

December, 2014

3M™ Double Coated Polyethylene Foam Tape 4496B

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.



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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

Property	Values		Attribute Modifier
Thickness: Nominal	1.6 mm	62 mil	
Thickness Tolerance	1.4 to 2 mm	53 to 80 mil	
Adhesive Type	430 (Acrylic Adhesive)		
Adhesive Carrier	Closed Cell Crosslinked Polyethylene Foam		
Foam Color	Black		
Foam Density	65 kg/m ³	4 lb/ft ³	
Liner	Paper		
Liner Color	Tan		Primary
Liner Thickness	0.08 mm	3 mil	

Typical Performance Characteristics

Property	Values		Method	Attribute Modifier	Dwell/Cure Time	Notes	Dwell Time Units	Temp C	Temp F	Environmental Conditions	Substrate	Backing
Normal Tensile	275 kPa	40 lb/in ²	ASTM D897	T-Block	72 hr	1 in. ² (6.45 cm ²), Jaw Speed 2 in./min. (50 mm/min.)						
Overlap Shear Strength	240 kPa	35 lb/in ²	ASTM D1002			1 in. ² (6.45 cm ²) overlap, Jaw Speed 0.5 in./min., (12.7 mm/min.)						

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Typical Performance Characteristics (continued)

Property	Values	Method	Attributes/Modifications	Dwell/Cure Time	Notes	Dwell Time Units	Temp C	Temp F	Environmental Conditions	Substrate	Backing
UV Resistance	No apparent degradation when exposed for seven days in U.V. chamber.										
Cold Flex @ -20°F (-30°C)	No cracking when flexed around a 1/4 in (6.4 mm) mandrel.										
90° Peel Adhesion	128 oz/in 14 N/cm	ASTM D3330		72	12 in/min (300 mm/min)	hr	22C	72F	52%RH	Stainless Steel	2 mil PET

Relative High Temperature Operating Ranges	Test Condition
82 °C	180 °F Short Term (minutes, hours)
70 °C	158 °F Long Term (days, weeks)

Property: Relative High Temperature Operating Ranges

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Typical Performance Characteristics (continued)

Static Shear	Test Condition
1000 g	Room Temperature
500 g	@ 49°C (120°F)
250 g	@ 70°C (158°F)

Property: Static Shear
Method: ASTM D3654
notes: 1/2 in.² (3.23 cm²), will hold weight listed for 10,000 minutes

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)

Available Sizes

Property	Values		Notes
Standard Roll Length	32.9 m	36 yd	
Maximum Length	91.4 m	100 yd	
Available Width	3.2 to 1219 mm	1/8 - 48 in	Slit rolls 1/8 in. (3.2 mm) up to 1/2 in. (12.7 mm) are only available in standard lengths.
Normal Slitting Tolerance	±0.8 mm	±1/32 in	

Handling/Application Information

Application Ideas

- 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.

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Handling/Application Information (continued)

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

Product retains its performance and properties for 24 months from date of manufacture when stored in original cartons at 70°F (21°C) and 50% relative humidity.

Trademarks

3M is a trademark of 3M Company.

References

Property	Values
3m.com Product Page	https://www.3m.com/3M/en_US/company-us/all-3m-products/-/3M-Double-Coated-Polyethylene-Foam-Tape-4496?N=5002385+3293242749&rt=rud
Safety Data Sheet (SDS)	https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&msdsLocale=en_US&co=ptn&q=4496B

Family Group

	4462W	4462B	4466W	4466B	4492W	4492B	4496W	4496B
Relative High Temperature Operating Ranges (°C) Test Condition: Short Term (minutes, hours)	70	70	70	70	82	82	82	82
Relative High Temperature Operating Ranges (°C) Test Condition: Long Term (days, weeks)	49	49	49	49	70	70	70	70
Liner Color Attribute Modifier: Primary	White	White	White	White	Tan	Tan	Tan	Tan
Thickness: Nominal (mm)	0.8	0.8	1.6	1.6	0.8	0.8	1.6	1.6
Thickness Tolerance (mm)	0.6 to 1	0.6 to 1	1.4 to 2	1.4 to 2	0.6 to 1	0.6 to 1	1.4 to 2	1.4 to 2
Adhesive Type	745 (Rubber Adhesive)	745 (Rubber Adhesive)	745 (Rubber Adhesive)	745 (Rubber Adhesive)	430 (Acrylic Adhesive)	430 (Acrylic Adhesive)	430 (Acrylic Adhesive)	430 (Acrylic Adhesive)
Adhesive Carrier	Closed Cell Crosslinked Polyethylene Foam	Closed Cell Crosslinked Polyethylene Foam	Closed Cell Crosslinked Polyethylene Foam	Closed Cell Crosslinked Polyethylene Foam	Closed Cell Crosslinked Polyethylene Foam	Closed Cell Crosslinked Polyethylene Foam	Closed Cell Crosslinked Polyethylene Foam	Closed Cell Crosslinked Polyethylene Foam
Foam Color	White	Black	White	Black	White	Black	White	Black

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Family Group (continued)

	4462W	4462B	4466W	4466B	4492W	4492B	4496W	4496B
Liner	Paper	Paper	Paper	Paper	Paper	Paper	Paper	Paper
Liner Thickness (mm)	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08

ISO Statement

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

Information

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