



Technical Data Sheet

3M™ Scotch® ATG Tape 976



Additional Info



Regulatory
Info/SDS

Product Description

3M™ Scotch® ATG 976 with 3M™ Adhesive 300 is a reverse wound version of standard 3M Adhesive Transfer Tape 927 intended for use in the Scotch® ATG hand-held dispensers. This product is reinforced with discrete glass fibers which is important for roll stability in narrow widths. It offers good adhesion to a variety of surfaces, including low surface energy plastics.

Product Features

- A quick & controlled method of applying Scotch® ATG adhesive transfer tapes while simultaneously rewinding the liner into the applicator.
- Reinforced with discrete glass fibers, which limits elongation, provide structure and is important for roll stability in narrow widths and resists edge oozing.
- Low odor for improved working environment.
- Available in non-ATG format as well, also using the 300 adhesive.

Technical Information Note

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

Typical Physical Properties

Attribute Name	Test Method	Value
Adhesive Type		300 Fibered Acrylic
Total Tape Thickness	ASTM D3652	0.05 mm (2 mil)
Liner		58# Glassine
Liner Thickness		0.08 mm (3.2 mil)
Primary Liner Color		Tan

Typical Performance Characteristics

180° Peel Adhesion

Backing: 2 mil Aluminum Foil

Test Method: ASTM D3330

Dwell Time	Temperature	Substrate	Value
20 min	23 °C (73 °F)	Stainless Steel	6.5 N/cm (59 oz/in) ¹
72 h	23 °C (73 °F)	Stainless Steel	9.4 N/cm (86 oz/in) ¹
72 h	23 °C (73 °F)	ABS	8.4 N/cm (76 oz/in) ¹
72 h	23 °C (73 °F)	Polypropylene (PP)	7.9 N/cm (72 oz/in) ¹
72 h	70 °C (158 °F)	Stainless Steel	12.7 N/cm (116 oz/in) ¹

¹ 300 mm/min (12 in/min)

Substrate: Stainless Steel
 Temperature: 32 °C (90 °F)
 Dwell Time: 72 h
 Backing: 2 mil Aluminum Foil
 Environmental Condition: 90 %RH

Attribute Name	Test Method	Value
180° Peel Adhesion	ASTM D3330	11.4 N/cm (104 oz/in) ¹

¹ 300 mm/min (12 in/min)

90° Peel Adhesion

Backing: 2 mil Aluminum Foil
 Test Method: ASTM D3330

Dwell Time	Temperature	Substrate	Value
20 min	23 °C (73 °F)	Stainless Steel	5.3 N/cm (49 oz/in) ¹
72 h	23 °C (73 °F)	Stainless Steel	5.8 N/cm (53 oz/in) ¹
72 h	23 °C (73 °F)	ABS	5.8 N/cm (53 oz/in) ¹
72 h	23 °C (73 °F)	Polypropylene (PP)	5.6 N/cm (51 oz/in) ¹
72 h	70 °C (158 °F)	Stainless Steel	9.0 N/cm (82 oz/in) ¹

¹ 300 mm/min (12 in/min)

Substrate: Stainless Steel
 Test Condition: 500 g
 Test Method: ASTM D3654

Attribute Name	Value
Short Term Temperature Resistance	49 °C (120 °F) ¹
Long Term Temperature Resistance	Not intended for elevated temperatures ²

¹ Maximum temperature where tape supports indicated load per 6.5cm² (1 in²) in static shear for 60 minutes.

² Maximum temperature where tape supports indicated load per 6.5cm² (1 in²) in static shear for 10,000 minutes.

Static Shear

Substrate: Stainless Steel
 Dwell Time: 72 h
 Test Method: ASTM D3654

Temperature	Test Condition	Backing	Value
23 °C (73 °F)	1000 g	2 mil Aluminum Foil	1,200 min ¹
23 °C (73 °F)	250g	2 mil Aluminium Foil	2,500 min ¹
23 °C (73 °F)	100g	2 mil Aluminium Foil	10,000 min ¹
70 °C (158 °F)	250g	2 mil Aluminium Foil	25 min ¹
70 °C (158 °F)	100g	2 mil Aluminium Foil	200 min ¹

¹ 25 x 25 mm (1 in x 1 in) sample area, test terminated after 10,000 minutes

Typical Environmental Performance

90° Peel Adhesion

Substrate: Stainless Steel
 Backing: 2 mil Aluminum Foil
 Test Method: ASTM D3330

Dwell Time	Temperature	Environmental Condition	Value
72 h	23 °C (73 °F)	Control	100 % of control ¹
1 h	23 °C (73 °F)	Isopropyl alcohol	88 % of control ¹

Dwell Time	Temperature	Environmental Condition	Value
1 h	23 °C (73 °F)	Acetone	74 % of control ¹
1 h	23 °C (73 °F)	Gasoline	77 % of control ¹
4 h	23 °C (73 °F)	Weak Acid (pH 4)	88 % of control ¹
4 h	23 °C (73 °F)	Weak Base (pH 10)	88 % of control ¹
72 h	23 °C (73 °F)	Water	105 % of control ¹
72 h	23 °C (73 °F)	Salt Water (5% by weight)	80 % of control ¹
72 h	32 °C (90 °F)	90 %RH	103 % of control ¹
72 h	49 °C (120 °F)	Oil (10W30)	121 % of control ¹
96 h		Temperature Cycling: 4 Hours at 70 °C (158 °F). 4 Hours at -29 °C (-20 °F). 16 Hours at 23 °C (73 °F). Repeat four times	149 % of control ¹

¹ 300 mm/min (12 in/min)

Electrical and Thermal Properties

Midpoint Tg

Attribute Name	Test Method	Value
Glass Transition Temperature (Tg)	ASTM E1356	-29 °C ¹

¹ Glass Transition Temperature (Tg) determined using DSC Analyzer with a heating rate of 10 °C per minute. Second heat values given.

Handling/Application Information

Application Equipment

To apply adhesives in a wide web format, lamination equipment is required to ensure acceptable quality. To learn more about working with pressure-sensitive adhesives please refer to technical bulletin, Lamination Techniques for Converters of Laminating Adhesives (70-0704-1430-8).

For additional dispenser information, contact your local 3M sales representative, or the toll free 3M sales assistance number at 1-800-362-3550.

Application Examples

- Long term bonding of graphic nameplates and overlays to surfaces such as metal and low surface energy plastics in the aerospace, medical and industrial equipment, automotive, appliance and electronic markets.
- Bonding metal nameplates and rating plates in the aerospace, medical and industrial equipment, automotive, appliance and electronic markets.
- Lamination to foam for gasket application.
- 2 mil thick tapes may generally be used for joining materials that are relatively smooth, thin and have low residual stress. For materials with a rough or textured surface, the thicker adhesive film of the 5 mil tapes would be more appropriate for evaluation.

Application Techniques

Ideal tape application temperature range is 21°C to 38°C (70°F to 100°F). Initial tape application to surfaces at temperatures below 10°C (50°F) is not recommended because the adhesive becomes too firm to adhere readily. However, once properly applied, low temperature holding is generally satisfactory. For more specific information, contact our toll free 3M sales assistance number at 1-800-362-3550.

For maximum bond strength, the surface should be thoroughly cleaned and dried, and well unified. Typical surface cleaning solvents are isopropyl alcohol and water (rubbing alcohol) or heptane. Consult manufacturer's Material Safety Data Sheet for proper handling and storage instructions.

Bond strength is dependent upon the amount of adhesive-to-surface contact developed and can be improved with firm application pressure and moderate heat (for metal surfaces only), from 38°C (100°F) to 54°C (130°F), promoting intimate contact with the bonding surfaces.

Industry Specifications

[EN 45545 test report for details \(ISO 5658-2, ISO 5660-1\)](#)

FDA Statement

This product might be suitable for use in indirect food contact applications. Please see the applicable Regulatory Data Sheet for more information relating to FDA compliance.

Storage and Shelf Life

Store under normal conditions of 16° to 27°C (60° to 80°F) and 40 to 60% relative humidity in the original packaging, out of direct sunlight.

For best performance, use this product within 24 months from date of manufacture.

Available Sizes

ATG roll dimensions is limited by applicator type and product thickness. Products are available in 1/4", 1/2", 3/4", and 2" widths.

Applicators available: ATG 700, ATG 714, ATG 752C, ATG 3662

Attribute Name	Value
Core Size (ID)	25.4 mm (1 in)
Normal Slitting Tolerance	± 0.8 mm (± 1/32 in)
Maximum Length	Available in 18 yd (m), 36 yd, 60 yd (60 yd only for 2 mil)
Available Width	6.35 mm (0.25 in), 12.7 mm (0.5 in), 19.05 mm (0.75 in), 50.8 mm (2 in)

Recognition/Certification

TSCA: This product is defined as an article under the Toxic Substances Control Act and therefore, it is exempt from inventory listing requirements

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

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Automotive Disclaimer

Select Automotive Applications:

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

Information

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ISO Statement

This product was manufactured under a 3M quality system registered to ISO 9001 standards.

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