SNAPSHOOT
ENGINEERED FOR A SAFER TOMORROW

현장을 이해하고, 필요한 솔루션을 연결합니다.

산업안전 · 추락방지 시스템
산업용 소재 · 건축자재
제품 제안부터 공급·시공·설치·교육까지



COMPANY INFORMATION

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TECHNICAL DOCUMENTS

인증서 · 데이터시트 · 기술자료

제품의 규격과 성능, 인증 및 적용 조건을 확인하기 위한 자료입니다.

ABOUT SNAPSHOOT

제품 공급을 넘어, 현장에 맞는 해결책으로

스냅슛은 산업현장의 작업 환경과 요구 조건을 바탕으로
적합한 제품과 시스템을 제안합니다. 현장 실사를 통해 설치 조건을 확인하고,
공급부터 시공·설치 및 사용 교육까지 필요한 과정을 함께합니다.

추락방지 시스템

안전대부착설비 · 수평·수직 라이프라인
레일 시스템 · 리지드 포스트

밀폐공간 진입·구조 솔루션

데빗암 · 삼각대 · 구조용 윈치
윈치 안전블록 · 구조장비

산업안전 보호구

전신형 안전대 · 랜야드 · 안전블록
작업 환경에 맞춘 개인보호구

산업용 소재·건축자재

산업용 테이프 · 접착제 · 기능성 소재
구조용 스크류 · 목조건축 자재

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홈페이지 바로가기 →
문서 라이브러리 바로가기 →
시공사례 바로가기 →
문의하기 →

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3M Science. Applied to Life.™

Technical Data Sheet

3M™ Single-Coated Urethane Foam Tape 4116

English-US

Last Revision Date: June, 2024

Supersedes: June, 2023

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™ 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

Attribute Name	Test Method	Value
Color		Natural-white
Adhesive Type		350*
Density	ASTM D3574	288 kg/m³ (18 lb/ft³) [1]
Shore 00 Hardness	ASTM D2240	75 [1]
Mold and Mildew Resistance	ASTM G21	No growth after 28 days [2]
Compression Deflection: 25% Compression	ASTM D3574	82.8 kPa (12 lb/in²)

[1] Foam with adhesive

[2] 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 350 is a medium-firm acrylic adhesive that provides a continuation of high wet grab and initial adhesion.

Typical Performance Characteristics

Attribute Name	Value
Short Term Temperature Resistance	177 °C (350 °F) [1]
Long Term Temperature Resistance	93 °C (200 °F) [2]
Temperature Resistance	Cold flex at -18 °C (Cold flex at 0 °F) [3]

[1] Short Term (minutes, hour)
[2] Long Term (day, weeks)
[3] No cracks. Tape slowly bent around a 1/4 in. diameter mandrel.

Attribute Name	Test Method	Value
Elongation	ASTM D3574	80 % [1]
Tensile Strength	ASTM D3574	795 kPa (115 lb/in²) [1]
Compression Set	ASTM D1667	12 %

[1] 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	0.066 W/m/K (0.5 (btu-in)/(h-ft²-°F))
Surface Resistivity (Adhesive)	ASTM D257	3×10^{15} Ω [1]
Surface Resistivity (Non-Adhesive)	ASTM D257	1×10^{14} Ω [2]
Water Absorption: 30% Compression	ASTM D1056	open cell - NA % by Volume

[1] Adhesive Side
[2] Non-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 24 months from date of manufacture.

Available Sizes

Attribute Name	Value
Maximum Available Width	1168 mm (46 in)
Maximum Length	91.4 m (100 yd)
Minimum Available Width	6 mm (0.25 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

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ISO Statement

This product was manufactured under a 3M quality system registered to ISO 9001 standards.

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