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Rev:3 **Status:** Active
Effective: 01/09/2002

3M™ Marine Grade Silicone Sealant

3M Part No.(s)	3M Part Descriptor(s)
08017	3 fl. oz. tube (90 ml) - White
08027	10 fl. oz. cartridge (295 ml) - White
08019	3 fl. oz. tube (90 ml) - Clear
08029	10 fl. oz. cartridge (295 ml) - Clear

Description

A mildew resistant, non-sagging, moisture curing silicone rubber sealant for above the waterline applications which remains flexible with excellent resistance to the marine environment. Adheres to bare and painted metal, glass, fiberglass, non-oily woods and many plastics and abraded rubber.

Features

- Mildew resistant
- Flexible polymer
- One-part cure
- Excellent weathering resistance
- High temperature resistant
- Non-shrinking
- Non-sagging formula

Typical Physical Properties

Container	3 fl. oz. tube (90 ml) - White/Clear 10 fl. oz. cartridge (295 ml) - White/Clear
Base	Synthetic resin
Density lbs/Gallon (Appx.)	8.67 lbs/gallon
Color	White/Clear
Flash Point - °F	>250°F (121°C)
Solids Content (Appx.)	100%
Consistency	Non-sagging paste
Service Temperature - °F	-40°F (-40°C) to 190°F (90°C)

Tack Free Time	30 - 45 min. at 75°F (25°C) @ 50%
Cure Time (1/8" Thick)	R.H.
Specific Gravity	24 hours at 75°F (25°C) @ 50%
Coverage (10 oz.)	R.H.
	1.04
	1/8 inch (0.3175 cm) bead = 120 lineal feet (36.6 m)

Performance Properties

180° Peel Strength - One inch (2.54 cm) wide specimen on canvas

Substrate	Relative Humidity	Temperature	Strength lbs/inch width	Failure Mode*
Gelcoat	50%	70°F (21°C)	11.5	Adhesive
Fiberglass	50%	70°F (21°C)	10.7	Adhesive
Acrylic	50%	70°F (21°C)	0	Adhesive
Aluminum	50%	70°F (21°C)	8.4	Adhesive
Polycarbonate	50%	70°F (21°C)	0	Adhesive
Oak	50%	70°F (21°C)	7.6	Adhesive
Pine	50%	70°F (21°C)	7.1	Adhesive
Mahogany	50%	70°F (21°C)	6.2	Adhesive

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

Adhesive Failure - Adhesive/Sealant releases from substrate.

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

Substrate	Relative Humidity	Temperature	Strength psi (kg/cm^2)	Failure Mode*
Woods:				
Primed Teak (#06533)	50%	70°F (21°C)	32 (2.25)	Adhesive
Pine	50%	70°F (21°C)	69 (4.85)	Adhesive
Oak	50%	70°F (21°C)	73 (5.13)	Adhesive
Maple	50%	70°F (21°C)	58 (4.08)	Adhesive

Fir	50%	70°F (21°C)	57 (4.0)	Cohesive
Mahogany	50%	70°F (21°C)	49 (3.45)	Adhesive
Metals:				
Stainless Steel	50%	70°F (21°C)	60 (4.22)	Adhesive
Aluminum	50%	70°F (21°C)	73 (5.13)	Adhesive
Plastics/Polymers:				
ABS	50%	70°F (21°C)	92 (6.47)	Cohesive
Acrylic	50%	70°F (21°C)	12 (1.20)	Adhesive
Polycarbonate	50%	70°F (21°C)	27 (1.90)	Adhesive
Gelcoat	50%	70°F (21°C)	101 (7.10)	Cohesive
Fiberglass	50%	70°F (21°C)	92 (6.47)	Cohesive
Polypropylene	50%	70°F (21°C)	0	Adhesive
Polyethylene	50%	70°F (21°C)	0	Adhesive
Glass	50%	70°F (21°C)	64 (4.50)	Cohesive

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

Adhesive Failure - Adhesive/Sealant releases from substrate.

Tensile & Elongation Test:
A 1/8 inch (0.3175cm) dumbbell specimen with a 1/8 inch (0.3175) 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)	220 (15.46)	350

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 Grade Silicone Sealant. 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.

Selection:
3M™ Marine Grade Silicone Sealant is an excellent sealant for above the waterline applications. These include head applications, interior and exterior wood and trim sealing and as a gasket adhesive.

- 3M™ Marine Grade Silicone Sealant 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.

-Cannot be painted.

-Do not use with electronic circuitry. Acetic acid liberated during cure may corrode electronic circuitry.

Application:

Temperature - Do not apply at temperatures below 40°F (4°C) or on frost covered surfaces.

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. Place cartridge in a caulk gun. Apply 3M™ Marine Grade Silicone Sealant to the seam or part to be sealed. Position parts. Tool material to desired appearance. Remove excess with General Purpose Adhesive Cleaner, P. N. 08984.

Cleanup:

For cleaning 3M™ Marine Grade Silicone Sealant 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, toluene or acetone.

Cure:

Cure	Relative Humidity	Temperature	Time	Cure Depth
Tack Free	50%	77°F (25°C)	5-10 minutes	N/A
Full Cure	50%	77°F (25°C)	24 hours	1/8 inch (0.3175 cm)

Applications

3M™ Marine Grade Silicone Sealant is an excellent sealant for above the waterline applications. These include head applications, interior and exterior wood and trim sealing and as a gasket adhesive.

Typical bonding and sealing applications include:

- Sealing marine trim
- Filleting and caulking joints to provide water and dust barrier
- Sealing port lights and hatches
- Sealing drip rails
- Sealing electrical assemblies

Sealing of:

- Wood
- Fiberglass
- Gelcoat
- Primed metal
- Most plastics
- Glass
- Painted surfaces
- Ceramic fibers

Storage and Handling

Recommended Storage Temperature Range: 60°F(15°C) to 80°F(27°C)
Expected Shelf Life at Recommended Storage Temperature: 36 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 physcial 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

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