Reflectix, Inc.

The World's Largest Manufacturer of Reflective Insulation

Solutions

for the Pro

Providing the Professional Builder with the Most Accurate and Useful Information on the Thermal Performance of Reflective Insulations and System R-values

• Upgrade • Up-Sell • Increase Sales & Return

Seal and Insulate with ENERGY STAR

LEARN MORE AT energystar.gov

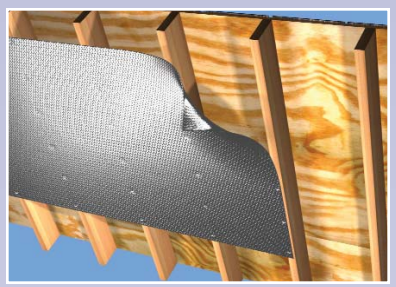
Energy Star Qualified for Residential Applications

Improving Your Home's Envelope

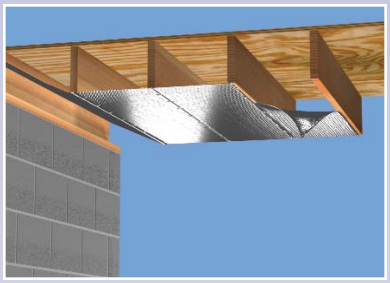
Reflectix® Insulation is labeled as part of ENERGY STAR® Home Sealing. When installed properly, Reflectix® helps ensure that homes stay comfortable and energy efficient all year long.

Note: An air space facing one foil side is required for this product to work as designed. R-values may be calculated when a foil side faces an enclosed air space (a cavity without free air flow). The air space required to meet these applications are included in the installation instructions on the reverse of the product label. Additionally, this information can be found at www.reflectixinc.com/r-values.

Residential Applications

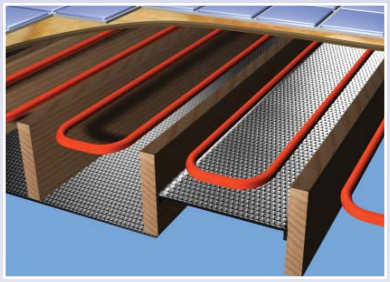


Attic

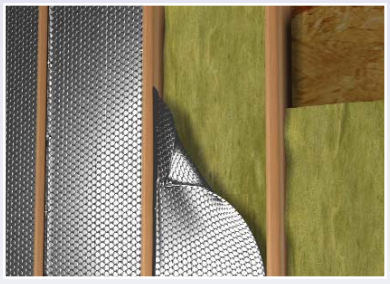


Crawl Space

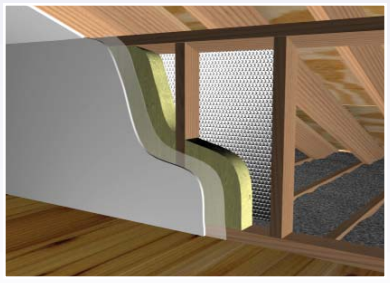
Masonry Wall



Radiant Floor Wood Joists



Wall - 2 x 4 and 2 x 6



Knee Wall

Reflectix® is the Industry Leader!

We manufacture the highest quality, most extensively-tested, readily-available, reflective-based insulations and radiant barriers in the world! With Reflectix® products, there is no middleman. We are the manufacturer and we operate with an ISO 9001:2000 certified management system. Our testing and validation requirements are second to none. Distribution of our products is worldwide through Do-It-Yourself Retailers, Contractor Sales Groups and Industrial/Commercial Building Product Suppliers.

What are the Advantages of Reflectix® Products?

Ease of installation and diversity of applications are two major advantages. Reflectix® Insulations and Radiant Barriers are very easy to handle and install. All that is required are simple hand tools and access to the installation area. Reflectix® products are some of the most diverse, energy conserving building materials available, with over forty verified applications for residences, industrial/commercial buildings and agricultural structures.

What About R-values?

"R" in R-value means the resistance to heat flow. For a reflective insulation to provide the most effective thermal performance (R-value), it must be installed with air spaces on (one or both of) the reflective side(s) of the product. The thermal value of the insulation system will vary depending on the size of the air spaces and the direction of heat flow. This is why with one basic product, we can achieve several different R-values. The system R-values provide you with a more accurate performance report of our product. You can feel confident specifying Reflectix® on your next job, knowing that we've left nothing to question.

Reflectix® also has an extensive bank of testing for fire safety, vapor transmission, mold and mildew resistance, emittance and smoke density, along with a full line of physical properties tests. Our products and applications have been evaluated by an impressive and ever growing list of agencies including: BOCA, ICBO, SBCCI, CCMC,* and the states of California, Wisconsin and Minnesota.

Reflectix goes the extra mile to provide you with accurate information.

Over the years, Reflectix has collected and continues to collect test data on the more popular applications using our insulation products. This brochure is the culmination of that research. On the following pages, we will review many of these applications in detail including their R-values, additional benefits and installation procedures.

Through the use of independent certified labs and government approved laboratories, Reflectix conducted tests on complete wall, floor, pipe and duct assemblies insulated with Reflectix®. These tests have enabled us to provide you with the most accurate and useful information possible on thermal performance or system R-values.

System R-values report the thermal resistance of complete assemblies, including insulation, studs, floor joists, furring strips and any other building materials a particular application may involve.

If you have questions on a specific application, feel free to call our toll free number at (800) 879-3645, or visit our website at www.reflectixinc.com.

* BOCA: Building Officials and Code Administrators; ICBO: International Conference of Building Officials; SBCCI: Southern Building Code Congress International; CCMC: Canadian Construction Materials Centre

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Pictured on the Cover: Damon Hanna (left), who works in the Shipping Department at Reflectix, and Ed Harris (right), the Reflectix Maintenance Manager.

Reflectix® Pro Products

Reflectix® Double Reflective Insulation

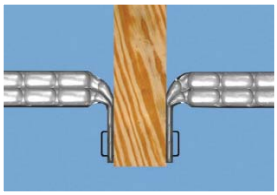
- Product Ordering Prefix: "BP" or "ST"
- HVAC Products Ordering Prefix: "HV"

Our Premium Reflective Insulation Product:

- Easy to install and handle - Does not require any specialized tools or equipment for installation
- Diverse - Multiple applications for a wide range of structures
- Reflects 96% of radiant heat

Product Description:

- A reflective insulation consisting of two outer layers of 96% reflective material, bonded to two layers of heavy gauge polyethylene bubbles (thickness: 5/16")
- Product is manufactured in 16 inch to 10 foot widths by 50 foot to 125 foot lengths
- Heavy gauge polyethylene double bubble interior for superior strength and easy handling
- Available in a Standard Edge or Staple Tab Edge configuration (Refer to diagram to the left)
- Staple Tab Edge products are recommended when installing the insulation on 24" or 16" centers
- Product Name: Reflective/Bubble/Bubble/Reflective - Roll ("BP")
- Product Name: Reflective/Bubble/Bubble/Reflective, Staple Tab - Roll ("ST")



Staple Tab Edge (ST) Product

Applications:

- Attic
- Crawl Space
- Duct Insulation
- Metal Bldg - Roof
- Metal Bldg - Wall
- Pipe Wrap
- Post Frame - Roof
- Post Frame - Wall
- Radiant Flr - Wd Joists
- Wall - Exterior
- Wall - Knee
- Wall - Masonry

Reflectix® Single Reflective Insulation

- Product Ordering Prefix: "RDBW"

Ideal for Metal and Post Frame Buildings:

- Economical - For applications where our Single Sided Reflective Insulation is most advantageous
- Easy to install and handle - Does not require any specialized tools or equipment for installation
- Manufactured in large contractor size rolls

Product Description:

- A reflective insulation consisting of one outer layer of 96% reflective material and one outer layer of white polyethylene, both of which are bonded to two layers of heavy gauge polyethylene bubbles (thickness: 5/16")
- Product is manufactured in 16 inch to 10 foot widths by 100 foot and 125 foot lengths
- Heavy gauge polyethylene double bubble interior for superior strength and easy handling
- Product Name: Reflective/Bubble/Bubble/White - Roll ("RDBW")

Applications:

- Metal Bldg - Roof
- Metal Bldg - Wall
- Post Frame - Roof
- Post Frame - Wall
- Pipe Wrap
- Radiant Flr - In a Subfloor

Reflectix® Radiant Barrier

4 Product Ordering SKU: "RB48125"

Saves Energy Dollars on AC Usage:

- Blocks 96% of radiant heat from entering structure
- Reduces AC usage up to 10%
- Increases efficiency of attic mounted ducts

Product Description:

- A radiant barrier consisting of two outer layers of 96% reflective material bonded together enclosing a heavy gauge poly scrim (to provide structure for staples)
- Product is manufactured in 4 foot widths by 125 foot lengths
- Product Name: Reflective/Scrim/Reflective, Radiant Barrier - Roll ("RB")

Applications:

- Attic
- House Wrap Behind Siding or Brick

Reflectix® Concrete Slab Insulation

4 Product Ordering Prefix: "DBWEF"

Improves Performance of Radiant Floor Systems:

- Easy to install and handle
- Vapor / radon retarder
- Spreads out the heat signature in radiant floors

Product Description:

- An insulation consisting of one layer of aluminum bonded to an external layer of white polyethylene and internally bonded to two layers of heavy gauge polyethylene bubbles (thickness: 5/16")
- Product is manufactured in 4 foot widths by up to 125 foot lengths
- Product Name: White/Reflective/Bubble/Bubble, Concrete Slab Insulation - Roll ("DBWEF")

Applications:

- Concrete Slab
- Radiant Floor - Over Existing Floor
- Radiant Floor - Concrete Slab
- Snow Melt

Expansion Joint

- Lightweight, shapes to contours, sturdy, resistant to termites and moisture
- A closed cell, foam expansion joint - Manufactured 0.5"x 4" and 6 x 50'
- Product Ordering SKU: EXP04050 (4"x 50") and EXP06050 (6"x 50')

Sill Seal

- Easy installation and convenient roll sizes
- A ribbed polyethylene foam sill seal (thickness: 3/16") - Manufactured in widths of 3.5", 5.5", 7.5" and 9.5" by 50'
- Product Ordering Prefix: "CF" (example: CF30550)

Tape

- Foil Tape - Utilize for seaming on the reflective sides of our insulation - Manufactured in 2" and 3" widths by 30' and 150' lengths - Product Ordering Prefix: "FT" (example: FT250)
- White Poly Tape - Utilize for seaming on our white poly insulation - Manufactured in a 3" width by 165' length - Product Ordering SKU: WPT355

Residential Pro Applications

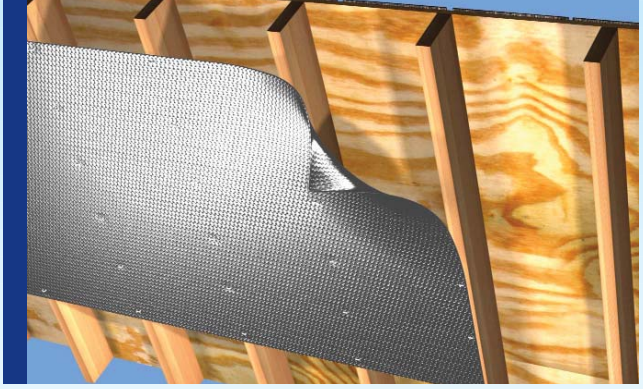
Reflectix has a wide variety of installation options for the Professional Residential Builder. Increasing energy efficiency is a solid direction to build greater demand (and net pricing) for a new home in today's highly competitive market.

- Upgrade and Focus on Energy Efficiency
- Up-Sell the Structure
- Increase Sales and Return
- Pays Dividends to the New Owner for the Life of the Home

Reflectix is World's Largest Manufacturer of Reflective Insulation Products

Our company is dedicated to the research, development, and manufacture of technically-advanced energy barriers designed to reduce consumption and be non-detrimental to our environment. Products or systems will be safe, easy to use, and provide significant economy for the user wherever there is a desire to control heating and cooling, or isolate temperature.

Reflectix® Reflective Insulations and Radiant Barriers greatly enhance the overall performance of the building assemblies in which they are installed. Our products are second to none in quality, ease of installation, versatility and performance.



Attic

Radiant Barrier

Benefits:

- Blocks 96% of radiant energy from entering the home
- Reduces a home's AC usage by up to 10%
- Improves efficiency of attic-mounted HVAC and ducts

Recommended Products:

Double Reflective Insulation, Product Ordering Prefix: "BP"
Double Reflective Insulation, Product Ordering Prefix: "ST"
Radiant Barrier, Product Ordering Prefix: "RB"

Underside of Rafter Method (depicted above):

• Check the attic for any needed repairs - Unroll the Reflectix® as you work and cut it to suitable lengths (8′ to 12′) with scissors or utility knife - Allow for proper ventilation - Install product perpendicular to the rafters with a 2″ overlap on the seams (No taping required) - Staple to the rafters at 2″ to 3″ intervals - Leave a 2″ to 3″ gap on each side of the roof peak and a gap at the lower edge of the roof line - Staple to the face of the studs on gables and insure at least a 1″ gap around all vents.

Rafter/Truss Cavity Method:

Southern Zone of USA ONLY - Verify location recommendation with our zip code zone locator at www.reflectixinc.com/attic, or contact our Customer Service Group at (800) 879-3645.

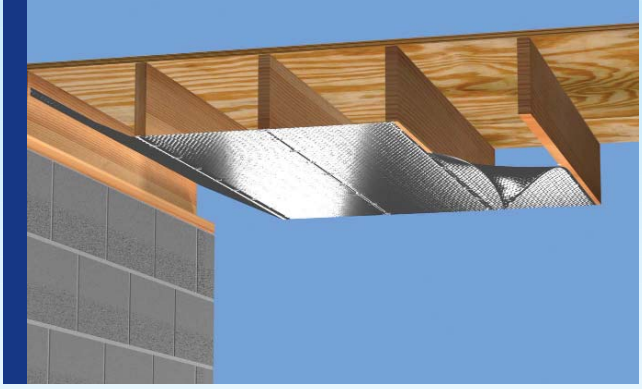
• Staple directly to the decking (in between rafters/trusses).

Between the Trusses (Reflective/Bubble Product):

• Install Staple Tab (ST) product to the side of the trusses or rafters (No product in contact with decking).

Blanket Fashion (Reflective/Scrim Product ONLY):

• Lay (RB) product over the top of the ceiling joists - Cut openings above heat generating devises (example: lights) - Overlap seams 2″.



Crawl Space

R-17

Benefits:

- Fiber / itch free install
- Vapor / moisture retarder
- Perfect for retrofit

Recommended Products:

Double Reflective Insulation, Product Ordering Prefix: "BP"
Double Reflective Insulation, Product Ordering Prefix: "ST"

Installation Instructions:

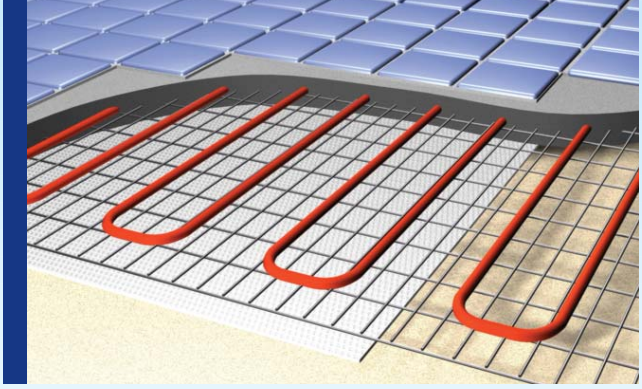
• Inspect the crawl space and make any needed repairs before installing the Reflectix®.

• Check the crawl space to determine whether the floor joists are 16" or 24" on-center.

• Determine if there are water pipes and heating ducts which hang below the floor joists - They will need to be insulated - Reflectix® Pipe Wrap and Duct Insulations are designed specifically for this use - There is no need to wrap water pipes or duct work that fall between floor joists - Reflectix® will provide adequate insulating without extra wrapping.

• Start at the end of the house and face staple to the bottom of the floor joists - Seal seams with Reflectix® Foil Tape to create a vapor barrier - At the end, staple up to the sub-floor or band board.

Note: Existing mass insulation in the joist cavities must be dry prior to installing the Reflectix® product.



Radiant Floor in a Concrete Slab

R-1.1

Benefits:

- Easy to handle and install
- Promotes even heat distribution
- No nesting characteristics for insects

Recommended Products:

Concrete Slab Insulation, Product Ordering Prefix: "DBWEF"

Installation Instructions:

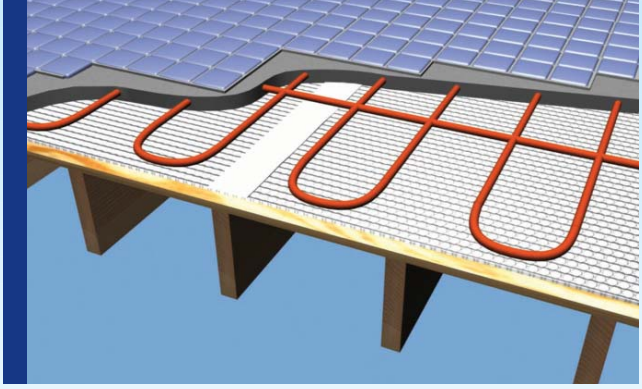
• Unroll the Reflectix® Concrete Slab Insulation product over the base material prior to pouring the concrete.

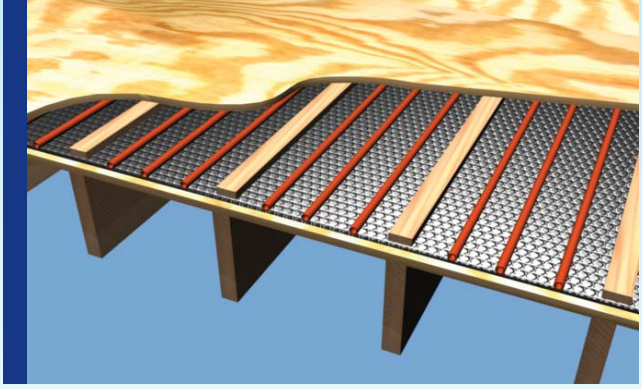
• Butt the seams of the product and seal with 3" wide white poly tape.

Note: Utilize a flat edge taping tool to assure good adhesion on all tape.

• Install Radiant Floor System per manufacturer's specifications.

Reflectix® - The most diverse insulation product for the home with over 20 proven applications.





Radiant Floor Over an Existing Floor

Benefits:

- Promotes even heat distribution
- Vapor retarder
- Increases system efficiency

Recommended Products:

Concrete Slab Insulation, Product Ordering Prefix: "DBWEF"

Installation Instructions:

• Unroll the Reflectix® Concrete Slab Insulation product over the existing floor prior to pouring the concrete (white poly side up) - Cut the product flush with the walls.

• Butt the seams of the product - Seal with 3" wide white poly tape.

Note: Utilize a flat edge taping tool for good adhesion on all tape.

• Install Radiant Floor System per manufacturer's specifications.

Radiant Floor in a Sub-Floor

Benefits:

- Directs heat into living space
- Easy to handle and install
- Cuts with a utility knife

Recommended Products:

Single Reflective Insulation, Product Ordering Prefix: "RDBW"

Installation Instructions:

• Unroll the Reflectix® product over the existing floor (reflective side facing up) - Cut the product flush with the walls.

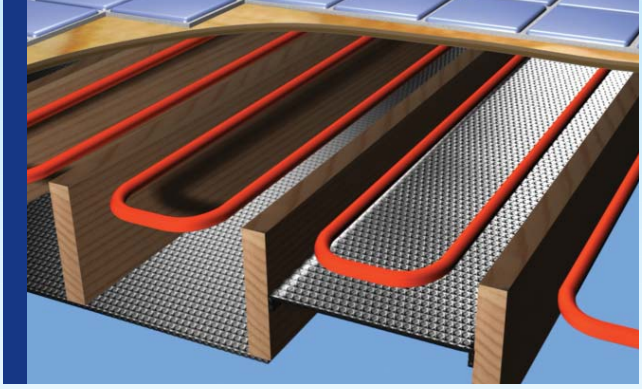
• Butt the seams and seal with 2" wide foil tape.

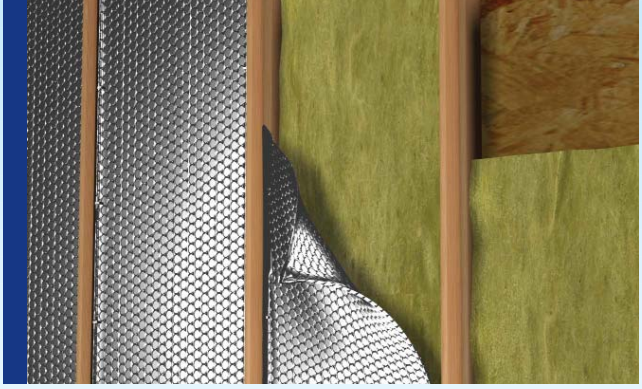
Note: Utilize a flat edge taping tool for good adhesion on all tape.

• Install Radiant Floor System per manufacturer's specifications, sleepers and new (top) subfloor.

Safety & Installation Tips for Reflectix® Insulation

- ALWAYS check local building codes before installing Reflectix®.
- ALWAYS check the area you are insulating and make any needed repairs before you begin. Any worn wiring should be replaced before you begin installing Reflectix®.
- ALWAYS use eye protection when using staple guns or screw guns.
- ALWAYS use caution around electricity.
- ALWAYS use caution and common sense when using a staple gun. Be aware of where electrical wiring is located. Stapling into a wire can cause severe shock or death. NEVER staple into electrical wiring.
- ALWAYS make sure work areas are well ventilated and well lighted.
- ALWAYS be careful when working with large pieces of Reflectix® on windy days.
- When stapling, securing the product every 2" to 3" is advised.
- When working with Reflectix® on bright sunny days, it is best to wear sun glasses.
- Do not work in areas such as attics when temperatures are too hot.





Radiant Floor Wood Joists

Benefits:

- Reflects 96% radiant energy back into sub-floor
- Product is dust and fiber free
- No nesting characteristics for insects

Recommended Products:

Double Reflective Insulation, Product Ordering Prefix: "BP"

Double Reflective Insulation, Product Ordering Prefix: "ST"

1. Underside of Floor Joist - R-17:

• Install product per "Crawl Space" application on page 6.

2. Inside Joist Cavity - Air Space Dependent R-value / Radiant Reflector:

• Install the Reflectix® Staple Tab product inside the joist cavity - Allow 4" to 6" below the heating coils (as recommended by the manufacturer).

Examples of benefits based on air space depth above product:

• 3.5" air space = R-12 • 9.5" air space = R-17

3. Inside Joist Cavity w/Mass Insulation Below - Air Space Dependent R-value / Radiant Reflector:

• Install the Reflectix® inside the joist cavity above a mass insulation batt - Utilize Reflective Staple Tab product (Refer to method #2).

Note: Verify that this method is acceptable for the type of radiant floor system being installed.

4. Inside Joist Cavity w/Mass Insulation Above - R-2.7 to R-3.8:

• Install the Reflectix Staple Tab product to the side of the floor joist below the mass insulation.

Examples of benefits based on air space depth below product:

• 0.5" Air Space = R-2.7 • 0.75" Air Space = R-3.8

Wall - Exterior

R-14 to R-21 (w/a Fiberglass Batt)

Benefits:

- Excellent upgrade for custom homes
- Vapor retarder and moisture barrier
- Resists growth of fungi, mold and mildew

Recommended Products:

Double Reflective Insulation, Product Ordering Prefix: "BP"

Double Reflective Insulation, Product Ordering Prefix: "ST"

2 x 4 Wall (R-14) or 2 x 6 Wall (R-21):

• Install R-13 in a 2 x 4 wall (R-19 in a 2 x 6 wall) un-faced, per manufacturer's specifications.

• Place one corner edge of the Reflectix® in an upper corner of the stud cavity.

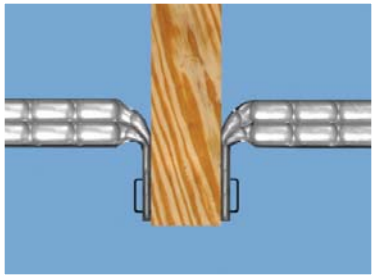
• Staple the product to the side of the stud (creating a 3/4" tab on the product and compressing into the fiberglass (3/4" as well)).

• The edge of the product should be flush with the forward corner of the stud.

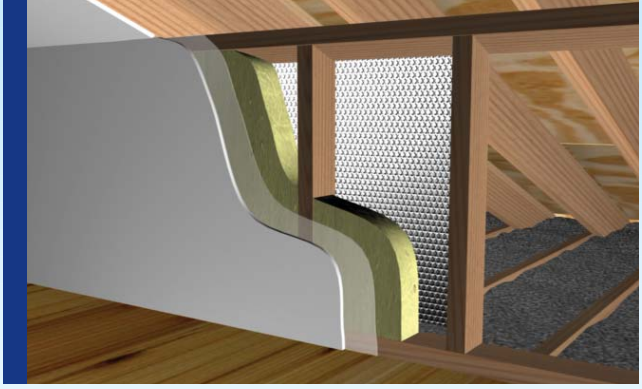
• Proceed "down" stapling to the side of the stud every 2"- 3".

• Repeat procedure on opposite stud.

• The Goal: Create a continuous 3/4" air space between the product and the interior panel.



Pictured: Our Staple Tab product easily and accurately bends to achieve the necessary 3/4" air space.



Wall - Knee

R-16 or R-19 (w/a Fiberglass Batt)

Benefits:

- Reflects 96% radiant energy back into attic space
- Excellent upgrade for a knee wall system
- Increases room comfort levels

Recommended Products:

Double Reflective Insulation, Product Ordering Prefix: "BP"
Double Reflective Insulation, Product Ordering Prefix: "ST"

1. In Back of Knee Wall Cavity - R-16 and a Radiant Reflector (with R-13 Fiberglass Batt):

• Install the Reflectix® Staple Tab (ST) product to the inside back of the stud cavity - Continue downward stapling every 3" to 4" - Repeat on opposite stud - Insure there is a continuous 1/2" air gap across the bottom of the cavity.

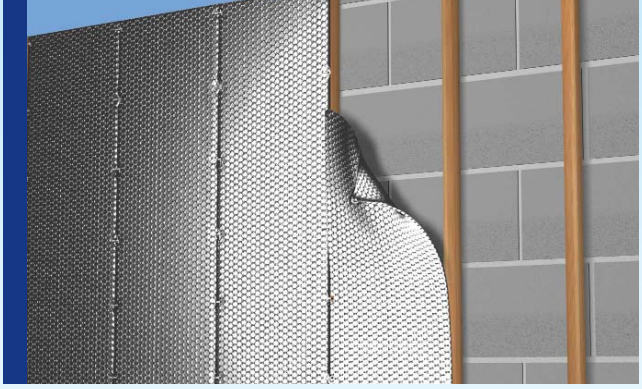
• If utilizing the non-staple tab product (BP), staple the edge of the product to the back face of the stud, splitting the stud - Insure there is a continuous 1/2" air gap across the bottom of the cavity.

• Install fiberglass batt per manufacturer's instructions.

• Install a vapor barrier on the inside of the knee wall if your building code dictates.

2. In Back of Knee Wall Cavity - R-19 and a Radiant Reflector (with R-13 Fiberglass Batt and 0.75" Furring (on the back of the Knee Wall)):

• Prior to placing the knee wall and nailing it to the floor and rafters, attach a 1"x 2" (nominal) furring strip to the back of each knee wall stud - Install Reflectix® per instruction in Method #1.



Wall - Masonry

R-3.7, R-4.2 or R-6.1 and a Vapor / Moisture Barrier

Benefits:

- Easy to handle and install
- Vapor retarder / moisture barrier
- Not affected by moisture or humidity

Recommended Products:

Double Reflective Insulation, Product Ordering Prefix: "ST"

1. R-3.7 (1"x 2" Nominal Furring):

• Attach 1"x 2" (nominal) furring strips vertically at an interval of 16" (or 24" per code) on center to the masonry wall (with an adhesive or fastener that is specified for this application).

• Cut the Reflectix® Staple Tab product (using scissors or a utility knife) into lengths equal to the height of the wall (floor to ceiling).

• Staple the product to the face of the furring strip - Product seams should split on a furring strip - One air space is created between the Reflectix® and the masonry wall.

2. R-4.2 (2"x 2" Nominal Furring):

• Same as above except utilize 2"x 2" (nominal) furring.

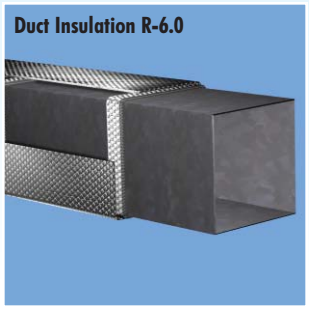
3. R-6.1 (2"x 2" Nominal Furring):

• Same as above, except the product is not stapled to the face of the furring strip - Staple the product to the side of the furring strip at a depth of 3/4" - The goal is to split the cavity (in two) into approximately equal air spaces.

• The two air spaces created are between the Reflectix® and the masonry wall, and the second between the new interior panel and the Reflectix®.

HVAC Pro Applications

Reflectix® offers an established line of products for the HVAC and Plumbing Professional. Reflectix® Duct Insulation has been installed in thousands of structures and meets code requirements nationwide. The following page provides insights to these applications and the benefits provided. Additional questions can be addressed on our website at www.reflectixinc.com, or by our Customer Service Group at (800) 879-3645.



Left: HVSP02025 2" Spacer Material

Right: HVSPACER Plastic Corner Spacer

Duct Insulation

- R-4.2 to R-6.0
- Easy to handle and cost less to install
- Non-fibrous / non-irritating to lungs or skin

Recommended Products:

Product Ordering Prefix: "HV" (example: HVBP48050)

R-4.2:

• Spiral wrap product around the duct overlapping 1" - Fasten each end with UL181A approved foil tape (with acrylic adhesive).

Note: This application (R-4.2) is not recommended as a standalone solution for air conditioning supply ducts - Condensation may occur.

R-6.0:

All R-6.0 duct applications require the use of a spacer. Two types of spacer options are available:

1. HVSP02025 (2" Spacer Material): Double wrap the duct at intervals of 24" to 36", or double wrap in a candy cane pattern.
2. HVSPACER (Plastic Corner Spacer): Install HV spacers on all 4 corners of the duct every 24". Refer to spacers photos above.

• Wrap the duct (per the illustration above) and securely tape the linear and circumference seams with UL181A approved foil tape (with acrylic adhesive).

Return Air Duct Panning

- Less costly than sheet metal or aluminum-clad sandwich panels
- Not affected by moisture or humidity
- Reduces noise through plenum

Recommended Products:

Reflecto Pan HVSB1610003 and HVSB2410002 (16" and 24"x 100')

Installation Instructions:

• Install print side out - Start at the end of the house and staple product to the subfloor behind the return air grate.

• Continue down the joist cavity stapling to the bottom of the floor joist every 2" to 3".

Note: Additionally approved fasteners include steel staples, sheet metal screws and roofing nails.

• Seal seams with UL181A approved foil tape (with acrylic adhesive).

Pipe Wrap

- R-4.0
- Eliminates condensation on cold pipes
- Does not compress, collapse or disintegrate

Recommended Products:

SPW02025, SPW04025 and SPW06025 (2", 4" and 6"x 25')

LPW06025 (6"x 25')

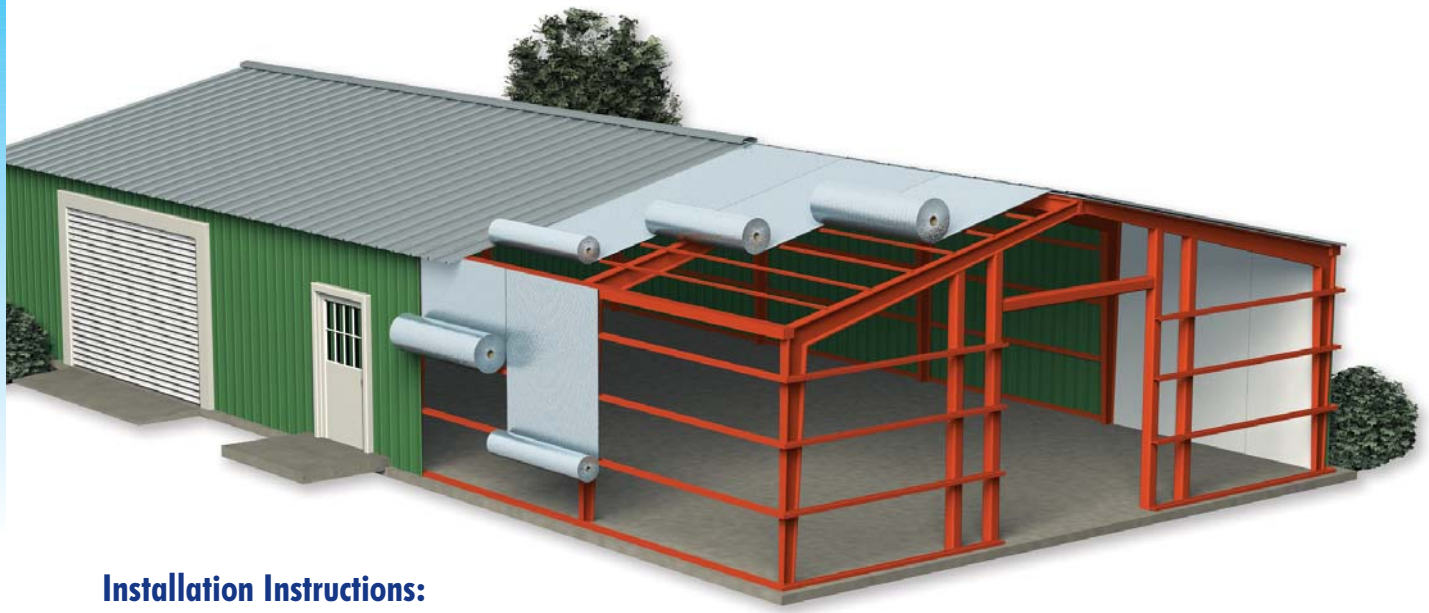
Installation Instructions:

Spiral Wrap Method: Spiral wrap the product around the pipe overlapping 1/2" - Securely tape each end of the wrapped product.

Linear Wrap Method: Cut product to an easily manageable length - Place the white side of the insulation next to the pipe - Wrap the insulation around the pipe (per diagram above) - Pull tape liner and overlap (adhere) product onto itself.

Metal Buildings

Reflectix has a variety of product and installation options for the Pro Metal Building Contractor. When it comes to ease of product handling and diversity, our Reflective Insulation Products are second to none. Please review the following information on Metal Building Applications. Additional questions can be addressed on our website at www.reflectixinc.com, or by our Customer Service Group at (800) 879-3645.



Installation Instructions:

Please refer to the diagrams on the adjoining page.

New Construction:

Roof: Install the product over the purlins with 1/2" self-tapping metal screws • Tape the seams with Reflectix® Foil Tape • Install a 3/4" thermal break (optional) • Install roofing either by screwing corrugated metal screws through the thermal break and insulation to the purlin, or install a standing seam roof.

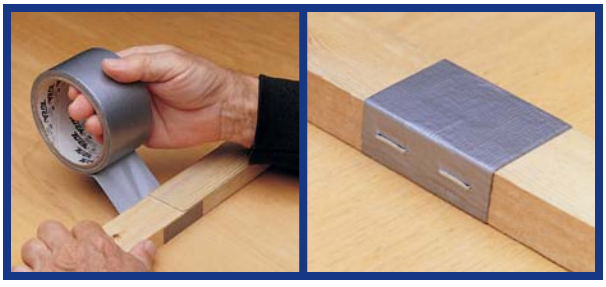
Wall: Install the product vertically, using 1 1/4" self tapping screws to the exterior of the C or Z girts • Tape the seams with Reflectix® Foil Tape • Install a 3/4" thermal break (optional) and attach the corrugated metal exterior finish.

Retrofit:

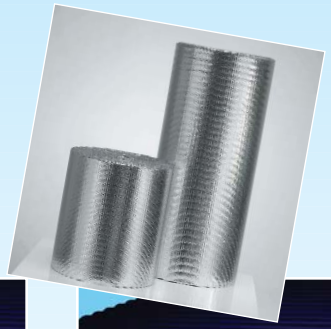
Roof: Install 1"x 2" furring strips on the bottom of and perpendicular to the Z purlins on 22" centers • Utilize 1 1/4" self-taping sheet metal screws to secure the furring strips to the Z purlins • Butt the furring strips together, tape and staple (per the photos to the right) • Staple the edges of the product to the furring strips with 3/4" overlap at the seams • Tape the seams with Reflectix® Foil Tape.

Wall: Install 1"x 2" furring strips on the inside and perpendicular to the Z girts on 22" centers • Utilize 1 1/4" self-taping sheet metal screws to secure the furring strips to the Z girts • Butt the furring strips together, tape and staple (per the photos below) • Staple the edges of the product to the furring strips with 3/4" overlap at the seams • Tape the seams with Reflectix® Foil Tape • Staple the product at approximately 4" intervals down the middle of the sheet into the furring strip parallel and centered.

Note: The installation instructions are the same for both reflective insulations featured on the next page. The only difference is that the Reflective One Side (product) is installed with the White Poly Side towards the interior of the building.



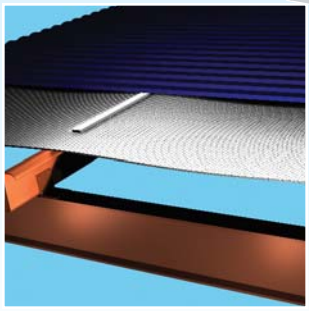
Metal Building Pro Applications
Reflectix® Insulation - Reflective Both Sides



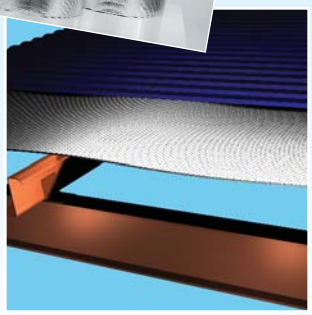
- Double Reflective Insulation, Product Ordering Prefix: "BP"
- Double Reflective Insulation, Product Ordering Prefix: "ST"

R-values: Reflective insulation assemblies in roof cavities are tested for heat flow direction "Up" and "Down" - Homogeneous mass insulation products, when tested in the same manner, provide the same level of benefit (same R-value) for both heat flow directions.

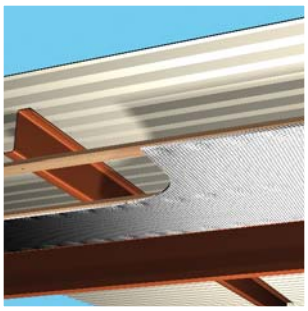
Product Name: Reflective/Bubble/Bubble/Reflective - Roll ("BP")
Product Name: Reflective/Bubble/Bubble/Reflective, Staple Tab - Roll ("ST")



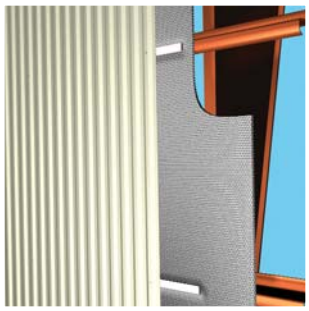
Roof / New*
(Thermal Break)
R-9.2 Heat Flow Down
R-4.1 Heat Flow Up



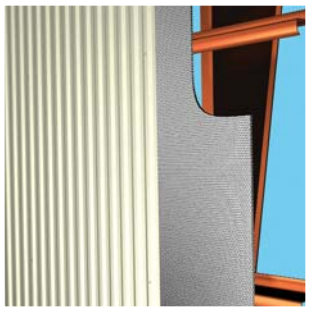
Roof / New*
(No Thermal Break)
R-7.6 Heat Flow Down
R-3.9 Heat Flow Up



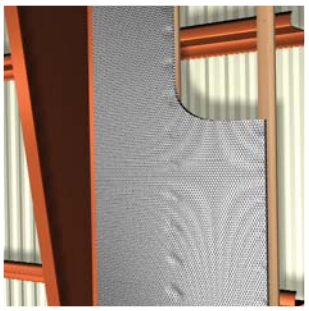
Roof / Retro*
R-11 Heat Flow Down
R-4.4 Heat Flow Up



Wall / New
(Thermal Break)
R-5.6 Heat Flow Horiz



Wall / New
(No Thermal Break)
R-4.7 Heat Flow Horiz



Wall / Retro
R-4.5 Heat Flow Horiz

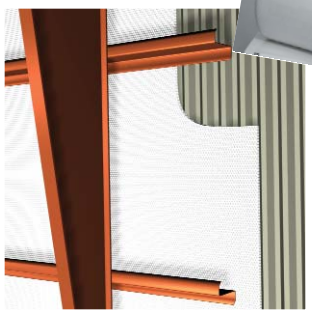
Reflectix® Insulation - Reflective One Side

- Single Reflective Insulation, Product Ordering Prefix: "RDBW"

Product Name: Reflective/Bubble/Bubble/White - Roll ("RDBW")

Roof / New*
R-4.0 Heat Flow Down
R-3.2 Heat Flow Up

Roof / Retro*
R-7.5 Heat Flow Down
R-3.6 Heat Flow Up



Wall / New
R-3.7 Heat Flow Horiz

Wall / Retro
R-3.5 Heat Flow Horiz

* Please Note: In addition to the stated R-value, this application also provides a Radiant Barrier. As a result, a 96% reduction of the radiant energy that ordinarily would be transmitted to the interior of the building is blocked.

Post Frame Buildings

Reflectix® Insulation has options for the Post Frame Building Contractor. The "easy to install and handle" feature reduces the labor necessary to install, and provides an "itch free" installation experience. Please review the following information on Post Frame Building Applications. Additional questions can be addressed on our website at www.reflectixinc.com, or by our Customer Service Group at (800) 879-3645.

Installation Instructions:

Please refer to the diagrams on the adjoining page.

New Construction:

Roof - Above the Purlin: After the trusses are set, run two purlins to make sure the trusses stay true • Attach the product to the first truss with at least 5/16" staples • Temporarily nail a 2"x 4" block over the end of the product to prevent it from pulling away • Roll out the product across the top of the trusses, pull tight and staple • Run sub-sequent courses of the product with the 3/4" staple tabs overlapping at the seams • Tape the seams with a Reflectix® Foil Tape • Install purlins over the insulation • Nail or screw to the trusses through the product.

Roof - Below the Purlin: Per the instructions above, except install product after installing the purlins (Insure a drape of 3/4" (middle of cavity)) is present.

Wall - Inside the Girts: Staple the product to the outside of the top girt • Staple the product to the inside of the remaining girts • Tape the seams with a Reflectix® Foil Tape.

Wall - Outside the Girts: Staple the product to the outside of the top girt • Staple the product to the outside of the remaining girts • Insure there is a drape of at least 3/4" (towards the interior of the building) at the center of each cavity • Tape the seams with a Reflectix® Foil Tape.

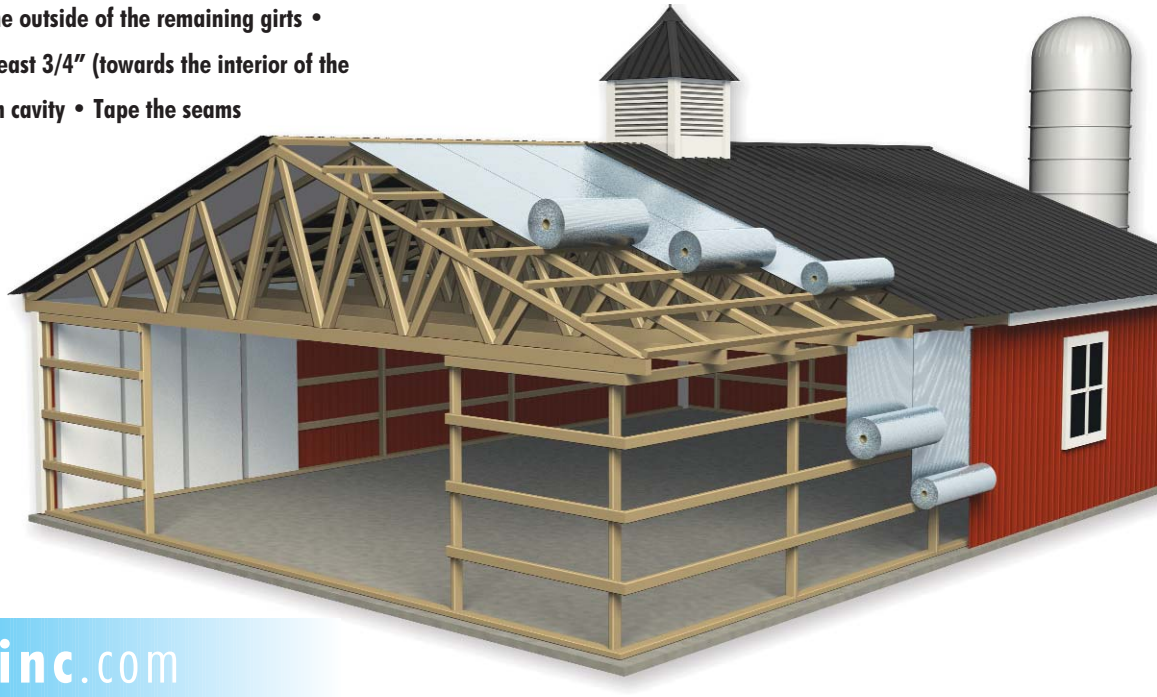
Retrofit:

Roof - Below the Purlin: Refer to the New Construction installation instructions prior.

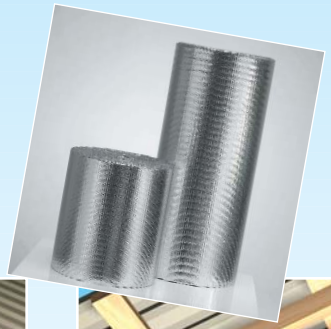
Roof - Bottom of Truss: Nail 1"x 2" furring strips on the bottom of and perpendicular to the trusses on 22" centers • Butt the furring strips together, tape and staple (Refer to photos at the bottom of page 11) • Staple the edges of the product to the furring strips with the 3/4" tabs • Tape the seams with a Reflectix® Foil Tape • Tape any butt seams with Reflectix® Foil Tape, insure taped seam has a good full continuous bond • Staple product at approximately 4" intervals down the middle of the sheet into the furring strip above.

Wall: The product can be installed either vertically or horizontally • Attach the product to the inside of the girts using 5/16" staples • Tape the seams with a Reflectix® Foil Tape • Staple product at approximately 4" intervals into the girt.

Note: The installation instructions are the same for both reflective insulations featured on the next page. The only difference is that the Reflective One Side (product) is installed with the White Poly Side towards the interior of the building.



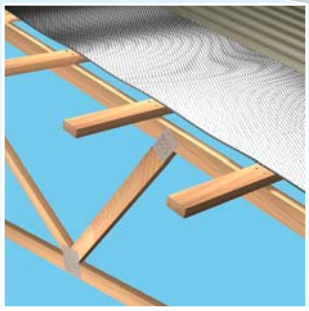
Post Frame Building Pro Applications
Reflectix® Insulation - Reflective Both Sides



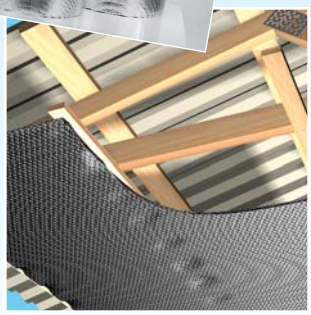
- Double Reflective Insulation, Product Ordering Prefix: "BP"
- Double Reflective Insulation, Product Ordering Prefix: "ST"

R-values and Air Spaces: Please take note as your review the featured applications, all building assemblies include an air space on one or both sides of our products (always on the reflective side of the "Reflective One Side" product). These air spaces are required to provide the stated R-values and must be included in the finished structure.

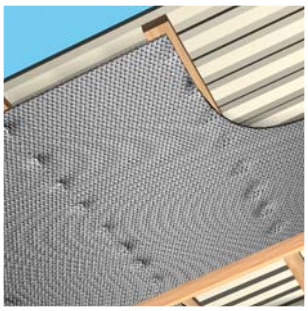
Product Name: Reflective/Bubble/Bubble/Reflective - Roll ("BP")
Product Name: Reflective/Bubble/Bubble/Reflective, Staple Tab - Roll ("ST")



Roof / New*
(Above Purlins)
R-6.4 Heat Flow Down
R-4.3 Heat Flow Up

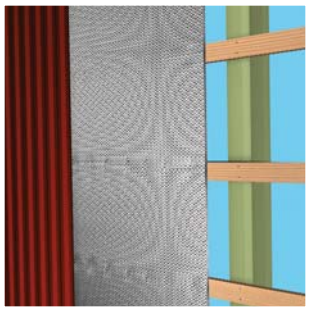


Roof / New / Retro*
(Bottom of Trusses)
R-9.0 Heat Flow Down
R-4.4 Heat Flow Up

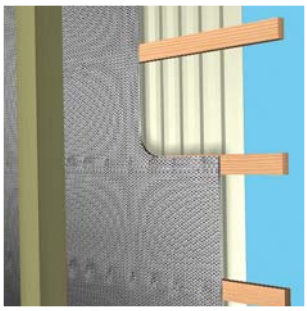


Roof / Retro*
(Below Purlins)
R-9.0 Heat Flow Down
R-4.4 Heat Flow Up

Wall / New
(Product Inside Girts)
R-5.3 Heat Flow Horiz



Wall / New
(Product Outside Girts)
R-4.7 Heat Flow Horiz



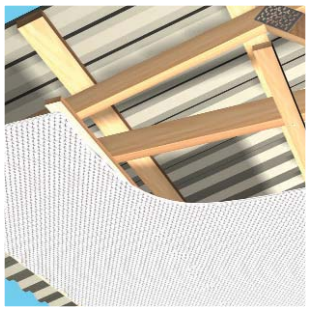
Wall / Retro
(Product Inside Girts)
R-5.3 Heat Flow Horiz

Reflectix® Insulation - Reflective One Side

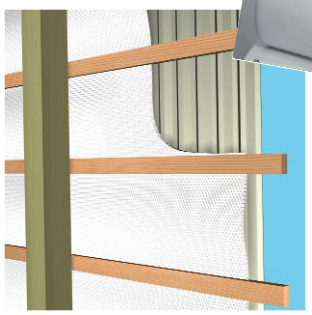
- Single Reflective Insulation, Product Ordering Prefix: "RDBW"

Product Name: Reflective/Bubble/Bubble/White - Roll ("RDBW")

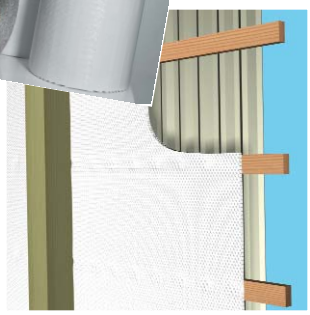
Roof / New*
R-3.8 Heat Flow Down
R-3.5 Heat Flow Up



Roof / Retro*
R-6.6 Heat Flow Down
R-3.0 Heat Flow Up



Wall / New
R-3.7 Heat Flow Horiz



Wall / Retro
R-4.2 Heat Flow Horiz

* Please Note: In addition to the stated R-value, this application also provides a Radiant Barrier. As a result, a 96% reduction of the radiant energy that ordinarily would be transmitted to the interior of the building is blocked.

Testing & Certifications

All tests on Reflectix® Insulation products are performed at either nationally approved independent laboratories or at leading universities. Tests are performed to current American Society of Testing and Materials (ASTM) Standards when a standard exists.

Testing results on our Reflective Insulation (Reflective/Bubble/Bubble/Reflective) product are listed below. For any additional testing information for this product (or any other), please refer to our website at www.reflectix-inc.com, or feel free to call our Customer Service Group at (800) 879-3645.

Nominal Thickness	5/16" (.312)
Weight	1.25 oz./ft^2
Temperature Range	-60° to 180° F
Flame Spread	Less than 25*
Smoke Development	Less than 50*
Perm. Rating	.02**
Puncture Resistance	60 lb./in.***
Vapor Transmission	.02
Mold and Mildew	No Growth
Emittance	.04
Tensile Strength	3.7 N/mm
Pliability	No Cracking
Hot Surface Performance	Passed

* Intertek Testing ASTM Test Method E-84 **ASTM Test E-96 ***FSTM 101 B Method 2031

Product Standards

Resistance to fungi or bacteria: Reflectix® does not promote the growth of fungi or bacteria.

Specification compliance: Reflectix® is covered under the Federal Minimum Standards Code for reflective insulation (HH-I-1252B) for all H.U.D. and F.H.A. projects.

Reflectix® products have been evaluated by the following:

- ICC-ES Evaluation Report Number ESR-1362
- Los Angeles County Evaluation Report No. RR8099

See Evaluation Reports listed above for allowable values and/or conditions of use concerning material presented in this document.

Testing and Certification Documents

- Thermal Performance ASTM C236
- Thermal Performance of Wall Systems ASTM C236
- Thermal Performance ASTM C518
- Thermal Performance of Crawl Space ASTM C236
- Hot Surface Performance ASTM C411
- Heat Transfer (Heat Flow Up, Down, Horizontal) ASTM C236
- Thermal Performance of Reflectix® and Fiberglass in Walls ASTM C236
- Heat Transfer of Air-Handling Ducts with Reflectix®
- Flame Spread and Smoke Density ASTM E84
- Adhesive Bleeding ICBO Acceptance Criteria
- Flammability FMVSS 302
- Fungus Resistance Mil-Std 810B Method 508
- Pliability Test
- Sound Absorption Test ASTM C423-90a and ASTM E795-83
- Sound Transmission Loss ASTM E90-90 and ASTM E413-87
- Water Vapor Transmission ASTM E96
- Tensile Strength
- Emittance Testing
- Thermal Performance of Water Heater Jackets
- NVLAP Approved Lab Test: Adhesive Bleeding per ICBO Evaluation Service Report # LA 73577
- State of California
- State of California Licensed Insulation Manufacturer
- State of Minnesota: Filed with Minnesota Insulation Standards Program
- State of Wisconsin: Wisconsin Material Approval, Safety and Buildings Division Approval # 920088-1
- Tennessee Technological University Emittance Testing
- Warnock Hersey Professional Services, LTD: Physical Properties Sheet Width, Length, Pliability, Water Vapor Permanence and Aged Water Vapor Permanence Report # 1/92
- Warnock Hersey Professional Services, LTD: Water Vapor Transmission Test ASTM-E96 (Dessicant Method) Report # 1/91

Total Design Calculations

Crawl Space

Product installed on the bottom of 2"x 10", 16" OC - Heat Flow Downward

Construction Components:	R-values At Framing:	At Cavity:
Inside Air Film	.92	.92
3/4" Wood Subfloor	.75	.75
5/8" Particle Board Underlayment	.82	.82
2"x 10" Wood Floor Joists 16" OC	10.07	---
9.5" Air Space	---	9.40
Reflectix® Insulation	1.10	1.10
Outside Air Film	4.55	4.55
Total:	18.21	17.54

Total Design "U"=.20/18.21+.80/17.54=.0566
Total Design "R"=1/.0566=17.67

Note: The above assembly R-value of R-17 includes a 4.55 value for the reflective air film.

Wall - Exterior

Product installed on 2"x 6" studs, 16" OC - Inside the cavity compressing the mass insulation R-19 batt 3/4" - Heat Flow Horizontal

Construction Components:	R-values At Framing:	At Cavity:
Inside Air Film	.68	.68
1/2" Plaster Board	.45	.45
Reflectix® Insulation	---	*3.87
2"x 6" Stud	6.88	---
R-19 Batt	---	15.70
1/2" Plywood	.62	.62
Total:	8.63	21.32

Total Design "U"=.14/8.63+.86/21.32=.0566
Total Design "R"=1/.0566=17.67

* Includes the thermal resistance for Reflectix® Insulation and the airspace on one side of the product.

Wall - Masonry

Product installed on 1"x 2" furring strips, 16" OC to block or concrete wall - Heat Flow Horizontal

Construction Components:	R-values At Framing:	At Cavity:
Inside Air Film	.68	.68
1/2" Plaster Board	45	.45
Reflectix® Insulation	---	*3.30
Furring Strips	1.59	---
8" Concrete Block	1.11	1.11
Total:	3.83	7.13

Total Design "U"= .14/3.83+.86/5.54=.1918
Total Design "R"=1/.1918=5.21

* Includes the thermal resistance for Reflectix Insulation and the airspace on one side of the product.