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 →

본 페이지는 스냅슛의 자료 제공 안내용 표지입니다. 첨부된 인증서 및 기술자료의 발행 주체, 인증 대상과 적용 범위는 해당 원문을 기준으로 확인해 주세요.



Technical Data Sheet

3M™ Membrane Switch Product with Adhesive 200MP 9057MP

Additional Info

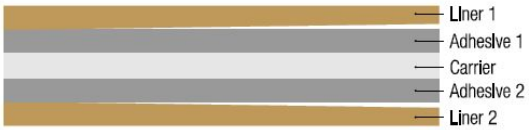
Regulatory Info/SDS

Product Description

3M™ High Performance Acrylic Adhesive 200MP is a popular choice and industry standard, for graphic attachment and general industrial joining applications. It provides outstanding adhesion to metal and high surface energy plastics. This adhesive provides some initial repositionability for placement accuracy when bonding to plastics. It also performs well after exposure to humidity and hot/cold cycles and provides the assurance the switch will perform through difficult environmental conditions and millions of actuations.

Product Features

• The High Performance Acrylic Adhesive 200MP offers excellent short-term heat resistance and will performan at temperatures up to 400ºF (204ºC)
• The 200MP adhesive provides high resistance to solvents and humidity
• The 2 mil nominal adhesive tape delivers excellent shear strength to metal surfaces
• 3M Membrane Switch products use the 200MP adhesive, which provides long lasting membrance switches
• 3M™ Double Coated Membrane Switch Spacers feature 2.0 mil adhesive layer for industry-standard, high-performance requirements.



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	Test Condition	Value
Adhesive Type			200MP Acrylic
Adhesive Carrier			Polyester Film (PET)
Adhesive Thickness		Faceside	0.05 mm (2 mil) [1]
Carrier Thickness			0.08 mm (3 mil)
Adhesive Thickness		Backside	0.05 mm (2 mil) [2]
Total Tape Thickness	ASTM D3652		0.18 mm (7 mil)
Liner Print			White 3M
Primary Liner Type			87# Polycoated Kraft Paper (PCK) [3]
Secondary Liner Type			87# Polycoated Kraft Paper (PCK) [3]
Primary Liner Thickness			0.16 mm (6.5 mil)
Secondary Liner Thickness			0.16 mm (6.5 mil)

[1] Faceside adhesive is on the interior of the roll, exposed when unwound and liner removed.
[2] Backside adhesive is on the exterior of the roll, exposed when liner is removed.
[3] Inner liner is primary (stays with die-cut part); Outer liner is secondary (removed first)

Typical Performance Characteristics

Dwell Time: 72 h
Backing: 2 mil Aluminum Foil
Test Method: ASTM D3330

Attribute Name	Temperature	Substrate	Value
90° Peel Adhesion	23 °C (73 °F)	Stainless Steel	8.2 N/cm (75 oz/in) [1]
90° Peel Adhesion	70 °C (158 °F)	Stainless Steel	8.7 N/cm (79 oz/in) [1]
180° Peel Adhesion	23 °C (73 °F)	Stainless Steel	8.9 N/cm (81 oz/in) [1]
90° Peel Adhesion	23 °C (73 °F)	Aluminum	8.4 N/cm (77 oz/in) [1]
90° Peel Adhesion	23 °C (73 °F)	Polyester (PET)	5.1 N/cm (47 oz/in) [1]
90° Peel Adhesion	23 °C (73 °F)	Polycarbonate (PC)	8.8 N/cm (80 oz/in) [1]

[1] 300 mm/min (12 in/min)

Substrate: Aluminum
Temperature: 23 °C (73 °F)
Dwell Time: 72 h

Attribute Name	Test Method	Value
Overlap Shear Strength	ASTM D1002, ISO 4587	2.3 MPa (338 lb/in²) [1]

[1] Pressure was obtained via a Mechanical Press set at 138 kPa (20 psi) for 15 seconds on 25 x 25 mm (1 x 1 in) sample Crosshead speed 300 mm/min (12 in/min).

Static Shear

Substrate: Stainless Steel
Dwell Time: 72 h
Backing: 2 mil Aluminum Foil
Test Method: ASTM D3654

Temperature	Test Condition	Value
23 °C (73 °F)	1000 g	10,000 min [1]
70 °C (158 °F)	500 g	10,000 min [1]

[1] 25 x 25 mm (1 in x 1 in) sample area, test terminated after 10,000 minutes

Substrate: Stainless Steel
Temperature: 23 °C (73 °F)
Dwell Time: 72 h
Backing: 2 mil Aluminum Foil
Test Method: ASTM D3654

Attribute Name	Environmental Condition	Test Condition	Value
Long Term Temperature Resistance	149 °C (300 °F)	500 g wt for at least 10,000 min	10,000 min [1]
Short Term Temperature Resistance	204 °C (400 °F)	500 g wt for at least 60 min	500 min [1]

[1] 6.5 cm² (1 in²) Sample area

Typical Environmental Characteristics

Environmental Resistance

Humidity Resistance – High humidity has a minimal effect on adhesive performance. Bond strength shows no significant reduction after exposure for 7 days at 90°F (32°C) and 90% relative humidity.

UV Resistance – When properly applied, nameplates and decorative trim parts are not adversely affected by outdoor exposure.

Water Resistance – Immersion in water has no appreciable effect on the bond strength. After 100 hours at room temperature, the high bond strength is maintained.

Temperature Cycling Resistance – High bond strength is maintained after cycling four times through:
4 hours at 158°F (70°C)
4 hours at -20°F (-29°C)
16 hours at 73°F (22°C)

Chemical Resistance – When properly applied, nameplate and decorative trim parts will hold securely after exposure to numerous chemicals including oil, mild acids and alkalis.

Bond Build-up: The bond strength of 3M™ High Performance Acrylic Adhesive increases as a function of time and temperature as the adhesive further wets the surface and reaches maximum bond strength after 72 hours at room temperature.

Temperature/Heat Resistance: 3M™ High Performance Acrylic Adhesive on polyester carriers is usable for short periods (minutes, hours) at temperatures up to 300 °F (149°C) and for intermittent longer periods (days, weeks) up to 250°F (121°C).
Lower Temperature Service Limit: -40°F (-40°C).

Electrical and Thermal Properties

Attribute Name	Test Method	Temperature	Test Condition	Value
Coefficient of Thermal Expansion	ASTM D696		First Heat (125 ~ 175 °C)	3.92 x 10^{-1} m/m/°C
Thermal Conductivity	ASTM C518	43 °C (109 °F)		0.176 W/m/K [1]

[1] results listed are at 43 °C (109° F)

Attribute Name	Test Method	Temperature	Value
Dissipation Factor	ASTM D150	23 °C (73 °F)	0.015
Dielectric Strength	ASTM D149		60.3 [1]
Volume Resistivity	ASTM D257	23 °C (73 °F)	5.5 x 10^{14} Ω-cm
Breakdown Voltage			11,180 V

[1] Short time method (air)

Handling/Application Information

Application Examples

• 3M™ Double Coated Membrane Switch Spacers are ideal for circuit separation

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.

Recognition/Certification

TSCA: This product is defined as an article under the Toxic Substances Control Act and therefore, it is exempt from inventory listing requirements

MSDS:3M has not prepared a MSDS for this product which is not subjected to the MSDS requirements of the Occupational Safety and Health Administration's Hazard Communication Standard, 29 C.F.R.1910.1200(b)(6)(v). When used under reasonable conditions or in accordance with the 3M directions for use, this product should not present a health and safety hazard. However, use or processing of the product in a manner not in accordance with the directions for use may affect its performance and present potential health and safety hazards.

UL: These products have been recognized by Underwriters Laboratories, Inc. under Ul 746C and UL 969. For more information on the UL Certification, please visit the website at http://www.3M.com/converter, select UL Recognized Materials, then select the specific product area.

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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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3M.com/iatd

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