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

스냅슛 (SNAPSHOOT)

ADDRESS (15431) 경기도 안산시 단원구 풍전로 37-9 트리플렉스 301동 118호
TEL 0507-1374-9229
FAX 0504-481-6749
E-MAIL bkkim@snapshoot.co.kr

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

SNAPSHOOT
ENGINEERED FOR A SAFER TOMORROW

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.



English-US

Last Revision Date: September, 2024

Supersedes: June, 2024

Technical Data Sheet

3M™ VHB™ Adhesive Transfer Tape F9473PC

Product Details

Product Description

Finite Element Analysis (FEA)data is available for this product at: **3m.com/FEA**

3M™ VHB™ Adhesive Transfer Tape F9473PC utilizes the 3M™ High Performance Acrylic Adhesive 100MP, which has excellent long term holding power with much higher adhesion strength than typical pressure sensitive adhesive systems. This 3M™ VHB™ Adhesive Transfer Tape is transparent and is ideal for use in many interior and exterior industrial applications to replace rivets, spot welds, liquid adhesives, and other permanent fasteners.

Product Features

• Thin profile combined with high strength acrylic adhesive for a long-lasting bond • High short term temperature tolerance • High operating temperature tolerance • Conforms to a variety of indoor and outdoor applications • 58# polycoated kraft paper liner printed with 3M™ VHB™ branding • Durable adhesive is chemical, UV and solvent resistant • Ease of application increases productivity

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
Adhesive Type		Acrylic
Density		1.012 g/cm³ (0.04 lb/in³)
Total Tape Thickness	ASTM D3652	0.26 mm (10 mil)
Liner Print		3M VHB
Liner		58# Polycoated Kraft Paper (PCK)
Liner Thickness		0.1 mm (4 mil)

Typical Performance Characteristics

Temperature: 23 °C (73 °F)
Backing: 2 mil Aluminum Foil

Attribute Name	Test Method	Value
180° Peel Adhesion	ASTM D3330	15.8 N/cm (144 oz/in) [1]

[1] 304 mm/min (12 in/min)

Attribute Name	Test Method	Temperature	Substrate	Value
Overlap Shear Strength	ASTM D1002, ISO 4587		Stainless Steel	550 kPa (80 lb/in²)
Normal Tensile	ASTM D897	23 °C (73 °F)	Aluminum	690 kPa (100 lb/in²)

Static Shear

Test Method: ASTM D3654

Temperature	Value
23 °C (73 °F)	1,000 g [1]
66 °C (150 °F)	1,000 g [1]
93 °C (200 °F)	1,000 g [1]
121 °C (250 °F)	1,000 g [1]
149 °C (300 °F)	1,000 g [1]
177 °C (350 °F)	500 g [1]

[1] Static shear measured at various temperatures and gram loadings on stainless steel. Will hold listed weight for 10,000 minutes.

Attribute Name	Value
Short Term Temperature Resistance	260 °C (500 °F) [1]
Long Term Temperature Resistance	149 °C (300 °F) [2]

[1] No change in room temperature dynamic shear properties following 4 hour conditioning at indicated temperature with 100 g/static load. (Represents minutes, hour in a process type temperature exposure).

[2] Maximum temperature where tape supports at least 78g/cm² (500 g/in²) in static shear for 10,000 minutes. (Represents continuous exposure for day or weeks).

Attribute Name	Value
Additional Test notes	3M™ VHB™ Adhesive Transfer Tapes F9460PC, F9469PC, and F9473PC are made from the same adhesive system and are thermoplastic in nature, becoming softer as temperature increases and firmer as temperature decreases. As the adhesive becomes firmer, the adhesion performance generally increases. At low temperatures (lower than -40°F [-40°C]), the 3M™ VHB™ Adhesive Transfer Tape becomes very firm and glassy

Typical Environmental Performance

Attribute Name	Value
Solvent Resistance	No apparent degradation when exposed to splash testing of many common solvents and fluids including gasoline, JP-4 fuel, mineral spirits, motor oil, ammonia cleaner, acetone and methyl ethyl ketone. (3 splash testing cycles: 20 seconds submersion, & 20 seconds air dry.)
UV Resistance	Excellent UV resistance through outdoor weathering tests and weather-O-meter tests.

Electrical and Thermal Properties

Attribute Name	Test Method	Temperature	Value
Thermal Conductivity	ASTM C177		0.16 W/m/K (1.1 (btu-in)/(h-ft²-°F))
Dielectric Strength	ASTM D149	23 °C (73 °F)	5,500 V
Insulation Resistance	ASTM D1000		> 1 x 10^6 MΩ/in²

Weight Loss and Outgassing Performance

Attribute Name	Test Method	Value
Total Mass Loss	ASTM E595-77/84/90	1.23 %
Volatile Condensible Materials	ASTM E595-77/84/90	0.01 %
Note		The testing was done per ASTM E595-77/84/90 as indicated in the NASA Reference Publication 1124, Revision 4, “Outgassing Data for Selecting Spacecraft Materials”, June 1997. The results are reported as percentage of total mass loss (TML) and percentage of Volatile Condensible Materials (VCM), respectively, as shown below.

Handling/Application Information

Application Techniques

Bond strength is dependent upon the amount of adhesive-to-surface contact developed. Firm application pressure helps develop better adhesive contact and improve bond strength.

To obtain optimum adhesion, the bonding surfaces must be clean, dry, and well unified. Some typical surface cleaning solvents are isopropyl alcohol/water mixture or heptane.*

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.

*Note: Be sure to follow the manufacturer’s precautions and directions for use when using solvents.

Industry Specifications

UL 746C
UL 879 (File E65361)

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	Width	Value
Maximum Length	1/4 in to 3/8 in widths	55 m (60 yd)
Maximum Length	3/8 in to 1 in widths	220 m (240 yd)
Maximum Length	1 in to 3 in	330 m (360 yd)
Maximum Length	3 in and wider	330 m (360 yd)
Normal Slitting Tolerance		0.8 mm (±1/32 in)
Note		Subject to Minimum Order Requirements
Standard Roll Length		55 m (60 yd)

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.

Note: One of 3M's core values is to respect our social and physical environment. 3M is committed to comply with ever-changing, global, regulatory and consumer environmental, health, and safety (EHS) requirements. As a service to our customers, 3M is providing information on the regulatory status of many 3M products. Further regulation information including that for OSHA, USCPSI, California Proposition 65, READY and RoHS, can be found at 3M.com/regs.

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.

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 and VHB are trademarks of 3M.
©3M 2024 (9/24)