



# Double Coated Tapes with Adhesive 340

9824 • 9828 • 9828HL • 9828PC • 9456

Technical Data

May, 2011

**Product Description** 3M™ Double Coated Tapes with 3M™ Adhesive 340 provide a combination of high initial adhesion and good shear holding power to a wide variety of materials, including many plastics and foams. These tapes are available with a thin polyester film or a tissue for dimensional stability and improved handling.

Construction	Product	Faceside <sup>1</sup> Adhesive Type/ Thickness	Carrier Type/ Thickness	Backside <sup>2</sup> Adhesive Type/ Thickness	Liner Color, Type Print	Liner Caliper	Total Tape Thickness (w/o liner)
	3M™ Double Coated Tape 9824	340/ 0.0013" (0.032mm)	Clear PET <sup>3</sup> 0.0005" (0.013mm)	340/ 0.0013" (0.032mm)	White, 55# Densified Kraft	0.0032" (0.081mm)	0.0023" (0.058mm)
	3M™ Double Coated Tape 9828	340/ 0.002" (0.051mm)	Clear PET 0.0005" (0.013mm)	340/ 0.0015" (0.038mm)	White, 55# Densified Kraft	0.0032" (0.081mm)	0.0033" (0.084mm)
	3M™ Double Coated Tape 9828HL	340/ 0.002" (0.051mm)	Clear PET 0.0005" (0.013mm)	340/ 0.0015" (0.038mm)	Natural, 132#, 12 point, Kraft	0.0115" (0.292mm)	0.0033" (0.084mm)
	3M™ Double Coated Tape 9828PC	340/ 0.002" (0.051mm)	Clear PET 0.0005" (0.013mm)	340/ 0.0015" (0.038mm)	White, 74# Polycoated Kraft	0.0056" (0.142mm)	0.0033" (0.084mm)
	3M™ Double Coated Tape 9456	340/ 0.002" (0.051mm)	Tissue	340/ 0.002" (0.051mm)	White, "3M" logo, 55# Densified Kraft	0.0032" (0.081mm)	0.0043" (0.11mm)

Note 1: Faceside adhesive is on the interior of the roll, exposed when unwound.

Note 2: Backside adhesive is on the exterior of the roll, exposed when liner is removed.

Note 3: PET (Polyester).

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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.**

Product Number	3M™ Double Coated Tape 9824	3M™ Double Coated Tapes 9828, 9828HL, 9828PC	3M™ Double Coated Tape 9456
Adhesion to stainless steel ASTM D3330 - 90 degree	Oz/in (N/100 mm)	Oz/in (N/100 mm)	Oz/in (N/100 mm)
- 15 minutes RT	49 (53)	63 (69)	34 (37)
- 72 hour RT	54 (57)	74 (80)	48 (52)
- 72 hour 158°F	68 (74)	94 (102)	53 (58)
ASTM D3330 - 180 degree, 2 mil aluminum foil			
- 72 hour RT	67 (73)	91 (99)	97 (106)
3) Adhesion to other surfaces* ASTM D3330 - 90 degree, 2 mil aluminum foil, 72 hour RT			
ABS	49 (53)	52 (57)	46 (50)
Polycarbonate	49 (53)	67 (73)	47 (51)
Polypropylene	32 (35)	32 (35)	42 (46)
Shear Strength - ASTM D3654 modified - (.5 inch <sup>2</sup> sample size)			
1000 grams at 72°F	142 min	31 min	>10,000 min
500 grams at 158°F	1800 min	3 min	>10,000 min
Relative High Temperature Operating Ranges			
Long Term (days, weeks)	120°F	120°F	150°F
Short Term (min, hours)	150°F	150°F	180°F

\*Not recommended for high temperature, high shear performance applications. For such applications, please refer to the 3M™ Adhesive 350 and 300MP product families.

## Available Sizes

Roll length, width, slitting tolerance, core size.

Maximum in: 1/2" to 54" widths	360 yds. (329 m)
Normal Slitting Tolerance	± 1/32 in. (0.08 mm)
Core Size (ID)	3.0 in. (76.2 mm)

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**Application Techniques** 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.

**Note:** Carefully read and follow the manufacturer’s precautions and directions for use when working with 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**
- 3M™ Adhesive 340 is a medium-firm acrylic that provides a combination of high initial adhesion to a wide variety of materials, including many plastics.
  - 3M™ Double Coated Tapes 9824, 9828, 9828HL and 9828PC have a film carrier, which can add dimensional stability to foams and other substrates. The carrier also provides easier handling during slitting and die-cutting.
  - 3M™ Double Coated Tape 9456 has a tissue carrier, which adds dimensional stability for handling, while still maintaining the flexibility of a free film adhesive.
  - Tape 9828HL has a heavy 12 point liner.
  - Tape 9828PC has a 74# polycoated kraft liner for moisture stability.

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|--------------------------|---|---|
| <b>Application Ideas</b> | <b>Tapes 9824/9828/9828HL/9828PC</b>  | <b>Tape 9456</b>  |
|                          | <ul style="list-style-type: none"><li>• General purpose foam lamination,</li><li>• General purpose lamination for fabricated parts.</li></ul> | <ul style="list-style-type: none"><li>• End Tabbing.</li><li>• Bonding fabric to rigid cardboard.</li><li>• Attaching foam to plastics.</li><li>• Closing CD chipboard mailers.</li></ul> |

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**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.

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## Storage

It is best to use the rolls as soon as possible after receipt. Ideally, rolls should be laminated to the intended substrates as soon after receipt as possible.

Store in original cartons at 70°F (21°C) and 50% relative humidity.

When storing rolls, lay them flat in a horizontal position with release treated wafers between the rolls.

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## Shelf Life

If stored under proper conditions, product retains its performance and properties for two years from date of manufacture.

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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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## Technical Information

The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

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## Product 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. Given the variety of factors that can affect the use and performance of a 3M product, user is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application.

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**ISO 9001:2008**

This Industrial Adhesives and Tapes Division product was manufactured under a 3M quality system registered to ISO 9001:2008 standards.



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