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05260

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3M™ Marine Adhesive/Sealant Fast Cure 4200

3M Part No.(s)

06560
06564
05260

3M Part Descriptor(s)

10 fl. oz. cartridge (295 ml) - White
10 fl. oz. cartridge (295 ml) - Black
3 fl. oz. tube (90 ml) – White

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.

Features

- Fast cure formula
- Allows for disassembly
- Extended shelf life
- Non-sagging

Typical Physical Properties

Container	10 fl. oz. cartridge (295 ml) – White/Black 3 fl. oz. tube (90 ml) – White
Base	Polyurethane
Density lbs/Gallon (Approx.)	9.75 lbs/gallon
Color	White/Black
Solids Content (Approx.)	100%
Consistency	Caulkable, non-sag paste
Service Temperature - °F	-40°F (-40°C) to 190°F (88°C)
Shore A Hardness (cured)	40
Tack Free Time	1-2 hours at 75°F (24°C) and 50% R.H.
Coverage (10 oz.)	1/8 inch bead = 120 lineal feet

Performance Properties

Tensile and Elongation:

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)	300 (21.09)	750

Overlap Shear Strength

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

Substrate	Strength psi (kg/cm ²)	Failure Mode*
Wood:		
Primed Teak (#06533)	129 (9.07)	Cohesive
Pine	185 (13.0)	Cohesive
Oak	195 (13.7)	Cohesive
Maple	218 (15.33)	Cohesive
Fir	135 (9.5)	Cohesive
Mahogany	260 (8.28)	Cohesive
Metal:		
Stainless Steel	138 (9.7)	Cohesive
Aluminum	38 (2.67)	Adhesive
Plastics/Polymers:		
Nylon	0	Adhesive
ABS	136 (9.56)	Adhesive
Acrylic	22 (1.55)	Adhesive
Polycarbonate	174 (12.23)	Cohesive
Gelcoat	244 (17.15)	Cohesive
Fiberglass	258 (18.14)	Cohesive
Polypropylene	64 (4.5)	Adhesive
Polyethylene	0	Adhesive
Vinyl	0	Adhesive
EPDM rubber	0	Adhesive
Glass	62 (4.36)	Adhesive

***Cohesive** – Adhesive/Sealant fails before adhesive/sealant releases from substrate. **This is the desired mode.**

***Adhesive Failure** – Adhesive/Sealant releases from substrate.

Environmental Submersion Exposure Tests:

Overlap Shear Strength – One inch (2.54 cm) overlap specimens (0.093 inch (0.2362 cm) thickness).

Substrate	Relative Humidity	Temperature	Initial Strength psi (kg/cm ²)	Failure Mode	Salt Water Immersion 500 hours psi (kg/cm ²)	Failure Mode*
Stainless Steel	50%	70°F (21°C)	138 (9.6)	Adhesive	135 (9.5)	Adhesive

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 4200. Recommended procedures include cleaning with 3M™ General Purpose Adhesive Cleaner, P. N. 08984. When using solvents, use in a well ventilated area. Extinguish all sources of ignition in the work area and observe proper precautionary measures for handling such materials. Refer to product label and MSDS for further precautions.

Local and Federal air quality regulations may regulate or prohibit the use of surface preparation and cleanup materials based on VOC content. Consult your local and Federal air quality regulation.

Application:

Abrading the surface with a180 grit to 220 grit abrasive, 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 Fast Cure 4200 to the seam or part to be bonded. Position parts. 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, P.N. 08984.

Cure:

Cure	Relative Humidity	Temperature	Time	Cure Depth
Bond Time	50%	75°F (25°C)	30 minutes	N/A
Tack Free	50%	75°F (25°C)	1 hour	N/A
Full Cure	50%	75°F (25°C)	24 hours	1/8 inch (0.3175 cm)

Cleanup:

For cleaning 3M™ Marine Adhesive/Sealant Fast Cure 4200 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. Cured material can be removed mechanically with a knife, razor blade, piano wire or by sanding.

Limitations -

- Alcohol should not be used in preparation for bonding as it will stop the curing process, causing the adhesive to fail.

- 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).

- 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 Fast Cure 4200. It is strongly recommended to test paint of interest for suitability.

-Fast Cure 4200 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.

- Fast Cure 4200 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.

- Fast Cure 4200 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.

-When using 3M™ Marine Adhesive/Sealant Fast Cure 4200 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:

3M™ Adhesive/Sealant Fast Cure 4200 is designed to allow disassembly of wood and fiberglass parts bonded together. If a permanent bond is desired, use 3M™ Marine Adhesive/Sealant 5200 or Marine Adhesive/Sealant Fast Cure 5200.

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

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: 12 Months

Precautionary Information

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

Country

US

This document is public. It may be distributed.

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.

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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>