



# Marine Adhesive/Sealant Fast Cure 5200

06520 • 05220

Technical Data

February, 2012

## Product Description

3M™ Marine Adhesive/Sealant Fast Cure 5200 is a fast curing, one-part polyurethane that chemically reacts with moisture to deliver strong, flexible bonds with excellent adhesion to wood and fiberglass. 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 Construction

<b>3M™ Marine Adhesive/Sealant Fast Cure 5200 06520</b>	10 fl. oz. cartridge (295 ml) - White
<b>3M™ Marine Adhesive/Sealant Fast Cure 5200 05220</b>	3 fl. oz. tube (90 ml) - White

## Features

- Tough/flexible polyurethane polymer.
- Non-shrinking.
- One-part moisture cure.
- Non-sagging formula.
- Fast cure formula.

## Typical Physical Properties

**Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.**

<b>Container:</b>	10 fl. oz. (295 ml) cartridge 3 fl. oz. (90 ml) tube
<b>Base:</b>	Polyurethane
<b>Density lbs/Gallon (Approx.):</b>	11.0 lbs/gallon
<b>Color:</b>	White
<b>Solids Content (Approx.)</b>	97%
<b>Consistency:</b>	Medium paste
<b>Service Temperature:</b>	-40°F to 190°F (-40°C to 88°C)
<b>Shore A Hardness (cured):</b>	60
<b>Specific Gravity:</b>	1.21
<b>Coverage (10 oz.):</b>	1/8 inch (0.3175 cm) bead = 120 lineal feet (36.6 m)

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**Performance Properties**    **Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.**

**Tensile and Elongation Test:** 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).

Relative Humidity	Temperature	Tensile Strength psi (kg/cm <sup>2</sup> )	Elongation (%)
50%	70°F (21°C)	1000 (70.3)	874

**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	335	25.0
Pine	543	38.2
Oak	518	36.4
Maple	597	42.0
Fir	600	42.2
Mahogany	407	28.6
<b>Metal(s):</b>		
Steel	316	22.2
Stainless Steel	197	13.8
Aluminum	203	14.3
Brass	184	12.9
Bronze	176	12.4
Copper	182	12.8
Lead	160	11.2
Zinc (Galvanized)	269	18.9
<b>Plastics/Polymers:</b>		
Fiberglass	269	18.9
Gelcoat	600	42.2
Polycarbonate	409	28.7
Acrylic	149	10.5
Nylon	140	9.8
ABS	262	18.4
Polypropylene	66	4.6
Polyethylene	0	0

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## 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 Fast Cure 5200. Recommended procedures include cleaning with 3M™ General Purpose Adhesive Cleaner 08984.\*

#### Application of Adhesive Sealant:

Abrading the surfaces with a 180 grit to 220 grit abrasive will enhance the bond strength. Cut tip to desired bead size, puncture seal in nozzle and remove the seal at bottom end of cartridge. Place cartridge in a caulk gun. Apply 3M Marine Adhesive/Sealant Fast Cure 5200 to the seam or part to be bonded. Position parts. Tool material to desired appearance. Remove excess with 3M General Purpose Adhesive Cleaner 08984.\*

Sealant should be used within 24 hours after inner seal is punctured, as product will start to cure in the cartridge and nozzle.

#### Cure:

Cure	Relative Humidity	Temperature	Time	Cure Depth
Open Time	50%	70°F (21°C)	1 hour	N/A
Open Time	90%	90°F (32°C)	15 minutes	N/A
Full Cure	50%	70°F (21°C)	24 hours	1/8 inch (0.3175 cm)

#### Cleanup:

For cleaning 3M Marine Adhesive/Sealant Fast Cure 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 08984,\* toluene or acetone. Cured 3M Marine Adhesive/ Sealant Fast Cure 5200 can be removed mechanically with a knife, razor blade or sanding.

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

#### Limitations:

- *Alcohol should not be used in preparation for bonding as it will stop the curing process.*
- *Heat resistance - Maximum 190°F (88°C). 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.*
- *3M Marine Adhesive/Sealant Fast Cure 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.*

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## Application Information (continued)

### Limitations: (continued)

- 3M™ Marine Adhesive/Sealant Fast Cure 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.
- When using 3M Marine Adhesive/Sealant Fast Cure 5200 with metals, it may be necessary to prime the surface to achieve adequate adhesion and durability of the bond. 3M™ Scotch-Weld™ Structural Adhesive Primer EC-1945 B/A may be used for priming of most metals.

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## Applications

- Typical bonding and sealing applications include:
- Fiberglass deck to fiberglass hull
  - Wood to fiberglass
  - Portholes
  - Deck fittings
  - Moldings
  - Trunk joints
  - Between struts and planking
  - Stern joints and hull planking
- Structural bonding and sealing of:
- Wood
  - Fiberglass
  - Gelcoat
  - Primed metal
- Sealing of:
- Some plastics (test before assembly)
  - Glass
  - Metals

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## Storage

Store product at 60-80°F (16-27°C) for maximum storage life. Higher temperatures can reduce normal storage life. Lower temperatures can cause increased viscosity of a temporary nature. Rotate stock on a “first in-first out” basis.

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## Shelf Life

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

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## 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.

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## Technical Information

The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

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## Product 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. Given the variety of factors that can affect the use and performance of a 3M product, user is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application.

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**ISO 9001:2008**

This Industrial Adhesives and Tapes Division product was manufactured under a 3M quality system registered to ISO 9001:2008 standards.

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