



FI-FOIL®

HIGH PERFORMANCE INSULATION

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 indoor 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 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, Convenience Products, 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:

- Receiving the Professional Remodeler Top 100 Products designation for the HY-Fi® hybrid frame wall system and M-Shield® paperless masonry wall insulation in 2017.
- Earning Product of the Year for our groundbreaking advancement in gas-filled panel technology called GFP Insulation in 2011 at the Global Insulation Conference in Toronto.
- Landing a 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), the Masonry Association of Florida (MAF), the Metal Building Contractors & Erectors Association (MBCEA), and National Frame Builders Association (NFBA).

Our Products

- **Insulations**

Masonry & Frame Wall

Post Frame Building Wall & Roof

Metal Building Wall & Roof

Ceiling & Crawl Spaces

Garage Door

- **Radiant Barriers**

Attic Radiant Barriers

- **Specialty Barriers**

Air Barriers

SCIF Barriers

Class A Facing

- **Accessories**

Tapes

Fasteners





VR Plus Shield™ Reflective Insulation Multi-layer for Masonry Walls



Multi-layer reflective insulation for masonry walls that are specified with wood furring or metal framing and 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 1-5/8" 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:

- Three (3) Layer Reflective Insulation
- Outer Layer of Natural Kraft Paper
- Inner Layers of Premium Grade Aluminum Foil
- FI-FOIL Expander Technology Separates layers to create three (3) reflective air spaces

BENEFITS:

- Adds R7.1¹
- Third-Party Verified Compliance
- Lightweight 500 SF Rolls Install Faster
- 1 Roll = 16 Sheets of Foam Board²



AA2 Vapor Shield™ Reflective Insulation for Masonry Walls



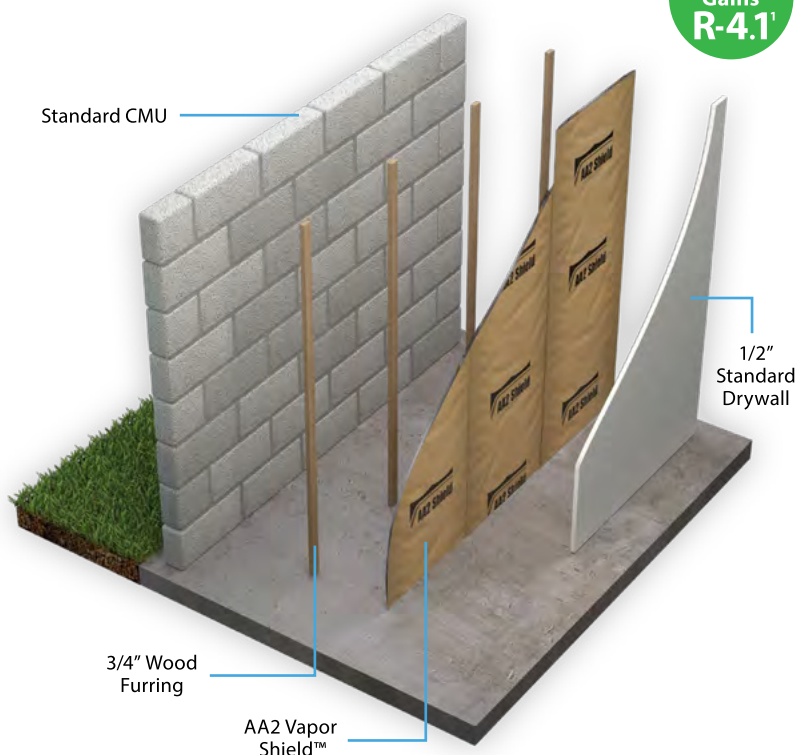
Single-layer reflective insulation for masonry walls that are specified with wood furring or metal framing and can be used alone or in combination with other mass insulation. Gain cost-effective thermal performance by enhancing a minimum ¾" enclosed cavity air space. Provides R-value with a slimmer wall system and potential to add sellable square footage. 10-year transferable warranty. Perforated version recommended in hot-humid climates.

FEATURES:

- Two (2) Layer Reflective Insulation
- Outer Layer of Natural Kraft Paper
- Inner Layer of Premium Grade Aluminum Foil
- FI-FOIL Expander Technology separates layers to create two (2) reflective air spaces

BENEFITS:

- Adds R-4.1 - R-5.1¹
- Third-Party Verified Compliance
- Lightweight 500 SF Rolls Install Faster
- 1 Roll = 16 Sheets of Foam Board²



This System Gains **R-4.1**¹

M-Shield® Reflective Insulation for Masonry Walls



Single-layer paperless mold-resistant reflective insulation designed for masonry walls that are specified with wood furring or metal framing and 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 1-5/8" enclosed cavity air space. Provides significant 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 Reflective Insulation for Mold Sensitive Projects
- Two (2) Layers of Reflective Insulation
- Outer Layer of Synthetic Polymer Facing
- Allows Vapor Transmission for Zero Mold growth

BENEFITS:

- Adds R-4.1 - R-5.1¹
- Improves Indoor Air Quality
- Third-Party Verified Code Compliance
- 1 Roll = 16 Sheets of Foam Board²



This System Gains **R-5.1**¹

¹Based on 2x6 cavity using 4.0" SPF with HY-FI vs - 5.5" of ocSPF @ 3.8/in.

RBI Shield™ Premium Reflective Bubble Insulation for Post Frame Buildings



RBI Shield™
Draped Over Post
Frame Purlins & Girts

Premium performance reflective bubble insulation designed for post-frame structures. Lifetime Limited Warranty. Provides exceptional thermal performance to improve living and working conditions.

FEATURES:

- 48" and 72" Widths Available
- Single or Double Bubble Versions
- Reflective / White or Reflective / Reflective Surface Options
- Moisture Resistant Material

BENEFITS:

- Reduces Condensation
- Adds up to R-10 with 1" Drape
- Adds Thermal Performance & Comfort, Year-Round
- Stops 95% of Radiant Heat Transfer



Adds R-Value
R-6.5
Reflective/White
With a 1" drape

Adds R-Value
R-10
Reflective/Reflective
With a 1" drape

RBI Shield™ High-Performance Reflective Bubble Insulation for Metal Buildings



RBI Shield™
Draped Over Steel
Purlins & Girts with
1" Airspace Toward
Roof & Siding

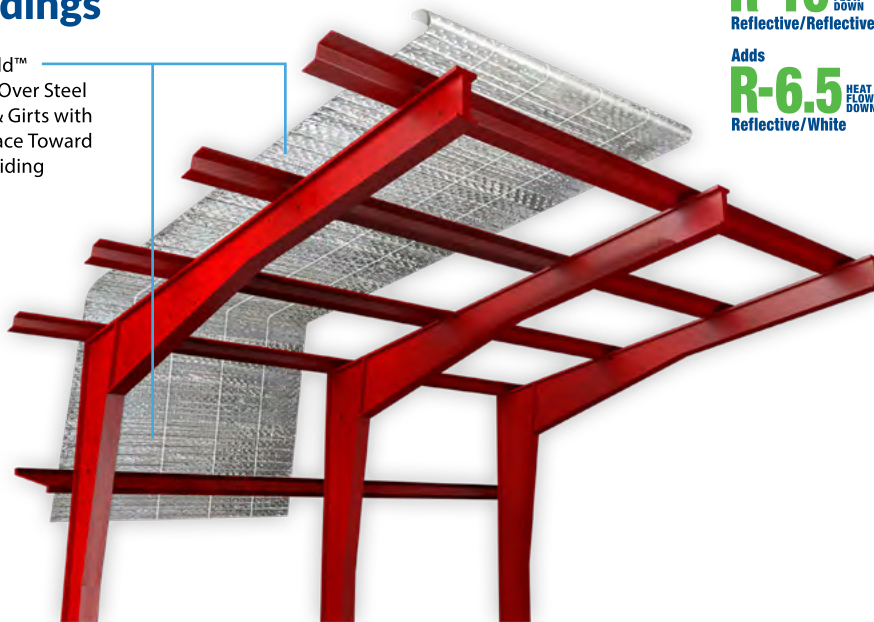
Superior reflective bubble insulation for new metal building applications. Stops 95% of radiant heat transfer. Reduces condensation to improve building conditions. Resistant to delamination. Blocks pests. Improve thermal performance. Reduce loads on HVAC systems. Keeps buildings cooler in the summer and warmer in the winter — Lifetime Limited Warranty.

FEATURES:

- 48" and 72" Widths Available
- Single or Double Bubble Versions
- Reflective / White or Reflective / Reflective Surface Options
- Moisture-Resistant Material

BENEFITS:

- Reduces Condensation
- Adds up to R-10 with 1" Drape
- Adds Thermal Performance & Comfort Year-Round
- Stops 95% of Radiant Heat Transfer



Adds R-Value
R-10
Reflective/Reflective

Adds
R-6.5
Reflective/White

RetroShield® System for Metal Building Retrofits



A complete, premium bubble insulation metal building retrofit system. Can be used alone or in combination with other mass insulation. Easy Installation with patented Clip & Pin technology. Adds up to R-16. Doubles as an attractive ceiling. Lifetime Limited Warranty.

FEATURES:

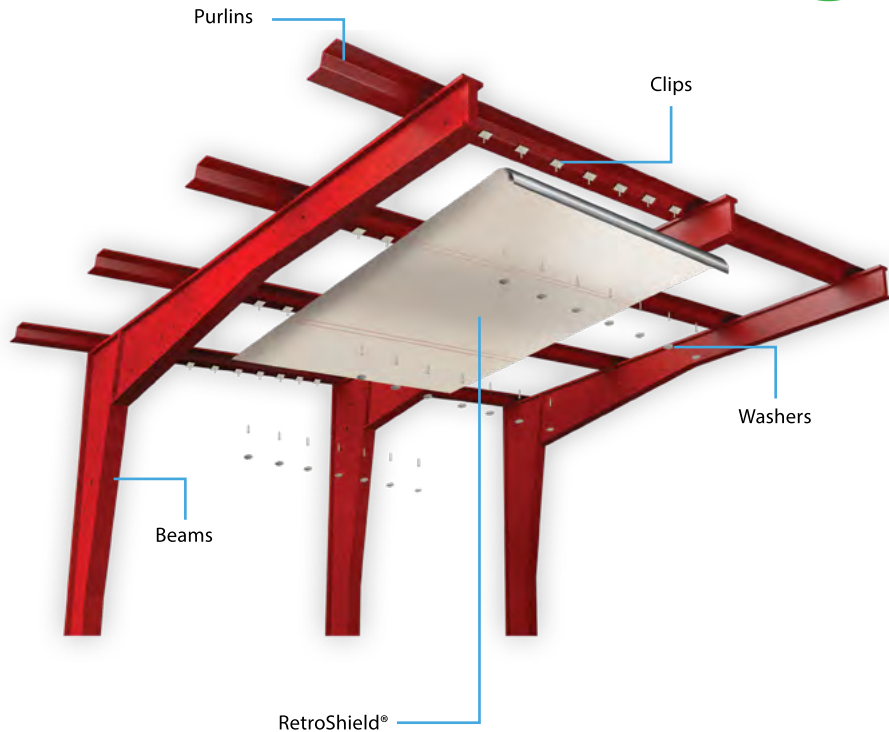
- Flexible, High Performance Reflective Double Bubble Insulation
- Reduces Thermal Bridging for Continuous Insulation
- Patented Clip & Pin Components for a Strong Mechanical Connection
- Variety of Clip & Pin Components & Facing Options

BENEFITS:

- Adds R-16 without Additional Insulation¹
- Improves Thermal Performance & Comfort and Saves Energy to Reduce Operating Costs
- White/Reflective System Doubles as a Beautiful Ceiling and Creates a Brighter Workspace

This System Gains

Up To
R-16¹

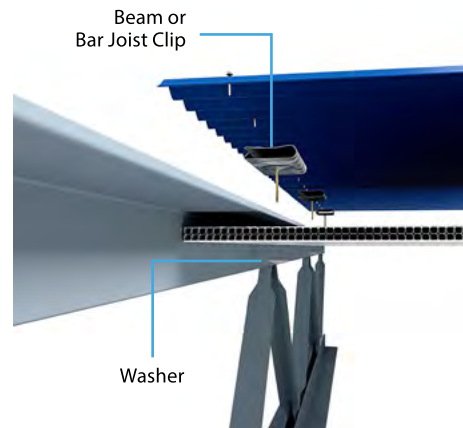


Mechanical Fastener Systems Clip-Pin and Washer Components



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

Fastener System works well with most metal building bubble insulation, vinyl-faced fiberglass and other facings.



FEATURES:

- Electro Galvanized Steel Fasteners
- Designed to Fit All Types of Metal Framing
- Works Well with MBI, Bubble Insulation or Facings
- Reduces Thermal Bridging

BENEFITS:

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

FSK Shield™ Class A Insulation Facing / Vapor Retarder

This System Gains **R-4.6¹**



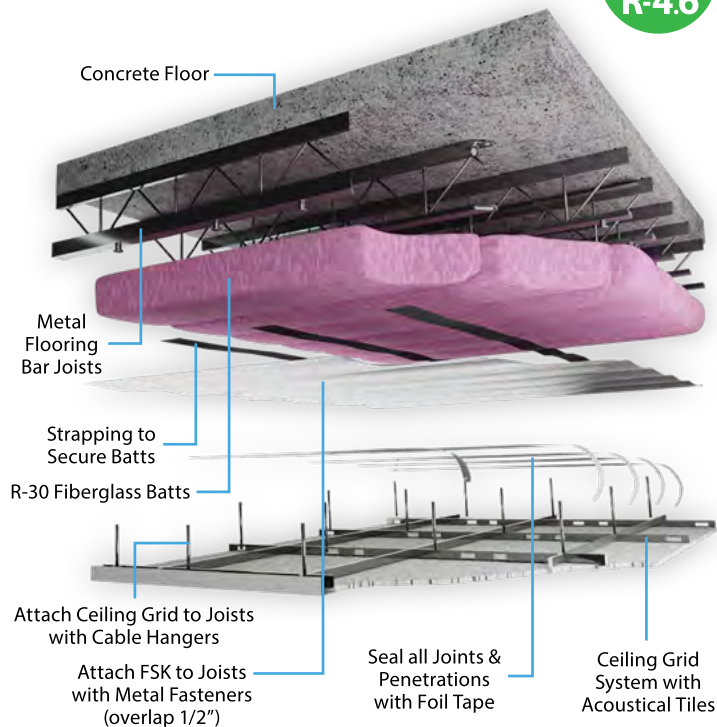
Cost-Effective Class A facing and vapor retarder. Single-sided Low-e foil facing reinforced with fiberglass scrim and bonded to natural kraft paper. Can be used alone or in combination with other mass insulation. Commonly used with unfaced batts or plenum ceiling applications. Adds up to R-4.6 to exposed roof or ceiling systems.

FEATURES:

- Class A Insulation Facing
- Ideal for Unfaced Batt
- 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 Batt
- Increases Thermal Resistance for Better Performance



RBI Shield™ Premium Reflective Bubble Insulation for Crawl Spaces



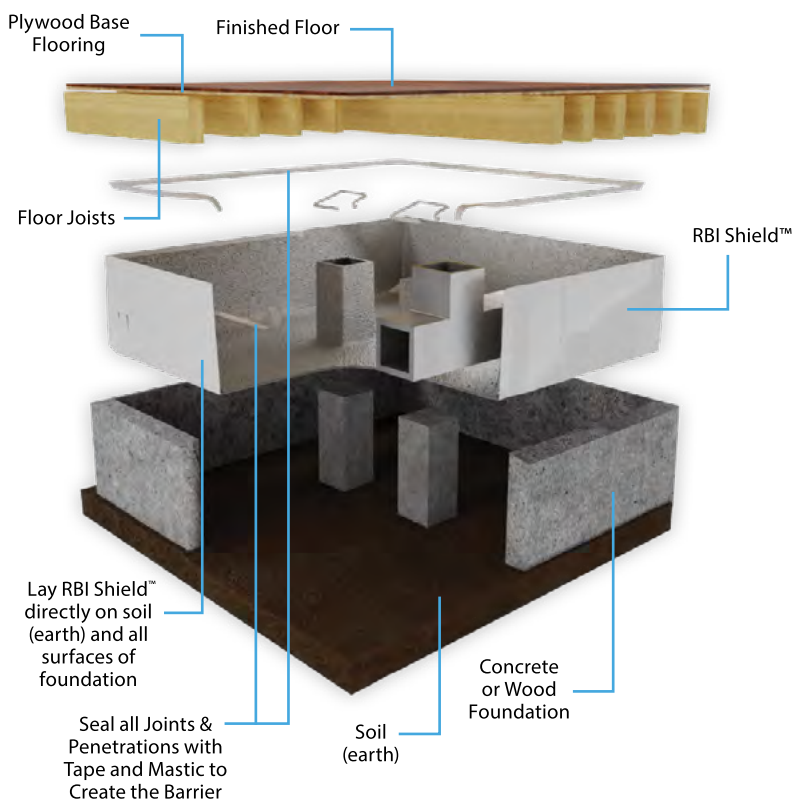
Premium reflective bubble insulation designed for crawl spaces in residential, commercial or institutional buildings. Available in single or double bubble. Low-e reflective surfaces to keep floors warmer in the winter and cooler in the summer. Lifetime Limited Warranty.

FEATURES:

- Flexible, Premium Reflective Bubble Insulation
- Single or Double Bubble Versions
- Moisture Resistant Material
- Class A Flammability Rating
- 5 Sizes Available to Fit a Wide Range of Applications

BENEFITS:

- Adds up to R-16¹
- Third-Party Verified Code Compliance
- Improves Thermal Performance & Comfort Year-Round
- Reduces Condensation



Radiant Shield™ Attic Radiant Barrier - Premium Single Layer



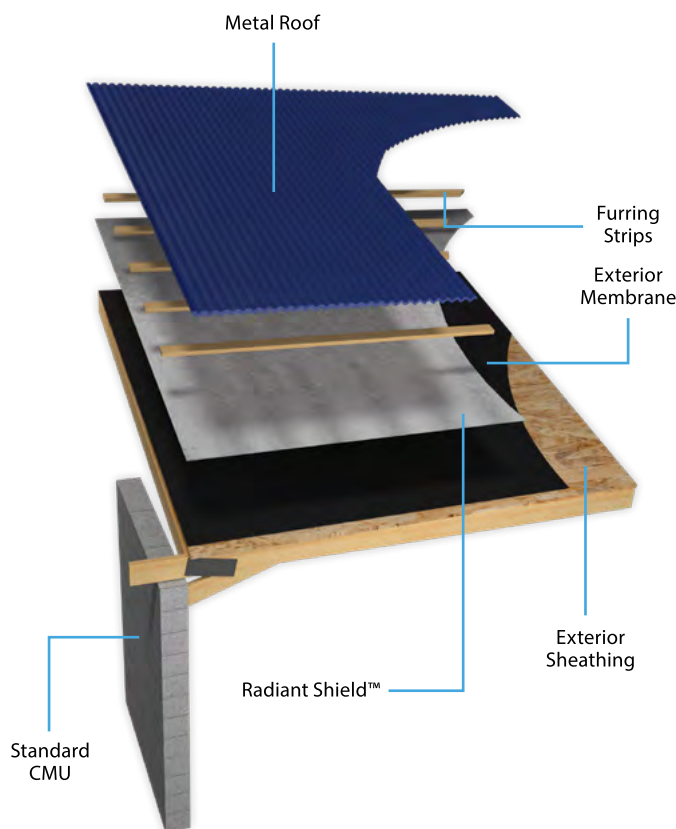
Dual-sided, vapor-permeable aluminum foil radiant barrier. Can be used alone or in combination with other mass insulation. Stops up to 95% heat transfer at the roof. Improves HVAC system performance by reducing the amount of heat transfer through the attic and ductwork. Improves energy-efficiency and indoor comfort. Perforated to allow vapor transmission.

FEATURES:

- Premium Grade Radiant Barrier
- Reflects 95% of Radiant Heat at the Roof
- Metalized Aluminum Deposited on Each Side of a Layer of Woven Polyethylene
- 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 Roofs
- Reduces Heat Loss in the Winter



Silver Shield™ Attic Radiant Barrier - Premium Multi-Layer



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. Stops up to 97% of radiant heat at the roof to reduce attic temperatures by up to 30 degrees in the summer. Improves HVAC Duct and system performance by up to 50%. Perforated to allow vapor transmission. 20-year transferable warranty.

FEATURES:

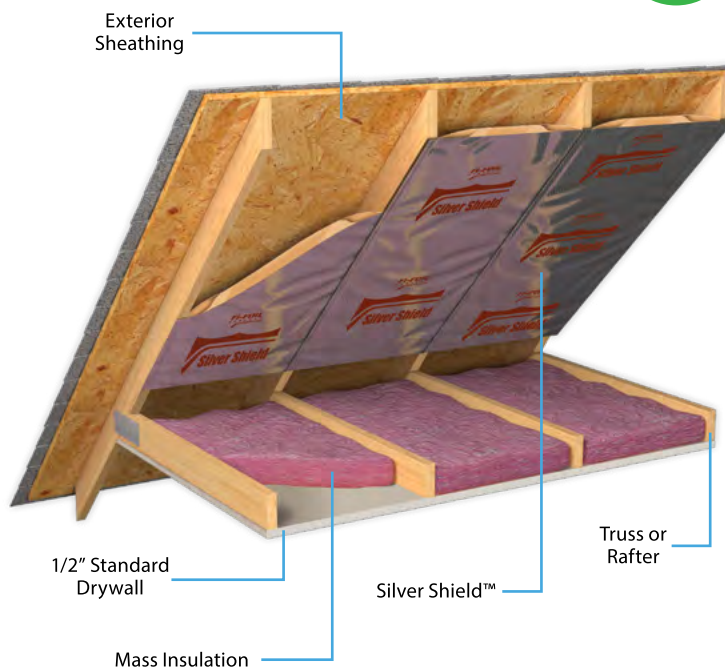
- Premium Grade Multi-Layer Radiant Barrier
- Reflects 97% of Radiant Heat at the Roof
- Third-Party Verified Code Compliance
- Outer Layer of Kraft Paper Reinforced with Aluminum

BENEFITS:

- Proven Performance Reduces Attic Temperatures up to 30°F in the Summer
- Improves HVAC System Performance by up to 50%
- Keeps Homes Cooler in the Summer and Warmer in the Winter for Greater Comfort
- Highest Performing Radiant Barrier on the Market

Reduces Attic Temps

As Much As
30°



SkyFlex™ Flexible Sheet Air Barrier – Class I Vapor Retarder



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. Adds up to R-1.7 with one side exposed to attic and up to R-2.9 with 3/4" enclosed air space.

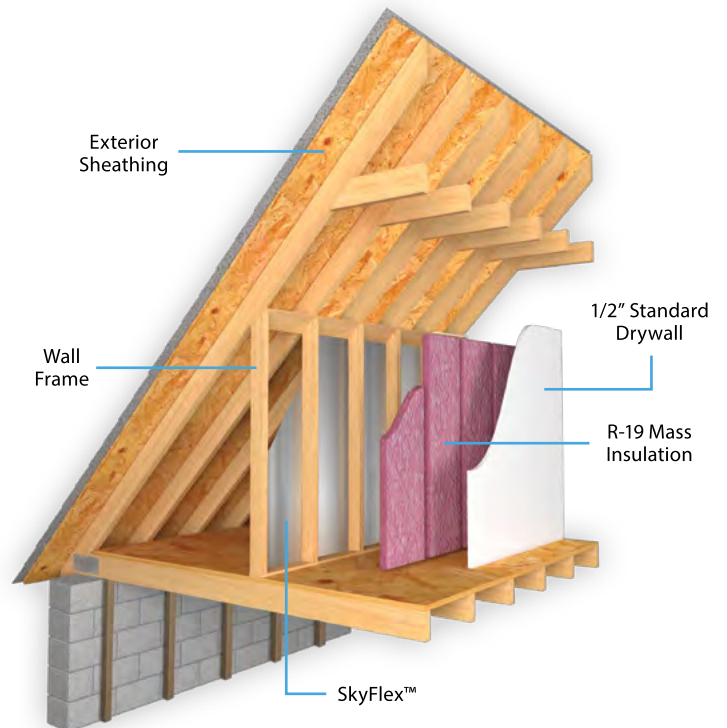
FEATURES:

- Premium Flexible Sheet Air Barrier
- Low-e Surfaces Reduce Radiant Heat Transfer
- Tough, Puncture-Resistant Material Won't Tear
- Flexible Sheet for Easy Handling

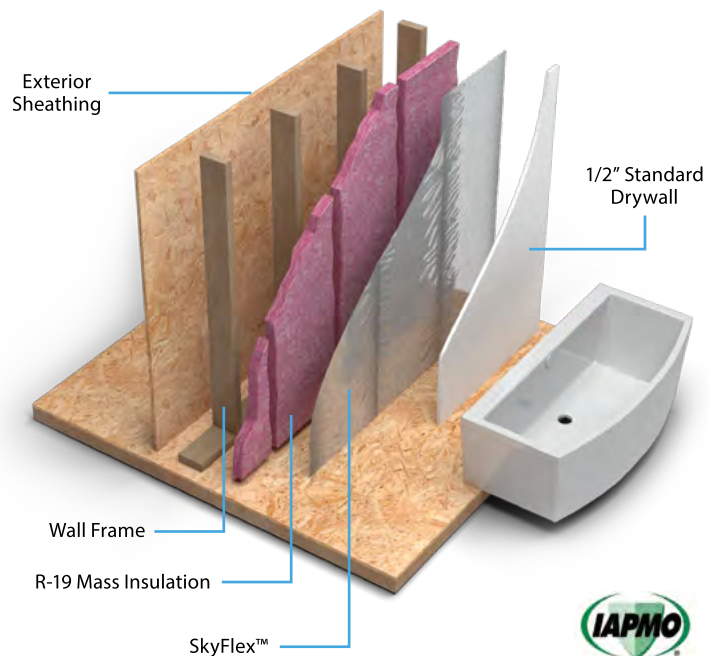
BENEFITS:

- Improves Thermal Performance of Building Envelope
- Significantly Improves Comfort in Living Areas with Exposed Walls
- Solid Material is a Class I Vapor Retarder
- 1 Roll = 16 Sheets of Rigid Board⁴
- 1 Pallet Covers as much as 2 Pallets of Rigid Board

This System Gains Up to: **R-1.4¹** Attic Side
R-2.0¹ with 3/4" Enclosed Air Space



This System Gains Up to: **R-1.7¹** Attic Side
R-2.9¹ with 3/4" Enclosed Air Space



IAPMO UEL Report 5003

RF Shield™ SCIF Barrier for Sensitive Compartmented Information Facilities



Multi-Layer 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:

- Multi-Layered 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](https://fifoil.com/applications)



Garage Door Insulation Kit



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

Low-e surfaces reflect 95% 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.



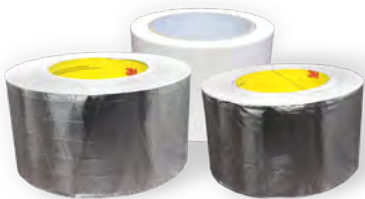
FEATURES:

- Versatile, High Performance Reflective Double Bubble Insulation
- Fits All Types of Single & Double Garage Doors
- Low-e Surface(s) Reflect 95% 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



High-quality reflective tapes to seal all joints and penetrations of insulation systems. Recommend using FI-FOIL tapes to seal all joints and penetrations.

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

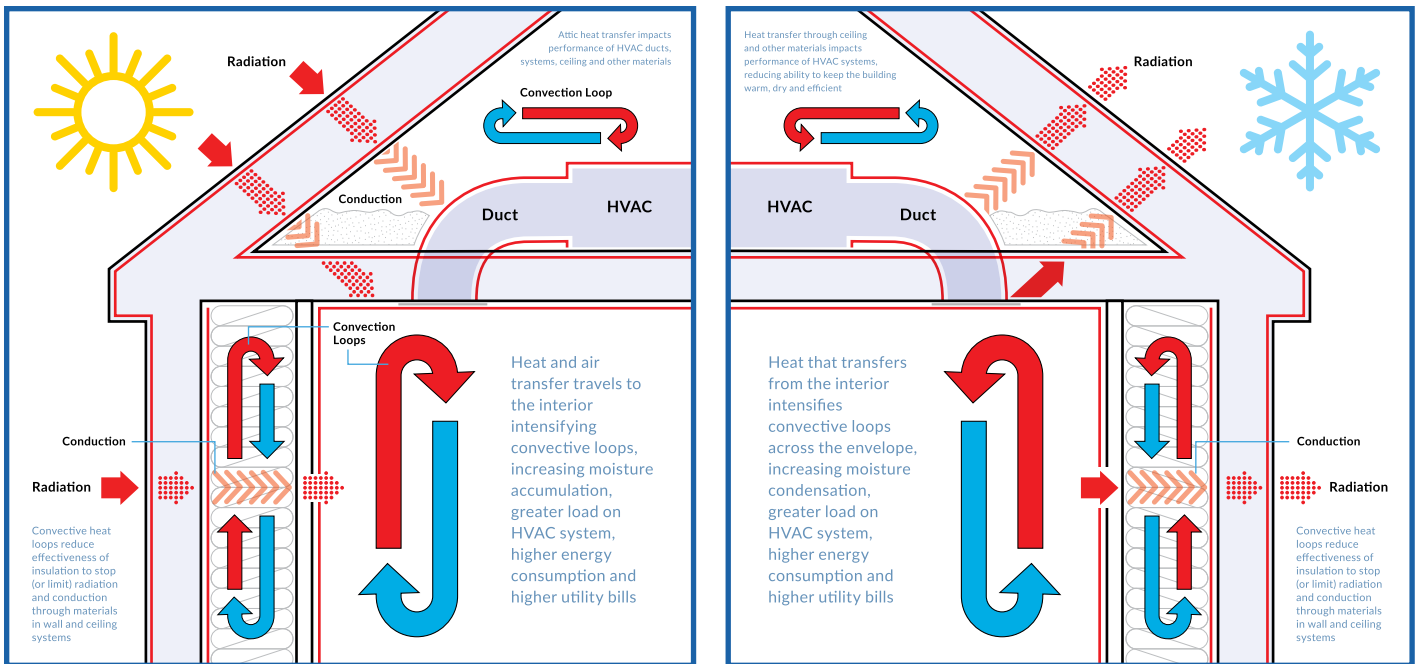


FEATURES:

- 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.

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 & METAL BUILDING APPLICATIONS

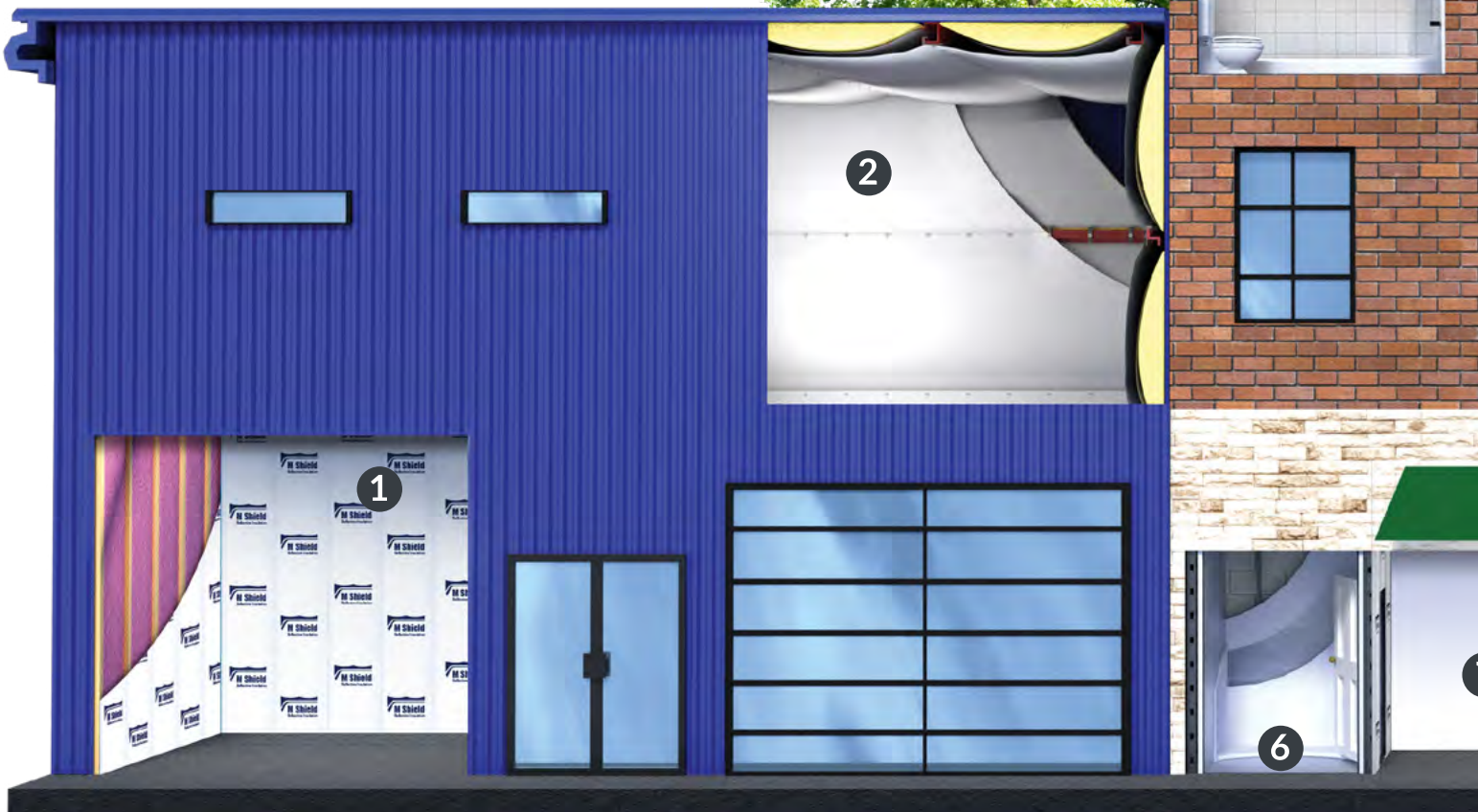
REFLECTIVE INSULATION & RADIANT BARRIERS

Metal Building

- 1 **M-Shield® Mold-Resistant Single Layer Reflective Wall Insulation** - Hybrid wall shown in metal building office with M-Shield® installed over 2" of fiberglass in 2x4 framing; alternative is M-Shield® installed over 2" of closed cell spray foam; works with a minimum 1-1/2" enclosed cavity air space; adds R-5.1
- 2 **RetroShield System® Metal Building Insulation for Retrofit Construction** - Metal Building Insulation shown as retrofit with RetroShield System® installed over existing insulation on roof and wall purlins; adds R-16

Mixed Use Residential/Commercial Building

- 3 **SkyFlex™ Flexible Sheet Air Barrier – Class I Vapor Retarder** - SkyFlex VT™ shown installed in wet room/bathroom behind shower over fiberglass insulation in 2x4 framing.
- 4 **Silver Shield™ Attic Radiant Barrier - Premium Multi-Layer** - Silver Shield™ shown installed on bottom of top cord attic trusses.
- 5 **VR Plus Shield™ Multi-Layer Reflective Wall Insulation** - Wall system shown with VR Plus Shield™ installed on masonry block with 1-1/2" framing; adds R-6.5
- 6 **RF Shield™ SCIF Barrier for Sensitive Compartmented Information Facilities** - SCIF system shown with RF Shield™ installed between two layers of drywall on the walls, ceiling and floor.
- 7 **VR Plus Shield™ Multi-Layer Reflective Wall Insulation** - Wall system shown with VR Plus Shield™ installed on masonry block with 1-5/8" metal framing; adds R-7.1
- 8 **Flex Foam 1/2" Continuous Reflective Insulation Hybrid with M-Shield®** - Walls shown with Flex Foam installed on masonry block with 7/8" framing and M-Shield® (R-6.5) Flex Foam can also be installed alone on masonry block with minimum 3/4" furring (R-4.5+).
- 9 **FSK Shield™ Class A Facing - Vapor Retarder** - Plenum Ceiling system shown with FSK Shield™ attached to floor joists under secured fiberglass batt.

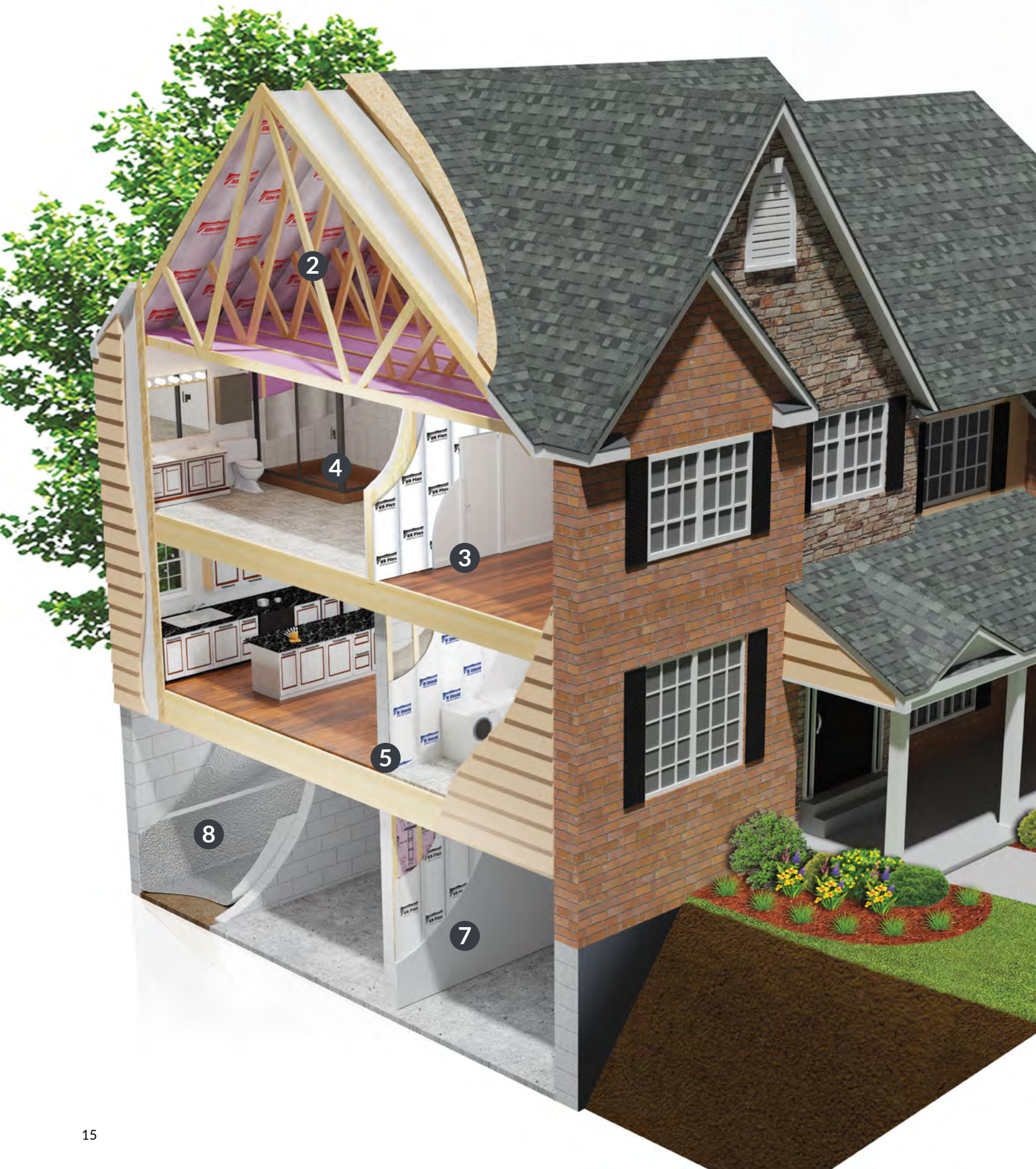


FI-FOIL®



RESIDENTIAL APPLICATIONS

REFLECTIVE INSULATION & RADIANT BARRIERS



FI-FOIL®



Attic

- 1 **SkyFlex™ Flexible Sheet Air Barrier – Class I Vapor Retarder** - Attic Knee Wall 6-sided cavity shown with SkyFlex™ and R-19 fiberglass batt installed in bonus room above the garage.
- 2 **Silver Shield™ Attic Radiant Barrier** - Attic Radiant Barrier shown with Silver Shield™ installed directly on bottom of top cord of roof trusses.

2nd Floor

- 3 **VR Plus Shield™ Multi-Layer Reflective Wall Insulation** - Hybrid wall system shown with VR Plus Shield™ installed over 2" of spray foam in 2x4 framing; works with a minimum 1-5/8" enclosed cavity air space in front of SPF; adds R-7.1
- 4 **SkyFlex™ Flexible Sheet Air Barrier – Class I Vapor Retarder** - Bathroom shown with SkyFlex™ installed behind shower tile.

1st Floor

- 5 **Flex Foam 1/2" Continuous Reflective Insulation Hybrid with M-Shield®** - Walls shown with Flex Foam hybrid installed on masonry block with 7/8" furring and M-Shield® (R-6.5) Flex Foam can also be installed alone on masonry block with minimum 3/4" furring; adds R-4.5+
- 6 **VR Plus Shield™ Multi-Layer Reflective Wall & Ceiling Insulation** - Hybrid ceiling shown with VR Plus Shield™ installed over fiberglass batt (R-10) on the face of ceiling beam cavities, works with minimum 1-5/8" enclosed cavity air space; adds R-7.1

Basement Floor

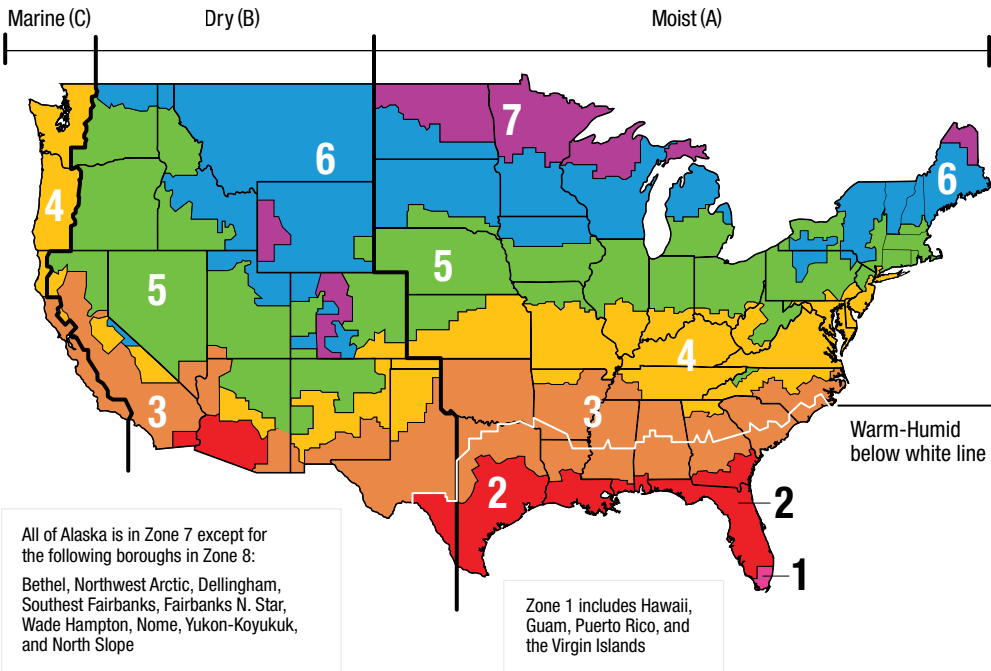
- 7 **VR Plus Shield™ Multi-Layer Reflective Wall Insulation** - Basement hybrid wall assembly shown with 1/2" foam board (R-3) installed on masonry block with VR Plus Shield™ attached to 1-5/8" framing; adds R-7.1
- 8 **RBI Shield™ Premium Reflective Bubble Insulation** - Sealed Crawl space shown with RBI Shield™ installed on walls, reflective side up, joints and penetrations sealed with tape and mastic.

FI-FOIL Products & Applications

	SPECIFICATIONS							STRUCTURES			APPLICATIONS								
Products¹	Widths	Roll Size	Versions Available in All Widths	Enclosed Cavity Air Space	R-Value³ Heat Flow Horizontal	R-Value³ Heat Flow Down	R-Value³ Heat Flow Up	Compliance⁴ Approvals	Masonry	Frame	Metal	Walls	Attics, Ceilings, Plenums, Roofs	Floors, Crawl Spaces, Basements	Garages, Workshops, Barns	Metal or Tile Roofs	Metal Buildings	OEM	
REFLECTIVE INSULATIONS • WALLS • CEILINGS • CRAWL SPACE • ROOF																			
VR Plus Shield™ Multi-Layer Reflective	16" o.c.	500 SF	Perforated Semi-Permeable²	1-1/2", 1-5/8"	R6.5 - R7.1	—	—	ASTM C1224	X			X		X					
	24" o.c.	500 SF	Solid Vapor Retarder																
AA2 Vapor Shield™ Single-Layer Reflective	16" o.c.	500 SF	Perforated Semi-Permeable²	3/4", 7/8", 1-1/2"	R4.1 - R5.2	—	—	ASTM C1224	X			X		X					
	24" o.c.	500 SF	Solid Vapor Retarder																
M-Shield® Single-Layer Mold Resistant	16" o.c.	500 SF	Perforated Semi-Permeable²	3/4", 7/8", 1-1/2"	R4.2 - R5.1	—	—	ASTM C1224	X			X		X					
	24" o.c.	500 SF																	
Flex Foam Continuous Insulation	24"	125 SF	Perforated Semi-Permeable²	3/4", 7/8", 1-1/2"	R4.5 - R4.7	—	—	ASTM C1224	X			X		X					
	48"	250 SF	Solid Vapor Retarder																
HY-FI® Hybrid Solution	16" o.c.	500 SF	Perforated Semi-Permeable²	1-5/8" - 2"	R7.1	≥ R7.0⁵	—	ASTM C1224		X		X	X	X	X		X		
	24" o.c.	500 SF	Solid Vapor Retarder																
RBI Shield™ Multi-Purpose Premium Bubble Insulation	16"	166 SF	RWDB Reflective White, Double Bubble	1"	R3.9 - R5.5	R6.0 - R10	R3.2 - R4.1	ASTM C1224	X	X	X	X	X	X	X				
	24"	250 SF	RWDB Reflective White, Single Bubble									X	X	X	X				
	48"	500 SF	RWDB Reflective Reflective, Double Bubble	R values depend on the air space adjacent to the facings								X	X	X	X	X	X		
	66"	688 SF	RWDB Reflective Reflective, Single Bubble	6" or more	R3.9 - R5.4	R12 - R16	R3.5 - R4.7					X	X	X	X	X	X		
	72"	750 SF										X	X	X	X	X	X		
POST FRAME BUILDING • WALLS • ROOF																			
RBI Shield™ Premium Bubble Insulation	16"	166 SF	RWDB Reflective White, Double Bubble	1"	R3.9 - R5.5	R6.0 - R10	R3.2 - R4.1	ASTM C1224	X	X	X	X	X		X				
	24"	250 SF	RWDB Reflective White, Single Bubble									X	X		X				
	48"	500 SF	RWDB Reflective Reflective, Double Bubble	R values depend on the air space adjacent to the facings								X	X		X				
	66"	688 SF	RWDB Reflective Reflective, Single Bubble	6" or more	R3.9 - R5.4	R12 - R16	R3.5 - R4.7					X	X		X				
	72"	750 SF										X	X		X				
METAL BUILDING • WALLS • ROOF																			
RBI Shield™ Premium Bubble Insulation	16"	166 SF	RWDB Reflective White, Double Bubble	1"	R3.5 - R5.5	R6.0 - R10	R3.2 - R4.1	ASTM C1224	X	X	X	X	X		X				
	24"	250 SF	RWDB Reflective White, Single Bubble									X	X		X				
	48"	500 SF	RWDB Reflective Reflective, Double Bubble	R values depend on the air space adjacent to the facings								X	X		X		X		
	66"	688 SF	RWDB Reflective Reflective, Single Bubble	6" or more	R3.9 - R5.4	R12 - R16	R3.5 - R4.7					X	X		X		X		
	72"	750 SF										X	X		X				
RetroShield® Premium Bubble Insulation System with Mechanical Fasteners	48"	500 SF	Attached to Bottom of Purlins RWDB, RWBS, RRDB, RRSB	6" Minimum when used Alone	R3.9 to 5.4 Alone or Higher with Hybrid	R12 to 16 Alone or Higher with Hybrid	R3.5 to 4.7 Alone or Higher with Hybrid	ASTM C1224			X	X	X		X		X		
	66"	688 SF									X	X	X		X		X		
	72"	750 SF									X	X	X		X		X		X
Mechanical Fasteners	4" x 1"	N/A	Beam or Bar Joist Clip Metal Framing	—	—	—	—	—			X				X		X		
	2" x 1"	N/A	Purlin Clip (C or Z Type Purlin) Metal Framing	—	—	—	—	—			X	X	X		X		X		
	2" x 1"	N/A	Angle Clip (Walls, Floors, Misc) Metal & Wood Framing	—	—	—	—	—	X	X	X	X	X		X		X		
	2" x 1"	N/A	Tube Clip (Rectangular or Square Framing) Metal & Wood Framing	—	—	—	—	—		X	X	X	X		X		X		
	4" x 1"	N/A																	
	1"	N/A	Washers White, Silver or Black	—	—	—	—	—	X	X	X	X	X		X		X		
RADIANT BARRIERS • ATTICS • ROOF																			
Silver Shield™	16"	500 SF	Multi-Layer	N/A	—	—	—	ASTM C1313	X	X			X		X				
	24"	500 SF	Perforated Semi-Permeable²																
	30"	250 SF																	
Radiant Shield™	25.5"	500 SF	Premium Single Sheet	N/A	—	—	—	ASTM C1313	X	X			X		X	X			
	48"	500 SF	Perforated Semi-Permeable²																
	51"	500 SF																	
SPECIALTY BARRIERS • WALLS • CEILINGS																			
SkyFlex™ Air Barrier	48"	500 SF	Flexible Sheet Solid Air Barrier	—	R1.7 - R2.9	—	—	ASTM E2178 IAPMO UEL-5003	X	X		X	X		X				
	51"	500 SF	Vapor Retarder																
RF Shield™ SCIF Barrier	51"	500 SF	Flexible Sheet Electromagnetic/Frequency Blocking Perforated Semi-Permeable Solid Vapor Retarder	N/A	—	—	—	ASTM 3057 ASTM 4935 IEEE 299	X	X	X	X	X	X	X			X	
FSK Shield™ Vapor & Radiant Retarder	54"	1000 SF	Flexible Sheet Class A Facing	Air Film	R1.7	R4.55	R1.32	ASTM E84	X	X	X	X	X	X	X	X		X	

CLIMATE ZONES						
1	2	3	4	5	6	7
REFLECTIVE INSULATION						
Alone or Hybrid	Alone or Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid
Alone or Hybrid	Alone or Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid
Alone or Hybrid	Alone or Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid
Alone or Hybrid	Alone or Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid
Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid
Alone or Hybrid	Alone or Hybrid	Alone or Hybrid	Alone or Hybrid	Alone or Hybrid	Alone or Hybrid	Alone or Hybrid
POST FRAME BUILDING						
Alone or Hybrid	Alone or Hybrid	Alone or Hybrid	Alone or Hybrid	Alone or Hybrid	Alone or Hybrid	Alone or Hybrid
METAL BUILDING						
Alone or Hybrid	Alone or Hybrid	Alone or Hybrid	Alone or Hybrid	Alone or Hybrid	Alone or Hybrid	Alone or Hybrid
Alone or Hybrid	Alone or Hybrid	Alone or Hybrid	Alone or Hybrid	Alone or Hybrid	Alone or Hybrid	Alone or Hybrid
Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid
Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid
Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid
Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid
Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid
RADIANT BARRIERS						
Alone	Alone	Alone	Alone	Alone	Alone	Alone
Alone	Alone	Alone	Alone	Alone	Alone	Alone
SPECIALTY BARRIERS						
Alone or Hybrid	Alone or Hybrid	Alone or Hybrid	Alone or Hybrid	Alone or Hybrid	Alone or Hybrid	Alone or Hybrid
Alone or Hybrid	Alone or Hybrid	Alone or Hybrid	Alone or Hybrid	Alone or Hybrid	Alone or Hybrid	Alone or Hybrid
Alone or Hybrid	Alone or Hybrid	Alone or Hybrid	Alone or Hybrid	Alone or Hybrid	Alone or Hybrid	Alone or Hybrid

Climate Zone Map



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 specification sheets available on product pages at [Fifoil.com](https://www.fifoil.com)

⁵ R-value calculations have been completed for a range of insulation combinations; Contact us for an engineered solution.

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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