



# Technical Data Sheet

## 3M™ Adhesive Transfer Tape 9442



[Product Details](#)



[Regulatory Info/SDS](#)

### Product Description

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

Attribute Name	Value
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.

Attribute Name	Test Method	Value
Adhesive Type		Acrylic
Total Tape Thickness	ASTM D3652	0.05 mm (2 mil)
Liner		55# Densified Kraft
Liner Thickness		0.08 mm (3.2 mil)

### Typical Performance Characteristics

#### 180° Peel Adhesion

Temperature: 22 °C (72 °F)

Dwell Time: 72 h

Test Method: ASTM D3330

Substrate	Value
ABS	7.1 N/cm (65 oz/in) <sup>1</sup>
Acrylic (PMMA)	6.5 N/cm (60 oz/in) <sup>1</sup>

Substrate	Value
Aluminum	5.5 N/cm (50 oz/in) <sup>1</sup>
Epoxy	7.1 N/cm (65 oz/in) <sup>1</sup>
Glass	9.8 N/cm (90 oz/in) <sup>1</sup>
High Density Polyethylene (HDPE)	3.3 N/cm (30 oz/in) <sup>1</sup>
Low Density Polyethylene (LDPE)	3.8 N/cm (35 oz/in) <sup>1</sup>
Painted Metal	6.5 N/cm (60 oz/in) <sup>1</sup>
Polycarbonate (PC)	7.1 N/cm (65 oz/in) <sup>1</sup>
Polypropylene (PP)	6.5 N/cm (60 oz/in) <sup>1</sup>
Polyvinyl chloride (PVC)	5.5 N/cm (50 oz/in) <sup>1</sup>
Stainless Steel	8.7 N/cm (80 oz/in) <sup>1</sup>

<sup>1</sup> 12 in/min (300 mm/min)

Temperature: 22 °C (72 °F)

Attribute Name	Value
Liner Release	55 g/in

### Static Shear

Temperature	Test Condition	Value
22 °C (72 °F)	1000g	10,000 min <sup>1</sup>
93 °C (200 °F)	400g	10,000 min <sup>1</sup>
121 °C (250 °F)	300g	10,000 min <sup>1</sup>
149 °C (300 °F)	300g	10,000 min <sup>1</sup>
177 °C (350 °F)	300g	10,000 min <sup>1</sup>

<sup>1</sup> 1 in x 1 in sample area, test terminated after 10,000 minutes

Attribute Name	Value
Short Term Temperature Resistance	232 °C (450 °F) <sup>1</sup>
Long Term Temperature Resistance	121 °C (250 °F) <sup>2</sup>
Minimum Long Term Temperature Resistance	-40 °C (-40 °F) <sup>2</sup>

<sup>1</sup> Short Term (minutes, hour)

<sup>2</sup> Long Term (day, weeks)

## 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.

## **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.

## **Available Sizes**

<b>Attribute Name</b>	<b>Width</b>	<b>Value</b>
Core Size (ID)		76.2 mm (3 in)
Maximum Available Width		48 in
Maximum Length	1/8 in to 3/8 in width	54.9 m (60 yd)
Maximum Length	3/8 in to 1/2 in width	165 m (180 yd)
Maximum Length	1/2 in to 1 in widths	329 m (360 yd)
Maximum Length	1 in to maximum	329 m (360 yd)
Normal Slitting Tolerance		± 0.8 mm (± 1/32 in)
Note		Subject to Minimum Order Requirements
Standard Roll Length		60 yd

## **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, these products should not present a health and safety hazard. However, use or processing of these 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.

**UL:** Tapes 9442 and 9445 have been recognized by Underwriters Laboratories Inc. under Standard UL 969 Marking and Labeling in File MH26206. Tapes 9482PC and 9485PC have been recognized by Underwriters Laboratories Inc. under Standard UL

746C Polymeric Adhesives Systems, Electrical Equipment Component in File MH17478. If you require official recognition of any 350 adhesive under either UL 969 or UL 746C, please contact 3M-customer service at 1-800-362-3550.

For more information on the UL Certification, please visit the website at <http://www.3m.com/converter>, select UL Recognized Materials, and then select the specific product area.

## **Automotive Disclaimer**

**Select Automotive Applications:** This product is an industrial product and has not been designed or tested for use in certain automotive applications, such as automotive electric powertrain battery or high voltage applications, which may require the product to be manufactured in a IATF certified facility, meet a Ppk of 1.33 for all properties, undergo an automotive production part approval process (PPAP), or fully adhere to automotive design or quality system requirements (e.g., IATF 16949 or VDA 6.3). Customer assumes all responsibility and risk if customer chooses to use this product in these applications.

## **Information**

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## **ISO Statement**

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

## **For Additional Information**

To request additional product information or to arrange for sales assistance, call toll free 1-800-223-7427 or visit [www.3M.com/converter](http://www.3M.com/converter). 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.

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