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*Technical Data Sheet*

Rev: 2

Effective: 4/15/2005

Status: Final

Supersedes: 07/06/2000

## 3M™ Marine Adhesive/Sealant 5200 (Tan)

### 3M Part No.(s)

06501  
21450

### 3M Part Descriptor(s)

10 fl. oz. cartridge (295 ml) - Tan  
5 gal. pail (18.93 L) - Tan

### Description

3M™ Marine Adhesive/Sealant 5200 (Tan) is a one-part polyurethane that chemically reacts with moisture to deliver strong, flexible bonds. It has excellent adhesion to wood, gel coat 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.

### Features

- Tough/flexible polyurethane polymer
- Non-shrinking
- One-part moisture cure
- Long working time

### Typical Physical Properties

Base	Polyurethane
Density lbs/Gallon (Approx.)	11.1 lbs/gallon
Color	Tan
Solids Content (Approx.)	99%
Consistency	Medium paste
Service Temperature - °F	-40°F (-40°C) to 190°F (88°C)
Shore A Hardness (cured)	58
Coverage (10 oz.)	1/8 inch (0.3175 cm) bead = 120 lineal feet (36.6 m)

### Performance Properties

#### Tensile, Elongation, and effect of water submersion:

*A 1/8-inch (0.3175 cm) dumbbell specimen with a 1/8-inch (0.3175 cm) square cross section was tested at 2.0 inches/minute (5.08 cm/minute). All samples tested at 50% Relative Humidity and 70°F (21°C).*

Environmental Conditions	Tensile Strength psi (kg/cm <sup>2</sup> )	Elongation (%)
50% R.H./ 70°F (21°C)	885 (62.2)	645

## Overlap Shear Strength

*One inch (2.54 cm) overlap specimens (0.093 inch (0.2362 cm thickness). Samples cured at 70°F (21°C), 50% Relative Humidity.*

Substrate	psi	kg/cm <sup>2</sup>
<b>Wood(s):</b>		
Teak	499	35.1
Pine	684	48.1
Oak	642	45.1
Maple	706	49.6
Fir	589	41.4
Mahogany	583	41.0
<b>Metal(s):</b>		
Steel	381	26.8
Stainless Steel	203	14.3
Aluminum	173	12.2
Brass	181	12.7
Bronze	203	14.3
Copper	214	15.0
Lead	74	5.2
Zinc (Galvanized)	213	15.0
<b>Plastics/Polymers:</b>		
Fiberglass	376	26.4
Gel Coat	388	27.3
Acrylic	169	11.9
Nylon	124	8.7
ABS	248	17.4
Polypropylene	77	5.4
Polyethylene	48	3.4

## Application Information

### Directions for Use

#### Surface Preparation:

There are waxes, coatings, sealants, grease, oil and other contaminants used in the marine industry, making it very important to clean all surfaces to be bonded before applying 3M™ Marine Adhesive/Sealant 5200. Recommended procedures include cleaning with 3M™ General Purpose Adhesive Cleaner\*, P. N. 08984.

#### Application of Adhesive Sealant:

Abrading the surfaces with a 180 grit to 220 grit abrasive, and subsequently wiping off residue, will enhance the bond strength. Cut tip of the nozzle to desired bead size. Puncture seal inside the threaded nozzle end and screw on nozzle. If using a 10 fl. oz. cartridge, remove the bottom seal and place the cartridge in a caulk gun. Apply 3M™ Marine Adhesive/Sealant 5200 Tan to the seam or part to be bonded. Position parts. Tool material to desired appearance. Remove excess material with 3M™ General Purpose Adhesive Cleaner\*, P. N. 08984.

**Cure:**

	Relative Humidity	Temperature	Time	Cure Depth
Open Time	50%	70°F (21°C)	5 hours	N/A
Open Time	90%	90°F (32°C)	1.5 hours	N/A
Full Cure	50%	70°F (21°C)	2 days	1/8 inch (0.3175 cm)

**Cleanup:**

For cleaning 3M™ Marine Adhesive/Sealant 5200 before it is cured, use a dry cloth to remove the majority of sealant, followed by a cloth damp with 3M™ General Purpose Adhesive Cleaner\*, P. N. 08984, toluene or acetone. Cured 5200 can be removed mechanically with a knife, razor blade, piano wire or sanding.

**Limitations -**

- **Alcohol should not be used in preparation for bonding as it will stop the curing process.**
- *If painting on top of the sealant, always test to make sure there are no incompatibilities between the paint and the 3M™ Marine Adhesive/Sealant 5200. Paints almost always crack on top of the sealant due to flexing in the joint.*
- *Heat resistance - Due to the decreased value in bond strength at elevated temperatures, we do not recommend use of this product 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).*
- *3M™ Marine Adhesive/Sealant 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.*
- *3M™ Marine Adhesive/Sealant 5200 is not recommended for the installation of glass, polycarbonate or acrylic windows that are not also mechanically fastened with a system designed by the manufacturer. Inconsistent adhesion of these unprimed substrates, specific design of the window, and movement due to thermal expansion and flexing, may cause application failure. It is strongly recommended that the customer contact the window/port light/hatch manufacturer for recommendations on proper sealing procedures.*
- *When using 3M™ Marine Adhesive/Sealant 5200 with metals, it may be necessary to prime the surface to achieve adequate adhesion and durability of the bond. Scotch-Weld™ Structural Adhesive Primer EC-1945 B/A may be used for priming of most metals.*

**Applications:**

Typical bonding and sealing applications include:

- Fiberglass deck to fiberglass hull
- Wood to fiberglass
- Porthole frames
- Deck fittings
- Moldings
- Trunk joints

Structural bonding and sealing of:

- Wood
- Fiberglass
- Gel coat
- Primed metal

- Between struts and planking
- Stern joints and hull planking

Sealing of:

- Some plastics (test before assembly)
- Glass
- Metals

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**Storage and Handling:**

**Recommended Storage Temperature Range: 60°F (16°C) to 80°F (26°C)**

**Expected Shelf Life at Recommended Storage Temperature: 24 Months**

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**Precautionary Information**

Refer to Product Label and Material Safety Data Sheet for Health and Safety Information before using this product.

**Country**

USA

**Important Notice to Purchaser**

**Technical Data:** All physical properties, statements and recommendations are either based on tests we believe to be reliable or our experience, but they are not guaranteed. 3M recommends each user determine the suitability of the products for the intended use.

\* If 'Directions for Use' reference P.N.'s 08984, 08986, or 08987, please read. Federal and local air quality regulations may regulate or prohibit the use of surface preparation and cleanup solvents based on VOC content. Consult your local and Federal air quality regulations for information. When using solvents, use in a well ventilated area. Extinguish all sources of ignition in the work area and observe precautionary measures for handling these materials. Refer to product label and MSDS for P.N. 8984, 8986, or 8987 for detailed precautionary information.

**Warranty and Limited Remedy:** 3M warrants this product will be free from defects in materials and manufacture. **3M MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** If the product is proved to be defective your exclusive remedy and 3M's and seller's sole obligation will be, at 3M's option, to replace the product or refund the purchase price.

**Limitation of Liability:** 3M and seller will not be liable for any loss or damage arising from this product, whether direct, indirect, special, incidental or consequential, regardless of the legal theory asserted, including warranty, contract, negligence or strict liability.

**For Additional Health and Safety Information**

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