



PRODUCT SPECIFICATION DATA SHEET

Stevens-OlyBond Classic Insulation Adhesive

General Description

Stevens-OlyBond Classic is a dual component, reaction cure polyurethane adhesive which can be applied with both traditional foam equipment and the Garlock™ Pace Setter 1000. The blowing agent is water (no HCFC). Stevens-OlyBond Classic is available in 15- and 50-gallon sets of diisocyanate (A) and resin (B). Stevens OlyBond Classic is used to fully adhere a variety of board stocks to numerous roof substrates in both new and re-roof applications. It can also be used to fully adhere insulation board to insulation board. Stevens OlyBond Classic rises 1/8-in.- 1/4-in. (3 - 6 mm) above the substrate and board stock is placed into the adhesive. The chemical cure takes place in approximately 10-15 minutes after spraying, depending on temperature and weather conditions.

All projects requiring a Stevens warranty must have a RFW submitted and approved prior to the commencement of work.

Technical

Compatible Roof Decks and Substrates (see Precautions)

- Lightweight structural concrete
- Poured in place structural concrete
- Existing sprayed in place polyurethane foam
- Treated plywood (5/8" min. thickness-16 mm)
- Steel 22 gauge or heavier w/approved cross section
- Pre-cast concrete
- Cementitious wood fiber plank
- Base Sheets
- Insulating concrete
- Gypsum

Compatible Roof Insulations

- Expanded polystyrene (EPS)
- Polyisocyanurate
- Extruded polystyrene (XPS)
- HD Wood Fiber
- DensDeck®

Typical Physical Properties

Density ASTM D-1622:

Free Rise: 1.6 lb/ft³

Compressive Strength ASTM D-1621:

Parallel: 15 psi @ 6% deflection

Perpendicular: 12 psi @ 6% deflection

Tensile Strength ASTM D-1623:

60 psi

Water Absorption ASTM D-2843:

0.01 - 0.03 lb/ft²

Closed Cell Content ASTM D-2856:

90% min.

R-Value

6.3 aged

7.1 new

K Factor - Initial ASTM C-518:

0.16

Volume Change ASTM D-2126:

Humid Aging - 28 days: 20%

Dry Aging - 28 days: 13%

Freeze - 5 days: 0%

Weight/Gallon (Liquid components):

"Part A" Component = 10.7 lbs (4.9 kg)

"Part B" Component = 8.3 lbs (3.9 kg)

Viscosity (Liquid components):

"Part A" Component = 300 cPs

"Part B" Component = 500 cPs

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Surface Preparation

Lightweight Concrete, Structural Concrete, and Plywood—Surfaces must be free of any debris, dirt, oil, grease, and moisture before applying Stevens-OlyBond Classic.

Built Ups (BUR) and Modified Bitumen—Non-graveled surfaces must be free of any debris, dirt, oil, grease and moisture. Graveled surfaces must be free of loose gravel, dirt and debris. A pull test is required to determine the adhesion to non-graveled surfaces. Contact Stevens Roofing Systems for details.

Steel—22 gauge or heavier. The upper flange of the steel deck (bonding surface) must be free of debris, dirt, grease, oil, and moisture. On new steel, the shop coating must be removed. The bonding surface must be free of any cleaner before applying Stevens-OlyBond Classic.

Insulation—Review the roofing insulation plan. Isocyanurate insulation boards to be attached can be no larger than 4 ft. x 4 ft. (1.2 m x 1.2 m). Multiple layers of boards should use the staggered joint method of application.

Existing Polyurethane Foam—The surface of the polyurethane roof, including the coating, should be removed with a scarifier (minimum 1/2-in. [12 mm]). The bonding surface should be blown clean before applying Stevens-OlyBond Classic.

Metal—Stevens-OlyBond Classic has excellent adhesion to clean metal. It is recommended that all non-ferrous metals (aluminum, copper, stainless, etc.) be primed to further increase adhesion. Accepted primers include epoxy, chlorinated rubber, and wash primer.

Product Installation

Application—The B (resin) component of Stevens-OlyBond Classic should be mixed with a mixer for at least one minute. The A and B components should be pumped individually at a 1:1 ratio to a spray gun where they are mixed as they are sprayed.

Coverage Rates—The rate of application is typically one gallon per 100 sq. ft (9.3 m²). This rate provides 100% coverage and a material rise of 1/4-in. (6 mm) over most substrates. The application rate must be increased for rougher surfaces and will vary depending on roughness. It is recommended that a layer of polyurethane foam be sprayed on rough surfaces prior to application of Stevens-OlyBond Classic.

Reaction Time—Stevens-OlyBond Classic is designed to react much more slowly than spray polyurethane foam. It is important to vary the speed of the reaction in relation to the temperature (substrate and ambient) at time of application to ensure a complete reaction. Note the chart below for correct 'Part B' component selection:

Typical Handling Characteristics (Tack Free and set Up Time in Minutes)			
Temperature Range	Part B Formula	Tack Free Time	Set Up Time
35 - 65°F (2-19°C)	WW	8	15
65 - 90 °F (19-32°C)	R	7	12
+90°F (32°C)	S	7	12

Important Installation Consideration—When applying OlyBond Classic, board stock must be placed into the adhesive while it is still wet and tacky (before it reaches its tack free state). Insulation boards may be placed into the adhesive shortly after it has reached its maximum rise. This typically occurs within 2 minutes.



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Precautions

Substrate compatibility caution—Various smooth and gravel asphalt BUR, coal tar pitch BUR and any other substrates not listed under **Compatible Roof decks and Substrates** above, MUST be reviewed and approved by Stevens Technical Department prior to shipment and installation.

Stevens-OlyBond Classic is NOT recommended for application or use as follows:

- With polyisocyanurate board stock larger than 4 ft. x 4 ft. (1.2 m x 1.2 m).
- When ambient or substrate temperatures are below 35° F (2°C) or above 120° F (49°C).
- During inclement weather.
- On wet surfaces.
- On any roof deck that shows signs of deterioration or loss of structural integrity.
- On excessively dirty or grease laden surfaces.
- After the expiration date. Contact Stevens at 800-621-7663 for options and instructions.

Handling and Storage

Keep containers closed and store in a well-ventilated cool dry place. For long-term storage, partially empty containers should be filled with dry inert gas at atmospheric pressure to avoid reaction with moisture. Contamination by moisture or basic compounds can cause dangerous pressure buildup in a closed container. Store between 45° F (7°C) and 95° F (35°C). At these temperatures, the shelf life is 12 months from the date of manufacture. Protect from freezing. Use only with ventilation that will keep the vapor concentration below the TLV ceiling limit of 0.02 PPM. **The minimum product temperature before entering the pump should be 72°F (22°C).** The minimum ambient and surface temperatures should be 35°F (2°C). Before spraying Stevens-OlyBond Classic, the applicator must observe the same precautions involved when spraying polyurethane foam: wear protective clothing, wear protective gloves, and wear protective eyewear. A self-contained breathing apparatus is also required, per OSHA guidelines. Please read the MSDS for additional important safety information.

Note:

The Material Safety Data Sheet (MSDS) for this product is on line at www.stevensroofing.com