

# Technical data sheet



Product: 4516

Manufacturer: 3M DEUTSCHLAND GMBH

Product group: KLEBEBAND

Article group: EINSEITIG

Download: 21.12.2024

## 3M™ SINGLE-COATED VINYL FOAM TAPE 4516

This data sheet was provided to you by Tewipack Uhl GmbH. The company tewipack Uhl GmbH assumes no responsibility for the topicality and the Accuracy of the information contained. The properties of the products can vary due to various influences such as composition and condition of the Substrate, impurities in or on the substrate, temperature and humidity at the Change storage and environmental conditions during use. Using this product in combination with other material, the customer is responsible for to check through our own tests whether the product is suitable for the planned combination and whether this combination delivers the expected results

Tewipack Uhl GmbH  
Industriestraße 15  
D-75382 Althengstett

Telephone:  
+49(0)7051/9297-0  
Fax:  
+49(0)7051/9297-99

E-Mail:  
info@tewipack.de  
Website:  
www.tewipack.de

Managing director:  
Alexander Uhl,  
Michael Uhl  
HRB 330424  
Amtsgericht  
Stuttgart

Bank details:  
Sparkasse  
Sindelfingen  
Pforzheim  
Calw  
BLZ 666 500  
85  
Konto 17 787

Commerzbank  
Sindelfingen  
BLZ 603 400 71  
Konto 8 001 166

Vereinigte  
Volksbank AG  
Böblingen  
BLZ 603 900 00  
Konto 80 089  
003

Postbank  
Stuttgart  
BLZ 600 100  
70  
Konto 146  
294 708



# Technical Data Sheet

## 3M™ Single-Coated Vinyl Foam Tape 4516



Product Details



Regulatory Info/SDS

### 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

Attribute Name	Test Method	Value
Color		Black
Adhesive Type		430*
Density	ASTM D3574	400 kg/m <sup>3</sup> (25 lb/ft <sup>3</sup> ) <sup>1</sup>
Shore 00 Hardness	ASTM D2240	55 <sup>1</sup>
Mold and Mildew Resistance	ASTM G21	No growth after 28 days <sup>2</sup>
Compression Deflection: 25% Compression	ASTM D3574	27.6 kPa (4 lb/in <sup>2</sup> )

<sup>1</sup> Foam with adhesive

<sup>2</sup> Foam with Adhesive

Attribute Name	Value
Thickness	1.6 mm (62 mil)
Liner Thickness	0.08 mm (3 mil)
Primary Liner Color	White
Thickness Tolerance	20 %

Attribute Name	Value
*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.

## Typical Performance Characteristics

Attribute Name	Value
Short Term Temperature Resistance	121 °C (250 °F) <sup>1</sup>
Long Term Temperature Resistance	66 °C (150 °F) <sup>2</sup>
Temperature Resistance	Cold flex at -18 °C (Cold flex at 0 °F) <sup>3</sup>

<sup>1</sup> Short Term (minutes, hour)

<sup>2</sup> Long Term (day, weeks)

<sup>3</sup> No cracks. Tape slowly bent around a 1/4 in. diameter mandrel.

Attribute Name	Test Method	Value
Elongation	ASTM D3574	200 % <sup>1</sup>
Tensile Strength	ASTM D3574	895 kPa (130 lb/in <sup>2</sup> ) <sup>1</sup>
Compression Set	ASTM D1667	15 %

<sup>1</sup> Die "A"

## Typical Environmental Characteristics

### Solvent Resistance

Solvent/Fuel	3M urethane foam tape series 4100	
	Adhesive	Foam
Acetone	Softens	Softens
Ammonia Cleaner	No effect	No effect
Engine Oil	No effect	No effect
Gasoline	Softens	Swells
JP-4 (jet fuel)	Softens	Swells
MEK	Softens	Softens
Mineral Spirits	No effect	Swells
Soapy Water	No effect	No effect

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

## Electrical and Thermal Properties

Attribute Name	Test Method	Value
Thermal Conductivity	ASTM C518	0.043 W/m/K (3 (btu-in)/(h-ft <sup>2</sup> -°F))
Surface Resistivity (Non-Adhesive)	ASTM D257	1 x 10 <sup>10</sup> Ω <sup>1</sup>
Surface Resistivity (Adhesive)	ASTM D257	2 x 10 <sup>11</sup> Ω <sup>2</sup>
Water Absorption: 30% Compression	ASTM D1056	5 % by Volume

<sup>1</sup> Non-Adhesive Side

<sup>2</sup> Adhesive Side

## **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.

### **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 18 months from date of manufacture.

### **Available Sizes**

<b>Attribute Name</b>	<b>Value</b>
Maximum Available Width	1118 mm (44 in)
Maximum Length	91.4 m (100 yd)
Minimum Available Width	3 mm (0.125 in)
Normal Slitting Tolerance	± 0.8 mm (± 1/32 in)
Roll Diameter	280 mm (11 in)
Standard Roll Length	32.9 m (36 yd)

### **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](http://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

3M is a trademark of the 3M Company.  
©3M 2024 (6/24)