

# Technical Data Sheet

## 3M™ Double Coated Tissue Tape 9448A

### Product Description

9448A/AB is a double coated pressure sensitive adhesive tape. High adhesion acrylic pressure sensitive adhesive is coated on both sides of flexible tissue film. High adhesion acrylic pressure sensitive adhesive has good bond strength on many types of substrate including low surface energy plastics on which most acrylic adhesive can not adhere well. Initial tack of this adhesive is not so effected by temperature change and good tack even at cold environment. Soft acrylic adhesive can penetrate rough surface and show good bonding. Paper liner is chosen to provide high suitability to converting processes such as die cutting.

### Product Features

Double Coated Tissue Tape

### 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
Backing	Tissue Paper	
Adhesive Type	Acrylate	View 
Test Name: Faceside Notes: Faceside adhesive is on the interior of the roll, exposed when unwound and liner removed.		
Adhesive Type	Acrylate	View 
Test Name: Backside Notes: Backside adhesive is on the exterior of the roll, exposed when liner is removed.		
Adhesive Carrier	Translucent Tissue	
Liner	58# Polycoated Kraft	
Liner Thickness	0.12 mm	
Liner Color	White	View 

Test Name: Primary

Color	Clear	View 
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Test Name: Cured

Adhesive Thickness	0.076 mm	View 
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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	1 mm	
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Total Tape Thickness (mil)	5.9 mil	View 
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Test Method: ASTM D3652

Total Tape Thickness (mm)	0.15 mm	View 
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Test Method: ASTM D3652

Adhesive Thickness	3 mil	View 
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Test Name: Backside

Notes: Backside adhesive is on the exterior of the roll, exposed when liner is removed.

Adhesive Thickness	0.076 mm	View 
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Test Name: Faceside

Notes: Faceside adhesive is on the interior of the roll, exposed when unwound and liner removed.

Adhesive Thickness	3 mil	View 
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Test Name: Faceside

Notes: Faceside adhesive is on the interior of the roll, exposed when unwound and liner removed.

Carrier Thickness	1 mil	
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Liner Thickness	4.7 mil	
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## Typical Performance Characteristics

Property	Values	Additional Information
Short Term Temperature Resistance	302 °F	

Short Term Temperature Resistance 150 °C

Long Term Temperature Resistance 70 °C

Long Term Temperature Resistance 158 °F

Static Shear >5,000 min View 

Test Method: ASTM D3654

Notes: 1 in<sup>2</sup> sample size

Static Shear >5000 min View 

Test Method: ASTM D3654

180° Peel Adhesion 13 N/cm View 

Dwell/Cure Time: 20.0  
Dwell Time Units: min  
Temp C: 23C  
Temp F: 72F  
Environmental Condition: 50%RH  
Substrate: Aluminum

180° Peel Adhesion 13.5 N/cm View 

Dwell/Cure Time: 20.0  
Dwell Time Units: min  
Temp C: 23C  
Temp F: 72F  
Environmental Condition: 50%RH  
Substrate: Polycarbonate (PC)

180° Peel Adhesion 13.5 N/cm View 

Dwell/Cure Time: 20.0  
Dwell Time Units: min  
Temp C: 23C  
Temp F: 72F  
Environmental Condition: 50%RH  
Substrate: Acrylic (PMMA)

180° Peel Adhesion 13.5 N/cm View 

Test Method: ASTM D3330

Dwell/Cure Time: 20.0  
Dwell Time Units: min  
Substrate: Stainless Steel

180° Peel Adhesion 13.2 N/cm View 

Test Method: ASTM D3330

Dwell/Cure Time: 20.0  
Dwell Time Units: min  
Substrate: ABS

180° Peel Adhesion

13.5 N/cm

View 

Test Method: ASTM D3330

Dwell/Cure Time: 20.0  
Dwell Time Units: min  
Substrate: Polycarbonate (PC)

180° Peel Adhesion

10 N/cm

View 

Test Method: ASTM D3330

Dwell/Cure Time: 20.0  
Dwell Time Units: min  
Substrate: Polypropylene (PP)

180° 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: Polycarbonate (PC)

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

180° Peel Adhesion

13.5 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: ABS

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

180° Peel Adhesion

10.5 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: Polypropylene (PP)

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

180° Peel Adhesion

17 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: Aluminum Foil

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

180° Peel Adhesion

155 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: Aluminum Foil

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

180° Peel Adhesion

18.1 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: Polycarbonate (PC)  
Backing: Aluminum Foil

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

180° Peel Adhesion

165 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: Polycarbonate (PC)  
Backing: Aluminum Foil

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

180° Peel Adhesion

15.9 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: ABS  
Backing: Aluminum Foil

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

180° Peel Adhesion

145 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: Aluminum Foil

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

180° Peel Adhesion

17 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: Aluminum Foil

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

180° Peel Adhesion

155 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: Aluminum Foil

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

180° Peel Adhesion

18.6 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: Stainless Steel  
Backing: Aluminum Foil

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

180° Peel Adhesion

170 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)

180° Peel Adhesion

19.7 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: Polycarbonate (PC)  
Backing: Aluminum Foil

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

180° Peel Adhesion

180 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: Aluminum Foil

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

180° Peel Adhesion

17 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: Aluminum Foil

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

180° Peel Adhesion

155 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: Aluminum Foil

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

180° Peel Adhesion

19.2 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: Aluminum Foil

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

180° Peel Adhesion

175 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: Aluminum Foil

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

180° Peel Adhesion

13.5 N/cm

View 

Test Method: ASTM D3330

Test Name: Faceside  
Dwell/Cure Time: 20.0  
Dwell Time Units: min  
Temp C: 23C  
Temp F: 72F  
Environmental Condition: 50%RH  
Substrate: Stainless Steel

Backing: 2 mil Polyester Film

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

180° Peel Adhesion

14 N/cm

View 

Test Method: ASTM D3330

Test Name: Faceside  
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 Polyester Film

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

180° Peel Adhesion

13.5 N/cm

View 

Test Method: ASTM D3330

Test Name: Backside  
Dwell/Cure Time: 20.0  
Dwell Time Units: min  
Temp C: 23C  
Temp F: 72F  
Environmental Condition: 50%RH  
Substrate: Stainless Steel  
Backing: 2 mil Polyester Film

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

180° 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: Stainless Steel

Notes: 12 in/min (300 mm/min), Backside, Backing: 2 mil Polyester film

180° Peel Adhesion

13.5 N/cm

View 

Test Method: ASTM D3330

Test Name: Backside  
Dwell/Cure Time: 72.0  
Dwell Time Units: hr  
Temp C: 23C  
Temp F: 72F  
Environmental Condition: 50%RH  
Substrate: ABS  
Backing: 2 mil Polyester Film

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

180° Peel Adhesion

10.5 N/cm

View 

Test Method: ASTM D3330

Test Name: Backside  
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 Polyester Film

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

## Available Sizes

Property	Values	Additional Information
Note	Subject to Minimum Order Requirements	
Normal Slitting Tolerance	± 0.8 mm	
Normal Slitting Tolerance	± 1/32 in	
Core Size (ID)	76.2 mm	
Core Size (ID)	3 in	

## Electrical and Thermal Properties

Property	Values	Additional Information
Breakdown Voltage	7500 V	

## Typical Environmental Performance

**Humidity Resistance:** High humidity has 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, nameplates and decorative trim parts are 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:

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

Shelf life of tape in roll form is 18 months from date of manufacture when stored in original cartons at 23 / 2 and 50 / 10% relative humidity.

## Automotive Disclaimer

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## Bottom Matter

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## Trademarks

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3M is a trademark of 3M Company.

## Handling/Application Information

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### Application Examples

- Nameplate Bonding
- Plastic film lamination/bonding
- Foam Bonding

### Application Techniques

Bond strength is dependent upon the amount of adhesive-to-surface contact developed. Firm application pressure helps develop better adhesive contact and improve bond strength. To obtain optimum adhesion, the bonding surfaces must be clean, dry and well unified. Some typical surface cleaning solvents are isopropyl alcohol or heptane.\*

\*Note: Carefully read and follow the manufacturer's precautions and directions for use when using solvents. 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.

### Surface Preparation

Bond strength is dependent upon the amount of adhesive-to-surface contact developed. Firm application pressure helps develop better adhesive contact and improves bond strength. To obtain optimum adhesion, the bonding surfaces must be clean, dry and well unified. Some typical surface cleaning solvents are isopropyl alcohol or heptane.

## References

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Property	Values
3m.com Product Page	<a href="https://www.3m.com/3M/en_US/p/d/b40070491/">https://www.3m.com/3M/en_US/p/d/b40070491/</a>
Safety Data Sheet SDS	<a href="https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&amp;msdsLocale=en_US&amp;co=ptn&amp;q=93020LE">https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&amp;msdsLocale=en_US&amp;co=ptn&amp;q=93020LE</a>

## Family Group

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Link Tags:

Product	Open Time	Shore D Hardness	Tensile Strength	Foam Color	Adhesive Carrier	Total Thickness with liner	Time to Full Cure	Color	Total Tape Thickness (mm)	Minimum Long Term Temperature Resistance	Spray Pattern	Adhesive Thickness	Liner	Worklife	Backing	Adhesive Type	Solids Content by Weight	Long Term Temperature Resistance
2710p black	1 - 4 min	37	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2210	N/A	N/A	36.8 N/cm	N/A	N/A	N/A	N/A	Tan	0.124 mm	N/A	N/A	N/A	N/A	N/A	N/A	Rubber	N/A	N/A
60CA Cylinder Spray Adhesive	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Translucent	N/A	N/A	Lace	N/A	N/A	N/A	N/A	N/A	N/A	N/A
9448A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.15 mm	N/A	N/A	0.076 mm	58# Polycoated Kraft	N/A	Tissue Paper	Acrylate	N/A	158 °F
2665b	N/A	35	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7110b	N/A	N/A	N/A	N/A	N/A	0.25 mm	N/A	N/A	0.1 mm	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6011LV	N/A	78	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
DP8910NS	N/A	N/A	2422 psi lb/in <sup>2</sup>	N/A	N/A	N/A	24 hrs hr	Black	N/A	N/A	N/A	N/A	N/A	N/A	10 mins min	N/A	N/A	N/A
60CA Adhesive	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Translucent	N/A	N/A	Lace or Pebble	N/A	N/A	N/A	N/A	N/A	43 %	N/A
VG832	N/A	N/A	N/A	White	Crosslinked Polyethylene Foam	N/A	N/A	N/A	N/A	10 °C	N/A	N/A	White Kraft	N/A	White kraft liner	Removable rubber based Adhesive	N/A	155 °F
VG816	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.7 mm	-29 °C	N/A	N/A	White Kraft	N/A	N/A	Removable rubber based Adhesive	N/A	155 °F
VG932	N/A	N/A	N/A	White	Crosslinked Polyethylene Foam	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Blue Kraft	N/A	liner	Removable Rubber based	N/A	155 °F

					Closed														
					Cell														
VG916	N/A	N/A	N/A	White	Crosslinked	N/A	N/A	N/A	1.6	-29	N/A	N/A	Blue	N/A	liner	N/A	N/A	68 °C	
					Polyethylene				mm	°C			Kraft						
					Foam														

## 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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