

OlyBond500[®] & OlyBond500[®] Green Data Sheets

Updated: 6/16



*Quality You Can Trust...From
North America's Largest Roofing Manufacturer!™*

Distributed by:



OLYBOND500® & OLYBOND500® GREEN

Insulation Adhesive

Description

OlyBond500® and OlyBond500® Green are two-component, low-rise polyurethane adhesives used to adhere a variety of board stocks to most roof substrates in both new and reroof applications. They can also be used to adhere insulation board to insulation board. OlyBond500® is dispensed in ¾" (19.1 mm) to 1" (25.4 mm) wide beads that spread to several inches while rising ¾" (19.1 mm) to 1" (25.4 mm) above the substrate. Place the board stock into the adhesive and walk into place. A chemical cure takes place, securing the board in approximately 4 to 8 minutes after application, depending on temperature and weather conditions.

OlyBond500® is a dual-component, reaction-cure polyurethane adhesive. The blowing agent is water. OlyBond500® does not contain HCFC and has low VOCs. It is available in 10-gallon sets of Part 1 (diisocyanate, 5 gallons [18.93 liters]) and Part 2 (resin, 5 gallons [18.93 liters]), and is also available in 1,500-ml SpotShot cartridge sets (4 cartridges/case).

Basic Use

- OlyBond500® and OlyBond500® Green are included in many approved roof assemblies listed with FM Approvals and Miami-Dade County.
- OlyBond500® and OlyBond500® Green are available in both Regular (Bag-in-Box and Spot Shot) and Winter Grade (OlyBond500® SpotShot only) for optimum application at various temperatures.
- Lightweight and portable.
- Easy application process.
- Compatible with a wide variety of roofing systems.
- Quick set-up time.
- Compatible with many roof decks, substrates, and cover boards.
- Ensure that you have the correct OlyBond500® or OlyBond500® Green formulation for the surface and ambient temperature.
 - **Bag-in-Box:** Regular (40°F+ [4.4°C+])
 - **SpotShot:** Regular (40°F+ [4.4°C+]) or Winter (0°F – 65°F [-17°C – 18.3°C])
- On retrofit re-cover projects, the existing roofing material must be investigated to ensure adequate attachment of existing system. All wet material must be identified and removed prior to the application of the OlyBond500® or OlyBond500® Green adhesive.
- See pages 3 – 4 for general application recommendations and requirements.

Packaging

- 10-gallon (37.85 liters) Bag-in-Box sets for use with the PaceCart 2® and PaceCart 3™ (5-gallon [18.93 liters] Part 1; 5-gallon [18.93 liters] Part 2).



- 1,500-ml SpotShot cartridge sets for use in specially designed applicators.
- Formulas (10-gallon Bag-in-Box sets):
- Regular (40°F+ [4.4°C+])
- Formulas (1,500-ml SpotShot cartridges):
- Regular (40°F+ [4.4°C+])
 - Winter (0°F – 65°F [-17°C – 18.3°C])

Compatibility When Properly Prepared and Evaluated

Roof Decks and Substrates:

- Structural concrete
- Gypsum
- Cementitious wood fiber plank
- Lightweight insulating concrete
- Steel (22 gauge or thicker with approved cross section)
- Plywood (¾" [19.1 mm] thick min.)
- Smooth and granular surface BUR
- Smooth and granular surface modified bitumen
- Existing sprayed-in-place polyurethane foam
- Base sheets
- Most vapor barriers (including asphaltic and fleece-top)

Roof Insulation and Cover Board:

- Expanded Polystyrene
- Polyisocyanurate and HD Polyisocyanurate
- High-Density Wood Fiber
- Gypsum Cover Boards
- Perlite
- Certain Extruded Polystyrene

Any substrate or insulation not listed must be reviewed by OMG. Call 800-633-3800.

Codes and Compliance

OlyBond500®

Physical Property	Test Method	Typical Values
Density	ASTM D1622	3.2 lb/cf
Compressive Strength	ASTM D1621	38 psi @ 6% deflection
Tensile Strength	ASTM D1623	35 psi
Water Absorption	ASTM D2842	5.1%
Closed Cell Content	ASTM D6226	90% min
R-Value	ASTM C518	3.8/inch (new)
VOC Content	ASTM D2369	5 g/L
Weight/Gallon	Part 1 Component	10.32 lb
	Part 2 Component	8.4 lb

OlyBond500® Green

Physical Property	Test Method	Typical Values
Density	ASTM D1622	3.38 lb/cf
Compressive Strength	ASTM D1621	20.6 psi @ 6% deflection
Tensile Strength	ASTM D1623	39.27 psi
Water Absorption	ASTM D2842	0.40%
Closed Cell Content	ASTM D6226	19.5% min
R-Value	ASTM C518	3.8/inch (new)
VOC Content	ASTM D2369	11 g/L
Weight/Gallon	Part 1 Component	10.32 lb
	Part 2 Component	8.4 lb

Manufactured by:



Florida Building Code



Distributed by:



OLYBOND500® & OLYBOND500® GREEN

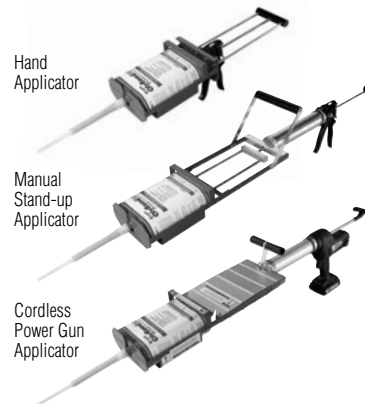
Insulation Adhesive

PaceCart 2® and PaceCart 3™ for OlyBond500® & OlyBond500® Green

Patented PaceCart 2® and PaceCart 3™ are the exclusive pieces of application equipment for OlyBond500® or OlyBond500® Green using patented Bag-in-Box technology.



- Fast application method
- Designed for high-production roof projects
- Low installed cost method of application
- Inexpensive to purchase and operate
- Can apply up to 60 squares of insulation per hour
- Two-component reaction occurs in the disposable mix tips, keeping the gun and hoses clean and free flowing
- 30-ft. (9.14 m) hose allows for easy application around penetrations
- Use OMG PCPreserver™ to keep pumps, hoses, and gun assembly sufficiently lubricated during storage
- Easy to clean and maintain
- Clean, airtight delivery system
- Built-in tool box holds extra mix tips, grease gun, etc.



SpotShot Applicators

Cordless Power Gun Applicator

- All the benefits of the manual stand-up applicator plus a battery-powered mechanical drive system
- Constant pressure provides even and uninterrupted adhesive flow for maximum efficiency
- Significantly increases production; easy to operate
- Includes two (2) batteries and a 120-volt charger

Hand Applicator

- Lightweight and easy to use
- Great for repair work or small areas
- Inexpensive and in stock at major roofing distributors

Manual Stand-up Applicator

- Lightweight and portable
- Stand-up application reduces worker fatigue while increasing production

Product Installation

Job Conditions:

- Ensure that you have the correct OlyBond500® and OlyBond500® Green formulation for the surface and ambient temperature.
 - **Bag-in-Box:** Regular (40°F+ [4.4°C+])
 - **SpotShot:** Regular (40°F+ [4.4°C+]) or Winter (0°F – 65°F [-17°C – 18.3°C]) (OlyBond500® only)
- Existing phenolic insulation must be removed.
- Coordination between trades is essential to avoid unnecessary rooftop traffic.

Roof Deck Criteria

1. The building owner or general contractor shall provide a proper substrate. The structure shall be sufficient to withstand normal construction load and live loads.
2. Defects in the deck must be documented and reported to the specifier, general contractor, roof cover manufacturer, and OMG, Inc. The application of OlyBond500® and OlyBond500® Green shall not proceed unless the defects are corrected.
3. It is the responsibility of the roofing contractor to ensure that the existing roof is adequately attached to the building and meets all the requirements for an acceptable surface.
4. Acceptable decks are structural concrete, gypsum, cementitious wood fiber plank, lightweight insulating concrete, minimum 22-gauge steel, and minimum 5/8" (15.9 mm) plywood.

Surface Preparation

- **General:** All surfaces must be dry and free of any debris, dirt, oil, or grease before applying OlyBond500® or OlyBond500® Green. GAF United Cleaning Concentrate (UCC) may be used on most surfaces.

• Specific Conditions

- **Steel** - The bonding surface of steel decks must be dry and free of debris, dirt, grease, and oil. On new steel, the shop coating/mill oil must be removed. The bonding surface must be free of any cleaner before applying OlyBond500®
- **Existing Smooth Asphaltic Surfaces** - The surface must be dry and free of debris, dirt, grease, and oil.
- **Existing Polyurethane Foam** - The surface of the polyurethane roof, including the coating, should be removed with a scarifier (minimum inch). The bonding surface should be blown clean before applying OlyBond500® or Olybond500® Green.
- **Metal** - OlyBond500® and OlyBond500® Green have 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 GAF Epoxy Primer, chlorinated rubber, and wash primer.
- **Concrete** - All concrete surfaces must be fully cured prior to applying OlyBond500® or OlyBond500® Green.
- **Other** - For other substrates not listed, contact OMG at 800-633-3800 or GAF at 1-800-ROOF-411.

Manufactured by:





OLYBOND500® & OLYBOND500® GREEN

Insulation Adhesive

Product Installation

• Using PaceCart 2® and PaceCart 3™

- Install Part 1 and Part 2 components following instructions on Bag-in-Box package.
- Open flow valves on the dispenser completely and turn machine on. This allows adhesive to be pumped at a 1:1 ratio through the disposable mix tip and onto the substrate in a semi-liquid state.
- Apply fluid mixture ¾"–1" (19.1 mm – 25.4 mm) wide wet beads spaced a maximum of 12" (305 mm) on center that spreads in excess of 2" (51 mm) wide while rising to ¾"–1" (19.1 mm – 25.4 mm).
- Lay insulation board into place and walk-in to ensure complete adhesion. Curing typically occurs in 4 to 8 minutes depending on temperature and weather conditions.
- Check with roof system manufacturer for project-specific spacing requirements.

• Using SpotShot Applicator

- Attach the disposable mix tip to the top of the SpotShot tube. Insert the tube into the SpotShot dispensing tool and dispense onto the substrate. Apply fluid mixture in ¾" – 1" (19.1 mm – 25.4 mm) wide wet beads in rows spaced a maximum of 12" (305 mm) on center that spread in excess of 2" (51 mm) wide while rising to ¾" – 1" (19.1 mm – 25.4 mm).
- Lay insulation board into place and walk-in to ensure complete adhesion. Curing typically occurs in 4 to 8 minutes depending on temperature and weather conditions.
- Check with roof system manufacturer for project-specific spacing requirements.

Typical Application Rates

Application rates vary depending on surface roughness and absorption rate of the substrate. Typical coverage rates for OlyBond500® and OlyBond500® Green dispensed through the PaceCart 2® and PaceCart 3™ are 10 – 25 squares per 10-gallon (37.85 liters) Bag-in-Box sets. Typical coverage rate for OlyBond500® and OlyBond500® Green SpotShot dispensed through applicators is 4 – 6 squares per case (4 sets of 1,500-ml cartridges). All coverage rates are based on 12" (305 mm) on center maximum spacing. See chart below for typical application rates on specific substrates.

Application Rates Bag-in-Box Dispensed from PaceCart 2®	Typical Coverage Squares/Gallon
Insulation to Concrete	1.7 to 2.5
Insulation to Insulation	1.7 to 2.5
Insulation to Smooth BUR	1.5 to 1.7
Insulation to Modified Bitumen	1.5 to 1.7
Insulation to Gypsum	1 to 1.2
Insulation to Lightweight Concrete*	1 to 1.7
Insulation to Wood	1.7 to 2
Insulation to Cementitious Wood Fiber	1 to 1.2
Insulation to Steel	1 to 1.2

*Coverage rate may vary substantially based on the absorption rate and/or the surface conditions of the LWC.

Typical Reaction Time Characteristics

5-Gallon Bag-in-Box Packaging:

OlyBond500® & OlyBond500® Green

Temp.	Tack-Free Time	Set-Up Time
40°F+	3 – 5 minutes	10 – 12 minutes

1500-ml SpotShot Cartridge:

OlyBond500® Only

Temp.	Tack-Free Time	Set-Up Time
0°F – 65°F	3 – 4 minutes	10 – 12 minutes

OlyBond500® & OlyBond500® Green

Temp.	Tack-Free Time	Set-Up Time
40°F+	3 – 4 minutes	10 – 12 minutes

Important: When applying OlyBond500® board stock must be placed into the adhesive shortly after it has reached its maximum rise while it is still wet and tacky and before it reaches its tack-free state.

Precautions

- **In Case of Fire:** Use water spray, foam, or CO₂. Firefighters should be equipped with self-contained breathing apparatus and turnout gear for protection against PMDI vapors and toxic decomposition products. Avoid water contamination in closed container or confined areas.
- **Do Not Leave Adhesive Exposed or Unprotected.** Polyurethane foam or isocyanurate foam products may present a serious fire hazard if exposed or unprotected. Each person, firm, or corporation engaged in the manufacture, production, application, installation, or use of any of these materials should carefully determine whether there is a potential fire hazard associated with such product in a specific usage and utilize all appropriate precautionary and safety measures as outlined in local, state, and federal regulations. When not in use, keep stored containers closed.

First Aid

In case of contact with eyes, immediately flush eyes with running water for at least 15 minutes. Call a physician immediately. In case of contact with skin, wash affected area with soap and water. Remove all contaminated clothing and shoes and clean before re-use. If swallowed, give large amounts of water to dilute. If vomiting occurs, give more water. Call a physician immediately.

Disposal

PMDI in Part 1 component may cause pollution. Do not discharge into lakes, streams, ponds, or public waters. Spilled material, unused contents, and empty containers should be neutralized and disposed of in accordance with local, state, and federal regulations.

Manufactured by:



Distributed by:



OLYBOND500® & OLYBOND500® GREEN

Insulation Adhesive

Patent Notice

The OMG PaceCart 3™ dispensing cart and the Bag-in-Box OlyBond500® Part 1/Part 2 adhesive system, including the adhesive dispensing method, are covered by one or more of U.S. Patent Nos. 6,220,526; 8,113,385; 8,132,693; 8,167,170; 8,342,372 and 8,474,658; and Canadian Patent No. 2,591,502. U.S. and Canadian Patents Pending.

Limitations

- OlyBond500® and OlyBond500® Green are not recommended for use with Polyisocyanurate board stock larger than 4' (1.21 mm) x 4' (1.21 mm).
- OlyBond500® (regular grade) and OlyBond500® Green are not recommended for application when ambient or substrate temperatures are below 40°F [4.4°C].
- OlyBond500® SpotShot winter formulation is specifically designed to be applied between 0°F and 65°F (-17°C – 18.3°C).
- OlyBond500® and OlyBond500® Green are not recommended for use during wet weather.
- OlyBond500® and OlyBond500® Green cannot be used on wet surfaces.
- OlyBond500® and OlyBond500® Green cannot be used on dirty or grease-laden surfaces.
- OlyBond500® and OlyBond500® Green are not recommended for use on any roof deck that shows signs of deterioration or loss of structural integrity.
- OlyBond500® and OlyBond500® Green are not recommended for use after the expiration date. Contact OMG at 800-633-3800 for options and instructions.

Storage and Handling

- Store in a cool, dry location at temperatures between 55°F (12.8°C) and 85°F (29.4°C). Protect from freezing at all times. If properly stored, the shelf life for unopened product is 18 months from the date of manufacture.
- Keep containers closed. Contamination by moisture or basic compounds can cause dangerous pressure build-up in a closed container.
- The minimum product temperature before application should be 72°F (22.2°C). The minimum ambient and surface temperatures should be 40°F (4.4°C) and rising unless the SpotShot winter formulation is being used.

Manufactured by:

