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™ Fastbond™ Pressure Sensitive Adhesive 4224-NF (Clear)

Regulatory Info/SDS

Product Description

3M™ Fastbond™ Pressure Sensitive Adhesive 4224-NF is a water-based, permanently pressure sensitive adhesive with excellent initial tack and good bond strength.

Product Features

• Good UV and plasticizer resistance.
• Excellent water resistance when dry.

• Non-flammable in the wet state.

• Adheres to most glass, paper, steel, galvanized steel, bare and clad aluminum, stainless steel, high impact styrene, PVC, ABS, polycarbonate and acrylic plastic surfaces.

• Certified to GREENGUARD® Product Emission Standard For Children and Schools(SM) for low emitting interior building materials:
° Addresses or Contributes to LEED® EQ Credit 4.1: Low Emitting Materials: Adhesive and Sealants
° Addresses or Contributes to LEED® EQ Credit 4.3: Low Emitting Materials: Flooring Materials
° Addresses or Contributes to LEED® EQ Credit 4.5: Low Emitting Materials: Furniture and Furnishings

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 Uncured Physical Properties

Attribute Name	Value
Net Weight	8 — 8.4 lb/gal

Typical Physical Properties

Attribute Name	Temperature	Value
Color		White (Wet), Clear (Dry)
Solids Content by Weight		39 — 42 %
Solvent Resistance		Water
Coverage		670 ft²/gal [1]
Viscosity	27 °C (80 °F)	9,000-12,000 cP [2]

[1] 1 mil dry film

[2] Brookfield Viscometer RVF/RVT #6sp. @ 20 rpm

Typical Performance Characteristics

180° Peel Adhesion

Temperature: 23 °C (73 °F)
Dwell Time: 48 h

Substrate	Value
ABS	58 oz/in [1]
Acrylic (PMMA)	48 oz/in [1]
Clad Aluminum	37 oz/in [1]
EPDM Rubber	24 oz/in [1]
High Density Polyethylene (HDPE)	24 oz/in [1]
Neoprene Rubber	26 oz/in [1]
Polycarbonate (PC)	53 oz/in [1]
Polypropylene (PP)	30 oz/in [1]
Polystyrene (HIPS)	46 oz/in [1]
Polyvinyl chloride (PVC)	54 oz/in [1]
Stainless Steel	67 oz/in [1]

[1] Adhesive was tested in 180° (angle) peel, overlap shear, and dead load strength by first applying a 0.15 mm (6 mil) wet thickness coating of adhesive to a primed polyester film. After drying, bonds were made to various substrates.

Overlap Shear Strength

Temperature: 23 °C (73 °F)
Dwell Time: 48 h

Substrate	Value
Glass	44 lb/in² [1]
Cold Rolled Steel	48 lb/in² [1]
Galvanized Steel	48 lb/in² [1]
2024 T3 Aluminum	40 lb/in² [1]
Clad Aluminum	45 lb/in² [1]
Stainless Steel	48 lb/in² [1]
High Density Polyethylene (HDPE)	33 lb/in² [1]
Polypropylene (PP)	27 lb/in² [1]
High Impact Polystryene	47 lb/in² [1]
Polyvinyl chloride (PVC)	46 lb/in² [1]

Substrate	Value
ABS	44 lb/in² [1]
Polycarbonate (PC)	50 lb/in²
Acrylic (PMMA)	44 lb/in² [1]
Neoprene Rubber	13 lb/in² [1]
EPDM Rubber	16 lb/in² [1]

[1] Adhesive was tested in 180° (angle) peel, overlap shear, and dead load strength by first applying a 0.15 mm (6 mil) wet thickness coating of adhesive to a primed polyester film. After drying, bonds were made to various substrates.

Dead Load Shear

Temperature	Test Condition	Value
23 °C (73 °F)	70 kPa (10 psi)	6 h [1]
23 °C (73 °F)	35 kPa (5 psi)	24+ h [1]
49 °C (120 °F)	70 kPa (10 psi)	15 min [1]
49 °C (120 °F)	2 psi	24+ h [1]
49 °C (120 °F)	35 kPa (5 psi)	2 h [1]
71 °C (160 °F)	70 kPa (10 psi)	3 min [1]
71 °C (160 °F)	2 psi	4 h [1]
71 °C (160 °F)	35 kPa (5 psi)	11 min [1]

[1] The adhesive, knife coated on polyester film as above, was used to make 1 in. x 1/2 in. bonds to 2024-T3 bare aluminum. Weights were hung on the film extending below the bond area and the time required for the bond to fail was measured.

Handling/Application Information

Directions for Use

1. Surface Preparation: Surfaces must be clean, dry and dust free. Wiping with solvent such as 3M™ No. 3 or methyl ethyl ketone (MEK)* will aid in removing oil and dirt.. Plastic surfaces may be cleaned with isopropyl alcohol.*
2. Application Temperature: For best results, the temperature of the adhesive and the surfaces being bonded should be at least 65°F (18°C).
3. Application: Spray, brush, roll or knife coat a smooth, uniform coat of adhesive to the least porous surface. Thickness of the adhesive will depend upon the surfaces being bonded and stress requirements and should be determined by the user. Porous or rough surfaces generally require more adhesive than smooth surfaces.
4. Drying Time: This will depend on the adhesive film thickness and drying temperature and should be determined by the user. Infrared heat may be used to speed up the drying process, if necessary. Generally, when the adhesive film has changed from an opaque, milky appearance to a clear or transparent and odorless state, drying can be considered complete. In order to maintain long term pressure sensitivity, the dry adhesive film must be kept free of dust or other contaminants through the use of a protective release liner.
5. Bonding: Bond surfaces together using firm pressure. A 3-inch wide (maximum) rubber roller (J-roller) is recommended. For maximum bond performance, the use of a nip-roll or rotary press is preferred. Bonding while one or both surfaces are warm will also help improve bond results.
6. Cleanup: Liquid adhesive can be removed from tools and equipment by flushing with large amounts of water. The addition of liquid soap and warm water will aid in cleanup. Dried adhesive may be removed with a solvent such as 3M™ Scotch- Weld™ Solvent No. 3 or methyl ethyl ketone.*

*Note: When using solvents, extinguish all ignition sources and follow the manufacturer’s precautions and directions for use.

Application Equipment

Note: Appropriate application equipment can enhance adhesive performance. We suggest the following application equipment for the user's evaluation in light of the user's particular purpose and method of application.

1. Pumping: Use a 2:1 ratio divorced design stainless steel pump with PTFE packings. Because these products contain water, pumping equipment should be stainless steel for maximum durability. Wetted parts of chrome or nickel should also be suitable.
2. Spray:

Spray Gun	Air Cap.	Fluid Tip	Air Pressure	Approx. Air Requirement	Fluid Flow
DeVilbiss JGV	30	E	10-15 PSI	5 CFM	12-24 fl. oz./min.
Binks 2001SS or No. 95	66 SD	66 SS	10-15 PSI	5 CFM	12-24 fl. oz./min.

3. Hoses: All material hoses should be nylon lined. Do not use PVA hoses. Do not use fluid hoses previously used with solvent based adhesive since residual solvent will cause the water dispersion to coagulate. New fluid hoses should be installed when changing from a solvent to a water-based adhesive.
4. Brushes and Rollers: Brushes and rollers designed for latex paints are suggested.

Industry Specifications

• Certified to GREENGUARD® Product Emission Standard For Children and Schools(SM) for low emitting interior building materials:
° Addresses or Contributes to LEED® EQ Credit 4.1: Low Emitting Materials: Adhesive and Sealants
° Addresses or Contributes to LEED® EQ Credit 4.3: Low Emitting Materials: Flooring Materials
° Addresses or Contributes to LEED® EQ Credit 4.5: Low Emitting Materials: Furniture and Furnishings

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, unopened packaging, out of direct sunlight. Lower temperatures cause increased viscosity of a temporary nature. Product will become unusable with prolonged storage under 4°C (40°F). Protect from freezing. For best performance, use this product within 30 months from date of manufacture.

Precautionary Information

Refer to Product Label and Material Safety Data Sheet for health and safety information before using this product. For additional health and safety information, call 1-800-364-3577

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