

COVER BOARD SPECIFICATIONS

General

These specifications are intended for use over InsulFoam insulation systems that require a cover board. Acceptable cover board materials for InsulFoam insulations are: DensDeck®, wood fiber, perlite and gypsum. These specifications are provided to serve as guidelines for designers and installers.

Installation Considerations

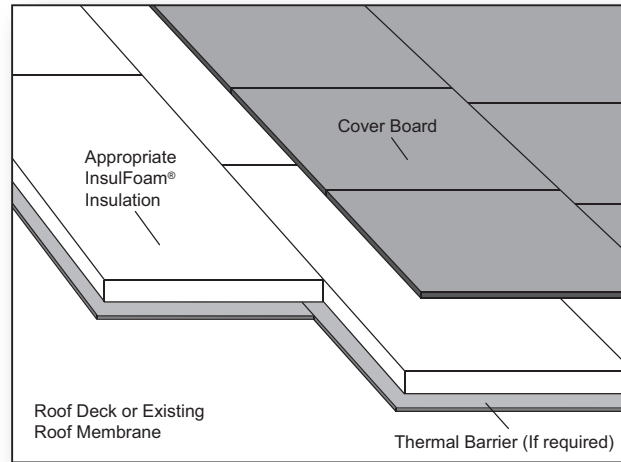
- Cover boards are available with a variety of packaging materials (plastic film wraps, shrouds, etc.) intended for temporary protection during shipping. All cover board material should be protected from the elements and stored in a dry location.
- Install only as much insulation as can be covered by a roof membrane system, and/or made watertight by the end of each day.
- Allow approximately 1/4" space between the cover board and vertical surfaces or roof projections and penetrations. Do not force or jam cover boards into place.
- Cover boards are typically thinner than InsulFoam insulations, and are more susceptible to damage during handling and installation. Extra care should be taken to ensure that the product is installed in a useable condition.
- Cover board size should be limited to 4' x 4' for asphalt and adhesive applications.
- Proper staging of material on the roof can significantly impact a crew's productivity as well as their ability to install material in an acceptable manner. Care should be taken in the placement of material.

Cover Board (Suffix) Specifications

Cover board specification designations are added as a suffix to the base insulation specification using a back-slash (/) and a two-letter descriptor. For example, a single layer of InsulFoam mechanically fastened direct to a metal deck is designated as 1NIM. If the same specification requires the use of an asphalt attached, wood fiber cover board over the InsulFoam, the specification would be modified to 1NIM/WH.

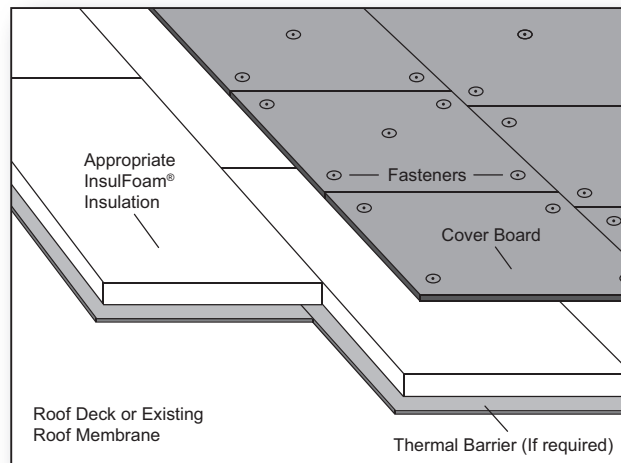
The following chart indicates the possible additions to the insulation specifications when a cover board is incorporated into the insulation systems.

	DensDeck	Wood Fiber	Perlite	Gypsum
Loose Laid	/DL	/WL	/PL	/GL
Adhesive Attached	/DA	/WA	/PA	/GA
Asphalt Attached	/DH	/WH	/PH	/GH
Mechanically Attached	/DM	/WM	/PM	/GM



Loose Laid Cover Boards

Install the cover board with continuous long joints (or side joints if a 4' x 4' board) and end joints staggered so that they are offset by a minimum of 12" from the end joints in adjacent rows. Cover boards should abut tightly against adjacent boards. Joints greater than 1/2" should be filled with the same cover board material that is being used in the field of the roof. All cover board joints are to be offset from the base layer insulation joints by a minimum of 6". When conditions dictate, in order to prevent wind blow-off or damage during installation, the loose laid insulation system should be weighed down or tacked in place with a minimal quantity of mechanical fasteners.

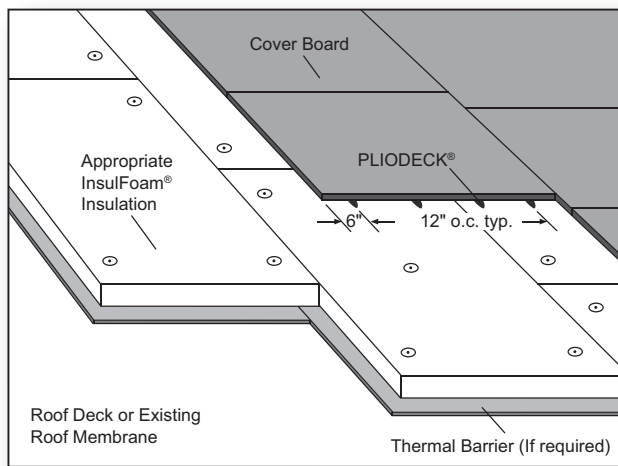


Mechanically Attached Cover Boards

Install the cover board with continuous long joints (or side joints if a 4' x 4' board) and end joints staggered so that they are offset by a minimum of 12" from the end joints in adjacent rows. Cover boards should abut tightly against adjacent boards. Joints greater than 1/2" should be filled with the same cover board material that is being used in the field of the roof.

All cover board joints are to be offset from the base layer insulation joints by a minimum of 6". Use an approved mechanical fastener of sufficient length to penetrate into or through the deck by the amount prescribed for the specific fastener. Fasteners should never be closer than 6" from the edges of the cover board, and should be placed in a pattern to achieve the desired approval. Use appropriate insulation plates with the fasteners. Care must be taken to avoid over-driving or under-driving the fastener and plate assembly.

Note: For mechanically attached insulation systems that incorporate a thermal barrier and/or a layer of InsulFoam insulation with the cover board, it is possible to attach all layers to the substrate using a single fastener of sufficient length.



PLIODECK® Attached Cover Boards

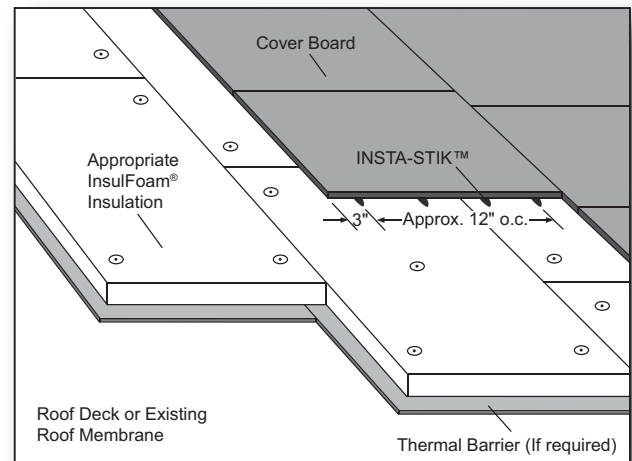
Surfaces to be bonded together must be free of dirt, debris and other contaminants. Cover board size should be limited to 4' x 4' when using this attachment method. Cover board side joints are to be continuous, and end joints staggered a minimum of 12". Joints greater than 1/2" should be filled with the same cover board material that is being used in the field of the roof. All cover board joints are to be offset from the base layer insulation joints by a minimum of 6".

At the time of use, unscrew the cap on PLIODECK cans, remove moisture seal and attach plastic pour spouts. Mount cans to the PLIODECK applicator cart and secure tightly. If cart-mounting plates do not fit securely against cans, use pliers or channel locks to align plates properly. Adjust cans to apply adhesive beads 12" on center in the field of the roof and 6" on center on the perimeter, with the outside beads placed 6" in from edge of board line. Punch a vent hole in the cans with an awl. Flip the tilting lever up to begin applying adhesive to the deck. Pace the cart speed to apply a 3/8" to 1/2" bead. In colder temperatures, adhesive will be thicker and pour more slowly. Spouts are designed for summer application, and in cooler weather, cart pace may be increased by cutting larger openings in the spout. Cart may be pulled or pushed. Place cart lever in the down position to stop the flow of adhesive.

Cover boards must be installed as soon as adhesive beads have been applied to substrate. In 5 to 15 minutes, the adhesive will change to a cream color and begin to foam. The cover board may rise slightly as a result of this foaming, and is to be walked-in to ensure contact with the substrate. Repeat this process as needed to ensure a smooth surface for membrane application. In cases of high moisture content and/or warped or cupped boards, it may be necessary to repeat this step several times. For warped or cupped boards, a weight should be applied to the board until the adhesive has set. It is not unusual for the adhesive to foam up through the joints of the boards. Excess foam may be trimmed away after the adhesive has set.

A roofing membrane may be applied as soon as the boards have become firmly attached to the substrate, typically after 15 to 30 minutes. Times will vary with ambient temperatures and moisture conditions. Application rates can vary. Contact Ashland, Inc. or Factory Mutual for additional information on perimeter and corner attachment requirements.

For additional information on storage, handling and use of PLIODECK Insulation Adhesive, refer to Ashland's InfoTech™ literature and the applicable Insulfoam/PLIODECK insulation specification.



INSTA-STIK™ Attached Cover Boards

Before dispensing INSTA-STIK Quik Set Commercial Roofing Adhesive, the applicator must observe the following precautions: wear protective clothing, work gloves and protective eyewear.

All surfaces must be free of any debris, dirt, dust, grease, oil, diesel fuel and standing water before INSTA-STIK is applied. Cover board size should be limited to 4' x 4' when using this attachment method. Cover board side joints are to be continuous, and end joints staggered a minimum of 12". Joints greater than 1/2" should be filled with the same cover board material that is being used in the field of the roof. All cover board joints are to be offset from the base layer insulation joints by a minimum of 6".

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INSTA-STIK should be mixed prior to use by firmly holding the container on its side and agitating the contents, using a side-to-side motion for at least 15 seconds.

The dispensing wand kit is ideal for roof decks with many penetrations. Attach the dispensing hose swivel end to the cylinder valve. Tighten the connection using an open-end wrench being careful not to over-tighten. Verify that the on/off valve on the dispensing hose is closed. The handle should be perpendicular to the valve. Attach the dispensing wand kit to the on/off valve by screwing in until it is hand-tight.

The INSTA-STIK Multi-Bead Applicator (MBA) is recommended for roof decks with open areas. The INSTA-STIK MBA uses three tanks of INSTA-STIK Quik Set Commercial Roofing Adhesive. The tanks are connected by a hose to a central inlet manifold. The INSTA-STIK MBA is rolled backward along the roof deck as four to eight beads of adhesive flow from the center outlet tubes in a precise pattern that can be adjusted per roofing requirements. The INSTA-STIK MBA also features an ancillary manifold that can be used near the roof edge to add three interspaced beads to the pattern.

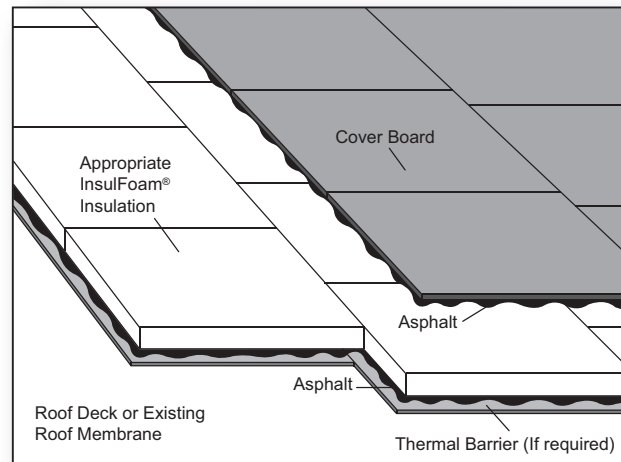
Dispense a minimum of 1 lineal foot of 3/4"-1" diameter bead of INSTA-STIK for every square foot of cover board to be attached. A picture of a 3/4" bead is provided in the INSTA-STIK MBA operating instructions as a guide for proper bead size.

Use a parapet wall or gutter as a straight edge guide when dispensing the first bead of INSTA-STIK. Under the normal application rate, place the first bead 3" inside the outside edge of the insulation to be attached. Apply 3 additional parallel beads approximately 12" apart, so that the fourth bead is 3" inside the opposite edge of the cover board. The result is 4 equidistant parallel beads (16 lineal feet) for each 4' x 4' insulation board. When using the MBA, open the valves to dispense 4 beads of INSTA-STIK.

The application rate can vary with roof system configuration. Additional adhesive is required around all roof penetrations and drains. An increased amount of INSTA-STIK may be required at the perimeter band of the roof, depending on the building and parapet wall heights. For application rates, refer to Table 1 in Dow's Installation Procedures for INSTA-STIK Quik Set Commercial Roofing Adhesive.

IMPORTANT: When applying INSTA-STIK, the cover boards must be placed onto the INSTA-STIK beads before tack-free (2 to 8 minutes depending on humidity). Walk on the boards to spread the beads for maximum contact. Continue to walk on the cover boards every 3 to 4 minutes until the insulation is firmly attached, usually within 10 to 20 minutes. Low humidity conditions will require longer cure times.

Refer to Dow's Installation Procedures and literature and the applicable Insulfoam/INSTA-STIK insulation specification for additional information on storage, handling and use of INSTA-STIK Quik Set Commercial Roofing Adhesive.



Asphalt Attached Cover Boards

Cover boards attached in asphalt directly to InsulFoam insulations should be installed by a roofing crew fully trained for these applications. Asphalt is to be applied only to the back-side of the cover board. The cover board is to be installed only after the asphalt has cooled adequately.

DO NOT APPLY ASPHALT DIRECTLY TO ANY INSULFOAM OR R-TECH PRODUCTS.

The cover board size is to be limited to a maximum of 4' x 4' when using this attachment method. Cover board side joints are to be continuous, and end joints staggered a minimum of 12". All cover board joints are to be offset from the base layer insulation joints by a minimum of 6".

Place the hot-asphalt-compatible cover board (bottom side up, if applicable) adjacent to the area in which it will be installed. Make certain that the previously installed InsulFoam insulation is protected from any over-mopped or spilled hot asphalt. Apply a continuous, firmly bonding film of asphalt to the entire back surface of the cover board at a nominal rate of 30 lbs. per square. Porous cover boards may require greater amounts of asphalt. Allow the asphalt to cool to 250 °F, but not less than 200 °F. The absence of visible smoke is a common indicator the asphalt has sufficiently cooled. This may not be applicable at ambient rooftop temperatures below 50 °F. The asphalt must remain sufficiently hot to maintain its adhesive characteristics. It may be useful to use an infrared heat gun to measure the asphalt temperature on the back of the first few boards installed. Weather conditions, asphalt variations and crew techniques will impact the rate at which asphalt cools. When the asphalt has cooled to within the appropriate temperature range, the back-mopped cover board is to be flipped so that the asphalt is facing down, and is to be placed over the InsulFoam insulation. The installed cover boards should be lightly stepped into place and should abut tightly against adjacent boards. Joints greater than 1/2" are to be filled with the same cover board material that is being used in the field of the roof.

For cold weather applications, contact the Insulfoam Technical Center for specific instructions.