3M

Double Coated Polyethylene Foam Tapes

4462W • 4462B • 4466W • 4466B • 4492G
4492W • 4492B • 4496G • 4496W • 4496B

Technical Data **February, 2000**

Product Description

Tapes 4462W and 4462B 1/32 in. (0.8 mm) Double Coated Polyethylene Foam Tape with Rubber Adhesive

Tapes 4466W and 4466B 1/16 in. (1.6 mm) Double Coated Polyethylene Foam Tape with Rubber Adhesive

Tapes 4492G, 4492W and 4492B 1/32 in. (0.8 mm) Double Coated Polyethylene Foam Tape with Acrylic Adhesive

Tapes 4496G, 4496W and 4496B 1/16 in. (1.6 mm) Double Coated Polyethylene Foam Tape with Acrylic Adhesive

Tapes 4462W and 4462B and **4466W and 4466B** combine a conformable closed cell foam with a rubber adhesive that provides high initial adhesion to a variety of surfaces including polyethylene and polypropylene.

Tapes 4492G, 4492W and 4492B and **4496G, 4496W and 4496B** combine a conformable closed cell foam with a high strength acrylic adhesive that provides good initial tack and offers high ultimate adhesion to a wide variety of surfaces.

Construction

Tape		**4462W 4462B**	**4466W 4466B**	**4492G 4492B 4492W**	**4496G 4496B 4496W**
Adhesive Type:		745*		430**	
Adhesive Carrier:		Closed Cell Crosslinked Polyethylene Foam		Closed Cell Crosslinked Polyethylene Foam	
Thickness:	Nominal	1/32 in. 0.031 in. (0.8 mm)	1/16 in. 0.062 in. (1.6 mm)	1/32in. 0.031 in. (0.8 mm)	1/16 in. 0.062 in. (1.6 mm)
	Tolerance	0.025-0.045 in. (0.6-1.0 mm)	0.053-0.080 in. (1.4-2.0 mm)	0.025-0.045 in. (0.6-1.0 mm)	0.053-0.080 in. (1.4-2.0 mm)
Foam Color:		White (W) or Black (B)		White (W) or Black (B) or Gray (G)	
Release Liner:		0.003 in. White Paper (0.08 mm)		0.003 in. Tan Paper (0.08 mm)	
Approximate Density: (foam only)		6 lb./ft.^{3} (95 kg/m^3)	4 lb./ft.^{3} (65 kg/m^3)	6 lb./ft.^{3} (95 kg/m^3)	4 lb./ft.^{3} (65 kg/m^3)

*745 is a rubber pressure sensitive adhesive that provides excellent initial tack and adhesion to a wide variety of surfaces, including many low surface energy plastics.

**430 is a firm acrylic pressure sensitive adhesive which features good initial adhesion and good resistance to both elevated temperature and environmental conditions.

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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.

Tape		4462W 4462B	4466W 4466B	4492G 4492B 4492W	4496G 4496B 4496W
Peel Adhesion: To Stainless Steel Room Temperature 90° Angle Peel 12 in./min. Jaw Speed (308 mm/min.) 72 hour Dwell ASTM D-3330		8 lb./in. width (140 N/100 mm)	8 lb./in. width (140 N/100 mm)	8 lb./in. width (140 N/100 mm)	8 lb./in. width (140 N/100 mm)
Static Shear: 1/2 in.^{2} (3.23 cm^2) overlap will hold listed weight for 10,000 min. ASTM D-3654	72°F (22°C)	1000 g	1000 g	1000 g	1000 g
	120°F (49°C)	250 g	250 g	500 g	500 g
	158°F (70°C)	—	—	250 g	250 g
Normal Tensile: (T-Block) 1 in.^{2} (6.45 cm^2) Jaw Speed 2 in./min. (50 mm/min.) 72 hour Dwell ASTM D-897		60 lb./in.^{2} (415 kPa)	40 lb./in.^{2} (275 kPa)	60 lb./in.^{2} (415 kPa)	40 lb./in.^{2} (275 kPa)
Dynamic Shear: 1 in.^{2} (6.45 cm^2) overlap Jaw Speed 0.5 in./min. (12.7 mm/min.) ASTM D-1002		55 lb./in.^{2} (380 kPa)	35 lb./in.^{2} (240 kPa)	55 lb./in.^{2} (380 kPa)	35 lb./in.^{2} (240 kPa)
Temperature Resistance: Short Term (Minutes, Hours)		158°F (70°C)		180°F (82°C)	
Long Term (Days, Weeks)		120°F (49°C)		158°F (70°C)	
U.V. Resistance:		Not recommended for direct exposure to U.V. light.		No apparent degradation when exposed for seven days in U.V. chamber.	
Solvent Resistance: Splash testing cycle - 20 seconds submersion, 20 sec. air dry, 3 cycles		No apparent degradation when exposed to splash testing of typical hydrocarbon solvents.			
Cold Flex at -20°F (-30°C):		No cracking when flexed around a 1/4 in. (6.4 mm) mandrel.			
Shelf Life:		18 months from date of manufacture when stored in original cartons at 70°F (21°C) and 50% relative humidity		24 months from date of manufacture when stored in original cartons at 70°F (21°C) and 50% relative humidity.	
Available Sizes:		Non-standard sizes may be subject to minimum order requirements.			
Standard Roll Length:		72 yds. (65.8 m)	36 yds. (32.9 m)	72 yds. (65.8 m)	36 yds. (32.9 m)
Maximum Roll Length:		175 yds. (160.0 m)	100 yds. (91.4 m)	175 yds. (160.0 m)	100 yds. (91.4 m)
Roll Width:		1/8 in. - 48 in. (3.2 mm -1219 mm)		1/8 in. - 48 in. (3.2 mm - 1219 mm)	
		Slit rolls 1/8 in. (3.2 mm) up to 1/2 in. (12.7 mm) are only available in standard lengths.			
Slitting Tolerance:		± 1/32 in. ± 0.031 in. (± 0.8 mm)		± 1/32 in. ± 0.031 in. (± 0.8 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 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 water. **Note:** Be sure to follow the manufacturer's precautions and directions for use when using cleaning 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.

Application Ideas

- The foam construction makes these products ideal for many joining, mounting, gasketing, and sealing applications involving irregular surfaces.
- Tapes 4462 and 4466 are specially formulated for many indoor general purpose mounting and joining applications, including bonding to polyethylene, polypropylene and many other plastics, where moderate temperature and shear performance are required.
- Tapes 4492 and 4496 are formulated for more demanding indoor and moderate outdoor general purpose mounting and joining applications.
- Application ideas for these Polyethylene Foam Tapes include:
  - Signs, Nameplates and Plaques
  - Point of Purchase and other Displays
  - Plastic Hooks, Racks and Dispensers
  - Wire and Cable Clips
  - Appliance, Display Case and Electronic Equipment Trim

General Information

- Tapes 4492G, 4492W, 4492B, 4496G, 4496W and 4496B are A.A.M.A. listed.
- These products are listed by the American Architectural Manufacturer's Association. They exceed all A.A.M.A. #810.1-92 voluntary specifications for "Expanded Cellular Glazing Tapes" tests.

Dispenser Suggestions

Note: Appropriate application equipment can enhance tape performance. We suggest the following dispensers for the user's evaluation in light of the user's particular purpose and method of application.

Tape	M-744	M-89	S-625	T-646	T-655 Dispensers
4462W and 4662B	Yes	Yes	Yes	Yes	Double Liner Only
4466W and 4466B	Yes	Yes	Yes	No	Double Liner Only
4492G, 4492W and 4492B	Yes	Yes	Yes	Yes	Double Liner Only
4496G, 4496W and 4496B	Yes	Yes	Yes	No	Double Liner Only

These products can only be dispensed liner on.

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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. Address correspondence to: 3M Bonding Systems 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: 1-809-750-3000. In Mexico, phone: 5-728-2180.

Certification/ Recognition

- **MSDS:** 3M has not prepared MSDSs 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.

Important Notice

3M MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of application. Please remember that many factors can affect the use and performance of a 3M product in a particular application. The materials to be bonded with the product, the surface preparation of those materials, the product selected for use, the conditions in which the product is used, and the time and environmental conditions in which the product is expected to perform are among the many factors that can affect the use and performance of a 3M product. Given the variety of factors that can affect the use and performance of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for the user's method of application.

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ISO 9002

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

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Bonding Systems Division

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