

## **Marine Silicone Sealant 3200**

## **Product Data Sheet**

January 2009

Supersedes: January.2006

## **Product Description**

Marine Silicone Sealant 3200 is a paste-like, one-component material, which cures to a tough rubbery solid when exposed to moisture in the air. It will adhere to clean metal, glass, wood, ceramic, painted surfaces and many plastics. It is easy to use and exhibits excellent resistance to weathering, vibration, mildew and extreme temperatures.

## **Key Features**

- Mildew resistant
- Seals a wide variety of substrates
- Non-sagging formulation

## **Technical Data**

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

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Properties	Marine Silicone Sealant 3200			
Tack-Free Time @ 23° C and	30 to 60 minutes for black & white, 30 to			
50% Relative Humidity	80 minutes for clear			
Rate of Cure @ 23° C and 50% Relative Humidity	3 mm per 24 hours			
Shore A Hardness	25 (black & white)			
((DIN 53505))	21 (clear)			
Density at 25° C	1.52 g/cm³ (black & white) (DIN53479A)			
	1.05 g/cm³ (clear) (DIN53479A)			
Elongation at Break	> 530%			
(DIN 53504 S3A)				
Tensile strength	2,0 MPa			
(DIN 53504 S3A)				
Service Temperature	-40°C to + 90°C			
Colours	White, Black and Clear			
Application temperature	5°C to + 40°C			
Consistency	Non-sagging paste			
UV resistance	Good			

#### **Direction for use**

## **Surface Preparation:**

Surfaces to be sealed or bonded should be clean and dry. Surfaces should be free from grease, mold release, oil, water/condensation and other contaminates that may affect the adhesion of the sealant. Abrading with 180 to 220 grit abrasive followed by a solvent wipe will improve the bond strength. Suitable solvents include  $3M^{TM}$  Citrus Based Adhesive Remover,  $3M^{TM}$  Scotch-Weld<sup>TM</sup> Solvent No. 2 or methyl ethyl ketone (MEK).\*

\*When using solvents, use in a well ventilated area. Extinguish all sources of ignition in the work area and observe product directions for use and precautionary measures. Refer to product label and MSDS for further precautions. Always pre-test solvent to ensure it is compatible with substrates.

Local and federal air quality regulations may regulate or prohibit the use of this product or surface preparation and cleanup materials. Consult local and federal air quality regulations before using these products.

**Note:** Alcohol will interfere with the curing process and extra care must be taken when using alcohol as a cleaning solvent to prevent any contact with the sealant.

Use of a primer is an extra step and cost and will depend on substrates and the final end use. Using primer can improve the corrosion resistance of certain metals as well as improve the durability of the bond when exposed to high humidity conditions. For most applications high strength bonds on metal can be achieved without the use of a primer. Pre-testing for adhesion is suggested to determine if a primer is needed. The 3M<sup>TM</sup> Scotch-Weld<sup>TM</sup> Structural Adhesive Primer EC-1945 B/A works well for most metals.

### Application:

Cut tip to desired bead size. Marine Silicone Sealant 3200 is supplied ready-to-use. Sealant should be applied at temperatures between 5°C and 40°C. The paste-like consistency makes it easy to tool with a spatula. The cure of the silicone progresses inward from the surface. At conditions of at least 23°C and 50% relative humidity a tack-free skin forms within approximately 30 minutes. Tooling is not practical after the skin begins forming.

## Cleanup:

While sealant is still soft cleaning can be done with the same solvents used for surface preparation. If sealant is already cured, removal is done mechanically with razor knife, piano wire, sanding or Scotch-Brite™ Moulding Adhesive and Stripe Removal Disc. This disc is available from 3M Automotive Aftermarket Division.

## Application Equipment Suggestions

#### Cartridge and Flex Pack:

For ease of dispensing an all metal, rod driven, friction feed manual applicator gun or an air operated applicator gun is suggested. Please contact your 3M sales representative for these items.

#### **Bulk Dispensing:**

For bulk dispensing a 46:1 ratio dual action piston pump with a ram is suggested. Actual equipment is dependent on the fluid flow desired, the number of guns to be supplied for each pump and distance product has to be pumped. It is best to consult with the equipment supplier to make sure the proper type and size of equipment is specified. Common suppliers of this type of pumping systems are Graco and Binks. It is best to work with a distributor for Graco or Binks located in your area. Our technical service group will be glad to work with you and your chosen supplier to ensure the proper equipment is selected.

### Storage

Marine Silicone Sealant 3200 must be stored in the original, un-opened containers at 15  $^{\circ}$  C - 25  $^{\circ}$  C for maximum shelf life. Rotate stock on a "first in-first out" basis.

#### **Shelf Life**

When stored at the recommended conditions in original un-opened containers, Marine Silicone Sealant 3200 has a shelf life of 18 months after date of manufacture.

## 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.

www.3M.com

# For Additional Information

To request additional product information or to arrange for sales assistance, call 0870 6080050 Address correspondence to: 3M United Kingdom PLC, 3M House, 28 Great Jackson Street, Manchester, M15 4PA

## **Important Notice**

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

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