Technical Data Sheet

3M™ Single-Coated Vinyl Foam Tape 4516

Product Description

3M™ Single-Coated Foam Tapes will adhere to a variety of substrates, including latex-painted wood, lacquered wood, enameled steel, glass, aluminum, stainless steel, acrylic, ABS, and PVC (non-plasticized) as tape adhesion is typically satisfactory within 20 minutes and continues to build with additional time.

Product Features

3M™ Vinyl Foam Tapes Series 4500 are a flexible, black, high-density, closed-cell foam with pressure-sensitive acrylic adhesive on one side. A 0.003 inch (0.08 mm) thick white, silicone treated paper liner is applied to the non-adhesive side of the foam so that the PVC can be cut to length and applied while leaving the liner in place.
3M vinyl foam tape series 4500 and 4700 are durable, flexible closed cell vinyls which can help seal out dust, light and moisture when placed under 30% compression. These vinyl tapes offer excellent aging characteristics and will remain flexible when exposed to elevated temperatures and UV light. Application ideas include: dust and moisture seal for appliances, computers, copiers and other electronic and transportation equipment.

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	Additional Information
Adhesive Type	430*	
Color	Black	
Liner Color	White	View
Liner Thickness	0.08 mm	
Thickness	1.6 mm	
Thickness	62 mil	
Liner Thickness	3 mil	

Test Name: Primary

Thickness Tolerance	20 %	

Density	400 kg/m³	View
Test Method: ASTM D3574 Notes: Foam with adhesive		
Density	25 lb/ft³	

Shore 00 Hardness	55	View
Test Method: ASTM D2240 Notes: Foam with adhesive		
*Note	*3M™ Adhesive 430 is a medium soft adhesive system that offers good quick stick to many types of surfaces along with excellent aging and UV resistance.	

Compression Deflection: 25% Compression	27.6 kPa	View
Test Method: ASTM D3574		
Compression Deflection: 25% Compression	4 lb/in²	View
Test Method: ASTM D3574		
Mold and Mildew Resistance	No growth after 28 days	View
Test Method: ASTM G21 Test Name: Foam with Adhesive		

Typical Performance Characteristics

Property	Values	Additional Information
Tensile Strength	895 kPa	View
Test Method: ASTM D3574 Notes: Die “A”		
Tensile Strength	130 lb/in²	View
Test Method: ASTM D3574 Notes: Die “A”		
Elongation	200 %	View

	Test Method: ASTM D3574	
	Notes: Die “A”	
Short Term Temperature Resistance	250 °F	View
	Test Condition: Short Term (minutes, hour)	
Short Term Temperature Resistance	121 °C	View
	Test Condition: Short Term (minutes, hour)	
Long Term Temp C	66 °C	View
	Test Condition: Long Term (day, weeks)	
Long Term Temp F	150 °F	View
	Test Condition: Long Term (day, weeks)	
Temperature Resistance	Cold flex at -18 °C	View
	Notes: No cracks. Tape slowly bent around a 1/4 in. diameter mandrel.	
Temperature Resistance	Cold flex at 0 °F	View
	Notes: No cracks. Tape slowly bent around a 1/4 in. diameter mandrel.	
Compression Set	15 %	View
	Test Method: ASTM D1667	

Available Sizes

Property	Values	Additional Information
Standard Roll Length	32.9 m	
Standard Roll Length	36 yd	
Roll Diameter	280 mm	
Roll Diameter	11 in	
Maximum Length	91.4 m	

Maximum Length	100 yd
Minimum Available Width	3 mm
Minimum Available Width	0.125 in
Maximum Available Width	1118 mm
Maximum Available Width	44 in
Normal Slitting Tolerance	± 0.8 mm
Normal Slitting Tolerance	± 1/32 in

Electrical and Thermal Properties

Property	Values	Additional Information
Thermal Conductivity	0.043 W/m/K	View
Test Method: ASTM C518		
Thermal Conductivity	3 (btu-in)/(h-ft²-°F)	View
Test Method: ASTM C518		
Surface Resistivity	1 x 10^10 Ω	View
Test Method: ASTM D257 Test Name: Non-Adhesive Side		
Surface Resistivity	2 x 10^11 Ω	View
Test Method: ASTM D257 Test Name: Adhesive Side		
Water Absorption: 30% Compression	5 % by Volume	View
Test Method: ASTM D1056		

Typical Environmental Performance

*Visual observations of tape bonded to steel panels and immersed totally in solvent/fuel for 24 hours.

Storage and Shelf Life

Store in the original cartons at 60-80°F (15-27°C) and 50% relative humidity.Shelf life is 18 months from date of manufacture.

Industry Specifications

UL 94HBF (File #E76581)

Automotive Disclaimer

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Bottom Matter

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Trademarks

3M is a trademark of the 3M Company.

Handling/Application Information

Application Techniques

● Bond strength is dependent upon the amount of adhesive-to-surface contact. Firm application pressure develops better adhesive contact and helps improve bond strength.

● To obtain optimum adhesion, the bonding surface must be clean, dry, and well unified. Some typical surface cleaning solvents are isopropyl alcohol and heptane.*

*Be sure to follow the solvent manufacturer's precautions and directions for use when handling 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.

References

Property	Values
3m.com Product Page	https://www.3m.com/3M/en_US/p/d/b40069529/
Safety Data Sheet SDS	https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&msdsLocale=en_US&co=ptn&q=4516

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Link Tags:

4504 4508 4516

Products	Adhesive Type	Color	Liner Thickness	Short Term Temperature Resistance	Long Term Temp C	Long Term Temp F
4508	430*	Black	0.08 mm	121 °C	66 °C	150 °F
4516	430*	Black	0.08 mm	121 °C	66 °C	150 °F
4504	430*	Black	0.08 mm	121 °C	66 °C	150 °F

ISO Statement

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

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