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3M™ Single-Coated Urethane Foam Tape 4108

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 4100 are a natural-white, firm, high-density, open-cell foam with pressure-sensitive adhesive on one side. The acrylic adhesive offers high initial quick stick to many types of surfaces along with excellent shear strength and high temperature performance. The adhesive is protected by a 0.003 inch (0.08 mm) thick white, silicone treated paper liner and has a firm rigid open cell urethane that offers excellent cushioning characteristics while allowing air or gas vapors to pass through the open cells. This product is placed on a 1.5 in. wide common core when the tape is 3/4 in. or less in width. Skip slitting is also used for roll stability on these narrow sizes. Note: 3M urethane foam tape series 4100 may turn yellow when exposed to light. Such yellowing affects only the appearance and not the physical performance of the tapes.

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		Method	Notes
Color	Natural-white			
Thickness	3.2 mm	125 mil		
Thickness Tolerance	15 %			
Adhesive	350*			
Density	256 kg/m³	16 lb/ft³	ASTM D3574	Foam with adhesive
Liner Thickness	0.08 mm	3 mil		
Liner Color	White			
Shore 00 Hardness	75		ASTM D2240	Foam with adhesive
*Note	* 3M™ Adhesive 350 is a medium-firm acrylic adhesive that provides a continuation of high wet grab and initial adhesion.			
Compression Deflection: 25% Compression	41.4 kPa	6 lb/in²	ASTM D3574	
Mold Resistance: Foam with adhesive	No growth after 28 days		ASTM G21	

Typical Performance Characteristics

Property	Values		Method	Notes
Tensile Strength	895 kPa	130 lb/in²	ASTM D3574	Die “A”
Elongation	80 %		ASTM D3574	Die “A”

Table continued on next page

Typical Performance Characteristics (continued)

Property	Values		Method	Notes
Low Temperature Resistance	Cold flex at -18 °C	Cold flex at 0 °F		No cracks. Tape slowly bent around a 1/4 in. diameter mandrel.
Compression Set	8 %		ASTM D1667	

High Temperature Resistance		Test Condition
93 °C	200 °F	Continuous
177 °C	350 °F	30 minutes maximum time

Property: High Temperature Resistance

Available Sizes

Property	Values	
Standard Length	32.9 m	36 yd
Roll Diameter	380 mm	15 in
Maximum Length	45.7 m	50 yd
Minimum Available Width	6 mm	0.25 in
Maximum Available Width	1168 mm	46 in
Normal Slitting Tolerance	± 0.8 mm	± 1/32 in

Electrical and Thermal Properties

Property	Values		Method
Dielectric Strength	70 V/mil		ASTM D149
Thermal Conductivity	0.066 W/m/K	0.5 (btu-in)/(h-ft²-°F)	ASTM C518
Surface Resistivity: Non-Adhesive Side	6 × 10^14 Ω		ASTM D257
Surface Resistivity: Adhesive Side	1 × 10^15 Ω		ASTM D257
Water Absorption: 30% Compression	open cell - NA % by Volume		ASTM D1056

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Typical Environmental Performance

Solvent and Fuel 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.

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 in the original cartons at 60-80°F (15-27°C) and 50% relative humidity.
Shelf life is 24 months from date of manufacture.

Industry Specifications

FMVSS 302
FAR 25.853 B-2
FAR 25.853 B-3

Trademarks

References

Property	Values
3m.com Product Page	https://www.3m.com/3M/en_US/company-us/all-3m-products/~/3M-Urethane-Foam-Tape-4108/?N=5002385+3293241309&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=4108

3M™ Single-Coated Urethane Foam Tape 4108

Family Group

	4104	4108	4116
Color	Natural-white	Natural-white	Natural-white
Thickness (mm)	6.4	3.2	1.6
Adhesive	350*	350*	350*
Liner Thickness (mm)	0.08	0.08	0.08
Liner Color	White	White	White

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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