

## TECHNICAL DATA SHEET

### MANUS-BOND® 77-MA Marine Adhesive Sealant

#### PRODUCT DESCRIPTION:

Manus-Bond® 77-MA Marine Adhesive sealant is a one-component, high-strength, and versatile elastic adhesive/sealant based on silyl-modified polymer technology. 77-MA cures on exposure to atmospheric moisture to form a tough, yet flexible, water-resistant, durable, adhesive/sealant. 77-MA is solvent and isocyanate free. 77-MA provides advantages over silicone and polyurethane. And, once it cures, it provides an excellent semi-matte appearance. 77-MA can be painted with most paints. Potential applications include aftermarket and OEM marine applications as (a) gap-filling for underwater thru-hull fittings, hull-to-deck joints, and portholes, and (b) bonding wood, gelcoat/fiberglass, and many other common substrates. 77-MA Marine Adhesive sealant exhibits excellent adhesion to most similar and dissimilar surfaces substrates including fiberglass, gelcoat, wood, aluminum, steel, glass, plywood, ceramic tile, brick blocks, and foam board.

Features	Advantages
<ul style="list-style-type: none"> <li>Used for bonding and sealing applications above or below the waterline</li> <li>Forms watertight, weather-resistant seals on joints and boat hardware</li> <li>Bonds and seals fiberglass deck to hull, wood to fiberglass</li> <li>Use as a sealant in open joints between glass, ceramics, and metals</li> </ul>	<ul style="list-style-type: none"> <li>Smooth, short cut-off string during application</li> <li>Excellent tack-free and cure times</li> <li>Neutral, odorless, and no shrinkage during cure</li> <li>Resistant to fresh and salt water</li> <li>Elastic in wide temperature range</li> <li>Excellent cohesive strength after cure</li> <li>High UV resistance and color stability</li> </ul>

Characteristic	Typical Value or Result <sup>1</sup>
<b>Uncured Properties</b>	
Appearance	High Viscosity Paste
Standard Colors <sup>2</sup>	Off-white, Gray, Black
Curing Mechanism	Moisture Curing
Tack-free Time (73°F and 50% RH)	15 minutes
Curing through volume (mm) (1 day at 73°F and 50% RH)	>3mm
Density (g/cc)	1.44 +/- 0.05
Coverage (10.1 OZ)	1/8" bead= 110 linear feet
<b>Cured Properties</b>	
Shore A	58 +/- 3
Tensile Strength (PSI)	≥400
Elongation	≥200 %
Temperature Resistance (°F)	-40 to +212 °F (short exposure up to 285°F)

<sup>1</sup> The values are typical or an approximation for the material and are not intended for use in specifications. Field or environmental conditions or application methods may yield different results.

<sup>2</sup> Other colors available upon request.

## MANUS-BOND® 77-MA MARINE SEALANT

### APPLICATION GUIDELINES:

#### Surface Preparations and Directions of Use:

The surfaces to be applied on should be clean, dry, and free from dust and grease. The ability for the adhesive to bond is only as good as the substrate it is applied on. Normal vehicle varnishes and standard glass generally do not require a primer. It is advisable to carry out preliminary adhesion tests on the substrate. Avoid exposure of unused material to air or moisture. A premium, high-ratio caulking gun that is suitable for high viscosity materials is recommended. Please contact Manus Sales Department or your Manus representative for information on premium, high-ratio caulking guns.

#### Precautions:

Some applications may not be compatible with this product. In most cases, no primer is required. Some cleaners or solvents may not be compatible with this product. Testing suitability for intended application before proceeding with full application is recommended. Do not use in direct contact with fire or in long-term high-temperature applications. Use with adequate ventilation. Inhalation of vapor during application and cure may cause eye or throat irritation. In case of contact with eyes, lips, or mouth, flush thoroughly with water. If irritation persists, consult a physician. Avoid repeated, prolonged contact with skin. See SDS for additional information. KEEP OUT OF REACH FROM CHILDREN.

#### Clean Up:

Excess cured material must be cut or scraped away followed by wiping with isopropyl alcohol, aromatic or ketone-type solvents. The use of these solvents (or other solvents) may be hazardous to your health. KEEP AWAY FROM OPEN FLAME. Tools and application equipment may be cleaned with the same solvent. Follow the precautions and instructions of the solvent manufacturers.

#### User Evaluation:

TESTING FOR SUBSTRATE COMPATIBILITY AND ADHESION MUST BE PERFORMED BY THE USER BEFORE PROCEEDING WITH FULL APPLICATION OR INCORPORATION. PRODUCT MAY NOT BE COMPATIBLE WITH ALL SUBSTRATES, SURFACES, USES, OR APPLICATIONS.

### PRODUCT STORAGE:

The product has shelf life of 12 months after production date in its original packaging (unopened) in a cool, dry place. For maximum shelf life, store unopened containers at temperatures not exceeding 80°F in cool, dry conditions. Keep away from wet areas, direct sunlight, and heat sources.

### PACKAGING AND SIZES:

77-MA Marine Adhesive sealant is available in 3.0 Oz squeeze tube, 10.1 fl.oz./290 ml cartridge or 20 fl.oz. sausage packs. Other packaging or colors available upon request.

### TECHNICAL SERVICE:

Manus technical representatives are available to provide assistance. Please contact our Technical Service Department with your questions or requests for specific applications.

### LIMITED WARRANTY:

ANY GOODS PROVED DEFECTIVE WILL BE REPLACED OR THE PURCHASE PRICE REFUNDED. THE LIMITED WARRANTY DESCRIBED HEREIN IS IN LIEU OF ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE. THE USER SHALL DETERMINE SUITABILITY OF THE PRODUCT FOR ITS INTENDED USE. LIABILITY FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGE OR LOSS IS EXCLUDED. THE USER ASSUMES ALL RISKS OF THE PRODUCT'S USE, HANDLING, AND STORAGE.

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