



FI-FOIL[®]

High Performance Radiant Insulation Systems

SERVICE | INTEGRITY | INNOVATION

SINCE 1983

About Us

FI-FOIL® has long been committed to advancing green building technology through high-performance insulation innovations. Our reflective insulation and radiant barriers provide energy efficiency and superior thermal performance for **residential, commercial, agricultural, and industrial** buildings.

FI-FOIL® opened in 1983 with a mission to manufacture and distribute high-quality radiant insulation and barriers to advance the energy efficiency of buildings and improve comfort year-round. Over 40 years, this mission has evolved to include a commitment to sustainable design that has driven improvements for the industry and education that has helped architects, builders and contractors understand the benefits and value of reflective insulating technologies. Today, the mission remains stronger than ever, with a dedication to ongoing innovation, exceptional customer service and integrity at the center of all we do.

As a leading manufacturer of air and specialty barriers and reflective insulation, FI-FOIL® has been specified by production and custom builders and preferred by local and national insulation contractors & distributors, including TopBuild, TruTeam, Service Partners, Installed Building Products (IBP), Pinnacle Housing Corporation, Kolter Properties, Moss Construction, PrimeSource Building Products, The Home Depot, Lowe's, D.R. Horton, Lennar, Pulte Homes, Neal Communities, along with energy consultants including Two Trails and SkyeTec and leading architects designing for sustainability and resilience.

Since 2017, FI-FOIL® systems have been specified in the National Association of Home Builders (NAHB) showcase homes – The New American Home (TNAH) and the New American Remodel (TNAR).

Why FI-FOIL®?

FI-FOIL's innovative reflective insulations and radiant barriers - many manufactured in the USA - increase building efficiency, savings, and comfort. Our team is dedicated to research and development, working tirelessly to craft premium products and systems that provide greater efficiencies across the entire building process from planning to construction. We provide resources and notable benefits to architects, builders, and installers with a variety of tools and product designs to support the industry with fast and easy installation, improved sustainability, marketability, and utility cost savings over the life of buildings that leverage our technology.



FI-FOIL® has been celebrated for its green building practices and sustainable innovations, including:

- Featured Insulation Product spot on The History Channel and receiving the Cool Product Award from the Pacific Coast Builders Conference for our Silver Shield™ multi-layer attic radiant barrier in 2006.
- Our products help builders reach their target Home Energy Rating System (HERS) Index and qualify for green building certification programs. These include the Florida Green Building Coalition (FGBC), the U.S. Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED), Department of Energy (DOE) Zero Energy Ready Certification, Earth Craft and Green Globes.

We also proudly affiliate with other industry leaders, including the Reflective Insulation Manufacturers Association International (RIMA-I), the American Society for Testing and Materials (ASTM) International, the Residential Energy Services Network (RESNET), the Insulation Contractors Association of America (ICAA), the National Insulation Contractors' Exchange (NICE), the International Association of Plumbing and Mechanical Officials (IAPMO), The National Association of Home Builders (NAHB) and Leading Suppliers Council (LSC), the Building Officials Association of Florida (BOAF), Florida Masonry, Inc. (MF), Metal Building Contractors & Erectors Association (MBCEA), and National Frame Builders Association (NFBA).

Our Products

- **Insulations**

- Walls
- HVAC Ducts
- Post Frame Building Walls & Roof
- Metal Building Walls & Roof
- Ceilings & Crawl Spaces
- Garage Door

- **Radiant Barriers**

- Attic Radiant Barriers

- **Specialty Barriers**

- Air Barriers
- SCIF Barriers
- Class A Facing

- **Accessories**

- Tapes
- Fasteners





VR Plus Shield™ Multi-Layer Reflective Wall Insulation



A multi-layer reflective insulation for walls that are specified with wood or metal framing. VR Plus can be used alone or in combination with other mass insulation. Gain cost-effective thermal performance with multiple Low-e layers by enhancing a minimum 1-1/2" enclosed cavity air space. Provides significant R-value with a slimmer wall system and potential to add sellable square footage. 10-year transferable warranty. Perforated version recommended in hot-humid climates.

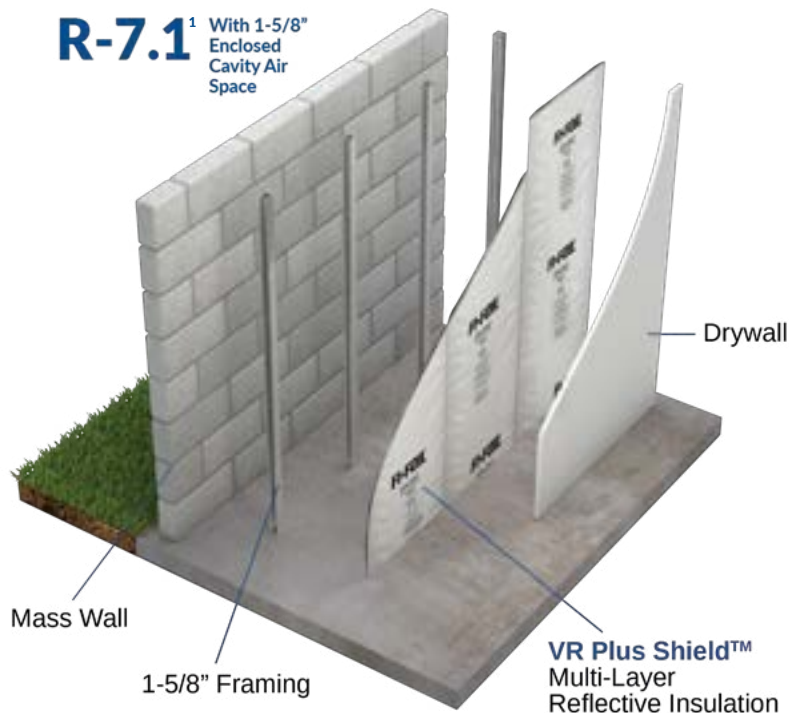
FEATURES:

- Outer Layer of Natural Kraft Paper
- Inner Layers of Premium Grade Aluminum Foil
- FI-FOIL® Expander Technology Separates Layers to Create the Three (3) Reflective Air Spaces

BENEFITS:

- Adds R-6.5 - R-7.1¹
- Blocks 97% Radiant Heat Transfer
- Lightweight 500 SF Rolls Install Faster
- 1 Roll = 16 Sheets of Foam Board²

R-7.1¹ With 1-5/8" Enclosed Cavity Air Space



AA2 Shield™ Reflective Wall Insulation



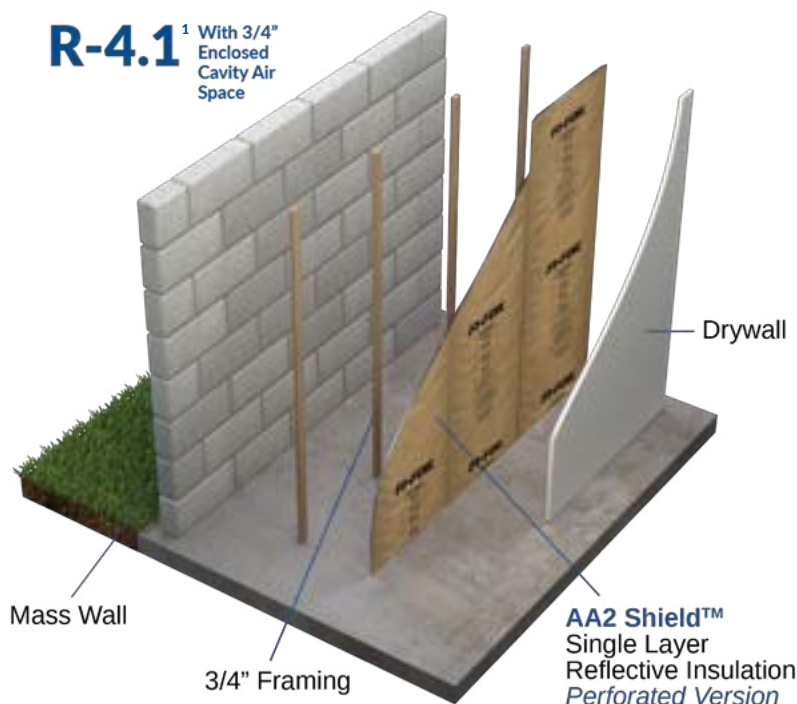
A single-layer reflective insulation for walls that are specified with wood or metal framing. AA2 can be used alone or in combination with other mass insulation. Gain cost-effective thermal performance by enhancing a minimum 3/4" enclosed cavity air space. Provides R-value with a slimmer wall system and potential to add sellable square footage. 10-year transferable warranty. Perforated version recommended in hot-humid climates.

FEATURES:

- Outer Layer of Natural Kraft Paper
- Inner Layer of Premium Grade Aluminum Foil
- FI-FOIL® Expander Technology Separates Facing from Foil Layer to Create the Two (2) Reflective Air Spaces

BENEFITS:

- Adds R-4.1 - R-5.2¹
- Blocks 97% Radiant Heat Transfer
- Lightweight 500 SF Rolls Install Faster
- 1 Roll = 16 Sheets of Foam Board²



M-Shield® Reflective Wall Insulation



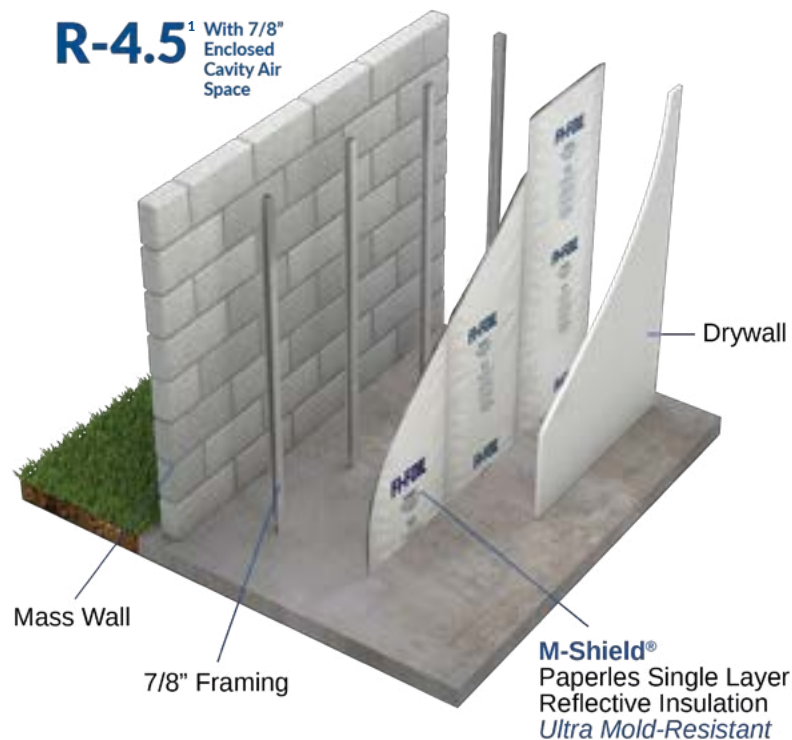
A single-layer ultra mold-resistant reflective insulation designed for walls that are specified with wood or metal framing. Can be used alone or in combination with other mass insulation. Ideal for mold-sensitive projects to reduce the risk of moisture accumulation and improve indoor air quality. Gain cost-effective thermal performance by enhancing a minimum 3/4" enclosed cavity air space. Provides R-value with a slimmer wall system and potential to add sellable square footage. 10-year transferable warranty. Ideal for use in hot-humid climates.

FEATURES:

- Paperless Synthetic Polymer Facing
- Allows Vapor Transmission for Superior Mold Resistance
- FI-FOIL® Expander Technology Separates Facing from Foil Layer to Create the Two (2) Reflective Air Spaces

BENEFITS:

- Adds R-4.1 - R-4.5¹
- Improves Indoor Air Quality
- Blocks 97% Radiant Heat Transfer
- 1 Roll = 16 Sheets of Foam Board²



VR Plus Shield™ Multi-Layer Hybrid Reflective Wall & Ceiling Insulation



R-6.5¹ With Minimum 1-1/2" Enclosed Cavity Air Space in Front of SPF
 PLUS R-value of the SPF

R-20²
 Hybrid Wall Cavity Assembly As Shown

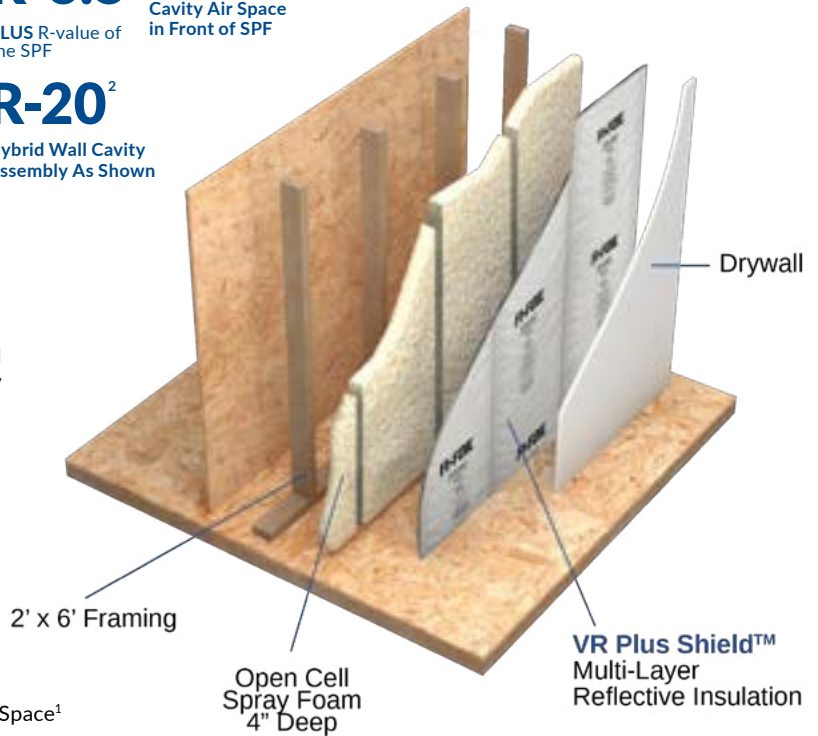
A multi-layer reflective insulation that can be used together with other mass insulation for improved thermal performance. Requires a minimum 1-1/2" enclosed cavity air space to provide a minimum R-6.5; commonly used as part of a hybrid wall or ceiling cavity assembly with spray foam. 10-year transferable warranty. Perforated version recommended in hot-humid climates.

FEATURES:

- Outer Layer of Natural Kraft Paper
- Inner Layers of Premium Grade Aluminum Foil
- FI-FOIL® Expander Technology Separates Layers to Create the Three (3) Reflective Air Spaces

BENEFITS:

- Adds R-6.5+ with Minimum 1-1/2" Enclosed Cavity Air Space¹
- Turbocharges ocSPF Performance by 10%²
- Minimizes excess SPF waste and associated costs
- Allows for Last Minute Changes to Wiring/Plumbing



RBI Shield™ HVAC Reflective Duct Insulation



R-4.2¹
 with 3/4" air space

R-8.0¹
 with 1-3/4" air space

R-6.0¹
 with 7/8" air space SHOWN

RBI Shield™
 Reflective Bubble Insulation wrapped over duct with spacers

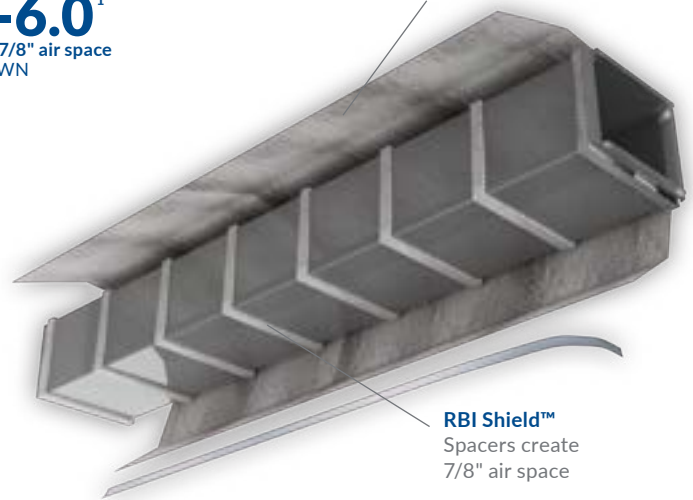
A premium formula duct insulation wrap designed with Low-e surfaces that reflect heat rather than absorb it. Save labor and material costs and install it faster with an itch-free solution. Keeps buildings cooler in the summer, warmer in the winter. Lifetime Limited Warranty.

FEATURES:

- Two (2) Outer Layers of Low-e Reflective Film
- Two (2) Inner Layers of Premium Polyethylene Bubble
- Class A / Class 1 Flammability Ratings
- Class 1 Vapor Retarder

BENEFITS:

- Blocks 94% of Radiant Heat Transfer
- An Itch-Free Alternative to Fiberglass
- Improves Duct Performance and Reduces Load on HVAC Systems
- Increases Energy Efficiency & Lowers Utility Bills



¹R-values vary based on direction of heat flow, amount of enclosed air space and R-value of other insulation used in combination, see our specification sheets at Fifiol.com for more specific information.
²Based on 2x6 cavity using 4.0" SPF with VR Plus Shield™ vs - 5.5" of ocSPF @3.8/in.

RBI Shield™ Reflective Bubble Insulation Post-Frame Buildings



R-5.3¹ With 1" Drape
REFLECTIVE/WHITE
DOUBLE BUBBLE
SHOWN

A superior formula bubble insulation with UV inhibitors, antioxidants and strengthening agents that prevent delamination. May significantly improve energy efficiency to lower operating costs. Easy to install. Lifetime Limited Warranty.

FEATURES:

- 48" and 72" Widths Available
- Single or Double Bubble Versions
- Reflective, White, or White Woven Facing Options
- Class A Flammability Rating

BENEFITS:

- Reduces Condensation
- Stops 94% of Radiant Heat Transfer
- Adds Thermal Performance & Comfort, Year-Round
- Adds R-value with 1" Drape



RBI Shield™ Reflective Bubble Insulation Metal Buildings



R-9.1¹ With 1" Drape
REFLECTIVE/REFLECTIVE
DOUBLE BUBBLE
SHOWN

R-5.3¹ With 1" Drape
REFLECTIVE/WHITE
DOUBLE BUBBLE

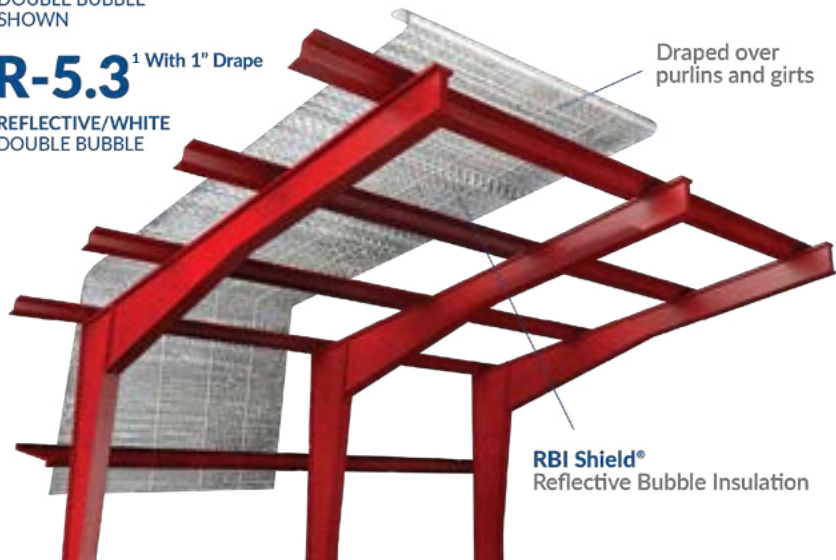
A superior reflective bubble insulation for metal building applications. Reduces condensation and controls pests. Blocks 94% of radiant heat transfer to improve thermal performance and reduce load on HVAC systems. Keeps buildings cooler in the summer and warmer in the winter. Lifetime Limited Warranty.

FEATURES:

- 48" and 72" Widths Available
- Single or Double Bubble Versions
- Reflective, White, or White Woven Facing Options
- Class A Flammability Rating

BENEFITS:

- Adds Up to R-9.1 With 1" Drape¹
- Stops 94% of Radiant Heat Transfer
- Adds Thermal Performance & Comfort, Year-Round



RetroShield® Reflective Bubble Insulation System Metal Building Retrofits



A complete premium bubble retrofit system with versatile mechanical fasteners. Can be used alone or in combination with other mass insulation. Quick and easy installation with a proven clip-pin technology. Adds up to R-13. Provides a clean beautiful ceiling. Lifetime Limited Warranty.

FEATURES:

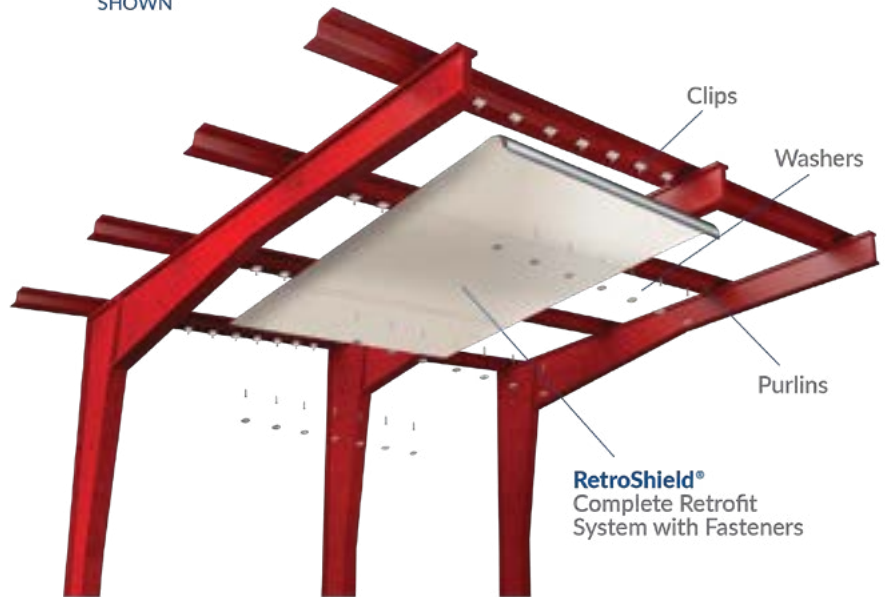
- Premium Formula Double Bubble Insulation
- Provides Continuous Insulation
- Mechanical Fasteners Provide a Strong, Secure Hold
- Variety of Clip-Pin & Facing Options
- System Designed to Fit Most Building Types

BENEFITS:

- Adds up to R-13 Without Additional Insulation¹
- Improves Building Efficiency to Save Energy and Reduce Operating Costs
- White/Reflective System Doubles as a Beautiful Ceiling and Creates a Brighter Workspace

R-10¹
REFLECTIVE/WHITE
DOUBLE BUBBLE
SHOWN

With 8"
Enclosed
Cavity Air
Space



Mechanical Fasteners Metal Building Retrofits



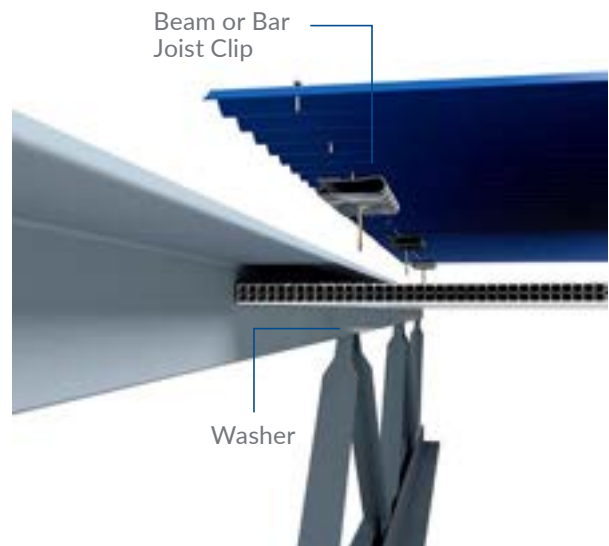
Versatile mechanical fasteners designed to fit most metal structures and common types of wood framing. Clip-Pin & Washers make installation quick and easy providing strong support to hold up to 60 lbs of backloaded insulation.

FEATURES:

- Electro Galvanized Steel Fasteners
- Works Well With MBI, Bubble Insulation, or Facings
- Reduces Thermal Bridging

BENEFITS:

- Provides a Strong, Secure Mechanical Connection
- No Glue or Banding Needed
- Easy One Pass Installation Reduces Operational Downtime with Retrofits

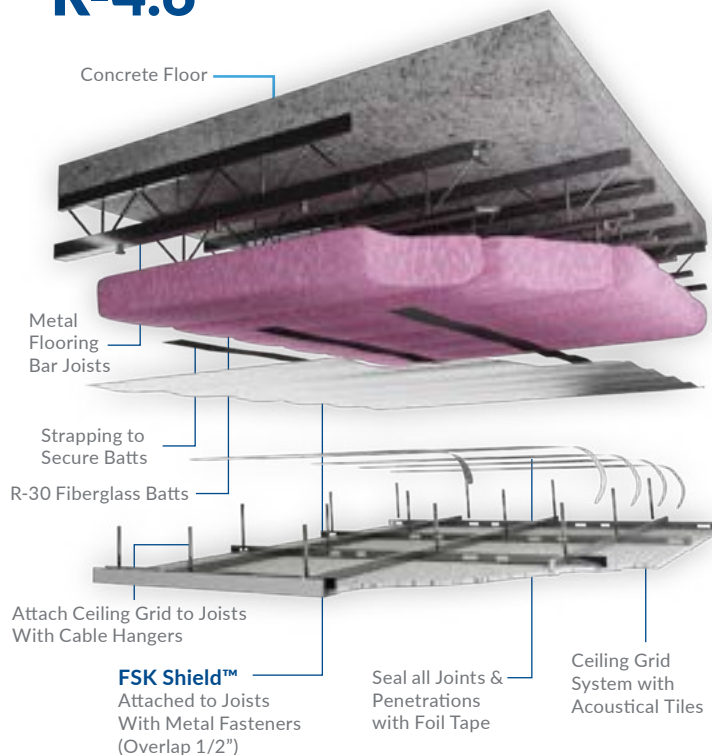


FSK Shield™ Class A Insulation Facing & Vapor Retarder



A cost-effective Class A facing and vapor retarder. Single-sided Low-e foil facing reinforced with fiberglass scrim and bonded to natural Kraft Paper. Can be used alone or in combination with other mass insulation. Commonly used with unfaced batts or plenum ceiling applications.

R-4.6¹



FEATURES:

- Class A Flammability Rating
- Ideal for Unfaced Batts
- Can Be Used as Radiant Barrier for Attics, Roofs and Walls
- Low-e Aluminum Foil Bonded to Natural Kraft Paper

BENEFITS:

- Adds R-4.6 to an Exposed Roof or Ceiling Applications¹
- Cost Effective Method to Meet Code Requirements for Class A Flammability
- Replaces Expensive Foil-Faced Batts
- Increases Thermal Resistance for Better Performance

RBI Shield™ Premium Reflective Bubble Insulation for Crawl Spaces



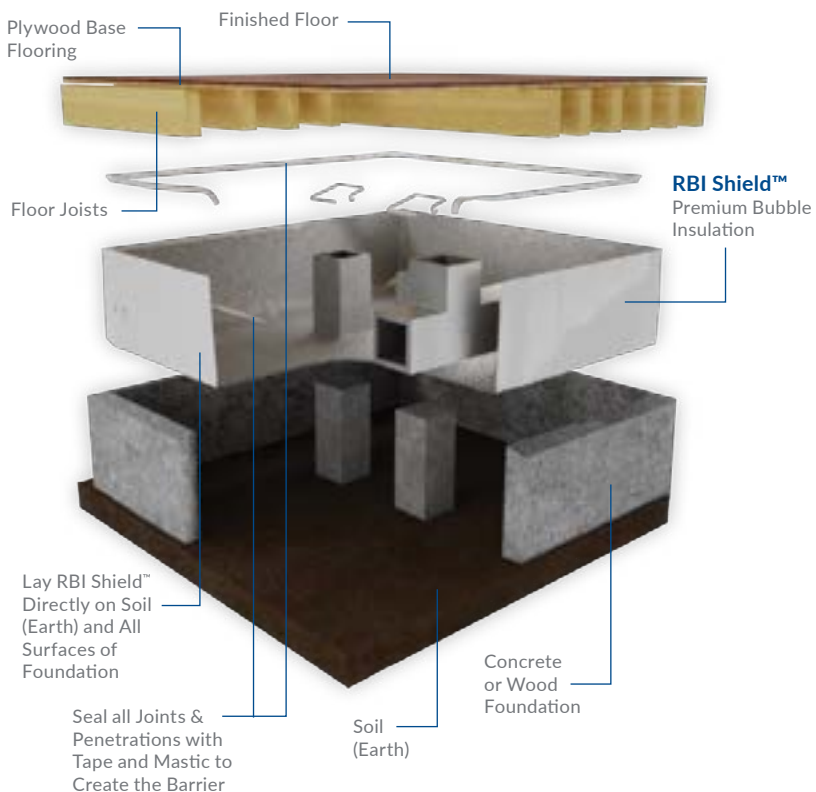
A premium reflective bubble insulation designed for crawl spaces in residential, commercial or institutional buildings. Available in single or double bubble. Low-e reflective surfaces keep floors warmer in the winter and cooler in the summer. Lifetime Limited Warranty.

FEATURES:

- Premium Reflective Bubble Insulation
- Moisture Resistant Material
- Class A Flammability Rating
- Multiple Sizes Available to Fit a Wide Range of Applications

BENEFITS:

- Adds Up to R-13¹
- Improves Efficiency & Comfort Year-Round
- Reduces Condensation



¹R-values vary based on direction of heat flow, amount of enclosed air space and R-value of other insulation used in combination, see our specification sheets at Fifioll.com for more specific information.

Radiant Shield™ Attic Radiant Barrier - Premium Single-layer



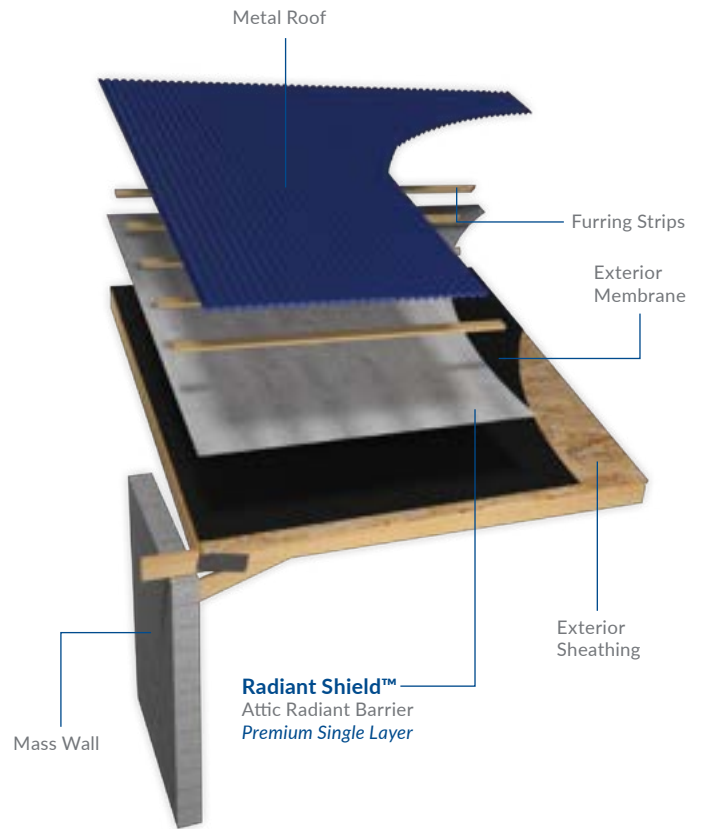
A double-sided, vapor-permeable aluminum foil radiant barrier. Can be used alone or in combination with other mass insulation. Blocks radiant heat transfer through the attic and ductwork for less load on HVAC systems. Improves energy efficiency and comfort.

FEATURES:

- Premium Grade Radiant Barrier
- Low-e Metalized Aluminum Surfaces with an Inner Layer of Woven Polyethylene
- Blocks 95% of Radiant Heat at the Roof
- Perforated to Allow Vapor Transmission

BENEFITS:

- Reduces Attic Temperatures in the Summer
- Improves Performance of HVAC Ducts and System Efficiency
- Effective Performance as a Vented System Under Metal Roofing



Silver Shield™ Attic Radiant Barrier - Premium Multi-layer



A multi-layer, Low-e radiant barrier solution can be used alone or in combination with other mass insulation. Highest performing radiant barrier on the market. Significantly blocks radiant heat transfer at the roof to reduce attic temperatures by up to 30°F in the summer. Improves HVAC Duct and system performance by up to 50%. Perforated to allow vapor transmission. 20-year transferable warranty.

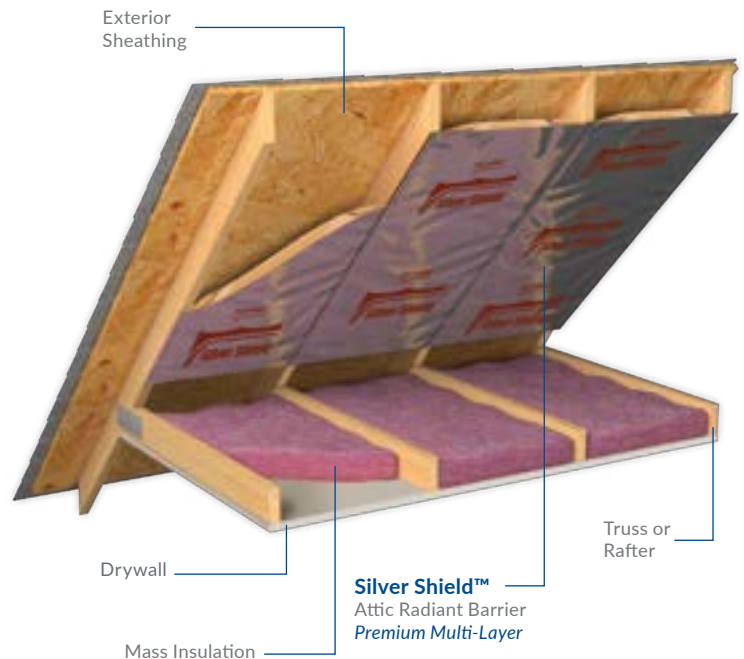
FEATURES:

- Premium Grade Multi-Layer Radiant Barrier
- Outer Layer of Kraft Paper Reinforced with Aluminum
- Reflects 97% of Radiant Heat at the Roof

BENEFITS:

- Reduces Attic Temperatures by 30°F during summer months
- Improves HVAC System Performance by Up to 50%
- Keeps Homes Cooler in the Summer and Warmer in the Winter for Greater Comfort

Reduces Attic Temperatures by as much as 30°F



SkyFlex™ Flexible Sheet Air Barrier – Class I Vapor Retarder



A premium, flexible air barrier for residential and commercial applications. Can be used alone or in combination with other mass insulation. Improve thermal performance year-round. Low-e reflective surfaces reduce radiant heat transfer and increase R-value by enhancing the air of adjacent films or enclosed cavities.

FEATURES:

- Premium Flexible Sheet Air Barrier
- Tough, Puncture-Resistant Material Won't Tear
- Class 1 Vapor Retarder

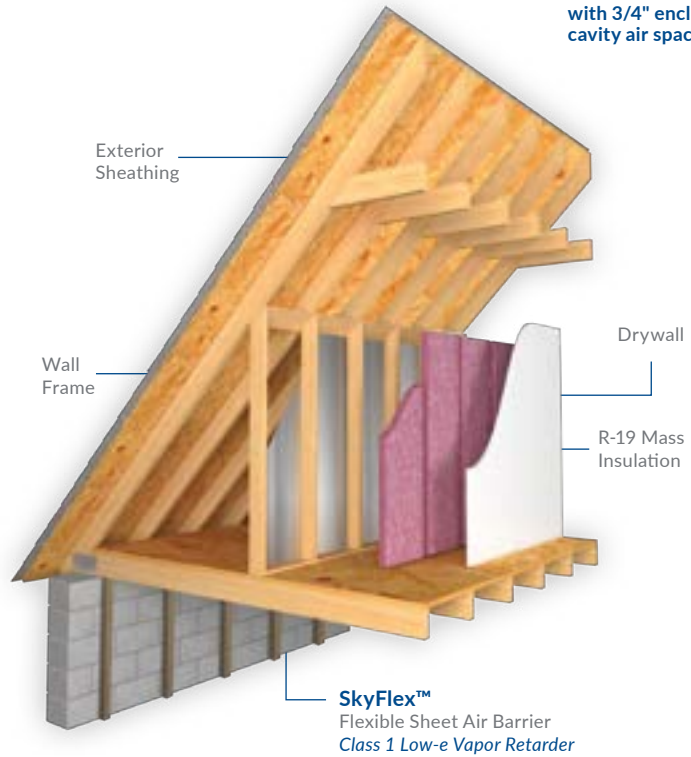
BENEFITS:

- Improves Thermal Performance of the Building Envelope
- Significantly Improves Comfort in Living Areas with Exposed Walls
- Easy to Handle and Install
- 1 Roll = 16 Sheets of Rigid Board²
- 1 Pallet Covers as Much as 2 Pallets of Rigid Board

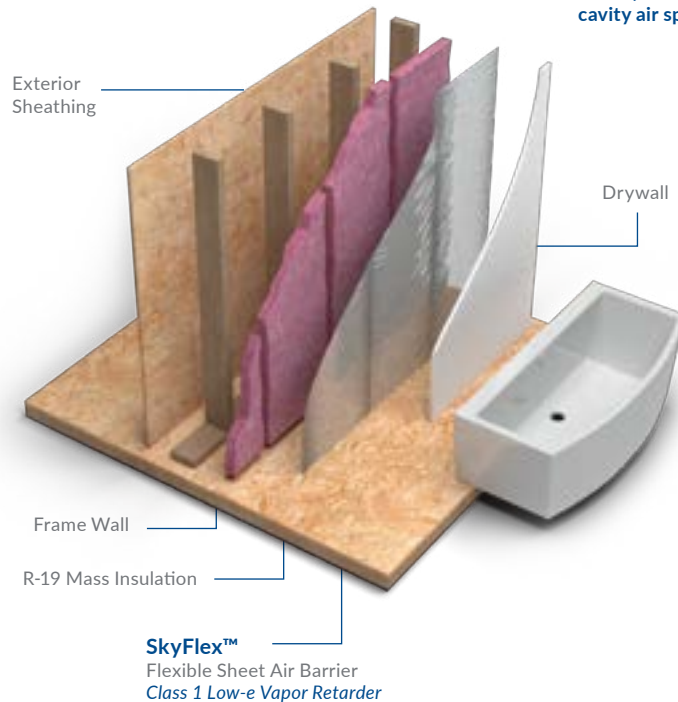


R-1.7¹
Attic Side

R-2.9¹
with 3/4" enclosed cavity air space



R-2.9¹
with 3/4" enclosed cavity air space



¹R-values vary based on direction of heat flow, amount of enclosed air space and R-value of other insulation used in combination, see our specification sheets at Fifiol.com for more specific information.
²Based on standard 4x8' foam board product.

RF Shield™ SCIF Barrier for Sensitive Compartmented Information Facilities



A premium SCIF Barrier solution to block electromagnetic (EM) and radio frequency (RF) interference to protect highly sensitive information. Reduces sound attenuation and meets or exceeds shielding effectiveness requirements of NSA.



FEATURES:

- Superior Security Shielding
- Solid or Perforated Versions
- Two (2) Outer Layers of 99% Pure Aluminum Foil
- Inner Layer of Fiberglass Reinforcing & Kraft Paper

BENEFITS:

- Protects Highly Sensitive Information
- Blocks Electromagnetic (EM) Interference
- Blocks Radio Frequency (RF) Interference
- Third-Party Verified for Shielding Effectiveness by NSA Approved TEMPST Facility, IEEE 299



Residential



Commercial



Institutional



Agricultural

Learn More About How to Improve Building Envelope Performance Across Markets & Building Types.

FIFOIL.COM/APPLICATIONS



Garage Door Insulation Kit



A premium quality garage door insulation system. Works well with single or double doors. Easy to cut and install, complete with double-sided tape. Beautiful, finished look with white facing brightens the garage.

Low-e surfaces reflect 94% of radiant heat for superior thermal performance to keep the garage cooler in the summer and warmer in the winter. Kit can be installed over garage door hardware for a continuous insulation solution.



FEATURES:

- Versatile, High Performance Reflective Double Bubble Insulation
- Fits All Types of Single & Double Garage Doors
- Low-e Surface(s) Reflect 94% of Radiant Heat
- Available in White/Reflective

BENEFITS:

- Insulate New & Existing Doors
- No Itchy Fibers, Easy to Install
- Beautiful Appearance
- Class A Fire Rating
- Increases Comfort and Efficiency by Keeping Garages Cooler in the Summer and Warmer in the Winter



Tapes



FI-FOIL® tapes to seal all joints and penetrations for maximum performance of insulation systems.

FI-FOIL® offers the following tapes:

- Aluminum Foil Tape
- FSK Tape
- Polyester White and Silver Tape
- SCIF Conductive Tape
- SCIF EMI Shielding Tape
- Double-Sided Tape



FEATURES:

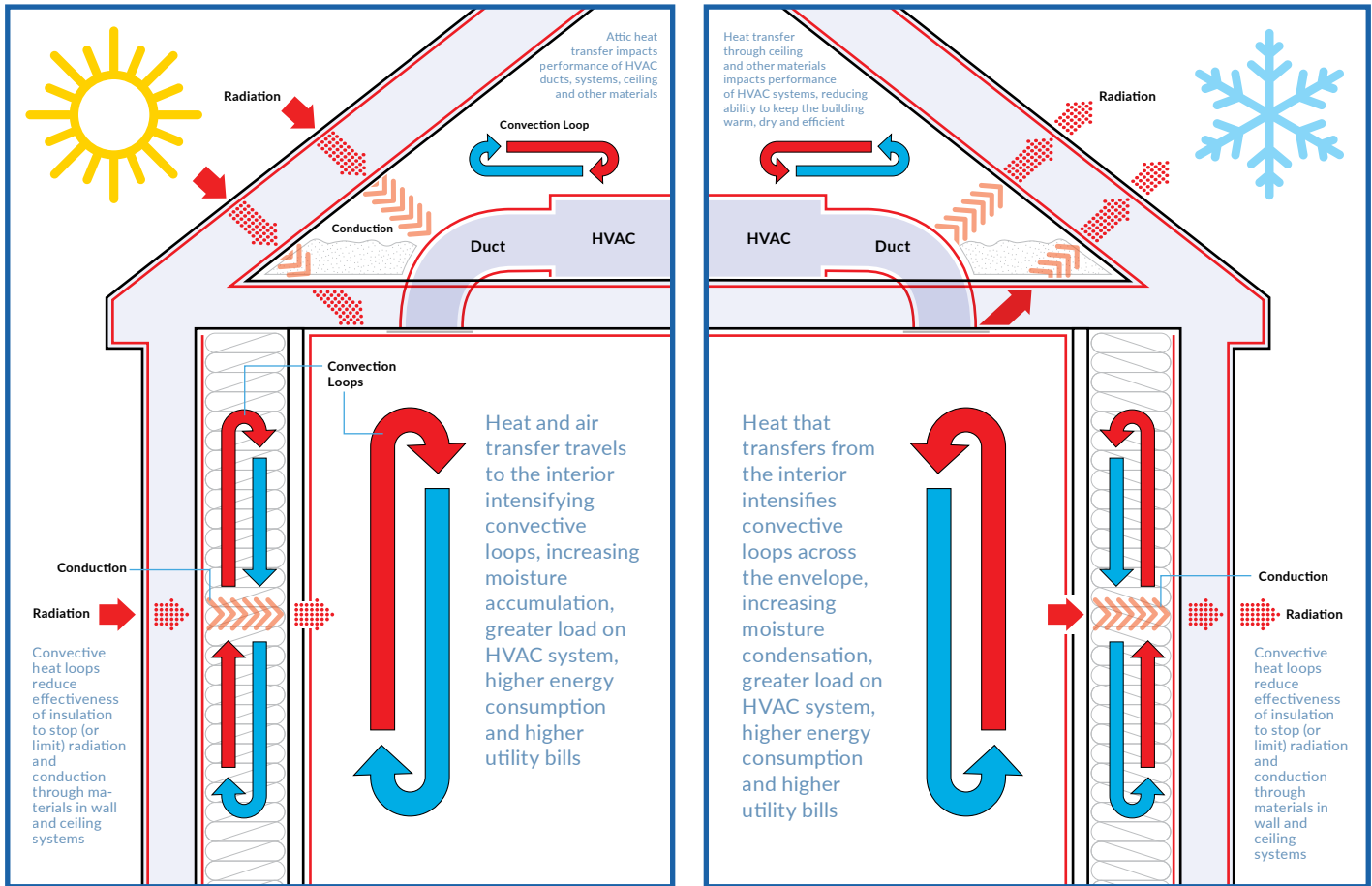
- Aluminum, Polyester, Polypropylene, and Metal Backings
- Strong Acrylic Adhesives and Polymers
- Conductive or EMI Shield Backing for Sensitive Compartmented Information Facilities (SCIF)

BENEFITS:

- Tape Solutions to Fit a Variety of Needs When Sealing Joints and Penetrations
- High Quality Materials and Adhesives Ensure Lasting Performance of Systems
- Aluminum and SCIF Tapes Ensure R-value and EMI Shielding Code Compliance

FI-FOIL® Technology & The Science of Heat Flow

Unlike traditional thermal insulation, FI-FOIL® uses Low-e surfaces to reflect heat rather than absorb it. Low-e surfaces are designed to face enclosed air cavities or air films across the building envelope, resulting in greater performance of the wall, ceiling and floor systems. According to the ASHRAE Handbook 26.14-15, reflective insulation can provide 2X the thermal performance of other mass insulation and materials. The reason is that reflective insulation technologies can effectively **reduce all three modes of heat transfer: conduction** (heat transfer between object in direct contact), **convection** (the circular flow of heat through air and moisture) and **radiation** (the movement of heat in electromagnetic waves).

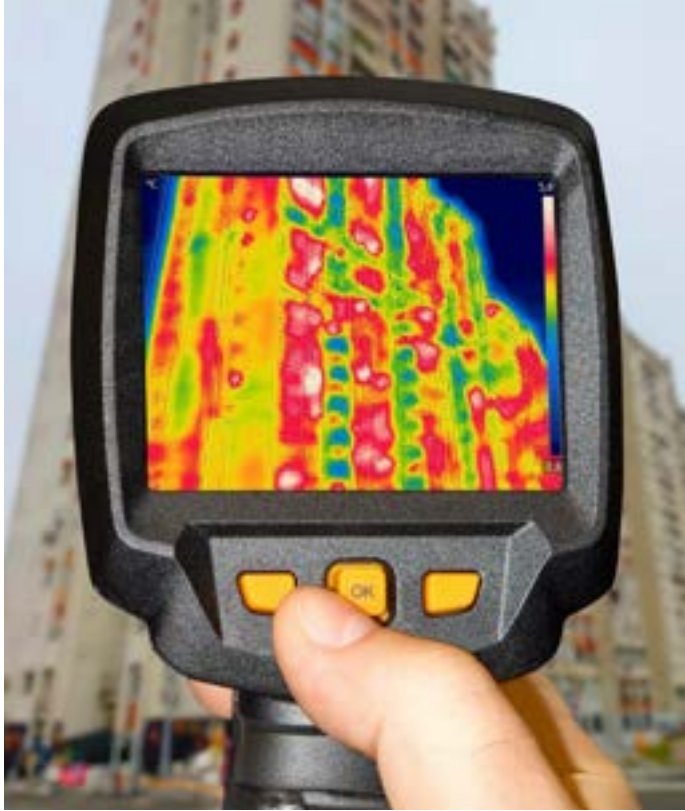


Studies have shown that when a radiant surface is installed facing a small air space in a hybrid system, the result is a reduction in convection in that cavity, which in turn reduces conductivity of the other mass insulating material(s). Using a reflective component in the assembly not only improves performance of air spaces across the envelope—but it also notably improves the thermal performance of other mass insulation in these assemblies. This provides superior performance and energy efficiency for a more sustainable, resilient building.

FI-FOIL® insulation can be used alone in hot-humid climates or part of a hybrid system in any climate.

Block Heat Gain and Reduce Heat Loss for Efficient, Resilient Buildings

Thermal imaging can illustrate the benefit of reflective insulation in your building. More blue areas mean improved efficiency over time, reduced HVAC load, and lower emissions. The result is greater sustainability—for the building and the environment—and lower monthly utility bills for those living or working in the building.



Insulation Type & Heat Flow Comparisons

Description	Conduction	Convection	Radiation
Cavity, Air Only – No Insulation	BASELINE	BASELINE	BASELINE
Fiberglass Batts	Minor Increase	Major Decrease	Minor Decrease
High Density FG Batts	Minor Increase	Major Decrease	Decrease
Spray Foam, OC	Increase	Major Decrease	Decrease
Spray Foam, CC	Decrease	Major Decrease	Decrease
Foam Board, Expanded Polystyrene	Increase	Major Decrease (If Space is Filled)	Decrease
Foam Board, Extruded Polystyrene	Decrease	Major Decrease (If Space is Filled)	Decrease
Multi-layer Reflective Insulation (Wall Cavity - Heat Flow Horizontal)	Minor Increase	Minor Decrease	Major Decrease
Gas Filled Reflective Insulation Panels (With Argon Gas)	Major Decrease	Decrease	Major Decrease
Hybrid Reflective Insulation and OC Spray Foam	Increase	Major Decrease	Major Decrease
Hybrid Reflective Insulation and CC Spray Foam	Decrease	Major Decrease	Major Decrease

COMMERCIAL BUILDING APPLICATIONS

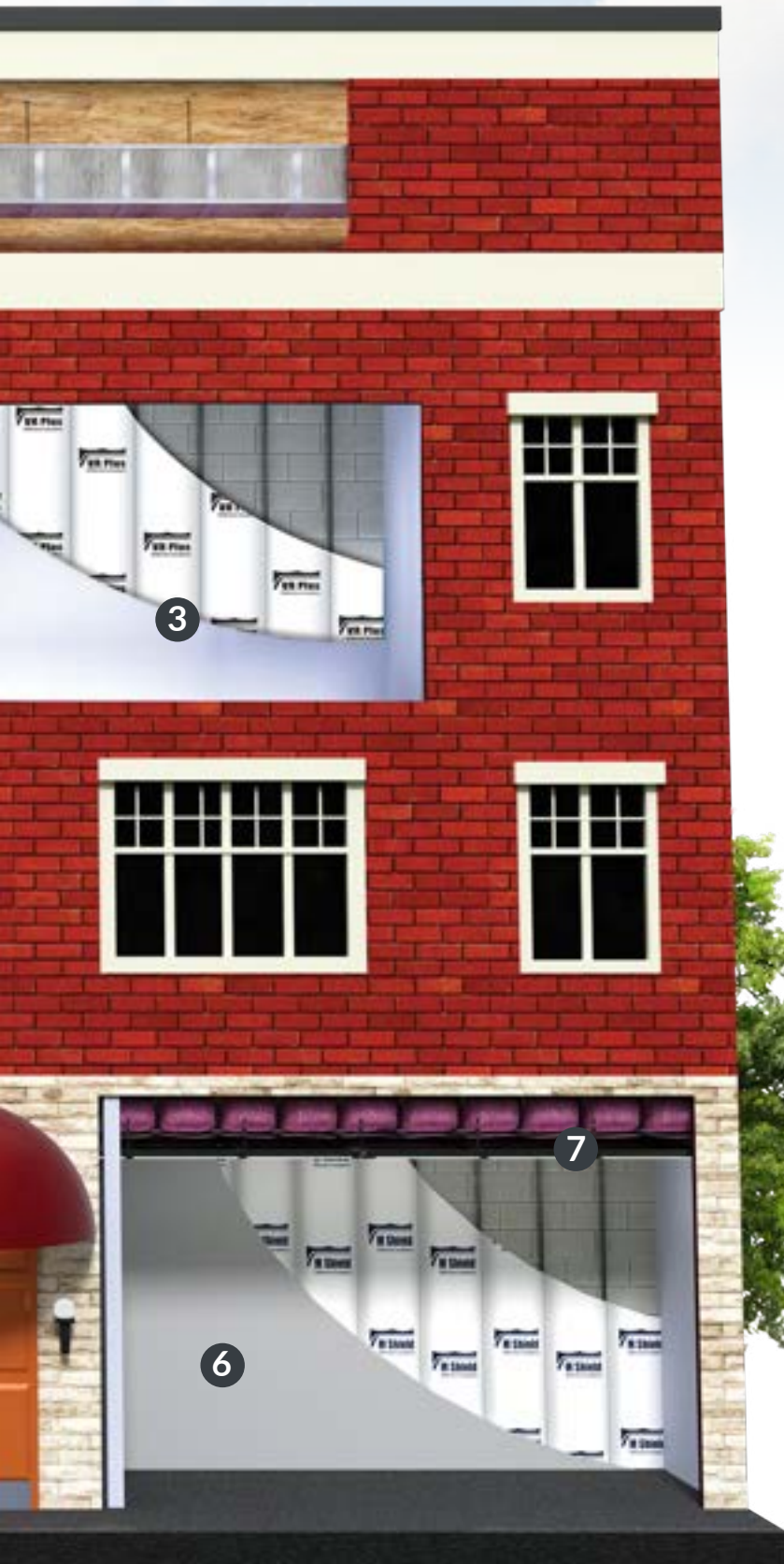
REFLECTIVE INSULATION, RADIANT BARRIERS & SPECIALTY BARRIERS



FI-FOIL®

Mixed Use Residential/Commercial Building

- 1 **SkyFlex™ Flexible Sheet Air Barrier – Class I Vapor Retarder** shown installed in bathroom behind shower over fiberglass insulation in 2x4 framing.
- 2 **RBI Shield™ Reflective HVAC Duct Insulation ducts** shown with a double bubble insulation wrap; provides R-value based on depth of enclosed air space between duct and wrap: R-4.2 with 3/4" enclosed air space, R-6.0 with spacers to create 7/8" of enclosed air space, and R-8.0 with spacers to create 1-3/4" of enclosed air space.
- 3 **VR Plus Shield™ Multi-layer Reflective Wall Insulation** shown with VR Plus installed on mass wall with 1-1/2" framing; adds R-6.5.
- 4 **RF Shield™ SCIF Barrier for Sensitive Compartmented Information Facilities** shown with RF Shield installed between two layers of drywall on walls, ceiling, and floor.
- 5 **VR Plus Shield™ Multi-layer Reflective Wall Insulation** shown with VR Plus installed on mass wall with 1-5/8" framing; adds R-7.1
- 6 **M-Shield® Ultra Mold-Resistant Reflective Wall Insulation** shown with paperless M-Shield installed on mass wall with 7/8" framing; adds R-4.5.
- 7 **FSK Shield™ Class A Facing - Vapor Retarder** shown with FSK attached to floor joists under secured fiberglass batt as part of a plenum ceiling system.



METAL BUILDING APPLICATIONS

REFLECTIVE INSULATION



FI-FOIL®



Metal Building

- 1 RetroShield® Metal Building Retrofit System with Mechanical Fasteners** shown with Reflective/White Double Bubble Insulation (RWDB) installed with 8" of enclosed cavity air space; adds R-10 for the roof assembly and R-4.4 for the wall assembly.
- 2 RBI Shield™ Reflective HVAC Duct Insulation ducts** shown with a double bubble insulation wrap; provides R-value based on depth of enclosed air space between duct and wrap: R-4.2 with 3/4" enclosed air space, R-6.0 with spacers to create 7/8" of enclosed air space, and R-8.0 with spacers to create 1-3/4" of enclosed air space.
- 3 VR Plus Shield™ Multi-layer Reflective Wall Insulation** hybrid shown in metal building office with VR Plus installed facing 2" of fiberglass in 2x4 framing; alternative is VR Plus installed facing 2" of closed cell spray foam with a minimum 1-1/2" enclosed cavity air space in front of SPF; adds R-6.5.

RESIDENTIAL APPLICATIONS

REFLECTIVE INSULATION, RADIANT BARRIERS & SPECIALTY BARRIERS



FI-FOIL®



Attic

- 1 **SkyFlex™ Flexible Sheet Air Barrier – Class I Vapor Retarder** shown installed on attic knee wall creating a 6-sided cavity for improved performance of R-19 fiberglass for a bonus room above the garage.
- 2 **Silver Shield™ Multi-Layer Attic Radiant Barrier** shown installed directly on bottom of top cord roof trusses; reduces attic temperatures by as much as 30°F.
- 3 **RBI Shield™ HVAC Reflective Insulation for Ducts** shown with a double bubble insulation wrap; provides R-value based on depth of enclosed air space between duct and wrap: R-4.2 with 3/4" enclosed air space, R-6.0 with spacers to create 7/8" of enclosed air space, and R-8.0 with spacers to create 1-3/4" of enclosed air space.

2nd Floor

- 4 **VR Plus Shield™ Multi-Layer Reflective Wall Insulation** hybrid shown with VR Plus installed facing spray foam in 2x4 framing; works with a minimum 1-1/2" enclosed cavity air space in front of SPF; adds R-6.5 plus value of SPF.
- 5 **SkyFlex™ Flexible Sheet Air Barrier - Class I Vapor Retarder** shown installed behind shower tile; may add R-2.9 when facing 3/4" enclosed cavity air space.

1st Floor

- 6 **M-Shield® Ultra Mold-Resistant Reflective Wall Insulation** hybrid shown facing reflective foam board installed on mass wall with 7/8" enclosed cavity air space; adds R-4.5 plus value of foam board.
- 7 **VR Plus Shield™ Multi-layer Reflective Wall & Ceiling Insulation** hybrid ceiling shown with VR Plus facing fiberglass batt (R-10) installed on face of ceiling beam cavities with minimum 1-1/2" enclosed cavity air space; adds R-6.5

Basement Floor

- 8 **VR Plus Shield™ Multi-layer Reflective Wall Insulation** hybrid shown with VR Plus facing foam board installed with 1-5/8" enclosed cavity air space; adds R-7.1 plus value of foam board.
- 9 **RBI Shield™ Premium Reflective Bubble Insulation - Sealed Crawl Space** shown with RBI Shield™ installed on walls, reflective side up, joints and penetrations sealed with tape and mastic.

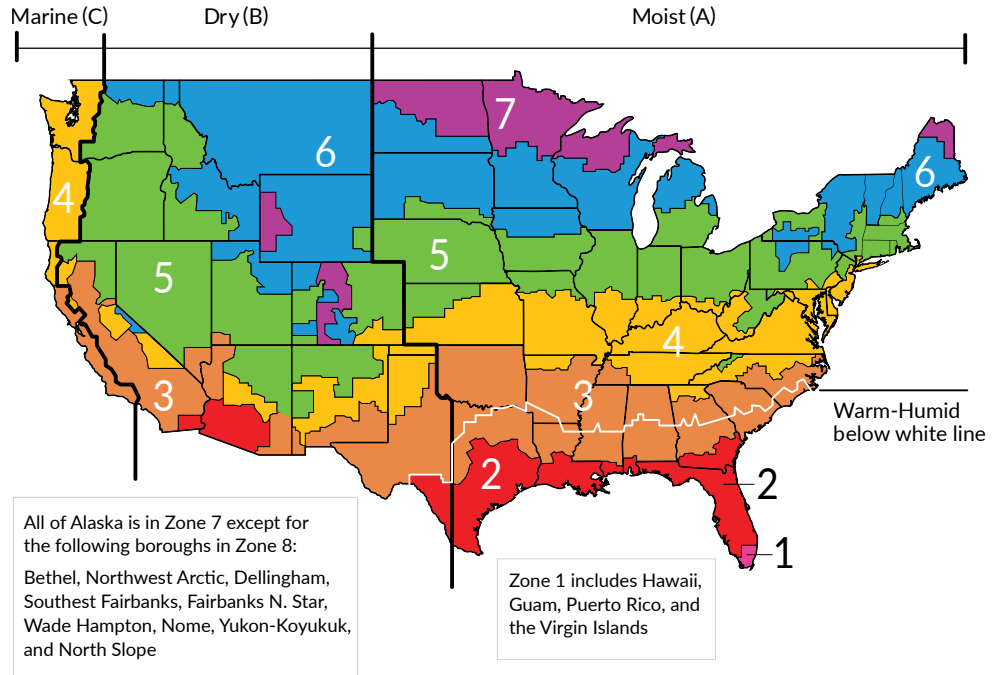
FI-FOIL® Products & Applications

SPECIFICATIONS ⁴										
FOR THE LATEST TECHNICAL DATA, VISIT THE DOWNLOADS SECTION ON EACH PRODUCT PAGE AT FIFOL.COM.										
Products ¹	Widths	Roll Size	Versions Available in All Widths	R-Value Based on Depth of Enclosed Cavity Air Space ³						
				3/4" Heat Flow Horizontal & Sur-to-Sur	7/8" Heat Flow Horizontal & Sur-to-Sur	1" Heat Flow Down	1-1/2" Heat Flow Horizontal	1-3/4" Heat Flow Horizontal & Sur-to-Sur	1-5/8" Heat Flow Horizontal	8" or More Heat Flow Down
REFLECTIVE INSULATIONS										
VR Plus Shield™ Multi-Layer	16" o.c.	500 SF	Perforated Semi-Permeable ²				R-6.5		R-7.1	
	24" o.c.	500 SF	Solid Vapor Retarder				R-6.5		R-7.1	
AA2 Vapor Shield™ Single-Layer	16" o.c.	500 SF	Perforated Semi-Permeable ²	R-4.1	R-4.6		R-5.1		R-5.1	
	24" o.c.	500 SF	Solid Vapor Retarder	R-4.2	R-4.7		R-5.2		R-5.2	
M-Shield® Single-Layer Mold-Resistant	16" o.c.	500 SF	Perforated Semi-Permeable ²	R-4.2	R-4.5					
	24" o.c.	500 SF		R-4.1	R-4.5					
RBI Shield™ Premium Formula Bubble	16"	166 SF	RWDB Reflective White, Double Bubble			R-5.3				R-10.0
	24"	250 SF	RWSB Reflective White, Single Bubble			R-5.0				R-9.6
	48"	500 SF	RRDB Reflective Reflective, Double Bubble			R-9.1				R-13.7
	66"	688 SF	RRSB Reflective Reflective, Single Bubble			R-8.6				R-13.2
	72"	750 SF								
HVAC DUCT INSULATION										
RBI Shield™ HVAC Premium Formula Bubble	24"	200 SF	Reflective Double Bubble Class A Flammability Class 1 Vapor Barrier	R-4.2	R-6.0			R-8.0		
	24"	250 SF		R-4.2	R-6.0			R-8.0		
	48"	400 SF		R-4.2	R-6.0			R-8.0		
	48"	500 SF		R-4.2	R-6.0			R-8.0		
	2"	24 Rolls								
METAL BUILDING & POST FRAME BUILDING INSULATION										
RBI Shield™ Premium Formula Bubble	16"	166 SF	RWDB Reflective White, Double Bubble			R-5.3				R-10.0
	24"	250 SF	RWSB Reflective White, Single Bubble			R-5.0				R-9.6
	48"	500 SF	RRDB Reflective Reflective, Double Bubble			R-9.1				R-13.7
	66"	688 SF	RRSB Reflective Reflective, Single Bubble			R-8.6				R-13.2
	72"	750 SF								
RetroShield® Premium Formula Bubble Retrofit System with Mechanical Fasteners	48"	500 SF	RWDB Reflective White, Double Bubble							R-10
	66"	688 SF	RWSB Reflective White, Single Bubble							R-9.6
	72"	750 SF	RRDB Reflective Reflective, Double Bubble							R-13.7
			RRSB Reflective Reflective, Single Bubble							R-13.2
Mechanical Fasteners	4" x 1"	N/A	Beam or Bar Joist Clip Metal Framing							
	2" x 1"	N/A	Purlin Clip (C or Z Type Purlin) Metal Framing							
	2" x 1"	N/A	Angle Clip (Walls, Floors, Misc) Metal & Wood Framing							
	2" x 1"	N/A	Tube Clip (Rectangular or Square Framing)							
	4" x 1"	N/A	Metal & Wood Framing							
	1"	N/A	Washers White, Silver or Black							
RADIANT BARRIERS										
Silver Shield™ Premium Multi-Layer	16"	500 SF	Perforated Semi-Permeable ²							
	24"	500 SF								
	30"	250 SF								
Radiant Shield™ Premium Single Sheet	25.5"	500 SF	Perforated Semi-Permeable ²							
	48"	500 SF								
	51"	500 SF								
SPECIALTY BARRIERS										
SkyFlex™ Flexible Sheet Air Barrier	48"	500 SF	Vapor Retarder	R-2.9			R-2.6			
	51"	500 SF								
RF Shield™ Premium SCIF Barrier	51"	500 SF	Electromagnetic/Frequency Blocking Perforated Semi-Permeable ² Solid Vapor Retarder							
FSK Shield™ Vapor & Radiant Retarder	54"	1000 SF	Flexible Sheet Class A Facing							

APPLICATIONS

Walls	HVAC Ducts	Attics, Ceilings, Plenums	Floors, Crawl Spaces, Basements	Garages, Workshops, Barns	Metal or Tile Roofs	OEM
X				X		
X				X		
X		X	X			
X		X	X	X	X	X
X		X	X	X	X	X
X		X	X	X	X	X
X		X	X	X	X	X
X		X	X	X	X	X
	X					
	X					
	X					
	X					
X		X		X		
X		X		X		
X		X		X		
X		X		X		
X		X		X		
X		X		X		
X		X		X		
				X		
X		X		X		
X		X		X		
X		X		X		
X		X		X		
		X		X		
		X		X	X	X
X		X		X		
X		X	X	X		X
X		X	X	X	X	X

Climate Zone Map



Many FI-FOIL® products can be used alone to meet code in zones 1-2 and as a hybrid solution to improve overall performance as part of an assembly in zones 1-8; contact us for engineered solutions.

FI-FOIL®

- ¹ FI-FOIL® products are designed to be used alone or combined with other insulation as part of a system.
 - ² Semi-permeable versions of reflective insulation are highly recommended in hot-humid climates.
 - ³ R-values vary based on amount of enclosed air space, air films, and R-value of other insulation used in combination and the direction of heat flow; contact us for an engineered solution.
 - ⁴ For additional compliance information, see technical data sheets available on product pages at Fifoil.com
- HYBRID** means product must be used with another insulation (e.g. fiberglass, foam board or spray foam) in order to meet R-value requirements of Energy Codes in certain climate zones.
- ALONE** or **HYBRID** means product can either be used alone to meet Energy Codes or as part of a system with other insulation (e.g. fiberglass, foam board or spray foam) to meet higher R-value requirements for certain projects or in certain climate zones.



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