December, 2014

3M™ Double Coated Polyethylene Foam Tape 4466B

Product Description

3M™ Double Coated Polyethylene Foam Tapes 4466B combines a conformable closed cell foam with a rubber adhesive that provides high initial adhesion to a variety of surfaces including polyethylene and polypropylene.

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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	745 (Rubber Adhesive)		
Adhesive Carrier	Closed Cell Crosslinked Polyethylene Foam		
Foam Color	Black		
Foam Density	65 kg/m³	4 lb/ft³	
Liner	Paper		
Liner Color	White		Primary
Liner Thickness	0.08 mm	3 mil	

Typical Performance Characteristics

Property	Values		Method	Attribute Modifier	Dwell Time	Cure Notes	Test Condition	Dwell Time Units	Temp C	Temp F	Environmental Conditioning	Substrate	Backing
Normal Tensile	275 kPa	40 lb/in²	ASTM D897	T-Block	72 hr	1 in.² (6.45 cm²), Jaw Speed 2 in./min. (50 mm/min.)							
Overlap Shear Strength	240 kPa	35 lb/in²	ASTM D1002			1 in.² (6.45 cm²) overlap, Jaw Speed 0.5 in./min., (12.7 mm/min.)							
Static Shear	1000 g		ASTM D3654			1/2 in.² (3.23 cm²), will hold weight listted for 10,000 minutes	Room Temperature						
Static Shear	250 g		ASTM D3654			1/2 in.² (3.23 cm²), will hold weight listted for 10,000 minutes	@ 49°C (120°F)						

Table continued on next page

Typical Performance Characteristics (continued)

Property	Values		Method	Attribute Modifier	Dwell/Cure Time	Notes	Test Condition	Dwell Time Units	Temp C	Temp F	Environmental Condition	Substrate	Backing
UV Resistance	Not recommended for direct exposure to U.V. light												
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

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)

Relative High Temperature Operating Ranges		Test Condition
70 °C	158 °F	Short Term (minutes, hours)
49 °C	120 °F	Long Term (days, weeks)

Property: Relative High Temperature Operating Ranges

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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 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.
• 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

Product retains its performance and properties for 18 months from date of manufacture when stored in original cartons at 70°F (21°C) and 50% relative humidity.

Trademarks

3M™ Double Coated Polyethylene Foam Tape 4466B

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-4466?N=5002385+3293242750&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=4466B

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
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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