3M™ Adhesive Transfer Tape 9485PC

Last Revision Date: September, 2002

Product Description

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

This 3M™ Adhesive Transfer Tape with 3M™ Adhesive 350 is a modified acrylic adhesive ideal for very high-bond strength to many surfaces. It has excellent chemical resistance and bold strength even at elevated temperatures. This tape is offered with a fiber reinforced adhesive which is important for roll stability in narrow widths. Tapes using adhesive 350 are designed for temperature exposure to 450°F (232°C) for short periods of time and up to 300°F (149°C) over long time frames. This adhesive is a good choice for applications which require adhesion to Low Surface Energy plastics, powder coatings and oily metals.

General Information

- Excellent bond to metal and high surface energy plastics.
- Outstanding temperature and chemical resistance.
- Two adhesive thicknesses: 2 mil for thin profile labels and 5 mil for rougher surfaces.
- Available on various liners for specialized processing:
- 55# Densified Kraft for rotary die-cutting
- 62# Polycoated Kraft for steel rule die-cutting
- 83# Polycoated Kraft for lay flat applications
- 78# Extensible Kraft for conformable applications

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
Total Tape Thickness	0.127 mm (5 mil)	View
Test Method: ASTM D3652		
Total Tape Thickness	5 mil	View
Test Method: ASTM D3652		
Adhesive Type	Acrylic	
Liner	62# Polycoated Kraft	
Liner Print	None	

Liner Thickness	0.11 mm (4.2 mil)
Liner Thickness	4.2 mil
Dispenser Selection	For assistance in helping you determine the best dispenser for your application, contact your local 3M sales representative, or the toll free 3M sales assistance number at 1-800-362-3550.

Typical Performance Characteristics

Property	Values	Additional Information
Short Term Temperature Resistance	232 °C (450 °F)	View
Test Condition: Short Term (minutes, hour)		
Short Term Temperature Resistance	450 °F	View
Test Condition: Short Term (minutes, hour)		
Long Term Temperature Resistance	121 °C (250 °F)	View
Test Condition: Long Term (day, weeks)		
Long Term Temperature Resistance	250 °F	View
Test Condition: Long Term (day, weeks)		
Minimum Long Term Temperature Resistance	-40 °C (-40 °F)	View
Test Condition: Long Term (day, weeks)		
Minimum Long Term Temperature Resistance	-40 °F	View
Test Condition: Long Term (day, weeks)		
Static Shear	10000 min	View
Test Condition: 1000 g @ Room Temperature Notes: 1in x 1in size; test terminated after 10,000 minutes		
Static Shear	10000 min	View
Test Condition: 500 g @ 70°C (158°F) Notes: 1in x 1in size; test terminated after 10,000 minutes		
Static Shear	10000 min	View
Test Condition: 500 g @ 70°C (158°F) Notes: 1in x 1in size; test terminated after 10,000 minutes		

Test Condition: 400 g @ 93°C (200°F)

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

Static Shear	10000 min	View

Test Condition: 300 g @ 121°C (250°F)

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

Static Shear	10000 min	View

Test Condition: 300 g @ 149°C (300°F)

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

Static Shear	10000 min	View

Test Condition: 300 g @ 177°C (350°F)

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

Static Shear	10000 min	View

Test Condition: 200 g load @ 232°C (450°F)

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

180° Peel Adhesion	15.8 N/cm (145 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: Painted Metal

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

180° Peel Adhesion	145 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: Painted Metal

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

180° Peel Adhesion	15.8 N/cm (145 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)

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

180° Peel Adhesion	145 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)

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

180° Peel Adhesion	13.6 N/cm (125 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)

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

180° Peel Adhesion	125 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)

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

180° Peel Adhesion	13.1 N/cm (120 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: Epoxy

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

180° Peel Adhesion	120 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: Epoxy

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

180° Peel Adhesion	9.3 N/cm (85 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

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

180° Peel Adhesion	85 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

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

180° Peel Adhesion	9.8 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: Polyvinyl chloride (PVC)

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

180° 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: Polyvinyl chloride (PVC)

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

180° Peel Adhesion	8.7 N/cm (80 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: Polypropylene (PP)

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

180° Peel Adhesion	80 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: Polypropylene (PP)

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

180° Peel Adhesion	15.8 N/cm (145 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

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

180° Peel Adhesion	145 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

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

180° Peel Adhesion	3.8 N/cm (35 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: High Density Polyethylene (HDPE)

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

180° Peel Adhesion	35 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: High Density Polyethylene (HDPE)

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

180° 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: Low Density Polyethylene (LDPE)

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

180° 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: Low Density Polyethylene (LDPE)

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

180° Peel Adhesion	10 N/cm (95 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

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

180° Peel Adhesion	95 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

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

180° Peel Adhesion	16.4 N/cm (150 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

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

180° Peel Adhesion	150 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

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

Liner Release	44 g/in

Available Sizes

Property	Values	Additional Information
Note	Subject to Minimum Order Requirements	
Standard Roll Length	60 yd	
Maximum Length	54.9 m (60 yd)	View

Width: 1/8 in to 3/8 in width

Maximum Length	60 yd	View
Width: 1/8 in to 3/8 in width		
Maximum Length	165 m (180 yd)	View
Width: 3/8 in to 1/2 in width		
Maximum Length	180 yd	View
Width: 3/8 in to 1/2 in width		
Maximum Length	329 m (360 yd)	View
Width: 1/2 in to 1 in widths		
Maximum Length	360 yd	View
Width: 1/2 in to 1 in widths		
Maximum Length	329 m (360 yd)	View
Width: 1 in to maximum		
Maximum Length	360 yd	View
Width: 1 in to maximum		
Maximum Available Width	48 in	
Normal Slitting Tolerance	± 0.8 mm (± 1/32 in)	
Normal Slitting Tolerance	± 1/32 in	
Core Size	76.2 mm (3 in)	View
Test Name: ID		
Core Size	3 in	View
Test Name: ID		

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% R.H. Storage in a plastic bag is recommended.

Handling/Application Information

Application Examples

Ideal adhesive application temperature range is 70°F to 100°F (21°C to 38°C). Initial 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 satisfactory. For more specific information, contact our toll free 3M sales assistance number at 1-800-362-3550.

2 mil thick tapes may generally be used for joining materials that are relatively smooth, thin and have low residual stress. For materials with a rough or textured surface, the thicker adhesive film of the 5 mil tapes would be more appropriate for evaluation.

Application Techniques

For maximum bond strength the surface should be thoroughly cleaned and dried. Typical cleaning solvents are heptane or isopropyl alcohol. Consult manufacturer's Material Safety Data Sheet for proper handling and storage instructions. Bond strength can also be improved with firm application pressure and moderate heat (for metal surfaces only), from 100°F (38°C) to 130°F (54°C), causing the adhesive to develop intimate contact with the bonding surfaces.

References

Property	Values
3m.com Product Page	https://www.3m.com/3M/en_US/company-us/all-3m-products/~/3M-Adhesive-Transfer-Tape-9485PC/?N=5002385+3293241558&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=9485PC

ISO Statement

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

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