GUARDIAN BUILDING PRODUCTS

Laminated Blanket Installation for Wood Frame Buildings

Conventional Over-the-Purlin Installation Methods

Background

Guardian Building Products Distribution, Inc. takes great care in the manufacture and lamination of your faced fiberglass insulation to help insure that the products will deliver their maximum possible thermal performance. Our fiberglass insulation is manufactured to exacting standards that include control of such key items as fiber diameter, binder content and roll compression. In our lamination process we use hot melt adhesive technology and surface rewind systems that improve recovery over traditional water-based adhesive and center wind systems. It is equally important that the material be installed correctly in order to provide maximum in-place thermal performance.

Because fiberglass insulation works by trapping air between the interwoven fibers, it is important to allow it to recover to its maximum thickness in order to optimize performance. Proper installation involves placing the insulation with enough drape over the purlins or girts to allow it to recover to its full thickness in the central zone of the purlin or girt space.

Because faced fiberglass insulation often provides the finished appearance on the interior of the building, ***it is not uncommon for the installer to apply excessive tension to the insulation during installation in order to create a smoother interior finish***. Doing so is likely to prevent the insulation from recovering to its maximum possible thickness and ***which would not allow the material to perform as designed. Improperly installed insulation may not meet building code requirements***.

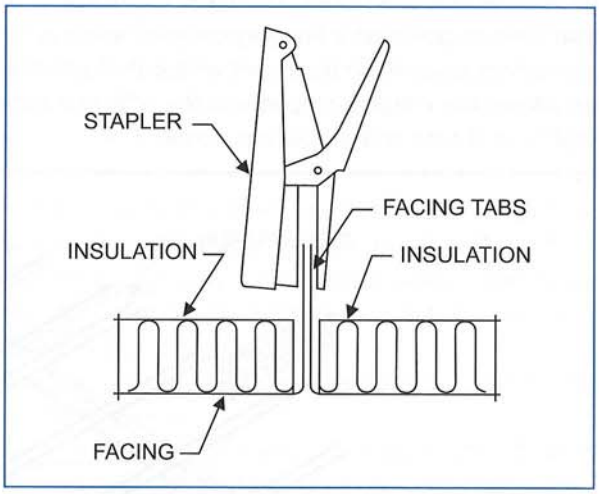
Vapor Retarders

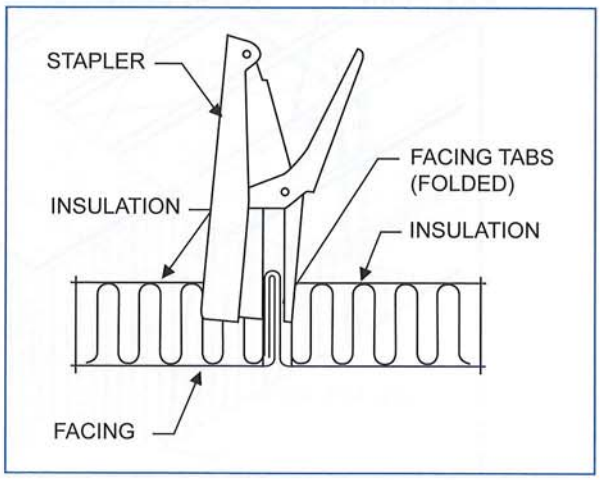
Vapor retarders (commonly called "facing") materials serve numerous purposes. They primarily provide a pleasing interior appearance and to have a low water vapor transmission rate (or "perm" rating). Permeance is a measure of the flow of water vapor through a material and the lower the perm rating the better the vapor retarder. Facing materials should also have good strength characteristics so that they function well during installation and provide some degree of durability once installed.

Connecting Rolls of Faced Blanket Insulation

For a standard (single layer) metal building application, the vapor retarder or facing material is customarily 6" wider than the fiberglass insulation. That extra facing is referred to as a "tab" and may be supplied as two-3" tabs (fiberglass centered on the facing) or one-6" tab (fiberglass shifted completely to one side).

If two-3" tabs are supplied, a plier stapler should be used to connect adjacent rolls of insulation. At the seam where the two rolls join, pull the tabs upward and staple approximately every 8". The initial staples should be placed ½" from the end of the tabs (as shown below). Once this initial stapling is complete, fold the tab over and staple in between each original staple. The tabs will now be folded over and stapled approximately every 4". Tuck the completely sealed tab back into the joint. Caution should be taken not to staple too close to the base of the tabs as the staples may pull out during the sheeting process; resulting in poor appearance and a poor vapor seal.





flat surface, to prevent contact with surface water.

4) If a dry protected area is not available at the site, the contractor should place the insulation in a storage trailer or at the end of the building where the roof sheets will first be applied.

NOTE: Whenever possible, the contractor should use the insulation as soon as possible after he receives it. It follows that the sooner the insulation is up, the less likely it is to get damaged in storage.

Guardian Building Products proudly guarantees our laminated metal building insulation to recover to full thickness and to provide at least the labeled R-value when it is delivered to your jobsite and prior to installation. Insulation products that fail to meet the labeled R value will be replaced fully at our expense. It should be noted that fiberglass does not recover to full thickness instantaneously. See our Guardian Laminated Fiberglass Recovered R-Value Limited Warranty document (available at www.guardianbp.com – click on "GBP Corporate Center" then on "Metal Building Insulation") for additional details.

Miscellaneous

Thermal Spacer Blocks

When fiberglass insulation is compressed its' R-Value is reduced. In a conventional building application, this will occur above the purlins and outside the girts. Optional thermal spacer blocks can be installed at those compression points and can restore some of the lost R Value. The blocks are typically 1" thick and can be anywhere from 3" to 6" wide. High compressive strength materials such as extruded polystyrene insulation are good choices for thermal block material.

Trim Strips

The purpose of Trim Strips is to provide a finished appearance to the insulation facing tabs. They are typically 3 ½" to 4" wide and are installed parallel to the insulation rolls directly beneath the joint where one roll sits next to another. Roll lengths vary by supplier, but Trim Strips are generally provided in 500' or 1000' coils.

For the walls, pre-cut the strips to the wall height. With the finished side to the interior of the building, attach one end of the strip to the side of the eave strut. Pull down on the outside of each girt flange and fasten the base angle. It is suggested that you install the trim strips at the same time you install each piece of insulation, so that you avoid misalignment.

Roof installation is accomplished in the same manner as the walls. Once the first roll of insulation is in place, position the center line of the strip directly beneath the edge of the insulation. Be sure to place the finished side of the strip toward the building interior and attach end of the strip to the top of the eave strut and to one of the ridge purlins. Additional fastening points may be advisable on wider buildings.

For both wall and roof installation, do not over tension the trim strips as this is likely to adversely affect the R-value of the insulation by not allowing it to recover to its maximum possible thickness.

Note: **This document does not address code compliance, or the actual calculated or tested in-place thermal performance of any particular product**. In a conventional over-the-purlin building application, the insulation is significantly compressed directly above and adjacent to the purlins. This compression reduces the amount of trapped air and correspondingly reduces the resistance to heat flow (the R value) of the insulation. Guardian Building Products has many high R value (low U value) systems that help maximize insulation thickness by reducing the amount of compression. Contact your sales representative if you need help evaluating a given situation.

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