

English
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Technical Data Sheet

3M™ Single-Coated Urethane Foam Tape 4318

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™ Urethane Foam Tapes Series 4300 are a conformable, grey, low-density, opencell foam with pressure-sensitive acrylic adhesive on one side. The adhesive is protected by a 0.003 inch (0.08 mm) thick tan, silicone treated paper liner and has a very soft, conformable low density foam which can help seal out air, dust and light when compressed 50%. Application ideas include: recessed lighting, door, window and cabinet seals. It also can be used to help cushion, damp sound and absorb vibration in electronics such as printers, keyboards, computers, aircraft lights and automotive dash boards. This tape is available on individual cores and in blocks of 1.5 inches when the tape is 3/4 inch or less in width. Note: Extra care should be taken when handling these delicate rolls of tape to avoid damaging tape.

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	Charcoal grey	
Liner Color	Tan	View
Test Name: Primary		
Liner Thickness	0.08 mm	
Thickness	3.2 mm	
Thickness	125 mil	
Liner Thickness	3 mil	

Thickness Tolerance	30 %	

Density	32 kg/m³	View
Test Method: ASTM D3574 Notes: Foam with adhesive		
Density	2 lb/ft³	

Shore 00 Hardness	10	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	2.1 kPa	View
Test Method: ASTM D3574		
Compression Deflection: 25% Compression	0.3 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	170 kPa	View
Test Method: ASTM D3574 Notes: Die “A”		
Tensile Strength	25 lb/in²	View
Test Method: ASTM D3574 Notes: Die “A”		
Elongation	125 %	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 -29 °C	View
Notes: No cracks. Tape slowly bent around a 1/4 in. diameter mandrel.		
Temperature Resistance	Cold flex at -20 °F	View
Notes: No cracks. Tape slowly bent around a 1/4 in. diameter mandrel.		
Compression Set	5 %	View
Test Method: ASTM D1667		

Available Sizes

Property	Values	Additional Information
Standard Roll Length	32.9 m	
Standard Roll Length	36 yd	
Roll Diameter	380 mm	
Roll Diameter	15 in	
Maximum Length	32.9 m	

Maximum Length	36 yd
Minimum Available Width	6 mm
Minimum Available Width	0.25 in
Maximum Available Width	1168 mm
Maximum Available Width	46 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	6 x 10^12 Ω	View
Test Method: ASTM D257 Test Name: Non-Adhesive Side		
Surface Resistivity	1 x 10^13 Ω	View
Test Method: ASTM D257 Test Name: Adhesive Side		
Water Absorption: 30% Compression	open cell - NA % 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 24 months from date of manufacture.

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Bottom Matter

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Trademarks

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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/b40069520/
Safety Data Sheet SDS	https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&msdsLocale=en_US&co=ptn&q=4318

Family Group

Link Tags:

4314 4317 4318

Products	Liner Color	Liner Thickness	Short Term Temperature Resistance	Long Term Temp C	Long Term Temp F	Adhesive Type	Thickness
4318	Tan	0.08 mm	121 °C	66 °C	150 °F	N/A	N/A
4314	Tan	0.08 mm	121 °C	66 °C	150 °F	N/A	N/A
4317	Tan	0.08 mm	121 °C	N/A	150 °F	430*	9.5 mm

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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