



# Technical Data Sheet

## 3M™ Marine Adhesive/Sealant Fast Cure 4000 UV

### **Product Description**

3M™ Marine Adhesive/Sealant 4000 UV is a one-part adhesive sealant that cures to form a firm, rubbery waterproof seal. Its flexibility allows for the dissipation of stress caused by shock, vibration, swelling or shrinking. Designed for marine applications above and below the waterline. Its superior UV resistance properties makes this an ideal cosmetic adhesive sealant.

### **Product Features**

- Superior UV resistance.
- Exceptional sealing properties.
- <1% VOC's
- Low odor.
- Non-shrinking.
- Non-sagging.
- Non-corrosive.
- Non-cracking.
- Caulkable at low temperatures (>40°F [4°C]).
- Fast curing.
- Paintable (test for suitability).

### **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 Uncured Physical Properties**

Attribute Name	Value
Density	11.7 lb/gal
Consistency	Medium Paste
Base	Polyether

### **Typical Physical Properties**

Attribute Name	Value
Color	White Black
Product Construction	10 fl. oz. cartridge (295 ml) 3 fl. oz. tube (90 ml) 400 ml Flex Pack (13.5 fl. oz.)
Approximate Coverage	36.6 lineal m <sup>1</sup>

<sup>1</sup> 10.5 oz. [310 mm Cartridge]; 1/8 in (3 mm) bead

## Typical Cured Characteristics

Attribute Name	Test Method	Value
Shore A Hardness	ASTM C661	39

## Typical Performance Characteristics

### 180° Peel Adhesion

Temperature: 23 °C

Substrate	Value
Aluminum	70 oz/in (Cohesive ) <sup>1</sup>
Fiberglass	57 oz/in (Cohesive ) <sup>1</sup>
Gelcoat	60 oz/in (Cohesive ) <sup>1</sup>
Mahogany	50 oz/in (Cohesive ) <sup>1</sup>

<sup>1</sup> 25 mm (1 in) wide specimens on canvas.

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

Adhesive Failure - Adhesive/Sealant releases from substrate.

### Overlap Shear Strength

Temperature: 23 °C

Substrate	Value
Oak	13.385/15 kg/cm <sup>2</sup> (Cohesive/Adhesive ) <sup>1</sup>
Maple	14.880/20 kg/cm <sup>2</sup> (Cohesive/Adhesive ) <sup>1</sup>
Fir	13.370/30 kg/cm <sup>2</sup> (Cohesive/Adhesive ) <sup>1</sup>
Mahogany	11.260/40 kg/cm <sup>2</sup> (Cohesive/Adhesive ) <sup>1</sup>
Aluminum	15.880/20 kg/cm <sup>2</sup> (Cohesive/Adhesive ) <sup>1</sup>
Fiberglass	14.0 kg/cm <sup>2</sup> (Cohesive ) <sup>1</sup>
Gelcoat	17.6 kg/cm <sup>2</sup> (Cohesive ) <sup>1</sup>

<sup>1</sup> 25 mm (1 in) overlap specimens 2.4 mm (0.093 in) thick.

Cohesive - Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode.

Adhesive Failure - Adhesive/Sealant releases from substrate.

Attribute Name	Temperature	Substrate	Value
Application Temperature			4 — 38 °C
Long Term Temperature Resistance			90 °C <sup>1</sup>
Minimum Long Term Temperature Resistance			-40 °C <sup>1</sup>
Temperature Resistance	23 °C	Fir	17.655/45 kg/cm <sup>2</sup> (Cohesive/Adhesive ) <sup>2</sup>
Temperature Resistance	23 °C	Aluminum	28.195/5 kg/cm <sup>2</sup> (Cohesive/Adhesive ) <sup>2</sup>
Temperature Resistance	23 °C	Gelcoat	19.3 kg/cm <sup>2</sup> (Cohesive ) <sup>2</sup>
Temperature Resistance	23 °C	Fiberglass	22.880/20 kg/cm <sup>2</sup> (Cohesive/Adhesive ) <sup>2</sup>

<sup>1</sup> Long Term (day, weeks)

<sup>2</sup> 25 mm (1 in) overlap specimens 2.4 mm (0.093 in) thick. Aged 500 hours @ 190 °F (90 °C).

Cohesive - Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode.

Adhesive Failure - Adhesive/Sealant releases from substrate.

Attribute Name	Temperature	Value
Elongation		>300 % <sup>1</sup>
Tensile Strength	23 °C	28.1 kg/cm <sup>2</sup> <sup>1</sup>

<sup>1</sup> A 3.2 mm (1/8 in) dumbbell specimen with a 3.2 mm (1/8 in) square cross section was tested at 51 mm/min (2 in/min)

## **Product Uses**

3M Marine Adhesive Sealant 4000 UV may be used in typical bedding and sealing applications including fiberglass hull, wood to fiberglass, porthole frames, deck fittings, moldings, thru hull and deck hardware.

## **Handling/Application Information**

### **Directions for Use**

#### 1. Surface Preparation

Surface should be clean, dry and free of contaminants. New surfaces should be solvent wiped with 3M™ General Purpose Adhesive Cleaner 08984\*, or equivalent. Other than new surfaces should be sanded with a fine grade abrasive to enhance bond strength.

#### 2. Sealing and bedding application

Apply 3M™ Marine Adhesive/Sealant 4000 UV to the seam or part to be bonded. Position parts. Tool and squeeze out material to desired appearance. Remove excess with 3M general purpose adhesive cleaner 08984.\*

#### 3. Cleanup

For cleaning 3M marine adhesive/sealant 4000 UV before it is cured, use a dry cloth to remove the majority, followed by a cloth damp with 3M general purpose adhesive cleaner, toluene, acetone, or other good cleaning solvent.\* Cured 3M marine adhesive/sealant 4000 UV can be removed mechanically with a knife, razor blade, piano wire or by sanding.

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

### **Cure:**

Tack Free (50%RH, 22 °C, 72 °F): 22 min

Full Cure (50%RH, 22 °C, 72 °F): 24 hr with 3.2 mm (1/8 in) depth of cure

\*Higher temperature and humidity conditions will accelerate the tack free time and cure. Please plan accordingly.

### **Application Examples**

#### **Typical Marine Adhesive Sealant Applications:**

Portlights  
Hatches  
Thru-hulls  
Rails  
Metal Hardware  
Moldings  
Wood  
Teak  
Fiberglass  
Gelcoat  
Porthole Frames

## **Storage and Shelf Life**

Store under normal conditions of 16° to 27°C (60° to 80°F) and 40 to 60% relative humidity in the original packaging, out of direct sunlight. Lower temperatures cause increased viscosity of a temporary nature. When stored at recommended conditions, the shelf life is 15 months from date of manufacture for cartridges and sausage packs. When stored at recommended conditions, the shelf life is 15 months from date of manufacture for 3 ounce tubes.

## **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

## **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.

## **Information**

Precautionary Information: Refer to product label and Material Safety Data Sheet for health and safety information before using the product. For information, please contact your local 3M Office. You can click or scan QR code to see contact detail or visit [www.3M.com](http://www.3M.com) Important Information: All statements, technical information and recommendations contained in this document are based upon tests or experience that 3M believes are reliable. However, many factors beyond 3M's control can affect the use and performance of a 3M product in a particular application, including the conditions under which the product is used and the time and environmental conditions in which the product is expected to perform. Since these factors are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for the user's method or application. All questions of liability relating to this product are governed by the terms of the sale subject, where applicable, to the prevailing law. Values presented have been determined by standard test methods and are average values not to be used for specification purposes. Our recommendations on the use of our products are based on tests believed to be reliable but we would ask that you conduct your own tests to determine their suitability for your applications. This is because 3M cannot accept any responsibility or liability direct or consequential for loss or damage caused as a result of our recommendations.

## **ISO Statement**

This product was manufactured under a 3M quality system registered to ISO 9001 standards.

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