

Date: April 2003

ROOFING TECHNICAL BULLETIN - #04-03

Sarnafil Insulation Adhesive

Sarnafil is now offering OlyBond500 Adhesive Fastener for adhering approved insulations and Dens-Deck to various substrates. The OlyBond500 Adhesive Fastener is a two component low rise polyurethane ribbon applied foam adhesive. This adhesive is in addition to our two component low rise polyurethane spray applied foam adhesive (LR2001).

A review and approval process is required prior to installation of the liquid ribbon or spray applied products, and preferably prior to bid in order for either system to be included within our System Warranty coverage. OlyBond500 and Sarnacol LR-2001 are to be purchased directly from Sarnafil to be included as part of our System Warranty.

Product Description

OlyBond500 Adhesive Fastener – is a non-penetrating option for attaching insulation board to roof decking or substrates. OlyBond500 is a two component, low rise polyurethane foam adhesive that is applied using a specially designed dispensing machine. The blowing agent is water, not HCFC, and is available in 5 gallon sets of diisocyanurate (Part1) and resin (Part 2). This product is used to adhere a variety of insulation, Dens-Deck and recover boards to a variety of substrates in both new and re-roof applications. It may also be used to adhere insulation board to insulation board and Dens-Deck to insulation. The adhesive is dispensed in a semi liquid bead that spreads to several inches before rising $\frac{3}{4}$ - 1 inch above the substrate. After the adhesive starts to change color, the board is placed into the adhesive and walked into place. The chemical cure takes place in approximately 4 to 8 minutes after the application, depending on temperature and weather conditions.

Acceptable Substrates

The adhesive may be used on the following Roof Decks and Insulations:

- Concrete – pre-cast, poured in place, lightweight structural
- Treated plywood (5/8 inch minimum thickness)
- BUR, smooth or granular surface (coal tar pitch and gravel surfaced must be reviewed prior to approval)
- Cementitious wood fiber plank (Tectum)
- Base sheets
- Insulating concrete
- Gypsum
- Polyisocyanurate (4' x 4' is recommended)
- Dens Deck
- Expanded Polystyrene

Any substrate, (roof deck or insulation) not listed above must be reviewed and approved by Sarnafil.

Application of Insulation Adhesive

The adhesive is packaged in 5 gallon pail sets consisting of Part 1 (diisocyanurate) and Part 2 (resin) containers that are to be stored between 45 and 95 degrees F. At these temperatures the shelf life is 12 months from date of manufacture. The minimum ambient and surface temperatures shall be 45 degrees Fahrenheit, with the minimum product temperature entering the adhesive dispenser at 72 degrees F. Before applying the adhesive to approved substrates, be sure these surfaces are free of any debris, dirt, oil, grease and standing water.

The Part 2 (resin) component shall be shaken for at least one minute. The Part 1 and Part 2 components are poured into the respective hoppers on the PaceCart dispensing machine. The flow valve on the dispenser is moved to the open position allowing material to be pumped at a 1:1 ratio through the static mixing tip and onto the substrate in a semi liquid state. The fluid mixture is applied in rows spaced 12 inches on center that spread to several inches wide before rising $\frac{3}{4}$ to 1 inch. The insulation board is then laid into place and walked in to assure complete adhesion. Curing takes place in 4 to 8 minutes. Typical coverage rates are between 0.75 and 1.25 gallons per 100 square feet. This will result in the board achieving approximately 60 to 75% adhesion. This application rate must be increased for rougher surfaces and will vary depending on roughness.

IMPORTANT: when applying OlyBond500 insulation adhesive, board stock must be placed in 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. Any boards or portion of boards that are not secure must be mechanically attached with appropriate fasteners and plates to the structural deck.

The OlyBond500 is applied with the PaceCart Dispenser, which uses a patented gear pump delivery system. Unheated hoses and one switch control make operating this unit fast and easy. With the reaction occurring in the disposable nozzle, maintenance and clean up is simple and easy. The machine operates at low pressure (30 psi), which makes the equipment safer to operate. This machine can only be purchased directly from Olympic Manufacturing.