



3M™ Adhesive Transfer Tape 9472FL

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™ High-Strength Acrylic Adhesive 300LSE provides very high bond strength to most surfaces
- Excellent bond to low surface energy plastics such as polypropylene and powder coatings.
- Excellent adhesion to lightly oiled surfaces typical of machine parts.
- Thickness of 2 mils, 3.5 mils, and 5 mils for use on smooth and textured surfaces.
- Extremely smooth adhesive for excellent graphic appearances.
- Polyester film liner is ideal for rotary die-cutting, high speed processing, automatic dispensing, and clean room environments.
- Polyester film liner resists breakage for one piece liner removal.
- Polyester film liner resists curling or wrinkling in high humidity.

General Information

Processing:

Slitting and die-cutting: This adhesive is very aggressive and may be difficult to convert depending on your application requirements. Chilling the adhesive between 35 and 50°F will improve the processability. In addition, dies can be lubricated with Laminoleum evaporative stamping oil, which is available from Metal Lubricants Company (708-333-8900) or with Lubri-Blade 907 from Ceramic Technologies Inc. (800-258-8495). You may also refer to our Guide to Converting 3M Laminating Adhesive 300LSE Technical Bulletin

Roll Laminating: A combination of metal and rubber rollers with moderate pressure (approx. 14 psi) is recommended.


Note: Please refer to the 3M Slitting/Die-cutting Technical Bulletin for further details.

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	3M 300LSE High Strength Acrylic Adhesive	
Liner	Polyester Film	
Liner Thickness	0.05 mm	
Total Tape Thickness (mil)	5 mil	View
Test Method: ASTM D3652		

Total Tape Thickness (mm)	0.127 mm	View 
Test Method: ASTM D3652		
Liner Print	None	
Liner Thickness	2 mil	

Typical Performance Characteristics

Property	Values	Additional Information
90° Peel Adhesion	11.9 N/cm	View 
Test Method: ASTM D3330 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 Aluminum Foil		
90° Peel Adhesion	109 oz/in	View 
Test Method: ASTM D3330 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 Aluminum Foil Notes: 12 in/min (300 mm/min)		
90° Peel Adhesion	11.2 N/cm	View 
Test Method: ASTM D3330 Dwell/Cure Time: 15.0 Dwell Time Units: min 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	102 oz/in	View 
Test Method: ASTM D3330 Dwell/Cure Time: 15.0 Dwell Time Units: min 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

12.6 N/cm

View 

Test Method: ASTM D3330

Dwell/Cure Time: 15.0

Dwell Time Units: min

Temp C: 23C

Temp F: 72F

Environmental Condition: 50%RH

Substrate: Polypropylene (PP)

Backing: 2 mil Aluminum Foil

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

90° Peel Adhesion

115 oz/in

View 

Test Method: ASTM D3330

Dwell/Cure Time: 15.0

Dwell Time Units: min

Temp C: 23C

Temp F: 72F

Environmental Condition: 50%RH

Substrate: Polypropylene (PP)

Backing: 2 mil Aluminum Foil

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

90° Peel Adhesion

15.3 N/cm

View 

Test Method: ASTM D3330

Backing: 2 mil Aluminum Foil

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

90° Peel Adhesion

140 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: 2 mil Aluminum Foil

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

90° Peel Adhesion

14 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

128 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	14.9 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: Polypropylene (PP) Backing: 2 mil Aluminum Foil Notes: 12 in/min (300 mm/min)		

90° Peel Adhesion	136 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: Polypropylene (PP) Backing: 2 mil Aluminum Foil Notes: 12 in/min (300 mm/min)		

Short Term Temperature Resistance	300 °F
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Short Term Temperature Resistance	149 °C
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Long Term Temperature Resistance	93 °C
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Minimum Long Term Temperature Resistance	-40 °C
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Long Term Temperature Resistance	200 °F
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Minimum Long Term Temperature Resistance	-40 °F
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Available Sizes

Property	Values	Additional Information
Note	Subject to Minimum Order Requirements	

Maximum Length	165 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 
Width: 1 in to 54 in		
Maximum Length	360 yd	View 
Width: 1 in to 54 in		
Normal Slitting Tolerance	± 0.8 mm	
Normal Slitting Tolerance	± 1/32 in	
Minimum Slit Width	12.7 mm	
Minimum Slit Width	1/2 in	
Maximum Slit Width	1372 mm	
Maximum Slit Width	54 in	
Core Size (ID)	76.2 mm	
Core Size (ID)	3 in	

Typical Environmental Performance

Bond Build-up: The bond strength of 3MTM High-Strength Acrylic Adhesive 300LSE increases as a function of time and temperature, and has very high initial adhesion.

Humidity Resistance – High humidity has a minimal effect on adhesive performance. No significant reduction in bond strength is observed after exposure for 7 days at 90°F (32°C) and 90% relative humidity.

UV Resistance – When properly applied, adhesive bond is not adversely affected by exposure.

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 the following conditions:

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, adhesive bond will hold securely after exposure to numerous chemicals including oil, mild acids and alkalis.

Storage and Shelf Life

Product retains its performance and properties for 24 months from date of manufacture if properly stored at room temperature conditions of 72°F (22°C) and 50% relative humidity. Storage in plastic bag is recommended.

Recognition/Certification

MSDS: 3M has not prepared an 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 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.

Bottom Matter

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For Additional Information

To request additional product information or to arrange for sales assistance, call toll free 1-800-362-3550 or visit www.3M.com/bonding. Address correspondence to: 3M Engineered Adhesives Division, 3M Center, Building 220-7E-01, St. Paul, MN 55144-1000. Our fax number is 651-733-9175. 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

- Nameplates and graphic overlays printed and die-cut by rotary processing techniques.
- Labels engineered for performance with protected graphics for environmental durability (e.g., automotive under hood labels).
- Gaskets and other die-cut parts for use on difficult to bond to surfaces.
- Graphics and die-cut parts for application to oily metals, powder coatings or low surface energy plastics.

Application Techniques

For maximum bond strength the surface should be thoroughly cleaned and dried. Typical cleaning solvents are heptane or isopropyl alcohol. Carefully read and follow manufacturer's precautions and directions for use when using cleaning solvents. This cleaning recommendation may not be compliant with the rules for certain Air Quality Management Districts in California; consult applicable rules before use.

Bond strength can also be improved with firm application pressure and moderate heat, from 100°F (38°C) to 130°F (54°C) which causes the adhesive to develop improved

contact with the bonding surface.

The 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 for most pressure-sensitive adhesives because the adhesive becomes too firm to adhere readily. However, once properly applied, low temperature holding is generally satisfactory.

References

Property	Values
3m.com Product Page	https://www.3m.com/3M/en_US/p/d/b40065891/
Safety Data Sheet SDS	https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&msdsLocale=en_US&co=ptn&q=9472FL

ISO Statement

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

Information

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