

Carlisle OlyBond500® Adhesive

Overview

Carlisle OlyBond500 is a two-component, construction-grade, low-rise, expanding, polyurethane adhesive designed for bonding insulation to various substrates. Carlisle OlyBond500 is compatible with: HP Recovery Board, polyisocyanurate insulation (Polyiso), expanded polystyrene (EPS), extruded polystyrene (XPS), DensDeck®, SECUROCK®, and OSB. Compatible deck types include concrete, cellular lightweight concrete, gypsum, cementitious wood fiber, wood, and painted or galvanized steel. Carlisle OlyBond500 is also compatible with the following roofing materials: smooth BUR (previously exposed), mineral cap sheet, smooth (previously exposed) or granulated Mod-Bit, and Carlisle's VapAir Seal™ 725TR Air & Vapor Barrier. Carlisle OlyBond500 is applied in beads or ribbons at 4", 6", or 12" on center (o.c.) or full-spray, depending on the wind zone, building height and code requirements to produce a strong adhesive bond between the insulation and the substrate. Factory Mutual (FM) approval over a variety of deck types and substrates has been achieved.

Features and Benefits

- » Non-penetrating attachment system
- » Odor-free, making it an excellent choice for sensitive building types, such as schools, office buildings and hospitals
- » Ultra low-VOC meets all local and federal regulations
- » Reduces re-roof and construction noise
- » Rapid application with appropriate dispensing tools
- » Chemical cure results in fast set-up time
- » Eliminates thermal bridging
- » Extremely high wind-uplift ratings

Coverage Rate

1 square (9 m²) per gallon (3.78 L) – full coverage spray.

Up to 2.5 squares (23 m²) per gallon (3.78 L) – bead application.
Splatter application is not approved.

Application

1. The surface to which adhesive is to be applied shall be dry and free of fins, protrusions, sharp edges, loose and foreign materials, oil, and grease. Depressions greater than ¼" (6 mm) shall be filled with Carlisle OlyBond500 Adhesive or other approved patching material. All sharp projections shall be removed. Previously unweathered asphalt must be primed with CAV-GRIP® III Adhesive/Primer.

2. Seal gaps between the wall/penetration and concrete deck with Carlisle's VapAir Seal 725TR, Flashing Foam, or other suitable material, to avoid condensation issues and positive pressure from air infiltration.
3. For re-roofing sprayed-in-place (SPF) urethane roofs, all wet areas must be removed. The surface must then be scarified or perforated, depending on the coating, before applying Carlisle OlyBond500 Adhesive.
4. Apply Carlisle OlyBond500 Adhesive when the substrate and ambient temperatures are 40°F (4°C) or above when spraying or extruding with heated or non-heated equipment. Dispense the adhesive between 300-800 psi depending on the equipment used. Consult with your local FleeceBACK® Product & Application Specialist for more details.
5. Set pre-heater and hose temperature to 120°F (49°C). Temperature settings will vary with conditions.

Insulation Attachment

1. Apply Carlisle OlyBond Adhesive to the substrate.
 - » For full spray applications, spray adhesive at 1-gallon per square to obtain full coverage (approximately ¼" to ½" thick after foaming). Ensure membrane end laps are protected from adhesive.
 - » For extruded applications, apply at 4", 6", or 12" on center with a minimum ½" bead. Ensure membrane end laps are protected from adhesive. Bead spacing parameters for 5, 10, 15, or 20-year. 55-mph warranties are shown see below:

Building Height	Bead Spacing (Perimeter)	Bead Spacing (Field)
0' – 25'	6" o.c. (4' perimeter)	6" o.c.
26' – 50'	6" o.c. (8' perimeter)	6" o.c.
51' – 75'	6" o.c. (12' perimeter)	6" o.c.
76' – 100'	6" o.c. (16' perimeter)	6" o.c.
100' or greater: Contact Carlisle for bead spacing requirements		

Contact Carlisle's Project Review team for bead spacing on higher mph warranties or 20- and 30-year warranty projects.

2. Factory Mutual bead spacing guidelines in the perimeter and corner may differ from the table above. Beads at 12" o.c. are not acceptable at perimeters and corners.

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3. Place insulation boards (maximum 4' x 4' insulation boards when adhesive is extruded at 12" o.c. or when boards exceed 4" thickness, or 4' x 8' insulation boards when adhesive is applied in full spray, 4", or 6" beads) into adhesive after allowing it to rise and develop "string/body". String time will vary based on environmental conditions like temperature and humidity. Do not allow the adhesive to over-cure prior to setting insulation boards.
4. Designate one person to walk boards into place and then roll the boards between 5 – 7 minutes from the initial adhesive application. Boards may be temporarily weighted or relief-cut where necessary to keep the boards in constant contact with the adhesive until the adhesive cures.
5. At the beginning of the insulation attachment process and periodically throughout the day, check the adhesion of boards to ensure a tight bond is created and maximum contact is achieved.

Review Carlisle specifications and details for complete installation information.

Precautions

- » Review the Safety Data Sheet for complete safety information prior to use.
- » The foam produced is an organic material. It must be considered as combustible and may constitute a fire hazard. The foam adhesive must not be left exposed or unprotected. Shield from heat and sparks.
- » Do not smoke during application.
- » Use with adequate ventilation. Avoid breathing vapors. Wear a NIOSH- or MSHA-approved respirator for organic vapors with prefilters and solvent-resistant cartridges or supplied airline respirators while spraying. Proper safety training is essential for all persons involved in the installation process. If vapor is inhaled, remove to fresh air and administer oxygen if breathing is difficult. Consult a physician immediately.
- » Avoid contact with eyes. Safety glasses or goggles are required.
- » If adhesive is splashed in eyes, immediately flush eyes with plenty of clean water for at least 15 minutes. Contact a physician immediately.
- » Avoid contact with skin. Wear long-sleeved shirts and long pants. Wash hands thoroughly after handling. In case of contact with skin, thoroughly wash the affected area with soap and water or corn oil.
NOTE: Permeation-resistant gloves that meet ANSI/ISEA 105-2005 are required when handling the material or during application.

- » Jobsite storage temperatures in excess of 90°F (32°C) may affect the product shelf life. When temperatures are in excess of 90°F (32°C) utilize white membrane or material to shield the drums from direct sunlight. Should the components be stored at temperatures lower than 70°F (21°C), restore to room temperature prior to use. Do not allow adhesive to freeze.
- » Use spray booths, windscreens and/or lower spray pressure with spatter tips when spraying.
- » Precautions must be taken to prevent Adhesive vapors or overspray from entering buildings during application. All air-intake vents on roofs must be closed during the application of adhesive.
- » Use desiccant dryers on Part A drums to avoid formation of crystals from exposure to moisture in the air.
- » KEEP OUT OF THE REACH OF CHILDREN.
- » Desiccant dryers should be used to prevent atmospheric moisture contamination of the remaining diisocyanate. Even a small amount of contamination by water or other foreign substance could result in excess pressure and catastrophic failure of the jug container. Do not re-seal a jug if contamination is suspected. Move container to a well-ventilated area (outside) and allow to stand for at least 48 hours to allow escape of evolved carbon dioxide to avoid hazardous pressure build-up in container.

Packaging

- » 1500 ml SpotShot Cartridges
- » 5-gallon Bag-in-Box (10-gallon sets)
- » 15-gallon Drums (30-gallon sets)