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 Color	White	View
Test Name: Primary		
Color	Clear	View
Test Name: Cured		

Liner	58# Polycoated Kraft	
Liner Thickness	0.12 mm	
Adhesive Thickness	0.076 mm	View

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	
Total Tape Thickness (mil)	5.9 mil	View

Test Method: ASTM D3652

Total Tape Thickness (mm)	0.15 mm	View

Test Method: ASTM D3652

Adhesive Thickness	3 mil	View

Test Name: Backside

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

Adhesive Thickness	0.076 mm	View

Test Name: Faceside

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

Adhesive Thickness	3 mil	View

Test Name: Faceside

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

Carrier Thickness	1 mil	
Liner Thickness	4.7 mil	

Typical Performance Characteristics

Property	Values	Additional Information
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)

Short Term Temperature Resistance	302 °F	View

Test Condition: Short Term (minutes, hour)

Short Term Temperature Resistance	150 °C	View

Test Condition: Short Term (minutes, hour)

Long Term Temp C	70 °C	View

Test Condition: Long Term (day, weeks)

Long Term Temp F	158 °F	View

Test Condition: Long Term (day, weeks)

Static Shear	>5,000 min	View

Test Method: ASTM D3654

Test Condition: 1000 g @ Room Temperature

Notes: 1 in² sample size

Static Shear	>5000 min	View

Test Method: ASTM D3654

Test Condition: 1000 g @ Room Temperature

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

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.

Limitation of Liability

If the 3M product is proved to be defective, the exclusive remedy, at 3M'S option, shall be to refund the purchase price of or to repair or replace the defective 3M product. 3M shall not otherwise be liable for loss or damages, whether direct, indirect, special, incidental, or consequential, regardless of the legal theory asserted, including, but not limited to, contract, negligence, warranty, or strict liability.

Bottom Matter

3M
Industrial Adhesives and Tapes Division
3M Center, Building 225-3S-06
St. Paul, MN 55144-1000
800-362-3550

Trademarks

Handling/Application Information

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

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

Family Group

Link Tags:

Produc	Open Time (min)	Shore D Hardne	Liner Thickn	Liner	Total Tape Thickn (mm)	Long Term Temp C	Spray Pattern	Adhesi Carrier	Tensile Streng	Foam Color	Backin	Total Thickn with liner	Solids Conter by Weigh	Carrier Thickn	Long Term Temp F	Color	Minimu Long Term Tempe Resista	Adhesi Type	Short Term Temperat Resistanc
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	N/A
2210	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	36.8 N/cm	N/A	Crepe Paper	N/A	N/A	N/A	N/A	Tan	N/A	Rubber	80 °C
60CA Cylinder Spray Adhesive	N/A	N/A	N/A	N/A	N/A	N/A	Lace	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Translucent	N/A	N/A	N/A
9448A	N/A	N/A	0.12 mm	N/A	N/A	70 °C	N/A	N/A	N/A	N/A	Tissue Paper	N/A	N/A	1 mm	N/A	Clear	N/A	Acrylate	150 °C
2665b	1.5 - 4 min	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	N/A
7110b	N/A	N/A	0.075 mm	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.25 mm	N/A	N/A	N/A	Black	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	N/A
60CA Adhesive	N/A	N/A	N/A	N/A	N/A	N/A	Lace or Pebble	N/A	N/A	N/A	N/A	N/A	43 %	N/A	N/A	Translucent	N/A	N/A	N/A
VG832	N/A	N/A	N/A	N/A	0.9 mm	N/A	N/A	N/A	N/A	White	White kraft liner	N/A	N/A	N/A	155 °F	N/A	N/A	High Performance Rubber Base	N/A
VG816	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Closed Cell Crosslinked Polyethylene Foam	N/A	White	N/A	N/A	N/A	N/A	155 °F	N/A	N/A	Removable rubber based Adhesive	N/A
VG932	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Closed Cell Crosslinked Polyethylene Foam	N/A	N/A	N/A	N/A	N/A	N/A	155 °F	N/A	N/A	Removable Rubber based	N/A
VG916	N/A	N/A	N/A	Blue Kraft	1.6 mm	68 °C	N/A	N/A	N/A	White	liner	N/A	N/A	N/A	155 °F	N/A	-29 °C	Removable Rubber based	N/A

ISO Statement

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

Information

Technical Information: The technical information, guidance, and other statements contained in this document or otherwise provided by 3M are based upon records, tests, or experience that 3M believes to be reliable, but the accuracy, completeness, and representative nature of such information is not guaranteed. Such information is intended for people with knowledge and technical skills sufficient to assess and apply their own informed judgment to the information. No license under any 3M or third party intellectual property rights is granted or implied with this information.

Product Selection and Use: Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. As a result, customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer's application, including conducting a workplace hazard assessment and reviewing all applicable regulations and standards (e.g., OSHA, ANSI, etc.). Failure to properly evaluate, select, and use a 3M product and appropriate safety products, or to meet all applicable safety regulations, may result in injury, sickness, death, and/or harm to property.

Warranty, Limited Remedy, and Disclaimer: Unless a different warranty is specifically stated on the applicable 3M product packaging or product literature (in which case such warranty governs), 3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ARISING OUT OF A COURSE OF DEALING, CUSTOM, OR USAGE OF TRADE. If a 3M product does not conform to this warranty, then the sole and exclusive remedy is, at 3M's option, replacement of the 3M product or refund of the purchase price.

Limitation of Liability: Except for the limited remedy stated above, and except to the extent prohibited by law, 3M will not be liable for any loss or damage arising from or related to the 3M product, whether direct, indirect, special, incidental, or consequential (including, but not limited to, lost profits or business opportunity), regardless of the legal or equitable theory asserted, including, but not limited to, warranty, contract, negligence, or strict liability.

Disclaimer: 3M industrial and occupational products are intended, labeled, and packaged for sale to trained industrial and occupational customers for workplace use. Unless specifically stated otherwise on the applicable product packaging or literature, these products are not intended, labeled, or packaged for sale to or use by consumers (e.g., for home, personal, primary or secondary school, recreational/sporting, or other uses not described in the applicable product packaging or literature), and must be selected and used in compliance with applicable health and safety regulations and standards (e.g., U.S. OSHA, ANSI), as well as all product literature, user instructions, warnings, and limitations, and the user must take any action required under any recall, field action or other product use notice. Misuse of 3M industrial and occupational products may result in injury, sickness, or death. For help with product selection and use, consult your on-site safety professional, industrial hygienist, or other subject matter expert. For additional product information, visit www.3M.com.