



## ACHIEVING GRADE 1 INSTALLATION STANDARDS MULTI-LAYER REFLECTIVE INSULATION FOR MASONRY WALL APPLICATIONS

### INSTALLATION INSTRUCTIONS

Fi-Foil's installation instructions are detailed and if followed, should provide a high quality installation. The instructions for each product can be found on the Products page of our website:

<http://www.fifoil.com/products/reflective-insulation>.

Typically, the framing or furring has been installed 16" or 24" on-center prior to the start of installation.

The insulation should be attached to the face of furring strips (metal or wood), expanded and cover the cavity with no or minimal exposed block showing.

**INSTALLATION TIPS**

**SPICES**  
For splices in wall cavities, either overlap the material to complete the cavity or cut the insulation in half and carefully butt the two pieces together to minimize any break in the insulation for that cavity. Tape the seam if the wall can be seen.

**WALL CUTOUTS**  
Cut the insulation so that it fits snugly around the outlet. If the wall can be seen, tape the edge of the insulation to the face.

**NOTES**  
Two workers is advised.  
Make sure the GFCI is checked for proper installation and use of proper technique in making connections, for other insulation considerations.

**FRAMING STRIPS**  
Furring strips should be installed horizontally and spaced every 16" or 24" on-center.  
Handle with care to avoid damage to the insulation.  
Avoid installation of the material in wall cavities that are not intended by the manufacturer.

**IRREGULAR CAVITIES**  
Caution that cut has been taken around the cavity.  
1. Complete items 1, 2 & 3 above.  
2. Start again at the top. Grasp the other side of the insulation and pull over the top of the other furring strip. Use this procedure the entire length of the wall and staple approximately every 4" to 8". Cut off excess material.  
Caution that cut has been taken around the cavity.  
If the cavity is wider than the standard width, if the cavity is wider than 24", install another furring strip. If the cavity is wider than 16" O.C., use 24" wide material. Staple the staple along.

**WALLS FURRED 16" & 24" ON CENTER**

- Grasp one side of the insulation with the ground side facing the applicator. Grasp the foil toward the masonry.
- Begin stapling at the top of the furring strip on one side only until stapled to the length of the joint. Staple approximately every 4" to 8".
- Cut off the insulation leaving enough length to overlap between horizontal furring strips.
- Start again at the top. Grasp the staple tab on the opposite side and pull slightly to expand material. Staple to the other furring strip. Use this procedure the entire length of the wall, stapling approximately every 4" to 8".
- Staple the top and bottom horizontal furring strips (if present) approximately every 4" to 8".

**NOTE:** Where horizontal furring strips are present, the insulation should be installed horizontally using the indicated procedure above.

For water furring strips, when done, they use the "top" 1/8" veneer, or stick to the metal furring with adhesive tape or heavy adhesive. Protect with the same heavy adhesive as above. This will hold the insulation in place and the wall board in position.

**Reflective Insulation**

Staples 4" on-center

Step 1: Grasp one side of the insulation with the ground side facing the applicator. Grasp the foil toward the masonry.

Step 2: Begin stapling at the top of the furring strip on one side only until stapled to the length of the joint. Staple approximately every 4" to 8".

Step 3: Cut off the insulation leaving enough length to overlap between horizontal furring strips.

Step 4: Start again at the top. Grasp the staple tab on the opposite side and pull slightly to expand material. Staple to the other furring strip. Use this procedure the entire length of the wall, stapling approximately every 4" to 8".

Step 5: Staple the top and bottom horizontal furring strips (if present) approximately every 4" to 8".

Step 6: For water furring strips, when done, they use the "top" 1/8" veneer, or stick to the metal furring with adhesive tape or heavy adhesive. Protect with the same heavy adhesive as above. This will hold the insulation in place and the wall board in position.

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### HOW DO RATERS INSPECT MULTI-LAYER INSULATION?

#### GRADE 1 INSULATION – MINOR DEFECTS

Grade 1 installation requires that the insulation material is installed with the direction of the framing. Most framing is installed vertically except windows or doors which often are framed horizontally on the walls.

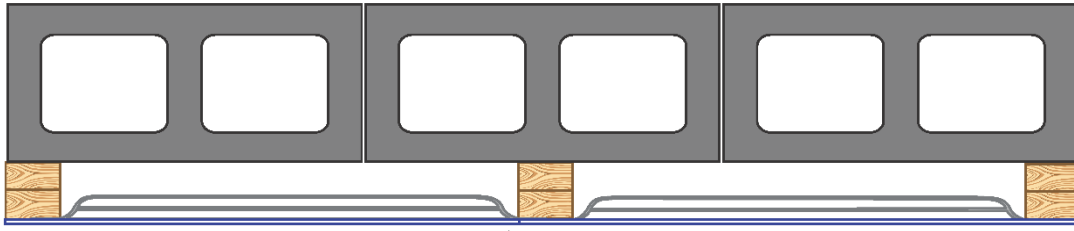
To attain a rating of "Grade 1", wall insulation will cover almost the entire cavity – only minor defects (2% or less of the area is not insulated such that the building envelope (wall) is visible from the building's interior).

For building code compliance, insulating materials with a flame spread rating greater than 25, the insulation facing should be in substantial contact with the drywall (insure that the product has been adhered to the face of the framing – no inset stapling).

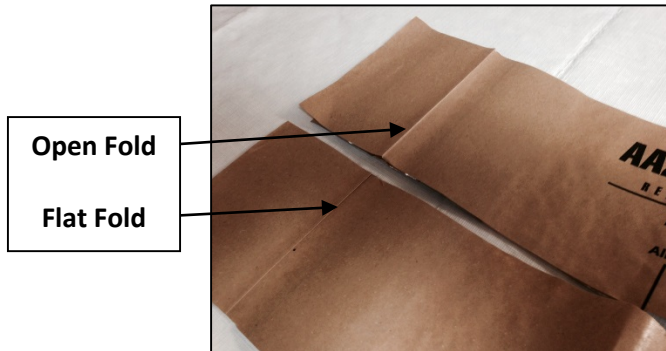
- Coverage: Make sure the insulation covers the entire wall cavity and is attached securely with staples approximately every 4" to 8" or glued, and/or tape tap is secure at both sides, top, and bottom.
- Facing Side / Reflective Side: The paper side should be facing the inside of building – the reflective side should face the block wall.



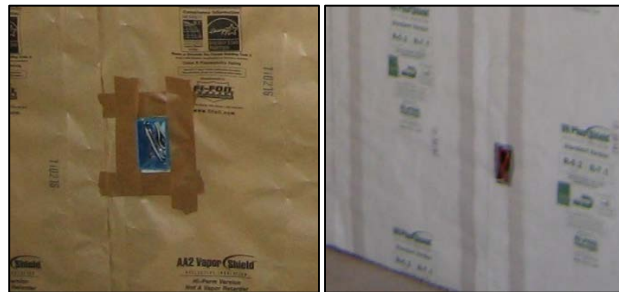
- Internal Reflective Air Spaces: Multi-layer reflective insulation requires air spaces between the reflective layers to function at the optimum R-value.



- The folded crease on each side of insulation (located near the edge) should be un-creased or is no longer completely flat. This will indicate that the layers have separated internally or that air spaces exist between the reflective layers and the insulation facing.



- Make sure the insulation is cut so that it fits snugly around the outlet boxes – the block wall should not be visible around outlets or any penetrations. Taping is acceptable where gaps exist.



- For cavities that are less than standard widths, the excess material shall be trimmed or the over-lap must be to the outside of adjacent installed cavity.
- When there is a splice in wall cavity, the reflective insulation seam shall be butted, overlapped or taped so the wall is not visible.

### **GRADE 2 INSULATION – MODERATE DEFECTS**

Grade 2 installation requires that the insulation be installed per Grade 1 with the following exceptions.

- To attain a rating of “Grade 2”, wall insulation should cover most of the entire cavity. Thus defects or areas not insulated (where the building envelope or block wall is visible from the building’s interior) are greater than 2% but not more than 10%.

### **GRADE 3 INSTALLATION WHEN THE ABOVE REQUIREMENT ARE NOT MET.**

*Updated: June 7, 2015*