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



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English-US

Last Revision Date: September, 2024

Supersedes: July, 2024

Technical Data Sheet

3M™ Fastbond™ Insulation Adhesive 49

Product Details

Regulatory Info/SDS

Product Description

3M™ Fastbond™ Insulation Adhesive 49 is a water-based, high solids, fast tacking, pressure sensitive adhesive for bonding lightweight materials like fiberglass insulation, felt, shoddy, paper and other materials to metal and many other surfaces.

Product Features

• Water-based, non-flammable in the wet state.
• Spray, brush, or roll apply.
• High coverage.
• Instant tack on fiberglass insulation.
• Permanently pressure sensitive with aggressive tack.
• Recognized by Underwriters Laboratories, Inc., Component Recognition Category MAGW2 (Adhesives, Insulation), File Number MH 6288.

• 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 4.5: Low Emitting Materials: Furniture and Furnishings
° Addresses or Contributes to LEED® EQ Credit 4.6: Low Emitting Materials: Ceiling and Wall Systems

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	0.99 kg/L (8.25 lb/gal)
Base	Acrylate

Typical Physical Properties

Attribute Name	Temperature	Value
Color		Milky White (wet), Clear (dry)
Solids Content by Weight		53 — 57 %
pH		4.1 — 4.5
Coverage		20 m²/L (820 ft²/gal) [1]
Flammability (Dry)		Combustible
Flammability (Wet)		Non-Flammable
Viscosity	23 °C (73 °F)	450 — 650 cP [2]

[1] 27 g/m² (2.5 g/ft²) dry wt.; For most HVAC applications. Coverage for other applications may be lower.

[2] Brookfield Viscometer RVF #3 Sp. @ 20 rpm

Typical Performance Characteristics

180° Peel Adhesion

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

Substrate	Value
ABS	8.2 N/cm (75 oz/in) [1]
Acrylic (PMMA)	6.8 N/cm (62 oz/in) [1]
Clad Aluminum	5.0 N/cm (45 oz/in) [1]
EPDM Rubber	1.8 N/cm (16 oz/in) [1]
High Density Polyethylene (HDPE)	0.9 N/cm (8 oz/in) [1]
Neoprene Rubber	2.3 N/cm (21 oz/in) [1]
Polycarbonate (PC)	9.1 N/cm (83 oz/in) [1]
Polypropylene (PP)	3.9 N/cm (35 oz/in) [1]
Polystyrene (HIPS)	10 N/cm (90 oz/in) [1]
Polyvinyl chloride (PVC)	7.9 N/cm (72 oz/in) [1]
Stainless Steel	5.6 N/cm (51 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	37 N/cm² (53 lb/in²) [1]
Cold Rolled Steel	40 N/cm² (57 lb/in²) [1]
2024 T3 Aluminum	35 N/cm² (51 lb/in²) [1]
Clad Aluminum	36 N/cm² (52 lb/in²) [1]
Stainless Steel	36 N/cm² (52 lb/in²) [1]
High Density Polyethylene (HDPE)	23 N/cm² (34 lb/in²) [1]
Polypropylene (PP)	27 N/cm² (39 lb/in²) [1]

Substrate	Value
High Impact Polystryene	37 N/cm² (53 lb/in²) [1]
Polyvinyl chloride (PVC)	39 N/cm² (56 lb/in²) [1]
ABS	35 N/cm² (50 lb/in²) [1]
Polycarbonate (PC)	40 N/cm² (57 lb/in²)
Acrylic (PMMA)	36 N/cm² (52 lb/in²) [1]
Neoprene Rubber	8.3 N/cm² (12 lb/in²) [1]
EPDM Rubber	9.7 N/cm² (14 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.

Test Method: ASTM E84

Attribute Name	Value
Flame Spread	1.8 [1]
Smoke Developed Index	4 [2]

[1] Tunnel test results; Test at a roverage rate of 19.6 m²/l (800 ft²/gal); UL Requirement: Less than 25

[2] Tunnel test results; Test at a roverage rate of 19.6 m²/l (800 ft²/gal); UL Requirement: Less than 50

Typical Environmental Performance

Attribute Name	Value
Accelerated Aging	Adhesive was spray applied to pieces of 1.5 lb. per cubic foot density fiberglass insulation at the recommended coverage rate. The fiberglass was then bonded to galvanized steel panels and allowed to air dry for 24 hours. After drying, the bonded panels were aged in a 320°F (160°C) oven for 60 days. Bond strength sufficient to tear fiberglass was observed after aging. [1]

[1] Adhesive was spray applied to pieces of 1.5 lb. per cubic foot density fiberglass insulation at the recommended coverage rate. The fiberglass was then bonded to galvanized steel panels and allowed to air dry for 24 hours. After drying, the bonded panels were aged in a 320°F (160°C) oven for 60 days. Bond strength sufficient to tear fiberglass was observed after aging.

Typical Environmental Characteristics

Wet Strength

Adhesive was spray applied on 6 in x 12 in x 1.0 in pieces of 1.5 lb. per cubic foot density fiberglass insulation at the recommended coverage level. After 1 minute of drying at room temperature, the fiberglass was bonded (using hand pressure) to 6 in x 12 in galvanized steel panels pre-bent to form a 90° angle. The wet strength of the adhesive was sufficient to hold the fiberglass in place.

Humidity Resistance

As above, 1.5 lb. per cubic foot density fiberglass was bonded to galvanized steel and aged for 60 days at 140°F (60°C) and 95-100 percent relative humidity. Bond strength sufficient to tear fiberglass was observed after aging.

Temperature Resistance

The bonded panels above were allowed to air dry for 24 hours and then they were placed in 127°F (53°C) oven for 15 minutes. The temperature was then raised 18°F (8°C) every 10 minutes until 325°F (162°C) was achieved. No failure of the fiberglass to the substrate was observed within this temperature range.

Handling/Application Information

Directions for Use

Setting Up the 3M™ Fastbond™ Insulation Adhesive 49 Container for Dispensing: Suggested equipment for dispensing is outlined in the section under Application Equipment. If using open head drums or totes it is suggested that one check for dried skins on the surface and remove them prior to using the product. For containers using a flexible poly bag skinning should not occur. For hook up considerations the outlet for the various containers are:
Schutz tote – 2" male cam lock
EZ-Bulk tote – 1.5" FNPT
Drum – 2" FNPT or 3/4" FNPT
Hedwin Box uses a 38 MM 400 finish screw on cap

Applications: Adhesive may be applied by spray, brush or paint roller. Apply a uniform, generous coat of adhesive to one of the surfaces to be bonded (porous surface preferred.) Very porous material may require more than one coat. (Allow adhesive to dry completely between coats).

Coverage: Coverage is dependent upon porosity of the substrate and the method by which the adhesive is applied. To bond fiberglass insulation, apply the adhesive to the insulation in a uniform pattern at a coverage rate between 1.0 -2.0 dry gms./sqft (2000 sqft to 1000 sqft/gallon). (Additional adhesive may be required for heavier materials).

Drying: Allow adhesive to dry until the surface becomes tacky. The insulation may then be bonded using hand pressure. Bonded parts may be handled immediately.

Cleanup: Wet adhesive may be removed using soapy water. For dry adhesive removal, use 3M™ Scotch-Weld™ Solvent No. 3 (Methyl Ethyl Ketone), or 3M™ Citrus Base Cleaner, or isopropyl alcohol.*

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

Surface Preparation

Surfaces must be clean, dry and dust free. Remove all dirt, dust, oil, grease, wax, loose paint, etc. to ensure proper adhesion.

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.
Air Atomizing Spray Equipment

Spray Guns

Type	Example	Air Cap	Fluid Tip	Atomizing Air Pressure[2]
Pressure fed, hand held spray	Binks Model 2001 SS Binks Model 95	66S 66S	63A SS (.040") 63A SS (.040")	25 psi 25 psi
Gravity fed, hand held	Binks 2001 SS Binks Model 95 SS	Tornado Tip[1] Tornado Tip[1]	0.070"-0.096"[1] 0.070"-0.096"[1]	40 psi 40 psi

Note: Gravity fed systems are preferred to minimize fluid shear.
[1]Air cap and fluid tip combination available from U.S. Legends, Inc.
[2]Starting air pressure on regulator. Adjust up and down based on application requirements.

Pressure Pots
Stainless steel pressure pots recommended. Non-stainless may be used with plastic liners if dip tube and fittings are changed to plastic or stainless steel.

Pumping Equipment

Due to the shear sensitivity of this product pumping is not recommended. If pumping is under consideration please consult with your local 3M sales representative.

Filter (Between Gun and Fluid Source)
The use of a 40-mesh stainless steel strainer is suggested to filter any impurities or dried adhesive that may have entered the system.

Hoses
Hoses used with pressure pots should be nylon or polyester lined. For gravity feed systems a clear PVC hose with a 0.5" inside diameter is adequate. Avoid using fluid hoses that have previously been used with solvent.

Brushes and Rollers
Typical brushes and rollers designed for use with latex paints may be used.

Industry Specifications

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• Certified to GREENGUARD® Product Emission Standard For Children and Schools(SM) for low emitting interior building materials:
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° Addresses or Contributes to LEED® EQ Credit 4.6: Low Emitting Materials: Ceiling and Wall Systems

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 18 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.

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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

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