

3M[™] Adhesive Transfer Tape 467MP

Last Revision Date: December, 2017

Product Description

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

3M™ High Performance Acrylic Adhesive 200MP is a popular choice for graphic attachment and general industrial joining applications. It provides outstanding adhesion to metal and high surface energy plastics. This adhesive provides some initial repositionability for placement accuracy when bonding to plastics. It also performs well after exposure to humidity and hot/cold cycles.

Product Features

- Up to 400°F short-term heat resistance
- Excellent solvent resistance
- Excellent shear strength to resist slippage and edge lifting

Technical Information Note

The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

0.06 mm

Typical Physical Properties

Total Tape Thickness

Property	Values	Additional Information
Adhesive Type	Acrylic	
Liner	58# Polycoated Kraft Paper (PCK)	
Liner Thickness	0.11 mm	
Liner Color	Tan	View ^
Test Name: Primary		
Total Tape Thickness	2.3 mil (0.06 mm)	View ^
Test Method: ASTM D3652		

View ^

Test Method: ASTM D3652

Liner Thickness	4.2 mil

Typical Performance Characteristics

Property	Values	Additional Information
90° Peel Adhesion	5.4 N/cm	View ^
Test Method: ASTM D3330		
Dwell/Cure Time: 15		
Dwell Time Units: min		
Temp C: 23C		
Temp F: 72F		
Environmental Condition: 50%RH Substrate: Stainless Steel		

90° Peel Adhesion	49 oz/in	View	
Test Method: ASTM D3330			
Dwell/Cure Time: 15 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	10 N/cm	View ^	

Test Method: ASTM D3330

Backing: 2 mil Aluminum Foil

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

90° Peel Adhesion

92 oz/in

View

Test Method: ASTM D3330

Dwell/Cure Time: 72
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

16.7 N/cm (153 oz/in)

View

View

Test Method: ASTM D3330

Dwell/Cure Time: 72 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	153 oz/in	View ^	
Test Method: ASTM D3330			
Dwell/Cure Time: 72 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	7 N/cm (64 oz/in)	View ^	
Test Method: ASTM D3330			
Dwell/Cure Time: 72 Dwell Time Units: hr Temp C: 23C Temp F: 72F Environmental Condition: 50%RH Substrate: Aluminum Backing: 2 mil Aluminum Foil			

90° Peel Adhesion	64 oz/in	View ^	
Test Method: ASTM D3330			
Dwell/Cure Time: 72 Dwell Time Units: hr Temp C: 23C Temp F: 72F Environmental Condition: 50%RH Substrate: Aluminum Backing: 2 mil Aluminum Foil Notes: 12 in/min (300 mm/min)			
90° Peel Adhesion	2.4 N/cm (22 oz/in)	View ^	

Test Method: ASTM D3330

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

Substrate: ABS

Backing: 2 mil Aluminum Foil

90° Peel Adhesion	22 oz/in	View ^
Test Method: ASTM D3330 Dwell/Cure Time: 72 Dwell Time Units: hr Temp C: 23C		

Temp F: 72F Environmental Condition: 50%RH Substrate: ABS Backing: 2 mil Aluminum Foil

90° Peel Adhesion	7 N/cm (64 oz/in)	View ^	
Test Method: ASTM D3330			
Dwell/Cure Time: 72 Dwell Time Units: hr Temp C: 23C Temp F: 72F Environmental Condition: 50%RH Substrate: Acrylic (PMMA)			
Backing: Aluminum Foil			
90° Peel Adhesion	64 oz/in	View ^	
Test Method: ASTM D3330			
Dwell/Cure Time: 72 Dwell Time Units: hr			
Temp C: 23C Temp F: 72F			
Environmental Condition: 50%RH Substrate: Acrylic (PMMA)			
Backing: Aluminum Foil			
90° Peel Adhesion	9.9 N/cm (90 oz/in)	View ^	
Test Method: ASTM D3330			
Dwell/Cure Time: 72 Dwell Time Units: hr Temp C: 23C Temp F: 72F Environmental Condition: 50%RH			
Substrate: Glass Backing: 2 mil Aluminum Foil			
Notes: 12 in/min (300 mm/min)			
90° Peel Adhesion	90 oz/in	View ^	
Test Method: ASTM D3330			
Dwell/Cure Time: 72 Dwell Time Units: hr Temp C: 23C			
Temp F: 72F Environmental Condition: 50%RH			
Substrate: Glass Backing: 2 mil Aluminum Foil			
Notes: 12 in/min (300 mm/min)			
90° Peel Adhesion	4.4 N/cm (40 oz/in)	View ^	
Test Method: ASTM D3330			
Dwell/Cure Time: 72 Dwell Time Units: hr Temp C: 23C Temp F: 72F Environmental Condition: 50%RH			
Substrate: Polyvinyl chloride (PVC) Backing: Aluminum Foil			
90° Peel Adhesion	40 oz/in	View ^	

Test Method: ASTM D3330

Dwell/Cure Time: 72 Dwell Time Units: hr

Temp C: 23C Temp F: 72F Environmental Condition: 50%RH Substrate: Polyvinyl chloride (PVC) Backing: Aluminum Foil

Test Condition: 1000 g @ Room Temperature

90° Peel Adhesion	7.8 N/cm (71 oz/in)	View ^	
Test Method: ASTM D3330			
Dwell/Cure Time: 72 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	71 oz/in	View ^	
Test Method: ASTM D3330			
Dwell/Cure Time: 72 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)			
Tensile Lap Shear – Peak Load	164 lb	View ^	
Test Method: ASTM D1002			
Substrate: Aluminum			
Notes: 0.5 in² sample size			
Short Term Temperature Resistance	400 °F (204 °C)	View ^	
Test Condition: Short Term (minutes, hour)			
Short Term Temperature Resistance	204 °C	View ^	
Test Condition: Short Term (minutes, hour)			
Long Term Temperature Resistance	149 °C (300 °F)	View	
Test Condition: Long Term (day, weeks)			
Long Term Temperature Resistance	300 °F	View ^	
Test Condition: Long Term (day, weeks)			
Static Shear	10000+ min	View ^	

Notes: 1in x 1in size; test terminated after 10,000 minutes

View ^ Static Shear 10000+ min Test Condition: 1000 g @ 70°C (158°F) Notes: 1in x 1in size; test terminated after 10,000 minutes View ^ Static Shear 10000+ min Test Condition: 1000 g @ 93°C (200°F) Notes: 1in x 1in size; test terminated after 10,000 minutes View ^ Static Shear 10000+ min Test Condition: 500 g @ 177°C (350°F) Notes: 1in x 1in size; test terminated after 10,000 minutes View ^ Static Shear 2284 min Test Condition: 400 g @ 232°C (450°F) Notes: 1in x 1in size; test terminated after 10,000 minutes View ^ Static Shear 10000+ min Test Condition: 200 g load @ 232°C (450°F) Notes: 1in x 1in size; test terminated after 10,000 minutes View ^ 180° Peel Adhesion 8.4 N/cm (77 oz/in) Test Method: ASTM D3330 Dwell/Cure Time: 72 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) View ^ 180° Peel Adhesion 77 oz/in Test Method: ASTM D3330 Dwell/Cure Time: 72 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) View ^ **Environmental Resistance** 9.5 N/cm (87 oz/in)

Test Name: 90° Peel Adhesion Dwell/Cure Time: 24 Dwell Time Units: hr Temp C: 23C Temp F: 72F Environmental Condition: Control Substrate: Stainless Steel Backing: 2 mil Aluminum Foil

Environmental Resistance	87 oz/in	View ^
Test Name: 90° Peel Adhesion Dwell/Cure Time: 24 Dwell Time Units: hr Temp C: 23C Temp F: 72F Environmental Condition: Control Substrate: Stainless Steel Backing: 2 mil Aluminum Foil Notes: 12 in/min (300 mm/min)		
Environmental Resistance	7.9 N/cm (72 oz/in)	View ^
Test Name: 90° Peel Adhesion Dwell/Cure Time: 1 Dwell Time Units: hr Temp C: 23C Temp F: 72F Environmental Condition: Gasoline Substrate: Stainless Steel Backing: 2 mil Aluminum Foil Notes: 12 in/min (300 mm/min)		
Environmental Resistance	72 oz/in	View ^
Test Name: 90° Peel Adhesion Dwell/Cure Time: 1 Dwell Time Units: hr Temp C: 23C Temp F: 72F Environmental Condition: Gasoline Substrate: Stainless Steel Backing: 2 mil Aluminum Foil Notes: 12 in/min (300 mm/min)		
Environmental Resistance	7.7 N/cm (70 oz/in)	View ^
Test Name: 90° Peel Adhesion Dwell/Cure Time: 1 Dwell Time Units: hr Temp C: 23C Temp F: 72F Environmental Condition: MEK Substrate: Stainless Steel Backing: 2 mil Aluminum Foil Notes: 12 in/min (300 mm/min)		
Environmental Resistance	70 oz/in	View ^
Test Name: 90° Peel Adhesion Dwell/Cure Time: 1 Dwell Time Units: hr Temp C: 23C Temp F: 72F Environmental Condition: MEK Substrate: Stainless Steel Backing: 2 mil Aluminum Foil Notes: 12 in/min (300 mm/min)		
Environmental Resistance	7.7 N/cm (70 oz/in)	

View ^

Test Name: 90° Peel Adhesion

Dwell/Cure Time: 1 Dwell Time Units: hr Temp C: 23C Temp F: 72F

Environmental Condition: Weak Acid (pH 4)

Substrate: Stainless Steel Backing: 2 mil Aluminum Foil

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

Environmental Resistance

70 oz/in

View ^

Test Name: 90° Peel Adhesion

Dwell/Cure Time: 1 Dwell Time Units: hr Temp C: 23C Temp F: 72F

Environmental Condition: Weak Acid (pH 4)

Substrate: Stainless Steel Backing: 2 mil Aluminum Foil

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

Environmental Resistance

7.2 N/cm (66 oz/in)

View ^

Test Name: 90° Peel Adhesion

Dwell/Cure Time: 1 Dwell Time Units: hr Temp C: 23C Temp F: 72F

Environmental Condition: Weak Base (pH 10)

Substrate: Stainless Steel Backing: 2 mil Aluminum Foil

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

Environmental Resistance

66 oz/in

View ^

Test Name: 90° Peel Adhesion

Dwell/Cure Time: 1 Dwell Time Units: hr Temp C: 23C Temp F: 72F

Environmental Condition: Weak Base (pH 10)

Substrate: Stainless Steel Backing: 2 mil Aluminum Foil

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

Environmental Resistance 13.9 N/cm (127 oz/in)

View ^

Test Name: 90° Peel Adhesion Dwell/Cure Time: 72 Dwell Time Units: hr

Temp C: 49C Temp F: 120F

Environmental Condition: Oil 10W30

Substrate: Stainless Steel Backing: 2 mil Aluminum Foil

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

Environmental Resistance

127 oz/in

View ^

Test Name: 90° Peel Adhesion

Dwell/Cure Time: 72 Dwell Time Units: hr Temp C: 49C Temp F: 120F

Environmental Condition: Oil 10W30

Substrate: Stainless Steel Backing: 2 mil Aluminum Foil

Environmental Resistance	9.5 N/cm (87 oz/in)	View ^
Test Name: 90° Peel Adhesion Dwell/Cure Time: 100 Dwell Time Units: hr Temp C: 23C Temp F: 72F Environmental Condition: Water Substrate: Stainless Steel Backing: 2 mil Aluminum Foil Notes: 12 in/min (300 mm/min)		
Environmental Resistance	87 oz/in	View ^
Test Name: 90° Peel Adhesion Dwell/Cure Time: 100 Dwell Time Units: hr Temp C: 23C Temp F: 72F Environmental Condition: Water Substrate: Stainless Steel Backing: 2 mil Aluminum Foil Notes: 12 in/min (300 mm/min)		
Environmental Resistance	9.5 N/cm (87 oz/in)	View ^
Test Name: 90° Peel Adhesion Dwell/Cure Time: 72 Dwell Time Units: hr Temp C: 49C Temp F: 120F Environmental Condition: Salt water (5 wt% in water) Substrate: Stainless Steel Backing: 2 mil Aluminum Foil Notes: 12 in/min (300 mm/min)		
Environmental Resistance	87 oz/in	View ^
Test Name: 90° Peel Adhesion Dwell/Cure Time: 72 Dwell Time Units: hr Temp C: 49C Temp F: 120F Environmental Condition: Salt water (5 wt% in water) Substrate: Stainless Steel Backing: 2 mil Aluminum Foil Notes: 12 in/min (300 mm/min)		
Environmental Resistance	11.9 N/cm (109 oz/in)	View ^
Test Name: 90° Peel Adhesion Dwell/Cure Time: 7 Dwell Time Units: day Temp C: 32C Temp F: 90F Environmental Condition: 90%RH Substrate: Stainless Steel Backing: 2 mil Aluminum Foil Notes: 12 in/min (300 mm/min)		
Environmental Resistance	109 oz/in	View ^

Test Name: 90° Peel Adhesion

Dwell/Cure Time: 7 Dwell Time Units: day Temp C: 32C

Temp F: 90F Environmental Condition: 90%RH Substrate: Stainless Steel Backing: 2 mil Aluminum Foil

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

Environmental Resistance

11.4 N/cm (104 oz/in)

View ^

Test Name: 90° Peel Adhesion Dwell/Cure Time: 2000 Dwell Time Units: hr

Environmental Condition: UV Conditions - ASTM G-154 Cycle 1

Substrate: Stainless Steel Backing: 2 mil Aluminum Foil

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

Environmental Resistance

104 oz/in

View ^



Test Name: 90° Peel Adhesion Dwell/Cure Time: 2000 Dwell Time Units: hr

Environmental Condition: UV Conditions - ASTM G-154 Cycle 1

Substrate: Stainless Steel Backing: 2 mil Aluminum Foil

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

Environmental Resistance

12.3 N/cm (112 oz/in)





Test Name: 90° Peel Adhesion

Dwell/Cure Time: 72 Dwell Time Units: hr

Environmental Condition: Temperature Cycling: 4 Hours at 158°F (70°C). 4 Hours at -20°F (-29°C). 16 Hours at Room Tempterature. Repeat three times

Substrate: Stainless Steel Backing: 2 mil Aluminum Foil

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

Environmental Resistance

112 oz/in



Test Name: 90° Peel Adhesion

Dwell/Cure Time: 72 Dwell Time Units: hr

Environmental Condition: Temperature Cycling: 4 Hours at 158°F (70°C). 4 Hours at -20°F (-29°C). 16 Hours at Room Tempterature. Repeat three times

Substrate: Stainless Steel Backing: 2 mil Aluminum Foil

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

Electrical and Thermal Properties

Property	Values	Additional Information
Breakdown Voltage	1760 V	

Insulation Resistance

>2.5 x 10^16 Ω

View ^



Test Method: Mil-I-46058C

Test Condition: test voltage = 100 VDC

Dielectric Constant 1KHz	2.72	View ^	
Test Method: ASTM D150			
Temp C: 23C Temp F: 72F Test Condition: 1 KHz			
Dissipation Factor	0.017		
Dielectric Strength	690 V/mil	View ^	
Test Method: ASTM D149			
Test Condition: 500 vac, rms[60 hz/sec]			
Thermal Conductivity	0.18 W/m/K (1.21 (btu-in)/(h-ft²-°F))	View ^	
Test Method: ASTM C518			
Test Condition: 109°F(43°C)			
Notes: results listed are at 109°F			
Thermal Conductivity	1.21 (btu-in)/(h-ft²-°F)	View ^	
Test Method: ASTM C518			
Test Condition: 109°F(43°C)			
Notes: results listed are at 109°F			

Typical Environmental Performance

Humidity Resistance – High humidity has a minimal effect on adhesive performance. Bond strength shows no significant reduction after exposure for 7 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 outdoor 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:

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.

Bond Build-up: The bond strength of 3M™ High Performance Acrylic Adhesive 200MP increases as a function of time and temperature

Temperature/Heat Resistance: 3M™ High Performance Acrylic Adhesive 200MP is usable for short periods (minutes, hours) at temperatures up to400°F (204°C) and for intermittent longer periods (days, weeks) up to 300°F (149°C).

Lower Temperature Service Limit: The glass transition temperature for 3M™ High Performance Acrylic Adhesive 200MP is -31°F (-35°C). Many applications survive below this temperature (factors affecting successful applications include: materials being bonded, dwell at RT before cold exposure, and stress below the TG [i.e. expansion/contraction stresses, impact]). Optimum conditions are: bonding high surface energy materials, longer time at RT before cold exposure, and little or no stress below the TG. The lowest service temperature is -40°F (-40°C).

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 24 months from date of manufacture.

Trademarks

3M is a trademark of 3M Company.

Handling/Application Information

Application Examples

- Long term bonding of graphic nameplates and overlays ("subsurface" printed polycarbonate or polyester) to metal and high surface energy plastics in the aerospace, medical and industrial equipment, automotive, appliance and electronics markets.
- Bonding metal nameplates and rating plates in the aerospace, medical and industrial equipment, automotive, appliance and electronics markets.
- Bonding graphic overlays for membrane switches and for bonding the complete switch to the equipment surface.
- High speed processing of parts in the medical, telecommunications and electronics markets (medical components, durable labels, and flexible circuits).
- Lamination to industrial foams for rotary die-cutting of small gaskets for industrial and electronics markets.

Application Techniques

For maximum bond strength (during installation of the final part) the surface should be thoroughly cleaned and dried. Typical cleaning solvents are heptane (for oily surfaces) or isopropyl alcohol for plastics. Use reagent grade solvents since common household materials like rubbing alcohol frequently contain oils to minimize the drying affect on skin and can interfere with the performance of a pressure-sensitive adhesive.

*Note: Carefully read and follow the manufacturer's precautions and directions for use when working with solvents. These cleaning recommendations may not be in compliance with the rules of certain air quality management districts in California; consult applicable rules before use.

It is necessary to provide pressure during lamination (1.5-20 pli recommended) and during final part installation (10-15 psi) to allow the adhesive to come into direct contact with the substrate. Using a hard edged plastic tool, which is the full width of the laminated part, helps to provide the necessary pressure at the point of lamination. Heat can increase bond strength when bonding to metal parts (generally this same increase is observed at room temperature over longer times, weeks). For plastic parts, the bond strength is not enhanced with the addition of heat.

The ideal adhesive application temperature range is 60°F (15.6°C) to 100°F (38°C). Application is not recommended if the surface temperature is below 50°F (10°C) because the adhesive becomes too firm to adhere readily. Once properly applied, at the recommended application temperature, low temperature holding is generally satisfactory (please refer to section VII of the Typical Physical Properties and Performance Characteristics).

When bonding a thin, smooth, flexible material to a smooth surface, it is generally acceptable to use 2 mils of 3M[™] Adhesive 200MP. If a texture is visible on one or both surfaces, the 5 mil 3M adhesive 200MP would be suggested. If both materials are rigid, it may be necessary to use a thicker adhesive to successfully bond the components. 3M[™] VHB[™] Acrylic Foam Tapes may be required (please refer to the data page 70-0709-3830-6).

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.

References

Property	Values
3m.com Product Page	https://www.3m.com/3M/en_US/company-us/all-3m-products/~/3M-Adhesive-Transfer-Tape-467MPX/? N=5002385+3293242532&rt=rud
Safety Data Sheet SDS	https://www.3m.com/3M/en_US/company-us/SDS-search/results/? gsaAction=msdsSRA&msdsLocale=en_US&co=ptn&q=467MP

Family Group

Link Tags:

467MP 468MP 467MPF 468MPF

Products	Adhesive Type	Liner	Liner Thickness	Liner Color	Total Tape Thickness	Short Term Temperature Resistance	Long Term Temperature Resistance
467MP	Acrylic	58# Polycoated Kraft Paper (PCK)	0.11 mm	Tan	0.06 mm	204 °C	300 °F

468MP	Acrylic	58# Polycoated Kraft Paper (PCK)	0.11 mm	Tan	0.13 mm	204 °C	300 °F
467MPF	Acrylic	Polyester Film (PET)	0.05 mm	Clear	0.06 mm	204 °C	300 °F
468MPF	Acrylic	Polyester Film (PET)	0.05 mm	Clear	0.13 mm	204 °C	300 °F

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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