

Technical Data Sheet

3M™ Marine Adhesive Sealant 5200 Fast Cure:

Product Description

A fast curing, one-part polyurethane that chemically reacts with moisture to deliver strong, flexible bonds to wood, gelcoat and fiberglass. It forms watertight, weather-resistant seals 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
- Fast cure formula
- Bonds dissimilar materials
- Non-shrinking
- Adheres to a wide variety of substrates
- Non-sagging
- Permanently elastic

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

Property	Values	Additional Information
Solids Content by Weight	97 %	
Color	White	


Typical Uncured Physical Properties

Property	Values	Additional Information
Density	11 lb/gal	
Consistency	Caulkable, non-sag paste	







Typical Mixed Physical Properties

Property	Values	Additional Information
Tack Free Time	1 hr	View 
Test Condition: Room Temperature		
Rate of Cure	1 to 8 in per 24 hr	View 
Test Condition: Room Temperature		
Rate of Cure	3 mm per 24 hr	View 
Test Condition: Room Temperature		

Typical Cured Characteristics

Property	Values	Additional Information
Shore A Hardness	60	View 
Test Method: ASTM C661		

Typical Performance Characteristics

Property	Values	Additional Information
Tensile Strength	6.9 MPa	View 
Test Method: ASTM D412		
Tensile Strength	1000 lb/in ²	View 
Test Method: ASTM D412		
Elongation at Break	>800 %	View 
Test Method: ASTM D412		
Long Term Temp C	90 °C	View 
Test Condition: Long Term (day, weeks)		
Minimum Long Term Temperature Resistance	-40 °C	View 
Test Condition: Long Term (day, weeks)		
Long Term Temp F	190 °F	View 
Test Condition: Long Term (day, weeks)		
Minimum Long Term Temperature Resistance		

-40 °F

[View](#) 

Test Condition: Long Term (day, weeks)

Overlap Shear Strength

25 kg/cm²

[View](#) 

Temp C: 23C
Temp F: 72F
Substrate: Teak

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength

350 lb/in²

[View](#) 

Temp C: 23C
Temp F: 72F
Substrate: Teak

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength

35 kg/cm²

[View](#) 

Temp C: 23C
Temp F: 72F
Substrate: Pine

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength

500 lb/in²

[View](#) 

Temp C: 23C
Temp F: 72F
Substrate: Pine

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength

35 kg/cm²

[View](#) 

Temp C: 23C
Temp F: 72F
Substrate: Oak

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength

500 lb/in²

[View](#) 

Temp C: 23C
Temp F: 72F
Substrate: Oak

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength

35 kg/cm²

[View](#) 

Temp C: 23C
Temp F: 72F
Substrate: Maple

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength

500 lb/in²View Temp C: 23C
Temp F: 72F
Substrate: Maple

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength

42 kg/cm²View Temp C: 23C
Temp F: 72F
Substrate: Fir


Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength

600 lb/in²View Temp C: 23C
Temp F: 72F
Substrate: Fir

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength

28 kg/cm²View Temp C: 23C
Temp F: 72F
Substrate: Mahogany

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength

400 lb/in²View Temp C: 23C
Temp F: 72F
Substrate: Mahogany

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength

14 kg/cm²View Temp C: 23C
Temp F: 72F
Substrate: Stainless Steel

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength

200 lb/in²View Temp C: 23C
Temp F: 72F
Substrate: Stainless Steel


Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength

14 kg/cm²View Temp C: 23C
Temp F: 72F

Substrate: Aluminum

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 200 lb/in² View 

Temp C: 23C
Temp F: 72F
Substrate: Aluminum

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 12 kg/cm² View 


Temp C: 23C
Temp F: 72F
Substrate: Brass

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 175 lb/in² View 

Temp C: 23C
Temp F: 72F
Substrate: Brass

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 12 kg/cm² View 

Temp C: 23C
Temp F: 72F
Substrate: Bronze

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 175 lb/in² View 

Temp C: 23C
Temp F: 72F
Substrate: Bronze

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 12 kg/cm² View 

Temp C: 23C
Temp F: 72F
Substrate: Copper

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 175 lb/in² View 

Temp C: 23C
Temp F: 72F
Substrate: Copper

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength

10 kg/cm²View Temp C: 23C
Temp F: 72F
Substrate: Lead

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength

150 lb/in²View Temp C: 23C
Temp F: 72F
Substrate: Lead


Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength

18 kg/cm²View Temp C: 23C
Temp F: 72F
Substrate: Zinc (Galvanized)

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength

250 lb/in²View Temp C: 23C
Temp F: 72F
Substrate: Zinc (Galvanized)


Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength

10 kg/cm²View Temp C: 23C
Temp F: 72F
Substrate: Acrylic (PMMA)

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength

150 lb/in²View Temp C: 23C
Temp F: 72F
Substrate: Acrylic (PMMA)

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength

9 kg/cm²View Temp C: 23C
Temp F: 72F
Substrate: Nylon

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength

125 lb/in²View Temp C: 23C
Temp F: 72F


Substrate: Nylon

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 18 kg/cm² View 

Temp C: 23C
Temp F: 72F
Substrate: ABS

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 250 lb/in² View 


Temp C: 23C
Temp F: 72F
Substrate: ABS

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 21 kg/cm² View 

Test Condition: Room Temperature
Substrate: Cold Rolled Steel

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 300 lb/in² View 


Test Condition: Room Temperature
Substrate: Cold Rolled Steel

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 28 kg/cm² View 

Test Condition: Room Temperature
Substrate: Polycarbonate (PC)

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 400 lb/in² View 


Test Condition: Room Temperature
Substrate: Polycarbonate (PC)

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 21 kg/cm² View 

Test Condition: Room Temperature
Substrate: Fiber-Reinforced Plastic

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 300 lb/in² View 

Test Condition: Room Temperature

Substrate: Fiber-Reinforced Plastic

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Storage and Shelf Life

Polyurethane sealants and adhesive sealants must be stored in a controlled environment to maximize shelf life. Store the products in the original unopened containers below 77°F (25C).

When stored at the recommended conditions in the original, unopened container this product has a shelf life of 24 months from date of manufacture.

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.

Bottom Matter

3M
Industrial Adhesives and Tapes Division
3M Center, Building 225-3S-06
St. Paul, MN 55144-1000
800-362-3550

Trademarks

3M and Scotch-Brite are trademarks of 3M Company.

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 Fast Cure. 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 Fast Cure 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:

3MTM Adhesive Sealant 5200 Fast Cure 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 90° F (32° 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 Fast Cure. It is strongly recommended to test all desired paints for suitability.
- 5200 Fast Cure 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 Fast Cure 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 Fast Cure 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 Fast Cure 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 Fast Cure 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.

References

Property	Values
3m.com Product Page	https://www.3m.com/3M/en_US/p/d/b40066996/
Safety Data Sheet SDS	https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&msdsLocale=en_US&co=ptn&q=5200FC

Family Group

Link Tags:

- 5200FC

Products	Color	Rate of Cure	Shore A Hardness	Minimum Long Term Temperature Resistance
5200FC	White	3 mm per 24 hr	60	-40 °C

ISO Statement

This Industrial Adhesives and Tapes Division product was manufactured under a 3M quality system registered to ISO 9001 standards.

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 or (651) 737-6501.

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.