

# Scotch<sup>®</sup>

## ATG Tapes

924 • 926 • 928 • 969 • 976 • 970XL

### Technical Data

August, 2000

|                            |                   |  |
|----------------------------|-------------------|--|
| <b>Product Description</b> | <b>Tape 924</b>   | 0.002 in. (0.05 mm) thick adhesive transfer tape                                   |
|                            | <b>Tape 926</b>   | 0.005 in. (0.13 mm) thick high performance adhesive transfer tape                  |
|                            | <b>Tape 928</b>   | 0.002 in. (0.05 mm) thick high-tack/low-tack double coated tape                    |
|                            | <b>Tape 969</b>   | 0.005 in. (0.13 mm) thick high-tack adhesive transfer tape                         |
|                            | <b>Tape 970XL</b> | 0.001 in. (0.025 mm) thick adhesive transfer tape                                  |
|                            | <b>Tape 976</b>   | 0.002 in. (0.05 mm) thick high-tack adhesive transfer tape                         |
|                            |                   | Tapes are reverse wound on 1-inch diameter cores for use in Scotch ATG dispensers. |

### Construction

| Products                                | Tape 924               | Tape 926               | Tape 928               | Tape 969               | Tape 976               | Tape 970XL                           |
|---|------------------------|------------------------|------------------------|------------------------|------------------------|--------------------------------------|
| Adhesive Type:*                         | 400                    | 350                    | 400/1000               | 300                    | 300                    | 400                                  |
| Adhesive Carrier:                       | None                   | None                   | Tissue                 | None                   | None                   | None                                 |
| Release Liner:                          | Tan Paper<br>*DK       | Tan Paper<br>*DK       | White Paper<br>*PCK    | Tan Paper<br>*DK       | Tan Paper<br>*DK       | White Paper with<br>Red Printing *DK |
| Approximate Thickness:<br>Release Liner | 0.004 in.<br>(0.10 mm) | 0.004 in.<br>(0.10 mm) | 0.006 in.<br>(0.15 mm) | 0.005 in.<br>(0.13 mm) | 0.004 in.<br>(0.10 mm) | 0.0025 in.<br>(0.065 mm)             |
| Tape Only                               | 0.002 in.<br>(0.05 mm) | 0.005 in.<br>(0.13 mm) | 0.002 in.<br>(0.05 mm) | 0.005 in.<br>(0.13 mm) | 0.002 in.<br>(0.05 mm) | 0.001 in.<br>(0.025 mm)              |
| Tape Color:                             | Clear                  | Clear                  | White                  | Clear                  | Clear                  | Clear                                |

\*DK = densified kraft    PCK = polycoated kraft

\*Adhesive System 350 is a firm acrylic pressure-sensitive adhesive system. It features very high adhesion to a variety of surfaces, excellent shear holding power, high temperature resistance and excellent UV resistance.

Adhesive System 400 is a medium-firm acrylic pressure-sensitive adhesive system. It features an excellent balance of good initial adhesion (quick stick) and good shear holding power.

Adhesive System 400 is a medium-firm acrylic pressure sensitive adhesive system. It features high initial adhesion to a wide variety of materials and good shear holding power.

Adhesive System 300 is a soft acrylic pressure-sensitive adhesive system. It features very high initial adhesion and good shear holding power to a wide variety of materials including most plastics.

Adhesive System 1000 is a low-tack, repositionable acrylic pressure-sensitive adhesive.

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## Typical Physical Properties and Performance Characteristics

**Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.**

| Products                                    | Tape 924   | Tape 926                      | Tape 928  | Tape 969  | Tape 976                    | Tape 970XL                  |
|---|--|-------------------------------|---|---|-----------------------------|-----------------------------|
| Adhesion to Steel:<br>(ASTM D3330)          | 25 oz./in.<br>(27 N/100 mm)  | 150 oz./in.<br>(163 N/100 mm) | 3 oz./in. low-tack side<br>12 oz./in. high-tack side<br>(13 N/100 mm) | 75 oz./in.<br>(82 N/100 mm)   | 60 oz./in.<br>(66 N/100 mm) | 14 oz./in.<br>(15 N/100 mm) |
| Relative High Temperature Operating Ranges: |  |                               |   |   |                             |                             |
| Long Term (days, weeks)                     | 180°F<br>(82°C)  | 300°F<br>(149°C)              | 120°F<br>(49°C)   | 180°F<br>(82°C)   | 180°F<br>(82°C)             | 180°F<br>(82°C)             |
| Short Term (minutes, hours)                 | 250°F<br>(121°C)   | 450°F<br>(232°C)              | 180°F<br>(82°C)   | 250°F<br>(121°C)  | 250°F<br>(121°C)            | 250°F<br>(121°C)            |
| Relative Solvent Resistance:                | Good   | Very Good                     | Fair  | Medium  | Medium                      | Good                        |
| U.V. Resistance:                            | Excellent  | Good                          | Good  | Not recommended for direct exposure to sunlight or other sources of U.V. light. |                             | Excellent                   |
| Shelf Life of Tape in Roll Form:            | 24 months from date of manufacture when stored in original cartons at 70°F (21°C) and 50% relative humidity. |                               |   |   |                             |                             |

## Available Sizes

|                            |  |  |                                      |  |                                      |                                      |
|----------------------------|--|--|--------------------------------------|--|--------------------------------------|--------------------------------------|
| Available Lengths:         | 36 yd. (32.9 m)<br>60 yds. (54.9 m)    | 18 yds. (16.5 m)<br>36 yds. (32.9 m)   | 18 yds. (16.5 m)<br>36 yds. (32.9 m) | 18 yds. (16.5 m)<br>36 yds. (32.9 m)   | 36 yds. (32.9 m)<br>60 yds. (54.9 m) | 36 yds. (32.9 m)<br>60 yds. (54.9 m) |
| Available Widths:          | 1/4 in., 1/2 in.,<br>3/4 in. and 2 in. | 1/4 in., 1/2 in.,<br>3/4 in. and 2 in. | 1/2 in. and 3/4 in.                  | 1/4 in., 1/2 in.,<br>3/4 in. and 2 in. | 1/4 in., 1/2 in.<br>and 3/4 in.      | 1/2 in. and 3/4 in.                  |
| Normal Slitting Tolerance: | ± 1/32 in. (0.8 mm)                    |  |                                      |  |                                      |                                      |
| Core Size (ID)             | 1.0 in. (25.4 mm)                      | 1.0 in. (25.4 mm)                      | 1.0 in. (25.4 mm)                    | 1.0 in. (25.4 mm)                      | 1.0 in. (25.4 mm)                    | 1.0 in. (25.4 mm)                    |

## 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. Typical surface cleaning solvents are isopropyl alcohol and water (rubbing alcohol) or heptane. **Note:** Be sure to 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.

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## General Information

- Tape 928 is a low-tack adhesive which allows removal from many papers, foils, and films without adhesive residue and will not cause delamination of most paper stocks. In many cases, the tape can be reused numerous times.
- Tape 928 will not bleed into most paper stocks which helps minimize possible discoloration or staining.
- Flexible materials will adhere better to tape 928 than will rigid materials (e.g., paper vs. cardboard). It may also be necessary to remove curl from certain materials to avoid having them pull away from the low-tack adhesive of tape 928 over a period of time.
- The extended liner (XL) on tape 970XL provides a dry edge on each side of the roll for adhesive protection. Liner extension is 1/16 in. (1.6 mm) on each side which decreases coating 1/8 in. (3.2 mm) overall.
- ATG tapes are a reverse wound version of standard 3M Adhesive Transfer and Double Coated tapes for use in the Scotch® ATG hand-held dispensers.

Comparable 3M tapes are:

| ATG Tape | Comparable 3M ATT/DC Tape |
|----------|---------------------------|
| 924      | 465                       |
| 926      | 9485                      |
| 928      | 9416                      |
| 969      | 950                       |
| 970XL    | 920XL                     |
| 976      | 927                       |

**Note:** The user should carefully evaluate the product under actual use conditions to determine whether it is fit for a particular purpose and suitable for the user's method of application.

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## Application Ideas

### • Tape 924

Tape 924 is ideal for bonding a wide variety of similar and dissimilar materials such as metals, glass, wood, papers, paints, and many plastics. Some application ideas include:

- Mounting promotional items, posters, etc.
- Core starting.
- Mounting picture frame mat boards and dust covers.

### • Tape 926

Tape 926 is ideal for applications requiring high bond strength, high shear strength and high temperature performance. Some application ideas are:

- Nameplates on award plaques.
- Bonding foam insulation.
- Bonding folders and boxes that have a higher degree of memory.

### • Tape 928

Many repositionable, reusable, or reclosable uses such as:

- Reclosable bags or envelopes
- Core starting and end tabbing of papers, foils, and films
- Novelty items
- Removable stickers and labels
- Point of purchase displays
- Book inserts
- Mounting promotional items
- Removable/changeable advertisements
- Temporary hold for protective packaging materials, such as foam or cardboard, used during shipment of manufactured goods

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## Application Ideas (continued)

- **Tapes 969 and 976**

Tapes 969 and 976 are ideal for bonding materials with glossy coatings where an aggressive adhesive with high initial adhesion is desired. Some application ideas are:

- Folders and boxes
- Attach fabric swatches in sample books
- Assemble point-of-purchase displays

- **Tape 970XL**

This adhesive is ideal for adhesion to many paper materials but also works well on many surfaces. Some application ideas are:

- Pressure-sensitive edges for posters and point of purchase sales advertising.
- Mounting photos pre-press, prior to color scanning in lithography (0.001 in. [0.025 mm] caliper helps reduce visibility).
- Mounting of novelty items, photographs, note pads, etc.

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## Certification/ Recognition

**MSDS:** 3M has not prepared a MSDS for these products which are not subject to the MSDS requirements of the Occupational Safety and Health Administration's Hazard Communication Standard, 29 C.F.R. 1910.1200(b)(6)(v). When used under reasonable conditions or in accordance with the 3M directions for use, these products should not present a health and safety hazard. However, use or processing of the products in a manner not in accordance with the directions for use may affect their performance and present potential health and safety hazards.

**TSCA:** These products are defined as articles under the Toxic Substances Control Act and therefore, are exempt from inventory listing requirements.

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## For Additional Information

To request additional product information or to arrange for sales assistance, call toll free 1-800-362-3550 or visit [www.3M.com/bonding](http://www.3M.com/bonding). Address correspondence to: 3M Engineered Adhesives Division, 3M Center, Building 220-7E-01, St. Paul, MN 55144-1000. Our fax number is 651-733-9175. In Canada, phone: 1-800-364-3577. In Puerto Rico, phone: 1-787-750-3000. In Mexico, phone: 52-70-04-00.

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ISO 9002

This Engineered Adhesives Division product was manufactured under a 3M quality system registered to ISO 9002 standards.



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