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## **LifeSeal<sup>®</sup> POLYURETHANE/SILICONE MARINE SEALANT**

### **DESCRIPTION**

#### **BASIC USE**

**LifeSeal<sup>®</sup> POLYURETHANE/SILICONE SEALANT** is a one part, fast curing, low odor, high adhesion, non-sag compound that has all the desired proven characteristics of both polyurethane and silicone sealant, eliminating most of the undesirable qualities that each individual sealant possesses. Although **LifeSeal<sup>®</sup>** was specifically designed for fiberglass and vinyl, it adheres tenaciously to metal, glass, wood, and other types of boat building materials. It provides a durable, permanent, watertight seal for all properly designed joints subject to structural movement. **LifeSeal<sup>®</sup>** is excellent for sealing decks to hulls, underwater thru hull fittings, vinyl ports, windshield setting glazing, and bedding of marine hardware. It retains excellent adhesion and elasticity under all weather conditions. **LifeSeal<sup>®</sup>** is also excellent for all maintenance needs. **LifeSeal<sup>®</sup>** has proven its ability to perform under most rigorous conditions. **LifeSeal<sup>®</sup>** does not sag or slump when applied to vertical surfaces.

#### **LIMITATIONS**

**LifeSeal<sup>®</sup>** is not recommended for use on ferro cement hulls where porous substrates permit water infiltration to bond interface. **LifeSeal<sup>®</sup>** should not be applied to boat building materials that may bleed oil or solvents. These include, but are not limited to, impregnated wood or oil soaked materials. The sealant should not be applied in totally confined spaces as it requires atmospheric moisture to cure. If painting is required, paint prior to applying sealant, or the system should be pre-tested with the specific paint to be used. Generally painting over a rubber surface will not be successful as the film of paint will not stretch with the expansion of the rubber and adhesion of the ozone and temperature extremes. Its tensile strength, elongation, hardness, and adhesion do not change with age or weather. Because of its memory properties **LifeSeal<sup>®</sup>** returns to its original shape and dimensions even after long periods of tensile or compression deformation. The sealant stays flexible indefinitely. Cured sealant will not harden with cold (-80° F) or soften with heat ( 400°F ) and is virtually unaffected by time or weather. When using in joints, it is recommended that a bond breaker of cotton be used to prevent the material from bonding to the bottom of the joint. Use of other types of material may result in staining of the surface and/or sealant.

#### **JOINT DIMENSIONS**

**LifeSeal<sup>®</sup>** is capable of withstanding extreme movement; however, we strongly recommend that joints be designed three times greater in width than the anticipated movement to help compensate for adverse field conditions. The joint width should not be less than 1/8". Joint depth should be a minimum of 1/4" to a maximum of 1/2".

**LifeSeal® POLYURETHANE/SILICONE  
PERFORMANCE PROPERTIES CONT.**

**INSTALLATION**

**PREPARATORY WORK**

The sealant bonding surfaces should be sound, clean, dry, and free of contamination such as release agents, water repellent treatment or other surface contaminants. Where adverse conditions are suspected, sanding is advisable. Clean surfaces to be caulked with **Life Calk Solvent & Cleaner®** or **Release®**.

**METHOD OF APPLICATION**

**LifeSeal®** can be applied directly from cartridges or bulk pails.

**COMPOSITION & MATERIALS**

**LifeSeal®** is a one-component, neutral emulsion of polyurethane and silicone polymers combined with proper crosslinking agents to form a unique sealant ready for use as supplied. Its ease of extrudability is unsurpassed and unaffected by extremes of temperature. Its "skin-over" time is 20 minutes or less, minimizing dirt pick-up. It cures rapidly to a firm rubber on contact with moisture from the atmosphere. Before material is cured, excess may be cleaned up with soap and water. Once cured, water will not affect the sealant. Under normal conditions **LifeSeal®** will cure to a depth of 1/4" within 24 to 36 hours depending on temperature and humidity. **LifeSeal®** is unsurpassed for long lasting performance in active joints with up to 75% total movement.

**PACKAGING**

**LifeSeal®** is packaged in 310ml disposable cartridges fitting a standard caulking gun or in 600 ml chubbs.

**PACKAGE STABILITY**

12 MONTHS at 75°F, & 50% relative humidity. Longer at a lower temperature and/or humidity.

**COLORS**

**LifeSeal®** is available in white, black, clear, and aluminum; other custom colors are available by special order.

**APPLICABLE STANDARDS**

**LifeSeal®** exceeds the requirements of the Federal Specifications TT-S-001543A (COM-NBS) Type Non-Sag Class A. **LifeSeal®** is impervious to the effects of sunlight, rain, or snow. The sealant can be applied as low as 10°F, provided the surfaces are clean, dry, and frost free.

**TECHNICAL DATA**

Maximum Movement Cap. In %	75%
Practical Joint Design Recommended	3X Movement
Life Expectancy In Years	
Mild Conditions	20+
Severe Conditions	15+
Joint Requirements	
Minimum Width	1/8"
Ideal Width	1/4"
Minimum Depth	1/4"
Maximum Width	1"
Depth Range	1/4" to 1/2"

**LifeSeal® POLYURETHANE/SILICONE  
PERFORMANCE PROPERTIES CONT.**

**TYPICAL PROPERTIES\***

After 7 Days a 77°F and 50% Relative Humidity

<b>Property</b>	<b>Value</b>	<b>Test Method</b>
Tensile Strength	290 psi	ASTM D 412-66T
Elongation	350%	ASTM D 412-66T
Specific Gravity	.99	8.270/8.345#/gal
Lap Shear	240 psi	ASTM D 1002
Tear Strength	30 psi	ASTM D 624-54
Flow (inches)	Nil	MIL-S-7502
Weathering	No Change in Hardness	10,000 Hours in Atlas Twin Arc Weathermeter 1/2" Thick Rod 1"
Compression Set	3.75%	Diameter under 50% Compression for 1 Year

**WARRANTY**

This product is sold "as is". Seller makes no warranty of merchantability in respect to the goods sold or delivered, or that the goods sold or delivered are fit for any particular purpose. The manufacturer's liability shall be limited solely to the refund of the purchase price within 90 days of the date of purchase.

\* These values are not intended for preparing specifications