



Document Library
TS Data Sheet 06520, 05220

Rev: 2

Effective: 04/1/2006

Status: Active

Supersedes: 07/06/2000

3M™ Marine Adhesive/Sealant Fast Cure 5200

3M Part No.(s)

06520

05220

3M Part Descriptor(s)

10 cartridge (295 ml) – White

3 fl. oz. tube (90 ml) - White

Description

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.

Features

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

Typical Physical Properties

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

Performance Properties

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 ²)	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 ²
Wood(s):		
Teak	355	25.0
Pine	543	38.2
Oak	518	36.4
Maple	597	42.0
Fir	600	42.2
Mahogany	407	28.6
Metal(s):		
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
Plastics/Polymers:		
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

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™ Adhesive/Sealant Fast Cure 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 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 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*, P. N. 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:

	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 min.	N/A
Full Cure	50%	70°F (21°C)	24 hours	1/8 inch (0.3175 cm)

Cleanup:

For cleaning Fast Cure 5200 before it is cured, use a dry cloth to remove the majority of sealant, followed by a cloth damp with General Purpose Adhesive Cleaner*, P. N. 08984, toluene or acetone. Cured Fast Cure 5200 can be removed mechanically with a knife, razor blade or sanding.

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.
- 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.
- 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. 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
- 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

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

Precautionary Information

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

Country

US

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

3M Marine

3M Center, Building 223-1N-13

Saint Paul, MN 55144-1000

1-877-366-2746 (1-877-3M MARINE)

<http://www.3m.com/marine>