

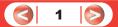
# Product Catalog EFFECTIVE JUNE 15, 2003

Avery Dennison

specialty tape

DIVISION





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## Shipping Leadtimes

**Next Day** shipment is available for 22 popular adhesive tapes offered for the industrial market.

- These industrial tapes represent core selections from a broad range of double-coated film, double-coated foams, transfer adhesive tapes and graphic overlay/nameplate laminating adhesives.
- Placing your order on or before 1:00 P.M. EST of any regular business day assures that your order (up to a maximum of 15,000 bulk lineal feet) ships by the following business day.

**Standard** shipment is available for core product offerings under a standard leadtime availability.

- Custom finish materials up to 30,000 lineal feet will ship within 4 to 10 business days.
- Standard custom coat products with minimum production of 6,000 to 12,000 feet will ship within 20 business days leadtime based on raw material availability.
- Non-standard custom-coat products requiring special raw materials may have longer than 20 business days leadtime based on raw material availability.

## **Benefits of Next Day Service:**

## Inventory Reduction 3-7% • Up to 80% reduction in inventory investment Reduced Obsolescence 1-4% • Only order sizes needed now; "no Guesswork" Reduced Handling Costs 1-2% • No sorting of multiple slit sizes • Direct staging of material to production areas **Reduced Administrative Costs** 1-4% • Complexity, physical inventories, estimating and order combining Increased Sales 1-5% • Due to better cost structure and shorter lead times **Reduced Warehousing Costs** 1-3% • Free-up valuable warehouse space for business expansion/avoid outside warehousing costs Potential Working Capital Savings 8-15%

### Other STD Next Day Cost Savings Benefits

- Business Simplification
- · Consolidated Product Range
- · Reduced Waste Handling
- · Smoother Cash Flow

**Ask are Customer Support Specialist about** placing your future orders by credit card.



Click on the items for Next Day Express Shipment to advance to the product information page.

## Rubber-Based, Double-Coated Adhesive Tapes

FT B (464890054 & 464890060) FT D (464760054)

FT EZ-8 (464665554)

FT 445 (577115554 & 577115527)

FT 8302 (464820054 & 464820060)

FT 8306 (871845554)\*

FT 8327 (560990054 & 563985560)

FT 8345 (580540054)

FT 8382 (565530054 & 565530060)

## Acrylic-Based, Double-Coated Adhesive Tapes

FT 8217 (561280060)

FT 8306 (871845554)\*

FT 8311 (870655554)

FT 8397 (566460054)

### Rubber-Based, Double-Coated White Foams

FM 2116 (559040054)

FM 2132 (559130054 & 559130060)

### Acrylic-Based, Transfer Tapes

FT 1122 HLP (561430048 & 561430054)

FT 1123 (560840054)

FT 1125 HLP (561440048 & 561440054)

FT 1126 (560910054)

### **High Performance Laminating Adhesives**

MS 1152 (566270054)

MS 1155 (566280054)

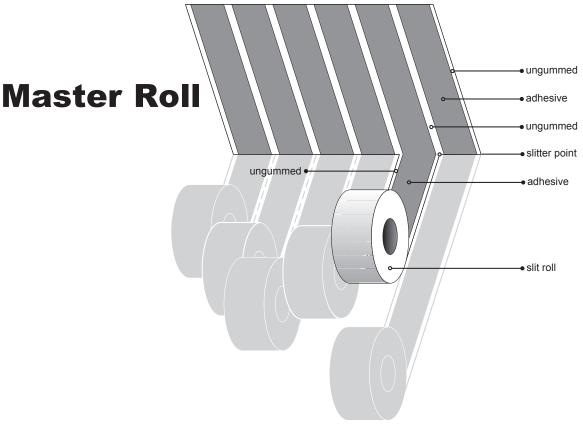
MS 3032 SL (565200054)







**Transfer Tapes Requiring Ungummed Slit Edges** 



- Key: Ungummed = Non-adhesive. Minimum ungummed is 1/8".
- Please refer to these guidelines when designing a pattern adhesive coating for transfer tapes and double coated tapes:
- Minimum order requirement is 4-9 MMSI.
- Tooling charge for new pattern bar is \$250.00.
- All adhesive and non-adhesive dimensions should be listed as fractions, and not as decimals.
- Slit roll tolerance is  $\pm 1/32$ ". Adhesive tolerance  $\pm 1/16$ ".
- A diagram of the pattern adhesive system, with slit roll dimensions, must be supplied with initial order.

Contact your sales representative for assistance when ordering pattern-coated adhesive tape. A surcharge will be added to price based on the complexity of the adhesive pattern.

## **Slitting Charges**

#### Web Width 44" - 60"

Slit Roll Sizes:

 $\geq 1/2$ " to 1" .35/MSI > 1" to < 4" .25/MSI







1. PRICE AND PAYMENT: All prices, unless stated otherwise herein, are F.O.B. shipping point and are exclusive of any present or future federal, state, local or other taxes applicable to the sale of products listed herein. Any such taxes shall be added to the price and paid by PURCHASER unless PURCHASER provides Avery International Corporation (AVERY DENNISON) with a valid exemption certificate acceptable to AVERY DENNISON and the appropriate taxing authorities. All prices are subject to change without prior notice; however, prices shall be those contained in the appropriate AVERY DENNISON Price list covering the products ordered and in effect on the "Ship Date" noted on the face of AVERY DENNISON's Sales Order. Orders calling for future delivery shall be billed at prices in effect on the shipping date. Shipments which are +/- 10% of the actual quantity ordered shall constitute filling the order; and PURCHASER shall be billed only for the quantity actually shipped plus, if applicable, trim loss.

The net amount of invoice shall be payable in full within thirty days following the date of invoice. A one percent discount is available if payment is received within ten days of date of invoice. Amounts not paid within thirty days of date of invoice will be subject to a late payment charge of 1.0% per month on the unpaid balance to be included on each month's invoice until paid. The imposition of such charge is not intended to infer and consent, acquiescence or other agreement, expressed or implied, on the part of AVERY DENNISON to forbear or otherwise defer collection of such amounts when due. To the contrary, AVERY DENNISON expects payment on or before the due date of each invoice and intends to take all necessary and feasible action to enforce prompt payment. PURCHASER confirms acknowledges and agrees that it would be expensive to attempt to determine the actual damage sustained by AVERY DENNISON as the result of the default payment of any individual account and that the charge of 1.0% per month referred to above represents a reasonable endeavor to fix AVERY DENNISON's minimum probable loss resulting from delinquent payment, that such charge bears a reasonable relation to such loss and that surcharge is reasonable in amount. It is expressly intended by AVERY DENNISON and PURCHASER that this provision for late payment charges shall constitute a valid, binding and enforceable agreement for the payment of liquidated damages pursuant to Section 1671 (b) of the California Civil Code and Section 2718 (1) of the California Commercial Code. If in AVERY DENNISON'S opinion PURCHASER's financial condition does not justify continuance of production or shipment on the terms of payment specified, AVERY DENNISON may require payments in advance. Failure of PURCHASER to pay and AVERY DENNISON invoice by its due date makes all subsequent invoices immediately due and payable irrespective of terms and AVERY DENNISON may withhold subsequent deliveries until the full account is settled.

- 2. ACCEPTANCE: An order once placed with and accepted by AVERY DENNISON (all orders are subject to acceptance by AVERY DENNISON's home office) may be cancelled only with AVERY DENNISON's consent and upon terms that will indemnify AVERY DENNISON against loss.
- 3. TITLE AND RISK OF LOSS: Title and risk of loss to all products purchased shall pass to PURCHASER upon delivery by AVERY DENNISON to a common carrier, regardless of the freight terms stated or method of payment of transportation charges.
- 4. SHIPMENT AND TRANSPORTATION CHARGES: AVERY DENNISON reserves the right to specify routing of shipments. AVERY DENNISON shall attempt to ship within the time specified in AVERY DENNISON's Sales Order, if indicated and if not then within a reasonable time; and PURCHASER acknowledges that no claim may be made for delays in shipment where PURCHASER accepts the products. Unless specified in AVERY DENNISON's Sales Order, freight charges shall be prepaid and billed.
- **5. COMPLIANCE:** AVERY DENNISON products are manufactured in compliance with all applicable requirements of the Fair Labor Standards Act, as amended. Except as otherwise agreed in writing normal tolerances in specifications shall not be cause to
- 6. RETURNS: Products sold by AVERY DENNISON are returnable only in accordance with the warranty provisions hereof. Before returning and product, PURCHASER must obtain AVERY DENNISON's written material return authorization and instructions

7. LIMITED WARRANTY: All statements, technical information and recommendations concerning products sold or samples provided by AVERY DENNISON are based upon tests believed to be reliable but do not constitute a guarantee or warranty. All products are sold and samples of products provided with the understanding that PURCHASER has independently determined the suitability of such products for its purposes. AVERY DENNISON warrants the products to be free from defects in material and workmanship. Should any failure to conform to this warranty appear within one year\* after the initial date of shipment, AVERY DENNISON shall, upon notification thereof and substantiation that the products have been stored and applied in accordance with AVERY DENNISON's standards, correct such defects by suitable repair or replacement without charge at AVERY DENNISON's plant or at the location of the products (at AVERY DENNISON's election); provided, however, if AVERY DENNISON determines that repair or replacement is not commercially practical, AVERY DENNISON shall not commercially practical, AVERY DENNISON shall issue a credit in favor of PURCHASER in an amount not to exceed the purchase price of the products.

THIS WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHER WARRANTY OF QUALITY, WHETHER EXPRESS OR IMPLIED, EXCEPT THE WARRANTY OF TITLE AND AGAINST PATENT INFRINGEMENT NO WAIVER, ALTERATION, ADDITIONS OR MODIFICATIONS OF THE FOREGOING CONDITIONS SHALL BE VALID UNLESS MADE IN WRITING AND MANUALLY SIGNED BY AN OFFICER OF AVERY DENNISON.

\*Or the time period stated on the specific product specification sheet, if any, and if not then on the specific information literature in effect at time of shipment.

- **8. LIMITATION OF LIABILITY:** In no event shall AVERY DENNISON be liable for any incidental or consequential damages, including but not limited to, loss of profit, loss of use or production or loss of capital. the remedies of PURCHASER set forth herein are exclusive and the total liability of AVERY DENNISON with respect to any contract, or anything done in connection therewith such as the performance or breach hereof, or from the manufacture, sale, delivery, resale, installation or use of any products whether arising out of contract, negligence, strict tort, or under any warranty, or otherwise shall not exceed the purchase price of the products upon which liability is based.
- 9. ASSIGNMENT: Any assignment of this agreement or of any rights hereunder or hypothecation thereof in any manner, in whole or in part, without the prior written consent of AVERY DENNISON shall be void.
- 10. NON-WAIVER: Failure by AVERY DENNISON to insist upon strict performance of any of the terms or conditions hereof, failure or delay to exercise any rights or remedies provided herein or by law or to properly notify PURCHASER in the event of breach, or the acceptance of payment for any products hereunder, shall not be deemed a waiver of any right of AVERY DENNISON to insist upon strict performance hereof or any of its rights or remedies or as to any prior to subsequent default hereunder, nor shall any termination of this agreement operate as a waiver of any of the terms hereof.
- 11. FORCE MAJEURE: AVERY DENNISON shall not be liable for any loss, damage, delays, changes in shipment schedules or failure to deliver caused by accident, fire, strike, riot, civil commotion, insurrection, war, the elements, embargo, failure of carrier, inability to obtain transportation facilities, government requirements, acts of God or public enemy, prior orders from others or limitations on AVERY DENNISON's or its suppliers' products or marketing activities or any other cause or contingency beyond AVERY DENNISON's control.
- 12. CHOICE OF LAW: This agreement shall be governed by and construed in accordance with the laws of the State of California.
- **13. ENTIRE AGREEMENT:** These terms and conditions embody the entire agreement and understanding between the parties, are intended as a complete and exclusive statement of the terms of agreement regarding the products set forth on AVERY DENNISON's Sales Order between the parties, and supersede any prior or collateral agreement or understanding between the parties relating to the subject matter hereof. PURCHASER acknowledges that AVERY DENNISON has not made any representation to PURCHASER other than those which are specifically referred to or contained herein. Each paragraph and provision hereof is severable and if any provision is held invalid or unenforceable, the remaining provisions shall nevertheless remain in full force and effect.





## "SERVICE When and Where You **Need IT"** is the focus of the Avery Dennison Specialty Tape Division.

Call your Avery Dennison Specialty Tape Division Field Sales Representative to discuss new applications and price quotations, and for technical assistance, product samples and additional product literature.

If you are not currently a customer, call Inside Sales for assistance at 1-866-462-8379, or send a fax to 1-440-358-3298.

Customer Support is available to assist customers in a variety of ways including:

- Managing order entry and processing needs.
- Providing order status and ship dates.
- Confirm pricing and inventory information.

Information needed	Items to prepare prior to call
Product Orders	<ul> <li>Shipping Address/Billing Address</li> <li>Purchase Order No.</li> <li>5-digit Specification No. and Product Description</li> <li>Quantity</li> <li>Roll Dimensions: width x length</li> <li>Slitting Instructions (Rewinds, Patterns, Trim Shipped or Scrapped, Customer's Part/Job#)</li> <li>Price and Applicable Upcharges</li> <li>Requested Ship Date</li> <li>Special Instructions</li> <li>Freight Terms if other than P/B</li> </ul>
Price Quotations	<ul> <li>Product Description/Specification No.</li> <li>Quantity/Order Sizes/Annual Volume</li> <li>Roll Dimensions: width x length</li> <li>Slitting Instructions (Rewinds, Patterns)</li> </ul>
Technical Support	<ul> <li>How will the product be used?</li> <li>What surface/substrate will you apply/remove product from?</li> <li>Are you planning to print or process (convert) the product?</li> <li>Do you need product specification information?</li> </ul>
Product Samples	<ul> <li>Product Description/Specification No. (roll and/or hand sheets required)</li> <li>Planned use of product</li> </ul>
Product Literature	Name of Literature/Quantity
Customer Claims or Returns	<ol> <li>Product Quality Claim</li> <li>Contact your Field of Inside Sales Representative</li> <li>Quality Claims reflect a defect in the material caused by Coating/Finishing of Packaging at Avery Dennison</li> <li>Product Non-Quality Claim</li> <li>Contact your Customer Support Specialist</li> <li>Administrative Claims reflect an error in the order a a result of a wrong price, incorrect slitting, quantity of length, or some other problem other than quality or freight related defects</li> <li>Freight Damage Claim - Preferred Avery Dennison Carrier Prepaid/Bill</li> <li>See Fassettle Procedure, P. 8</li> <li>Collect Terms - call your Specified Carrier</li> </ol>





24 Hr. Toll Free Support Line Avery Dennison Commits to a Timely Resolution Your Loss (\$) Credited to Your Account Within 5 Business Days

## **FASSETTLE** Freight & Transit Claims Process

- As a continuation of Avery Dennison's commitment to Quality, we have developed FASSETTLE as an innovative extension to our unique deliver services.
- We have found through 50+ years of experience that significant amount of loss or damage is attributable to carrier mishandling during transit.
- In packaging your material for shipment, Avery Dennison has exceeded National Motor Freight Classification (NMFC) Standard Packaging
- With your input, we will assume responsibility for filing loss/damage claims with our program carriers and issue credit to your account.

With **FASSETTLE**. . . Avery Dennison Targets Your Service Needs Today – To Improve Your Tomorrow.

- · Customer discovers damage and calls Avery Dennison immediately.
- 24 hour support line
- 1-800-972-0093

### **How Does FASSETTLE Work?**

- Customer discovers damage and calls 1-800-972-0093 immediately.
- · Avery Dennison advises whether customer is to accept/refuse based on condition of shipment.
  - Not accepting a shipment of goods can have adverse consequences. If a shipment is refused upon delivery and investigation proves only part of the material was damaged and most could have been salvaged, losses could be substantial.
- Customer notes damage on freight bill and signs. Utilize salvageable material and report material losses to Avery Dennison.
  - It is the responsibility of the customer to use any portion of material which can be used.
- Avery Dennison contacts carrier for an inspection of material. This will occur within 72 hrs.
- Avery Dennison prepares claim and submits to carrier.
- Total claim must be for a minimum of \$100.00.
- Avery Dennison issues customer credit (\$) within 5 business days.
- Avery Dennison works with carrier to resolve claim.



# Consolidated Billing – Receive One Invoice Per Month

E-mailed Statement – Request a Detailed Statement to be E-mailed Monthly by Avery Dennison Receive a 10% Discount/First Order and a 1% Cash Discount on Each Subsequent Order (Once enrolled, customer must purchase via credit card)

Deferred Billing – Credit Cards are Billed on the Third Fiscal Monday of Each Month ONLY – Generous Terms!

Additional Working Capital – Make Your Money Go Further!

Earn Credit Card Perks for Your Company\*:

- mileage/travel certificates
- merchandise and bonus offers
- extra business tools/rewards

\*Perks vary, based on the credit card of your choice.

Mail or Fax Back to:

ATTN: Inside Sales Coordinator Avery Dennison 250 Chester Street, #5-M Painesville, Ohio 44077 Phn: 1-866 GO AVERY (1-866-462-8379)

Fax: 1-440 358-3298

#### **Credit Card Customers:**

Please complete the following information for each credit card you intend to make purchases with. Please note: Individual orders cannot be split-up among various cards. You can, however, use more than one card to purchase with, one card per order.

Name of Cardholder	Company Name (if different)
Address of Cardholder	
City/State/Zip	E-mail Address
MCVISAAMEX	CC Number
	Exp Date/

10% Discount On First Credit Card Order and 1% Discount on Subsequent Orders

Customer must Remain Enrolled and Purchase via Credit Card

#### **Benefits of Credit Card Purchasing**

- Extended Terms Better Cash Flow No Order Delays Reduces A/P Overhead
- Perks Offered by Credit Card Company







1-888-358-4469 or DIRECT 440-358-3341 or e-mail complete information to: psa.tape@averydennison.com and note SUBJECT: Account Update.

#### **To Our Valued Customers:**

[ ] Other \_\_\_\_\_

Please submit changes and updates to your account	ant information:	
Contact Name:		
Title:		
Company Name:		
Address:		
City:	State:	Postal Code Zip:
Country:	Phone No:	
Fax No:	E-mail:	
[ ] Yes, please send the following business docu	ments to the e-mail a	ddress above:
[ ] Sales Order Acknowledgement (SOA)		
[ ] Invoices		
[ ] Advance Shipping Notification (ASN)		
Please indicate preferred unit of measure for order	ers:	
[ ] Thousand Sq. In. (MSI)		
[ ] Sq. Ft.		
[ ] Sq. Yd.		
[ ] Lineal Feet		
[ ] Lineal Yards		

#### RUBBER-BASED ADHESIVES



Product Spec # Description Total Width Length 1-4 Rolls 5-8 Rolls 9+ Rolls Caliper (in) (ft) Price/MSI (mil) Price/Roll DOUBLE-COATED FILM TAPE PRODUCTS FT B 46489 A double-coated tape, 0.5 mil PET coated on 1.86 1.62 1.37 54" both sides with 1.5 mils of rubber based 8.0 750 903.96 787.32 665.82 1,004.40 adhesive protected by an 80# densified kraft. 60" 750 874.80 739.80 FT D 46476 A double-coated tape, 0.5 mil PET coated on 2.76 2.51 2.13 both sides with 2.4 mils of rubber based 54" 1.341.36 1.219.86 1.035.18 8.7 750 adhesive protected by a 60# densified kraft. 46466 FT EZ-8 A double-coated tape, 0.5 mil PET coated on 1.84 1.68 1.42 the unwind side with 1.5 mils and on the 8.0 54" 750 894.24 816.48 690.12 liner side with 2.4 mils of rubber based adhesive protected by a 60# densified kraft. 1.40 FT E-8 56045 A double-coated tape, 0.5 mil PET coated on 1.82 1.65 680.40 both sides with 1.4 mils of rubber based 7.3 54" 750 884.52 801.90 adhesive protected by an 80# densified kraft. 57711 FT 445 A double-coated tape, 1.0 mil PP coated on 3.12 2.83 2.40 both sides with 2.4 mils of rubber based 9.2 54" 750 1.516.32 1.375.38 1.166.40 adhesive protected by a 60# densified kraft. FT 8302 46482 A double-coated tape, 0.5 mil PET coated on 1.67 1.16 1.37 54" 750 the unwind side with 1.5 mils and 1.4 mils 6.9 811.62 665.82 563.76 on the liner side with rubber based adhesive 60" 750 901.80 739.80 626.40 protected by a 60# densified kraft. 87204 2.38 FT 8305 A double-coated tape, 0.5 mil PET coated on 2.16 1.83 both sides with 1.2 mils of rubber based 6.3 54" 750 1.156.68 1.049.76 889.38 adhesive protected by a 60# densified kraft. FT 8306 87184 3.01 2.62 2.22 A double-coated tape, 0.5 mil PET coated 54" with 2.1 mils of permanent rubber adhesive 6.9 750 1,462.86 1,273.32 1,078.92 on the unwind side and with 0.8 mils of removable acrylic adhesive on the liner side protected by a 60# densified kraft. FT 8307 58021 A double-coated tape, 0.5 mil PET coated 2.10 1.91 1.62 side with 1.9 mils on the unwind side and 1.0 7.7 54" 750 1.020.60 928.26 787.32 mils of rubber based adhesive on the liner side protected by an 80# densified kraft. FT 8312 87325 2.69 A double-coated tape, 1.0 mil PET coated 3.65 3.17 with 2.0 mils on the unwind side and 54" 750 1,773.90 1,540.62 1,307.34 11.4 3.2 mils of rubber based adhesive on the liner side protected by a 100# densified kraft. FT 8326-12PT BD 56570 A double-coated tape, 0.5 mil PET coated 1.96 CC CC with 2.0 mils on the unwind side and 1.5 16.0 54" 750 952.56 mils of rubber based adhesive on the liner side protected by a 12 point board. FT 8327 56099 A double-coated tape, 0.5 mil PET coated 1.84 1.28 1.51 with 2.0 mils on the unwind side and 54" 750 894.24 622.08 8.5 733.86 56392 1.5 mils of rubber based adhesive on the liner 60" 750 993.60 815.40 691.20 side protected by an 80# densified kraft.

RUBBER-B	ASED	ADHESIVES				<	11 (	
Product	Spec#	Description	Total Caliper (mil)	Width (in)	Length (ft)	1-4 Rolls	5-8 Rolls Price/MSI Price/Roll	9+ Rolls
DOUBLE-C	OATE	D FILM TAPE PRODUCTS	<b>i</b>			l		
FT 8337	56097	A double-coated tape, 0.5 mil PET coated with 1.9 mils on the unwind side and with 0.8 mil of rubber based adhesive on the liner side protected by an 80# densified kraft.	7.5	54"	750	2.04 991.44	1.85 899.10	1.57 763.02
FT 8345	58054	A double-coated tape, 0.5 mil PET coated on both sides with 2.4 mils of rubber based adhesive protected by a 60# densified kraft.	8.7	54"	750	3.15 1,530.90	2.74 1,331.64	2.32 1,127.52
FT 8368	56399	A double-coated tape, 0.5 mil PET coated with 1.6 mils on the unwind side and with 1.5 mils of rubber based adhesive on the liner side protected by a 60# densified kraft.	7.1	54"	750	сс	сс	1.72 835.92
FT 8382*	56553	A double-coated tape, 0.5 mil PET coated with 2.0 mils on the unwind side and 1.4 mils of rubber based adhesive on the liner side with protected by an 80# densified kraft.	8.4	54" 60"	750	1.54 748.44	1.26 612.32	1.07 520.02
FT 8382-12PT BD	56569	A double-coated tape, 0.5 mil PET coated with 2.0 mils on the unwind side and 1.4 mils of rubber based adhesive on the liner side protected by a 12 point board.	17.4	54"	750	2.00 972.00	1.64 797.04	1.39 675.54
FT 8383*	56573	A double-coated tape, 0.5 mil PET coated with 1.5 mils on the unwind side and 1.4 mils of rubber based adhesive on the liner side protected by a 60# densified kraft.	6.6	54"	750	1.44 699.84	1.18 573.48	1.00 486.00
FT 8392	56631	A double-coated tape, 0.5 mil PET coated with 1.5 mils high performance acrylic on the unwind side and 1.4 mils of aggressive rubber based adhesive on the liner side with protected by an 80# densified kraft.	7.6	54"	750	2.17 1,054.62	1.89 918.54	1.60 777.60
FT 8409	56156	A double-coated tape, 1.0 mil PP coated on the unwind side with 3.0 mils and on the liner side with 5.0 mils of rubber based adhesive protected by an 80# densified kraft.	13.3	54"	750	2.88 1,399.68	2.67 1,297.62	2.26 1,098.36
FT 8708	56222	A double-coated tape, 1.0 mil PP coated on both sides with 5.0 mils of rubber based adhesive protected by an 80# densified kraft.	15.3	54"	750	СС	СС	3.15 1,530.90

RUBBER-E	BASED	ADHESIVES				(<	12	
Product	Spec#	Description	Total Caliper (mil)	Width (in)	Length (ft)	1-4 Rolls	5-8 Rolls Price/MSI Price/Roll	9+ Rolls
DOUBLE-C	OATE	D TISSUE/CREPE TAPE	PRODU	JCTS		,		
FT C	18023	A double-coated tissue tape, 1.5 mils tissue coated on both sides with 1.5 mils of rubber based adhesive protected by a 60# densified kraft.	6.8	54"	750	1.97 957.42	1.79 869.94	1.52 738.72
FT 8203	87508	A double-coated tape, 4.2 mils crepe coated on the unwind side with 1.9 mils and with 1.4 mils of rubber based adhesive on the liner side protected by a 60# densified kraft.	9.9	54"	750	сс	сс	1.30 631.80
DOUBLE-C	OATE	D FOAM TAPE PRODUCT	s					
FM 2108	55946	A double-coated foam tape, 1/8", 4# white foam coated on both sides with 2.4 mils of rubber based adhesive protected by a 60# densified kraft.	133.3	54"	216	7.90 1,105.75	7.19 1,006.37	6.09 852.41
FM 2116	55904	A double-coated foam tape, 1/16", 4# white foam coated on both sides with 2.4 mils of rubber based adhesive protected by a 60# densified kraft.	70.3	<b>54"</b> 60"	<b>324</b> 324	5.40 1,133.74 1,259.71	4.91 1,030.86 1,145.40	<b>4.16</b> <b>873.40</b> 970.44
FM 2132	55913	A double-coated foam tape, 1/32", 6# white foam coated on both sides with 2.4 mils of rubberbased adhesive protected by a 60# densified kraft.	39.2	54" 60"	648 648	4.52 1,897.97 2,108.85	4.11 1,725.81 1,917.56	3.48 1,461.27 1,623.63
SINGLE-C	OATE	FOIL TAPE PRODUCTS						
FASSON 0802	50058	A single-coated foil tape, 2 mil foil coated on unwind side with 2.0 mils of rubber based adhesive protected by a 40# densified kraft.	6.5	60"	750	1.58 853.20	1.44 777.60	1.22 658.80
FT 0815	55864	A single-coated foil tape, 5 mil foil coated on unwind side with 1.2 mils of rubber based adhesive protected by a 60# densified kraft.	9.6	54"	750	3.58 1,739.88	3.26 1,584.36	2.76 1,341.36

## ACRYLIC ADHESIVES



Product	Spec #	Description	Total	Width	Length	1-4 Rolls	5-8 Rolls	9+ Rolls
			Caliper (mil)	(in)	(ft)		Price/MSI Price/Roll	

OOUBLE-C	OATE	D FILM TAPE PRODUCTS						
FT A	50082	A double-coated tape, 0.5 mil PET coated on both sides with 1.8 mils of acrylic adhesive protected by a 60# densified kraft.	7.5	54"	750	сс	сс	2.36 1,146.96
FT 333	46411	A double-coated tape, 0.5 mil PET coated on both sides with 2.1 mils of acrylic adhesive protected by a 60# densified kraft.	8.1	54"	750	3.17 1,540.62	2.88 1,399.68	2.44 1,185.84
FT 702P	55810	A double-coated tape, 0.5 mil PET coated on the unwind side with 1.8 mils and on the liner side with 2.7 mils of acrylic adhesive protected by an 80# PE-coated kraft.	9.5	49" <b>54"</b>	750 <b>750</b>	3.62 1,596.42 <b>cc</b>	3.29 1,450.89 <b>cc</b>	2.79 1,230.39 <b>1,355.94</b>
FT 8306	87184	A double-coated tape, 0.5 mil PET coated with 2.1 mils of permanent rubber adhesive on the unwind side and with 0.8 mils of removableacrylic adhesive on the liner side protected by a 60# densified kraft.	6.9	54"	750	3.01 1462.86	2.62 1,273.32	2.22 1,078.92
FT 8311	87065	A double-coated tape, 0.5 mil PET coated on both sides with 1.8 mils of acrylic adhesive protected by an 80# densified kraft.	7.7	54"	750	2.58 1,253.88	2.35 1,142.10	1.99 967.14
FT 8346	56177	A double-coated tape, 0.5 mil PET coated with 2.4 mils on the unwind side and 1.8 mils of acrylic adhesive on the liner side with protected by an 80# densified kraft.	9.0	54"	750	сс	сс	2.72 1,321.92
FT 8392	56631	A double-coated tape, 0.5 mil PET coated with 1.5 mils high performance acrylic on the unwind side and 1.4 mils of aggressive rubber based adhesive on the liner side with protected by an 80# densified kraft.	7.6	54"	750	2.17 1,054.62	1.89 918.54	1.60 777.60
FT 8397	56646	A double-coated tape, 0.5 mil PET coated with 1.2 mils on the unwind side and 1.0 mils of high tack acrylic adhesive on the liner side with protected by an 80# densified kraft.	6.1	54"	750	1.58 767.88	1.44 699.84	1.22 592.92

CRYLIC	ADHE	SIVES					14 (	
Product	Spec#	Description	Total Caliper (mil)	Width (in)	Length (ft)	1-4 Rolls	5-8 Rolls Price/MSI Price/Roll	9+ Rolls
OUBLE-0	OATE	D NON-WOVEN TAPE PR	ODUC	тѕ				
FT 8217	56128	A double-coated tape, 0.3 oz non-woven coated with 3.0 mils on the unwind side and 2.0 mils acrylic adhesive on the liner side protected by a 60# densified kraft.	8.2	60"	750	3.40 1,836.00	3.09 1,668.60	2.6 1,414.8
FT 8716	56709	A double-coated tape, 0.3 oz non-woven coated with 1.4 mils of high performance acrylic adhesive on both sides protected by a 60# densified kraft.	8.1	54"	750	сс	сс	1. <sup>1</sup> 869.9
OUBLE-0	OATE	D FOAM TAPE PRODUCT	s					
FM 2316	56078	A double-coated foam tape, 1/16, 4#" white foam coated on both sides with 2.1 mils of acrylic adhesive protected by a 60# densified kraft.	70.1	54"	216	5.28 739.03	4.80 671.85	4.2 589.2
FM 2333	56288	A double-coated foam tape, 1/32", 6# white foam coated on both sides with 2.1 mils of acrylic adhesive protected by a 60# densified kraft.	39.2	54"	648	4.75 1,994.54	4.32 1,813.99	3. 1,591.
FM 2454	56742	A double-coated foam tape, 1/32", 6# black foam coated on both sides with 1.9 mils of acrylic adhesive protected by an 60# densified kraft.	39.2	54"	648	4.83 2,028.14	4.39 1,843.38	3.4 1,616.
NSUPPO	RTED	TRANSFER TAPE PRODU	стѕ	I				
T 1115**	87567	An unsupported transfer tape coated on the unwind side with 5.0 mils of acrylic adhesive protected by an 80# densified kraft.	8.8	54" 58"	750 750	3.45 1,676.70 1,800.90	3.14 1,526.04 1,639.08	2.7 1,336.5 1,435.5
T 1120**	56087	An unsupported transfer tape coated on the unwind side with 1.8 mils of acrylic adhesive protected by an 80# densified kraft.	6.3	54"	540	сс	сс	1.8 657.8
T 1122 HLP . <b>51</b>	56143	An unsupported transfer tape coated on the unwind side with 2.0 mils of acrylic adhesive protected by an 84# PE-coated kraft.	8.5	48" 54"	540 540	2.92 908.24 1,021.77	2.39 743.39 836.31	2.1 653.1 734.8

## ACRYLIC ADHESIVES



Product	Spec#	Description	Total Caliper (mil)	Width (in)	Length (ft)	1-4 Rolls	5-8 Rolls  Price/MSI Price/Roll	9+ Rolls
UNSUPPOF	RTED	TRANSFER TAPE PRODU	CTS					
FT 1123**	56084	An unsupported transfer tape coated on the unwind side with 3.0 mils of acrylic adhesive protected by an 80# densified kraft.	7.5	54"	540	2.84 993.77	2.33 815.31	2.04 713.84
FT 1125 HLP . <b>FL</b>	56144	An unsupported transfer tape coated on the unwind side with 5.0 mils of acrylic adhesive protected by an 84# PE-coated kraft.	11.5	48" 54"	540 540	3.60 1,119.74 1,259.71	2.95 917.57 1,032.26	2.59 805.59 906.29
FT 1126**	56091	An unsupported transfer tape coated on the unwind side with 5.0 mils of acrylic adhesive protected by an 80# densified kraft.	9.5	54"	540	3.41 1,193.23	2.96 1,035.76	2.60 909.79
FT 1126-12PT BD	56614	An unsupported transfer tape coated on the unwind side with 5.0 mils of acrylic adhesive protected by a 12 point board.	17	55"	540	cc	cc	2.93 1,044.25
FT 1143**	58022	An unsupported transfer tape coated on the unwind side with 3.0 mils of acrylic adhesive protected by an 80# densified kraft.	7.3	54"	750	cc	cc	2.04 991.44
FT 1148**	56112	An unsupported transfer tape coated on the unwind side with 5.0 mils of acrylic adhesive protected by an 80# densified kraft.	9.5	54"	750	cc	cc	2.74 1,331.64
FT 1149**	56493	An unsupported transfer tape coated on the unwind side with 4.5 mils of acrylic adhesive protected by an 84# Natural Staflat liner.	11.6	54"	750	3.64 1,769.04	3.17 1,540.62	2.78 1,351.08
FT 1150**	56486	An unsupported transfer tape coated on the unwind side with 2.0 mils of acrylic adhesive protected by an 80# densified kraft.	6.3	54"	750	1.99 967.14	1.63 792.18	1.43 694.98
MS 1152	56627	An unsupported transfer tape coated on the unwind side with 2.0 mils of acrylic adhesive protected by an 58# PE-coated kraft.	6.2	54"	540	2.83 990.27	2.46 860.80	2.16 755.83
MS 1155	56628	An unsupported transfer tape coated on the unwind side with 5.0 mils of acrylic adhesive protected by an 58# PE-coated kraft.	9.2	54"	540	4.44 1,553.64	4.04 1,413.68	3.54 1,238.72
FT 1158	56385	An unsupported transfer tape coated on the unwind side with 5.0 mils of acrylic adhesive protected by an 80# densified kraft.	9.5	60"	750	4.29 2,316.60	3.90 2,106.00	3.42 1,846.80
MS 3032 SL . <b>AL</b>	56520	An unsupported transfer tape coated on the unwind side with 2.0 mils of acrylic adhesive protected by a 58# PE kraft.	6.2	54"	540	2.48 867.80	2.26 790.82	1.98 692.84

		Pricebook No. 1340   Supersedes Pric	JODOOK IV	. 1000					
ACRYLIC	ADHES	SIVES						16	
Product	Spec#	Description	Total Caliper (mil)	Width (in)	Length (ft)		1-4 Rolls	5-8 Rolls Price/MSI Price/Roll	9+ Rolls
DOUBLE-L	INERE	ED, UNSUPPORTED TRAN	SFER	TAP	E PRO	DUCT	S		'
FT 3008	87527	A double-linered unsupported transfer tape coated on the unwind side with 4.5 mils of acrylic adhesive protected by a 60# densified kraft and 2.5 mil PE liners.	10.4	54"	750		сс	сс	3.06 1,487.16
HEAT ACT	IVATI	ED PSA TAPE PRODUCTS							
HB 3081-53	55844	A heat activated/PSA tape coated on the unwind side with 1.0 mils and on the liner side with 3.0 mils of 100# densified kraft.	9.3	54"	750		сс	сс	2.20 1,069.20
SINGLE-C	OATE	FOIL TAPE PRODUCTS							
FASSON 0800	56548	A single-coated foil tape coated on the unwind side with 2.0 mils of non-printed foil acrylic adhesive protected by a 50# densified kraft.	7.7	60"	750		сс	сс	1.48 799.20
FT 0816	55866	A single-coated 5.0 mil foil tape coated on the unwind side with 4.5 mils of foil with acrylic adhesive protected by a 50# densified kraft.	12.9	54"	750		сс	сс	4.16 2,021.76

ULTRA H	IGH AI	DHESION					(<	17	>
Product	Spec#	Description	Total Caliper (mil)	Width (in)	Length (ft)		1-4 Rolls	5-8 Rolls Price/MSI	9+ Rolls
OOUBLE-0	COATE	D TISSUE/NON-WOVEN T	APE F	ROD	UCTS	ı			
UHA 8272/100 (A)	56238	A double-coated tissue tape, 10# tissue coated on unwind side with 3.0 mils and on liner side with 2.4 mils of ultra high adhesion adhesive protected by a 100# densified kraft.	11.2	54"	750		сс	СС	2.96 1,438.56
UHA 8706 (R)	87521	A double-coated non-woven tape, of 0.3 oz. non-woven coated on both sides with 3.0 mils of ultra high adhesion adhesive protected by an 80# densified kraft.	13.4	54"	750		СС	СС	2.87 1,394.82
UHA 8791 (R)	56249	A double-coated non-woven tape, 0.3 oz. non-woven coated on the unwind side with 2.9 mils and on the liner side with 5.2 mils of ultra high adhesion adhesive protected by an 80# densified kraft.	13.4	54"	750		4.51 2,191.86	3.41 1,992.60	3.15 1,749.60
UNSUPPO	RTED	TRANSFER TAPE PRODU	стѕ						
UHA 1182 (A)	58982	An unsupported transfer tape coated on the unwind side with 2.0 mils ultra high adhesion adhesive protected by an 84# PE-coated kraft.	8.5	54"	540		сс	сс	3.60 1,259.71
UHA 1185 HLP (A)	56398	An unsupported transfer tape coated on the unwind side with 2.0 mils ultra high adhesion adhesive protected by an 84# PE-coated kraft.	8.5	54"	540		СС	СС	4.78 1,739.10
UHA 1191 (R)	56317	An unsupported transfer tape coated on the unwind side with 11.0 mils ultra high adhesion viscoelastic adhesive protected by an 80# densified kraft.	15.3	54" 60"	540 540		4.34 1,518.65 1,687.39	3.94 1,378.68 1,531.87	3.46 1,210.72 1,345.25
UHA 1194 <b>FL</b> (R)	56057	An unsupported transfer tape coated on the unwind side with 2 mils ultra high adhesion viscoelaastic adhesive protected by an 80# densified kraft.	6.3	54"	540		сс	сс	2.21 773.32
UHA 1198 (R)	56240	An unsupported transfer tape coated on the unwind side with 8.0 mils ultra high adhesion viscoelastic adhesive protected by an 80# densified kraft.	12.6	54" 60"	540 540		4.04 1,413.68 1,570.75	3.67 1,284.21 1,426.90	3.22 1,126.74 1,251.94
DOUBLE-	LINER	ED, UNSUPPORTED TRAN	SFER	TAP	E PR	DUCT	S		
UHA 3099 (R)	56224	A double-linered, unsupported transfer tape coated on the unwind side with 20.0 mils ultra high adhesion viscoelastic adhesive protected by an 80# densified kraft.	28.3	54"	540		12.95 4,531.46	11.26 3,940.10	9.88 3,457.21







Accelerated Aging: A simulation used to predict the effects of natural aging. Procedures used are elevated temperatures, high-intensity light, high humidity or all of the above cycled.

**Acrylic Adhesive:** A pressure sensitive adhesive formed by the polymerization of acrylic ester monomers. These adhesives exhibit high temperature resistance, excellent UV resistance and good aging characteristics.

Activate: To change an adhesive film from a dry stage into a useful tacky state.

Adhere: To bond; to cause two surfaces to be held together by adhesion.

**Adhesion:** The molecular force of attraction or bond between any adhesive it contacts. The strength of the attraction or bond is determined by the surface energy of the material. Pressure sensitive adhesive performance is measured in ounces, pounds or metric per inch width as it is pulled at a 180° angle at the rate of 12 inches per minute, usually off a polished stainless steel panel.

Adhesion Buildup: An increase in the peel adhesion value of a pressure sensitive adhesive tape after it has been allowed to dwell on the applied surface. Result of the adhesive "wetting out" on the substrate.

**Adhesive:** The pressure sensitive adhesive layer applied to a tape, which will usefully hold two surfaces together by intimate contact.

Adhesive Confusion: A term used to describe the situation that can occur when unwinding a roll of tape. When adhesive bonds to both the unwind and liner side of the paper used, the adhesive is "confused". The adhesive should always bond to the liner side of the paper. This problem can be caused by poor differential in release coating systems, winding tension, excessive age or heat and other conditions.

Adhesive Residue: Following tape removal, an adhesive deposit left behind on a substrate to which the tape was attached.

Adhesive Sandwich: A pressure sensitive adhesive sandwiched between two release liners with a different release coating so the adhesive can be exposed on one side, allowing it alone to be applied to a surface.

**Adhesive Splitting:** Splitting occurs when part of an adhesive layer remains on the surface from which the tape was removed.

**Adhesive Transfer:** The transfer of adhesive from its normal position to the surface from which it was just unwound. Transfer tapes demonstrate this phenomenon because of the differential release on the release liner.

Alligatoring: Term describing the appearance of an adhesive coated film that is cracked into large segments resembling the hide of an alligator.

Ambient Temperature: Normal fluctuating temperatures in an environment where temperatures are not closely controlled, as in a typical warehouse, boxcar, office building, etc.

Anchorage: The degree of adhesion to a surface. Insufficient anchorage results in the adhesive transferring to another surface when the tape is removed. This is distinct from splitting, where only a layer of adhesive is transferred.

**Aqueous:** Adhesives that use water as the carrier system.

A.S.T.M.: American Society for Testing Materials.

**Back Split:** Slits/score in the release liner to facilitate easy removal by hand.

**Backing:** An inexact term used in the pressure sensitive adhesive industry. When referencing double coated tapes and single-coated products, it is the release liner. When referencing self-wound tapes, it is the material to which the adhesive is bonded.

Basis Weight: The weight of a ream of paper. Traditional version is given in pounds per ream. The modern version is given in grams per square meter.

**Bleeding:** The undesirable penetration of the adhesive onto the surface to which the tape is applied.

**Blocking:** Layers of tape stuck together in roll form, preventing separation without damage.

Bologna Slit: A slitting process in which the roll of tape is kept stationary and a rotating blade cuts through the material. The term bologna is used because of the similarity of slicing bologna meat.

**Bond:** The adhesion of a pressure sensitive adhesive tape to the surface to which it has been applied.

**Bond Strength:** The amount of force required to separate the joined surfaces

**Buckling**: A deformation of a layout of tape that appears laterally across the roll, causing an opening between layers.

**Butt Cut:** Butt cutting refers to a conversion process whereby a die creates individual pieces by cutting through the laminated material and adhesive. In butt cutting, there is no waste area left between the adjoining

Butt Splice: A splice made by joining tape end to end without overlapping. The splice is assembled by a thin single-coated tape centered on both sides.

**Caliper:** A measurement of thickness expressed in thousandths of an inch (English units) or millimeters (metric units).

**Carrier:** When referring to double-coated tapes, it is the thin medium to which the adhesive is anchored on both sides.

Centigrade: A metric scale of temperature which features 0° and 100° as the freezing and boiling points of water. To convert Centigrade to Fahrenheit, multiply by 1.8 and add 32: e.g.,  $(100^{\circ}\text{C x } 1.8)$  plus 32 = 212°F.

Channeling: See Buckling.

Coater: A machine composed of an unwind stand, coating devices, rollers, ovens and windup stand used to apply adhesive to backing and/or carriers to produce a pressure sensitive tape.







**Coating Weight:** The weight of an adhesive per unit area, commonly expressed in grains per 24 square inches. Also known as adhesive mass or mass weight.

Cohesion: See Cohesive Strength.

**Cohesive Strength:** The internal strength of an adhesive and its ability to resist splitting caused by external forces. It is measured by its resistance to forces parallel to the surface. Good cohesion is necessary for clean removal

**Cold Flow:** The extremely slow flow or minute movement of a pressure sensitive adhesive under stress on a surface over a period of time. It accounts for increased adhesion and relates to oozing adhesive from the edges of a roll.

**Conformability:** The ability of a tape to fit snugly or to make total contact with the contours of a surface without creasing or folding.

Core Plugs: Metal, wood or plastic plugs used to prevent crushing or damage to the paper core.

**Creep:** The small, slow movement of the adhesive caused by continuing stress due to low cohesive strength.

Crepe Paper: Generally kraft paper that has small "folds" in it to impart desirable features such as stretch and conformability with good tensile strength.

**Cross Direction:** The direction at right angles to the machine direction of a web to which it runs through the machine.

**Cross-Linked:** A three-dimensional chemical bridge formed between molecular chains and activated normally by heat. An improvement in shear resistance, high temperature resistance and oil or solvent resistance will normally result.

**Cure:** To change the properties of an adhesive by chemical reaction or heat alone or in combination with or without pressure. (See Cross-Linked.)

**Delamination:** The undesirable separation or buckling of the release liner from an adhesive layer, usually in the parallel direction of the web. Most often found during high humidity, causing the paper to grow.

**Deterioration:** Undesired change in properties of an adhesive caused by aging, weathering, etc.

**Die Cut:** The thin line of severance between a pressure sensitive tape or label and its matrix, made by the cutting edge of a die.

**Dimensional Stability:** The property of a material that relates to the constancy of its dimensions.

**Dishing:** See Telescoping.

**Doctor Blade:** An adjustable knifelike bar that controls the amount of adhesive or lacquer applied to the coating roll prior to its transfer to a web.

**Double-coated:** A pressure sensitive tape consisting of a carrier with similar or dissimilar adhesives applied to both surfaces.

Double-Faced: See Double-coated.

**Double-Sided:** A double-coated tape incorporated with two release liners.

Easy Release: See Release.

**Edge Curl:** The peeling back or lifting of the outer edge of a tape that has been applied to a curved surface.

**Elastomer:** Generally a rubber-like substance easily deformed by a force, but which returns to its original shape. Elastomers are the basis of most pressure sensitive adhesives.

**Elongation:** The distance a tape will stretch lengthwise before breaking. Expressed as a percentage of original length. Elongation is not necessarily an indication of conformability.

**Emboss:** To create a design on a surface, caused by letters, figures, patterns, etc., to be raised by pressure of dies.

**Extrude:** To expel or force through a measured orifice; to apply a molten thermoplastic adhesive onto a web.

**Face Side:** The unlined side of a double-coated tape.

Fall-off: Tape pulls completely away from the surface to which it is applied and drops off.

Feel: The degree of stickiness of the adhesive, determined by touching with one's finger. This is often a misleading test to determine adhesion.

Fiber Filled: Refers to an adhesive that has had fibers added to it. These fibers help in conversion of the products by preventing adhesive flow. Fiber filling does allow for as much elongation as a regular transfer tape. It does not provide as much stability in conversion as a "carriered"

**Firm:** Refers to the resistance of an adhesive to flow.

**Fisheyes:** Relatively small deformations (pock marks) in the adhesive caused by the entrapment of air between the adhesive side and the backside of the previous layer on the roll. This is not an indication of a quality defect and is generally found in new or fresh tape; it diminishes during storage.

Flagging: A lifting or peeling away of the end of a tape wound on a spiral-wrap application.

Flame Resistance: The ability of a tape to withstand exposure to a flame. Flame resistant (fire-retardant, self-extinguishing) materials will burn when exposed to flame, but will not continue to burn after the flame is removed. Burning rate, smoke density, toxicity of fumes and melt drippings are important factors in assessing flame resistance.

Flame Retardant: A material that resists burning when exposed to flame.

**Flowout:** The ability of an adhesive to level after application. See

F.O.B.: Free on board. Indicates that a quoted price includes the freight cost from the original shipping point.

**Gapping:** That type of deformation wherein any two layers become separated from each other, causing an opening.







**Ghosting:** A haze-like deposit of adhesive left by a tape after its removal.

**Grain:** The machine direction of paper as opposed to the cross direction. Also, a measurement of pressure sensitive adhesive on a given area.

**Gravure Coater:** Applies a specific amount of coating controlled by an etched roll to a surface.

**Heat Activated:** To soften a dried thermoplastic adhesive film to a sticky state by application of heat. After bringing the adhesive to its melting point, the process of bonding can then take place.

**Heat Aging:** A controlled environment to provide an indication of any deterioration of an end use or finished product.

**Heat Resistance:** The ability of a tape to withstand high temperature exposure after application. Clean removal after exposure may or may not be important, depending on the intended function of the tape and the type of adhesive.

High Release: See Release.

Hold: See Adhesion.

**Holding Power:** The ability of a tape to resist slippage under shear stress. Usually measured by applying a standard area of tape to a vertical test panel and suspending a standard weight on the free end of the tape.

Hot Melt: A pressure sensitive adhesive applied to the liner or backing in a hot molten form that cools to form a conventional pressure sensitive adhesive.

Inhibitor: A substance that slows down chemical reaction. Inhibitors are sometimes used in certain adhesives to prolong their life or storage.

**Injection Molding:** A molding procedure whereby heat softened plastic is forced from a screw cylinder into a relatively cool cavity, giving it the desired shape.

**Instron:** A test instrument used to determine tensile and adhesion values.

**Kiss Cut:** Kiss cutting refers to a die cutting method in which the die cuts through the laminated material and adhesive and stops before rupturing the liner. In this process the waste matrix is often removed.

**Knife Coating:** A method of adhesive coating. It essentially consists of a rigid adjustable blade mounted above a roll. The adhesive is pumped behind the blade so that it is pulled under the blade.

Kraft: A sulphate wood pulp paper.

**Lacquer:** A solution that is applied to release liners, forming a thin protective film with special properties after the solvents have evaporated.

**Lap Splice:** A splice made by overlapping the ends.

**Legging:** Legging can be exhibited when unwinding a roll or in the end use application. When peeling back adhesive backed products, one can witness the adhesive bonding to both the end use and laminated materials. When this occurs, the adhesive strings between both materials upon removal. In an end use application, legging can be the result of plasticizer migration. In a roll of tape, it can be the result of an inadequate release system.

Lever Cutter: A machine used to cut large rolls of tape into narrow widths by rotating a large cylindrical blade and the roll of tape.

**Lifting:** Refers to the condition when a tape, of its own accord, comes away from the surface to which it was applied.

Liner: See Release Liner.

**Liner Side:** In roll form it is referred to as that side of the roll protected by the release liner.

Log Roll: See Master Roll.

Low Release: See Release.

Machine Direction: The direction of tape parallel to its forward motion on a coater.

Mass: Sometimes used as another name for the adhesive.

Mass Weight: See Coating Weight.

Master Roll: A roll of tape, normally 54" wide, wound in a predetermined length of usually 750 feet.

Matrix: The total construction of a pressure sensitive adhesive system surrounding a die-cut form that has been removed.

**Memory:** The property of a material to attempt to return to its original dimension after being distorted.

**Migration:** The slow movement of one or more components from a substrate that chemically attacks the adhesive, or vice versa. Some plastic films and foams contain plasticizers that migrate into the adhesive and soften it.

Mils: Used in describing adhesive coat weight and thickness. The term means thousandths of an inch.

**Monomer:** The basic building block from which a polymer chain is made. Many monomer molecules are chemically joined to make up the polymer.

**MVTR:** Moisture Vapor Transmission Rate. The term applies to a property of films that allows moisture vapor to migrate through the material. Most commonly used in the medical adhesive industry for wound care devices.

Mylar Film: See Polyester. (Registered trademark of E. I. du Pont de Nemours and Company, Inc.)

Natural Rubber: Derived from the latex of rubber trees. It imparts tack and adhesion properties to pressure sensitive adhesives. See Rubber Based Adhesives.

Non-blocking: Pertaining to an adhesive film that will not adhere to itself and/or other surfaces under normal stacked conditions.

Non-oriented Film: Film that has not been subject to stress to align the polymer chains and improve properties.

Non-woven Materials: Random interlocked paper tissues or synthetics bonded to each other with heat pressure or resinous materials.

**Oozing:** Refers to the condition wherein the sides of a roll become sticky or tacky due to the flowing out of adhesive between the layers of tape.

Orange Peel: The appearance of a surface irregularity resembling an orange skin in appearance.

Overrun: A quantity of material in excess of the amount ordered. Trade practices permit  $\pm$  10% to  $\pm$  20% tolerance for custom overruns and underruns.

**P.S.T.C.:** Pressure sensitive Tape Council.

Pattern Adhesive Coating: Refers to the width and spacing arrangement of adhesive laid down parallel to machine direction, across the width of a pressure sensitive stock, during its manufacture.

**Peel Adhesion:** The force required to remove a pressure sensitive tape from a standard test panel at a specified angle and speed under specified conditions. Usually expressed in ounces per inch width.

**Permanent Adhesive:** An adhesive characterized by relative high ultimate adhesion to a wide variety of surfaces.

Plasticizer: A substance added to materials to impart flexibility.

Plasticizer Migration: Loss of plasticizer from an elastomeric compound that is absorbed into the adhesive. The result is a softening of the adhesive to the point of adhesion failure.

**Polyester:** A strong film having good resistance to moisture, solvents and many other chemicals. It is usually clear and can be purchased in different mil thicknesses.

Polyethylene: An extruded, tough, stretchy film having limited temperature resistance but good moisture barrier properties.

**Polymer:** A large molecular chain made up of identical monomer units to produce a film-forming elastomer. This is the base material of films and adhesives.

**Polymerization:** The chemical reaction by a catalyst, heat, light or electron radiation in which relatively small molecules link up to form a macromolecule.

**Polypropylene:** A polyolefin plastic similar in properties to polyethylene but with higher temperature capability and greater strength.

Porosity: The extent to which a material will allow air, liquid or other matter to permeate through it.

Post Cure: The phenomenon peculiar to radiation curing wherein exposure to ultraviolet radiation will continue to react chemically for a period of minutes to hours after exposure.

Pot Life: The time period during which the adhesive remains workable before coating. Some of the phenomena that can occur are gel particles, thickening, foaming, etc.

Pressure Sensitive: A term used to designate a distinct category of adhesive tapes that in dry (solvent free) form are aggressive and permanently tacky at room temperature and adhere to a variety of surfaces without the need of more than finger or hand pressure. They require no activation by water, solvent or heat and have sufficient cohesive strength to be handled with the fingers.

Puckers: A distortion associated with laminated constructions. Puckers appear as ripples on the surface, exhibiting separation of the two laminated components and generally run in the cross machine direction.

Quick-Stick: See Tack.

Relative Humidity: The percent of moisture in the air at any given temperature that it can retain without precipitation.

Release: The adhesion level between a release liner and the adhesive/carrier combination. High or tight release means that the liner is more difficult to remove, producing high release adhesion. Low or easy release means that the liner removes readily.

**Release Coating:** Refers to a very thin coating applied to the release liner to allow the tape to unwind and/or removal of the adhesive layer.

Release Liner: A backing on one or both sides that protects the adhesive until use. The liner is removed and discarded before application. Most frequently found on double coated tapes and labels.

Removable Adhesive: A pressure sensitive adhesive characterized by low ultimate adhesion to a wide variety of surfaces.

Residue: See Adhesive Residue.

Resin: Usually a polymer that imparts tackiness and adhesion to a pressure sensitive adhesive.

**Reverse-Roll Coating:** The adhesive coating is premetered between rolls and then wiped off on the web. The amount of adhesive is controlled by the metering gap and by the rotation speed of the coating roll.

Rewind Slit: A slitting process whereby a roll of tape is unwound and run through a set of shear or score knives to be slit and then wound up into individual rolls.

RTS: Request for Technical Service. An Avery Dennison Specialty Tape Division form that helps define end use application needs. RTSs are electronically transmitted to the Technical Marketing Department where our staff can immediately start working on product recommendations.

Rubber Based Adhesive: An adhesive made from one or more synthetic or natural elastomers and tackifiers to produce a pressure sensitive adhesive. These adhesives are characterized by higher quick stick and adhesion than acrylics; however, they lack aging and weather resistance.

**SAFT:** Shear Adhesion Failure Temperature. This test measures the cohesive strength of a product when subjected to heat. A shear test is conducted in an oven that gradually and continuously rises in temperature. The temperature at which the product finally fails is called its SAFT temperature.

**Self-extinguishing:** A somewhat loosely used term describing the ability of a material to cease burning once the source of flame has been removed.

**Self-wound:** A roll of material adhesive coated on one side with no release liner, and is wound on its backing (e.g., masking, transparent and cloth duct tapes).

Shear: See Shear Adhesion.



**Shear Adhesion:** The ability of a tape to resist slippage under shear stress. It is measured by applying a standard area of tape to a vertical test panel and suspending a standard weight on the bottom portion of the tape. Measurement is given in minutes until failure and/or distance slipped.

**Shear Cutter:** A slitting machine that slits tape with two rotating knives duplicating a scissor action.

**Shear Strength:** The resistance of an adhesive film to slipping when a load is applied along the plane.

Shelf Life: The period of time during which a product can be stored under specific conditions and still remain suitable for use.

**Silicone:** A unique polymer system that can be a very effective release coating or pressure sensitive adhesive capable of functioning at extremely high temperatures.

Silicone Adhesive: Pressure sensitive adhesives having remarkable stability through a wide temperature range of -100°F to above 300°F.

**Single Faced:** The adhesive is applied to only one side of the backing.

Slip Sheet: A release treated sheet used to protect the edges of rolls from sticking to each other while stacked.

**Solvent:** In pressure sensitive technology, it is the liquid used to dissolve various adhesive ingredients to facilitate their application to a substrate during coating.

**Specification:** A document that spells out the requirements for a particular tape or group of tapes. It normally details the physical properties, performance requirements, general composition, sampling procedure and packing characteristics.

Splice: A point at which two separate lengths of tape are joined together.

Split Back: See Back Split.

**Spooling:** The process of winding narrow slit widths of tape much like fishing line is wound on a reel.

**Spool Wound:** A conversion process wherein a bulk roll is slit into a narrow width and wound on a core similar to a spool of thread. Spool winding permits very long rolls of converted material. This type of conversion requires specialized equipment.

**Stain:** A discoloration of a substrate to which the tape was applied, caused by the pressure sensitive adhesive.

Streaks: The absence of a coating that is readily distinguished from the normal uniform appearance. Streaks generally occur in the machine direction and can be caused by a foreign object stuck on the pattern bar.

Stringiness: A condition of the adhesive in which it feels very soft and gooey and on close examination, relatively long "legs" and "strings" of adhesive can be pulled.

**Stub Roll:** A short roll of material.

**Styrofoam:** A bubble-type polystyrene plastic made by inflating cells of polystyrene with air (Dow Chemical Company).

**Substrate:** The surface to which a pressure sensitive tape is applied.

**Surface Energy:** A term typically used to describe the ease with which a material can be made pressure sensitive. High surface energy materials like metals are usually easier to bond to than low surface energy materials like polypropylene. Surface energy is measured in dynes.

Surface Tension: Refers to the molecular energy of a liquid, allowing it to flow on a surface. Consider an automobile that has not been waxed. When water contacts the surface, it spreads in large puddles. By comparison, on a freshly waxed car the water will bead up into small spheres. The unwaxed surface demonstrates high surface energy allowing the water to flow. The waxed car is an example of low surface energy. The liquid (adhesive) does not flow out.

**Tack:** The property of a pressure sensitive adhesive that allows it to adhere to a surface under very light pressure with a minimum of contact time. It refers to the ability of the adhesive to quickly wet out the surface contacted.

Tackifier: A material such as rosin ester added to synthetic resins or adhesives to improve the initial tack of the adhesive film.

**Tearing:** Breaking of a tape during unwind.

**Telescoping:** A sideways sliding of the tape layers, one over the other, in such a manner that the roll looks like a funnel or telescope.

**Tensile Strength:** The force required to break a piece of tape by pulling on opposite ends. Results are usually expressed in pounds per inch width in the machine direction.

Thermoplastic: A substance capable of being melted by means of heat repeatedly.

Thermoplastic Adhesives: Adhesives that become softer as temperature increases regardless of how many times they are exposed to heat. Pressure sensitive adhesives normally are thermoplastic in nature.

Thermosetting Adhesive: An adhesive coating that becomes rigid or non-meltable when heated with or without pressure and remains set regardless of subsequent temperature cycles.

Thickness: See Caliper

Thumb Appeal: See Feel.

Tight Release: See Release.

**Tissue:** Typically referred to as a carrier in a double-coated product. A tissue carrier can make slitting and die cutting easier by preventing adhesive flow. Tissue differs from film carriers in that it allows for some elongation and permits more conformability.

Toxicity: A term referring to the physiological effect of absorbing a poisonous substance into the system either through the skin mucous membrane or respiratory system. Solvents usually have high, medium or low toxicity, depending on their concentration. Four hundred parts per million is the maximum amount permissible in the air for safe conditions.

**Transfer:** Normally refers to "adhesive transfer". Any tape component that moves from its proper place to some other position during unwind or removal.

**Transfer Tape:** An unsupported pressure sensitive adhesive on a release liner that has been release coated on both sides with different release levels.



Tunneling: A condition characterized by an incomplete bond with longitudinal portions to form tunnel-like structures.

Two-Sided Tape: See Double Coated Tape.

**UHA™:** Ultra High Adhesion adhesive products. A patented adhesive technology from Avery Dennison. These UHA products extend typical properties of rubber and acrylic products with respect to high temperatures and shear performance. The rubber based UHA products bond exceptionally well to low surface energy substrates and maintain shear performance to well over 200°F. The acrylic products have excellent UV and solvent resistance and perform at temperatures as high as 500°F.

**Ultimate Adhesion:** The maximum adhesion available from a pressure sensitive adhesive, determined by the force necessary to remove a strip of tape from a surface after an extended period of time.

Unbleached: A term applied to paper or pulp that has not been treated with bleaching agents.

**Unwind:** The act of unwinding tape from a roll.

**Unwind Adhesion:** The force required to remove tape from the roll.

**Unwind Side:** That side of the tape exposed as it unwound from a roll.

UV: Ultraviolet light. UV is an important factor to consider when choosing an adhesive. UV can degrade some adhesives with extended exposure.

Void: An uncoated area of either the adhesive or release coating of the tape.

Web: A term synonymous with backing or liner.

**Wetting:** The ability of an adhesive to flow uniformly over the laminated surface to which it is bonded.

Wrinkles: Distortion in the material represented by creases that interrupt the continuous, smooth nature of the web. Wrinkles can be encountered running in any direction on the web.

**Zone Coating:** See Pattern Coating.