3M Science. Applied to Life.™

Technical Data Sheet

3M™ Double Coated Polyethylene Foam Tape 4496B

English-US

Last Revision Date: June, 2024

Supersedes: May, 2022

Product Details

Regulatory Info/SDS

Product Description

3M™ Double Coated Polyethylene Foam Tapes 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.

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	Value
Foam Color	Black
Adhesive Type	430 (Acrylic Adhesive)
Foam Density	65 kg/m³ (4 lb/ft³)
Adhesive Carrier	Closed Cell Crosslinked Polyethylene Foam

Attribute Name	Value
Thickness Tolerance	1.4 — 2 mm (53 — 80 mil)
Thickness: Nominal	1.6 mm (62 mil)
Liner	Paper
Liner Thickness	0.08 mm (3 mil)
Primary Liner Color	Tan

Typical Performance Characteristics

Temperature: 22 °C (72 °F)
Dwell Time: 72 h

Attribute Name	Test Method	Substrate	Backing	Value
90° Peel Adhesion	ASTM D3330	Stainless Steel	5 mil Aluminum Foil	14 N/cm (128 oz/in) [1]
Normal Tensile	ASTM D897	Aluminum		275 kPa (40 lb/in²) [2]

[1] 12 in/min (300 mm/min)

[2] 1 in.² (6.45 cm²), Jaw Speed 2 in./min. (50 mm/min.)

Static Shear

Test Method: ASTM D3654

Temperature	Value
22 °C (72 °F)	1,000 g [1]
49 °C (120 °F)	500 g [1]
70 °C (158 °F)	250 g [1]

[1] 1/2 in x 1 in sample area, test terminated at 10,000 minutes

Attribute Name	Temperature	Value
Short Term Temperature Resistance		82 °C (180 °F) [1]
Long Term Temperature Resistance		70 °C (158 °F) [2]
Cold Flex	-30 °C (-20 °F)	No cracking when flexed around a 1/4 in (6.4 mm) mandrel.

[1] Short Term (minutes, hour)

[2] Long Term (day, weeks)

Temperature: 22 °C (72 °F)

Attribute Name	Test Method	Value
Overlap Shear Strength	ASTM D1002, ISO 4587	240 kPa (35 lb/in²) [1]

[1] 1 in² (6.45 cm²), Jaw Speed 0.5 in/min (12.7 mm/min)

Typical Environmental Performance

Attribute Name	Value
Solvent Resistance	No apparent degradation when exposed to splash testing of typical hydrocarbon solvents. (Splash testing cycle - 20 seconds submersion, 20 sec. air dry, 3 cycles)
UV Resistance	No apparent degradation when exposed for seven days in U.V. chamber.

Handling/Application Information

Application Examples

• The foam construction makes these products ideal for many joining, mounting, gasketing, and sealing applications involving irregular surfaces.
• 3M™ Double Coated Polyethylene Foam Tapes 4492 and 4496 are formulated for more demanding indoor and moderate outdoor general purpose mounting and joining applications.
• Application ideas for these 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

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 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.

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

Attribute Name	Value
Available Width	3.2 — 1219 mm (1/8 — 48 in) [1]
Maximum Length	91.4 m (100 yd)
Normal Slitting Tolerance	±0.8 mm (±1/32 in)
Standard Roll Length	32.9 m (36 yd)

[1] Slit rolls 1/8 in. (3.2 mm) up to 1/2 in. (12.7 mm) are only available in standard lengths.

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

Technical Information: The technical information, guidance, and other statements contained in this document or otherwise provided by 3M are based upon records, tests, or experience that 3M believes to be reliable, but the accuracy, completeness, and representative nature of such information is not guaranteed. Such information is intended for people with knowledge and technical skills sufficient to assess and apply their own informed judgment to the information. No license under any 3M or third party intellectual property rights is granted or implied with this information.

Product Selection and 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. As a result, customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer's application, including conducting a workplace hazard assessment and reviewing all applicable regulations and standards (e.g., OSHA, ANSI, etc.). Failure to properly evaluate, select, and use a 3M product and appropriate safety products, or to meet all applicable safety regulations, may result in injury, sickness, death, and/or harm to property.

Warranty, Limited Remedy, and Disclaimer: Unless a different warranty is specifically stated on the applicable 3M product packaging or product literature (in which case such warranty governs), 3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ARISING OUT OF A COURSE OF DEALING, CUSTOM, OR USAGE OF TRADE. If a 3M product does not conform to this warranty, then the sole and exclusive remedy is, at 3M's option, replacement of the 3M product or refund of the purchase price.

Limitation of Liability: Except for the limited remedy stated above, and except to the extent prohibited by law, 3M will not be liable for any loss or damage arising from or related to the 3M product, whether direct, indirect, special, incidental, or consequential (including, but not limited to, lost profits or business opportunity), regardless of the legal or equitable theory asserted, including, but not limited to, warranty, contract, negligence, or strict liability.

Disclaimer: 3M industrial and occupational products are intended, labeled, and packaged for sale to trained industrial and occupational customers for workplace use. Unless specifically stated otherwise on the applicable product packaging or literature, these products are not intended, labeled, or packaged for sale to or use by consumers (e.g., for home, personal, primary or secondary school, recreational/sporting, or other uses not described in the applicable product packaging or literature), and must be selected and used in compliance with applicable health and safety regulations and standards (e.g., U.S. OSHA, ANSI), as well as all product literature, user instructions, warnings, and limitations, and the user must take any action required under any recall, field action or other product use notice. Misuse of 3M industrial and occupational products may result in injury, sickness, or death. For help with product selection and use, consult your on-site safety professional, industrial hygienist, or other subject matter expert. For additional product information, visit www.3M.com.

ISO Statement

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

3M™ Industrial Adhesives and Tapes Division
3M Center, St. Paul, MN 55144-1000
3M.com/iatd