesion Stainless Steel	45 oz/in	View 
<p>Test Method: ASTM D3330</p> <p>Test Name: 90° Peel Adhesion Dwell/Cure Time: 15.0 Dwell Time Units: min Temp C: 23C Temp F: 72F Environmental Condition: 50%RH Substrate: Stainless Steel Backing: 2 mil PET</p> <p>Notes: 12 in/min (300 mm/min)</p>		


90° Peel Adhesion Stainless Steel	12.6 N/cm	View 
<p>Notes: 12 in/min (300 mm/min) ASTM D3330 72 hour dwell on Stainless Steel at 23°C (72°F) and 50% RH Backing: 2 mil Polyester</p>		

90° Peel Adhesion	12.6 N/cm	View 
<p>Test Method: ASTM D3330</p> <p>Dwell/Cure Time: 72.0 Dwell Time Units: hr Temp C: 70C Temp F: 158F Environmental Condition: 50%RH Substrate: Stainless Steel</p>		

Available Sizes

Property	Values	Additional Information
Note	Subject to minimum order requirements	
Maximum Length	164 m	View 
Width: 1/2 in to 63/64 in		
Maximum Length	180 yd	View 

Width: 1/2 in to 63/64 in

Maximum Length	329 m	View 
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Width: 1 in to 54 in

Maximum Length	360 yd	View 
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Width: 1 in to 54 in

Minimum Available Width	12.7 mm	
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Minimum Available Width	1/2 in	
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Maximum Available Width	1372 mm	
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Maximum Available Width	54 in	
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Normal Slitting Tolerance	± 0.8 mm	
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Normal Slitting Tolerance	± 1/32 in	
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Core Size (ID)	76.2 mm	
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Core Size (ID)	3 in	
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Electrical and Thermal Properties

Property	Values	Additional Information
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Breakdown Voltage	5700 V	
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Typical Environmental Performance

Humidity Resistance: High humidity has minimal effect on adhesive performance. No significant reduction in bond strength is observed after exposure for seven days at 90°F (32°C) and 90% relative humidity.

UV Resistance: When properly applied, nameplates and decorative trim parts are not adversely affected by exposure to direct sunlight.

Water Resistance: Immersion in water has no appreciable effect on the bond strength. After 100 hours at room temperature, the high bond strength is maintained.

Temperature Cycling Resistance: High bond strength is maintained after cycling four times through:

4 hours at 158°F (70°C)

4 hours at -20°F (-29°C)

4 hours at 73°F (22°C)

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

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.

Recognition/Certification

MSDS: 3M has not prepared a MSDS for this product which is 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 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.

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

RoHs Complaint/REACH Compliant: This product complies with the European Union's "Restriction of Hazardous Substances" (RoHs) initiative and with European REACH regulations 2002/95/EC and 2005/618/EC

Bottom Matter

3M

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Trademarks

3M is a trademark of 3M Company.

For Additional Information

To request additional product information or to arrange for sales assistance, call toll free 1-800-251-8634. Address correspondence to: 3M, Electronics Markets Materials Division, 3M Center, Building 225-3S-06, St. Paul, MN 55144- 1000. Our fax number is 651-778-4244 or 1-877-369-2923. In Canada, phone: 1-800-364-3577. In Puerto Rico, phone: 1-787-750-3000. In Mexico, phone: 52-70-04-00.

Automotive Disclaimer

Automotive Applications: This product is an industrial product and has not been designed or tested for use in certain automotive applications, including, but not limited to, automotive electric powertrain battery or high voltage applications. This product does not fully adhere to typical automotive design or quality system requirements, such as IATF 16949 or VDA 6.3. This product may not be manufactured in an IATF certified facility and may not meet a Ppk of 1.33 for all properties. The product may not undergo an automotive production part approval process (PPAP). Customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer's automotive application and for conducting incoming inspections before use of the product. Failure to do so may result in injury, death, and/or harm to property. No written or verbal statement, report, data or recommendation by 3M related to automotive use of the product shall have any force or effect unless in an agreement signed by the Technical Director of 3M's Automotive Division. Customer assumes all responsibility and risk if customer chooses to use this product in an automotive electric powertrain battery or high voltage application, and 3M will not be liable for any loss or damage arising from or related to the 3M product or customer's use of the product, whether direct, indirect, special, incidental, or consequential (including, but not limited to, lost profits or business opportunity or recall costs), regardless of the legal or equitable theory asserted, including, but not limited to, warranty, contract, negligence, or strict liability. In no event shall 3M be liable for any damages in excess of the purchase price paid for the product.

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Handling/Application Information

Application Examples

- 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 and moderate heat, from 100°F (38°C) to 130°F (54°C), will assist the adhesive in developing intimate contact with the

bonding surface.

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 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 1-800-251-8634.

Directions for Use

Adding Liners to 3M™ Double Coated Tapes with 3M™ Laminating Adhesive 300MP

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. Current process limitations prevent the supply of 3M™ Laminating Adhesive 300MP on a DK liner

References

Property	Values
3m.com Product Page	https://www.3m.com/3M/en_US/p/d/b40072043/
Safety Data Sheet SDS	https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&msdsLocale=en_US&co=ptn&q=9690

Information

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