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.



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English-US

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Technical Data Sheet

3M™ Marine Adhesive Sealant 5200

Product Details

Regulatory Info/SDS

Product Description

3M™ Marine Adhesive Sealant 5200 is a one-part polyurethane that chemically reacts with moisture to deliver strong, flexible bonds. It has excellent adhesion to wood, gelcoat, and fiberglass. It forms a watertight, weather-resistant seal on joints and boat hardware, above and below the waterline. In addition, its flexibility allows for dissipation of stress caused by shock, vibration, swelling or shrinking.

Product Features

- Tough/flexible polyurethane polymer
- One component, moisture curing
- Long working time
- Bonds dissimilar materials
- Non-shrinking
- Adheres to a wide variety of substrates

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
Density	11.3 lb/gal
Consistency	Caulkable, non-sag paste

Typical Mixed Physical Properties

Temperature: 23 °C (73 °F)

Attribute Name	Environmental Condition	Value
Tack Free Time		12 h
Tack Free Time	90%RH	4 h
Rate of Cure		3 mm/5 d (1 — 8 in/5 d)

Typical Physical Properties

Attribute Name	Value
Color	White Black Mahogany
Solids Content by Weight	97 %

Typical Cured Characteristics

Attribute Name	Test Method	Value
Shore A Hardness	ASTM C661	68

Typical Performance Characteristics

Overlap Shear Strength

Temperature: 23 °C (73 °F)

Substrate	Value
Teak	35 kg/cm² (500 lb/in²) [1]
Pine	48 kg/cm² (680 lb/in²) [1]
Oak	39 kg/cm² (545 lb/in²) [1]
Maple	46 kg/cm² (655 lb/in²) [1]
Fir	49 kg/cm² (700 lb/in²) [1]
Mahogany	40 kg/cm² (560 lb/in²) [1]
Stainless Steel	25 kg/cm² (350 lb/in²) [1]
Aluminum	28 kg/cm² (390 lb/in²) [1]
Brass	33 kg/cm² (470 lb/in²) [1]
Bronze	18 kg/cm² (250 lb/in²) [1]
Copper	14 kg/cm² (200 lb/in²) [1]
Lead	7.5 kg/cm² (100 lb/in²) [1]
Zinc (Galvanized)	34 kg/cm² (480 lb/in²) [1]
Acrylic (PMMA)	15 kg/cm² (215 lb/in²) [1]
Nylon	12 kg/cm² (175 lb/in²) [1]
ABS	16 kg/cm² (230 lb/in²) [1]
Cold Rolled Steel	38 kg/cm² (530 lb/in²) [1]
Polycarbonate (PC)	27 kg/cm² (380 lb/in²) [1]
Fiber-Reinforced Plastic	26 kg/cm² (360 lb/in²) [1]

[1] 25 mm (1 in) overlap specimens 2.4 mm (0.093 in) thick.
Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode.
Adhesive Failure – Adhesive/Sealant releases from substrate.

Attribute Name	Test Method	Value
Long Term Temperature Resistance		90 °C (190 °F) [1]
Minimum Long Term Temperature Resistance		-40 °C (-40 °F) [1]
Tensile Strength	ASTM D412	4.8 MPa (700 lb/in²)

[1] Long Term (day, weeks)

Handling/Application Information

Directions for Use

Surface Preparation:
There are waxes, coatings, sealers, greases, oils and other contaminants used in the marine industry, making it very important to clean all surfaces to be bonded before applying 3MTM Adhesive Sealant 5200. Recommended procedures include cleaning with 3MTM General Purpose Adhesive Cleaner* 08984. Abrading the surface with 180- to 200-grit abrasive before cleaning will enhance the bond strength.

Cut the plastic nozzle tip to the desired bead size. Puncture the seal in nozzle end of the cartridge and screw the plastic nozzle in place. Remove the bottom end seal of cartridge and place the cartridge in a caulk gun dispenser. Apply 5200 to the seam or part to be bonded. Position parts and tool material to desired appearance. Tooling of adhesive can be accomplished by using a tongue depressor. If a finger is used, rubber gloves are recommended. Remove excess with General Purpose Adhesive Cleaner 08984 or suitable solvent.

*When using solvents, use in a well ventilated area. Extinguish all sources of ignition in the work area and observe product directions for use and precautionary measures. Refer to product label and MSDS for further precautions. Always pre-test solvent to ensure it is compatible with substrates.
Local and federal air quality regulations may regulate or prohibit the use of these products or surface preparation and cleanup materials. Consult local and federal air quality regulations before using these products.

Note: Alcohol will interfere with the curing process and extra care must be taken when using alcohol as a cleaning solvent to prevent any contact with the sealant.

Primer:
Use of a primer is an extra step and cost and will depend on the final end use. Using primer can improve the corrosion resistance of certain metals as well as improve the durability of the bond when exposed to high humidity conditions. Pre-testing for adhesion is suggested to determine if a primer is needed. Contact your 3M Technical Service representative for primer recommendation and application advice.

Applications:
Applications:
3MTM Adhesive Sealant 5200 is for permanent assembly of wood and fiberglass parts bonded together. If a non-permanent bond is desired, use 3MTM Marine Adhesive Sealant 4200.

Typical bonding applications include:
- Fiberglass deck to fiberglass hull
- Wood to fiberglass
- Portholes
- Deck fittings
- Moldings
- Trunk joints
- Between struts and planking
- Stern joints

Typical sealing applications include:
- Some plastics (test before assembly)
- Glass
- Metals (priming may be required)

Limitations :
- Alcohol should not be used in preparation for bonding as it will interfere with the curing process, causing the adhesive to fail.
- Due to the decreased value in bond strength at elevated temperatures, use of this product is not recommended above 190°F (88°C).
- Do not apply at temperatures below 40°F (4°C) or on frost covered surfaces. Do not apply at surface temperatures above 100°F (38°C).
- Sealant should be used within 24 hours after inner seal is punctured, as product will start to cure in the cartridge and nozzle.
- At 90o F (32o C) and 90% relative humidity, bonds should be made within 15 minutes.
- Some one-part solvent-based Marine paints may not cure on top of cured 5200. It is strongly recommended to test all desired paints for suitability.
- 5200 has an elongation much greater than most paints. Most paints will not elongate to this extent before cracking or losing adhesion to the sealant. If the sealant is used in an application where it will elongate or flex to a high degree, it is best not to paint.
- 5200 is not recommended for use as a teak deck seam sealer. Extended exposure to chemicals (teak cleaners, oxalic acid, gasoline, strong solvents and other harsh chemicals) may cause permanent softening of the sealant.
- 5200 is not recommended for the installation of glass, polycarbonate, or acrylic windows that are not also mechanically fastened. Inconsistent adhesion of these unprimed substrates, specific design of the window and movement due to thermal expansion and flexing may cause application failure. Contact a Technical Service Engineer for help with these applications.
- When using 3MTM Marine Adhesive Sealant 5200 with metals it may be necessary to prime the surface to achieve adequate adhesion and durability of the bond. 3M Metal Primer P592 may be used for priming of most metals.

Cleanup:
For cleaning 3MTM Marine Adhesive Sealant 5200 before it is cured, use a dry cloth to remove the majority of sealant, followed by a cloth damp with 3MTM General Purpose Adhesive Cleaner 08984. Cured material can be removed mechanically with a knife, razor blade, piano wire, or sanding device.

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.

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.

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