

CertainTeed

Residential Insulation

Product Selection Guide



CertainTeed
SAINT-GOBAIN

5 Ways We Help You Succeed

Reinforcing Success

We continually strengthen your performance with a heritage of backing customers with the best products, service, support and innovation.

Engineering Performance

Your voice is what drives our global research team to create new solutions that meet your challenges — all with Building Science expertise and training.

Building Responsibly™

We are committed to providing products that are sustainable at every step and helping you create healthier, efficient and comfortable buildings that your customers want.

Providing Comfort

Our truly comprehensive insulation offering enables you to provide maximum comfort and efficiency on every project no matter how complex or unique.

Supporting Results

Our Service Advantage and extensive technical and business support tools help give you an unmatched competitive edge in the marketplace.



Empowering You by Installing Confidence

CertainTeed has helped shape the building materials industry for more than 100 years with the most forward-looking insulation solutions. And from the beginning, our mission has been the same – to continually strengthen your building success.

When you partner with us, you're installing much more than trusted high-performance insulation products. You're installing confidence into every build. Confidence you can only get from the proven leader in the building materials industry, who has a strong heritage of backing customers with industry-leading support and a commitment to product innovation at all levels. That's why you can **Be Certain™** we're the trusted choice for sustainable solutions that meet all kinds of insulation and business challenges.





Comprehensive Solutions Through the Largest Product Offering

Inside this catalog you'll discover how CertainTeed Insulation's unmatched breadth of residential insulation products gives you the best solution for any location, building, budget and customer.

With fiber glass Sustainable Insulation® and blowing wool, spray polyurethane foam, smart moisture and air barriers and multi-product systems, we have what you need to create the most efficient and comfortable home possible.

To learn more about the many services we provide to our partners, talk to your CertainTeed representative or give us a call. We're always happy to hear from you.

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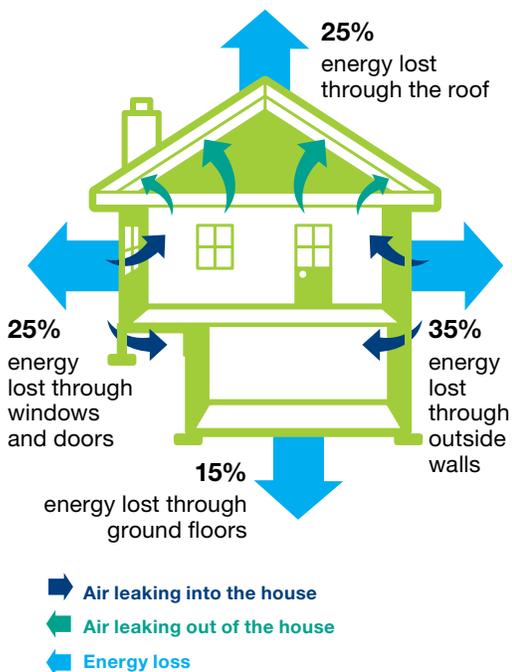
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Providing solutions for every insulation challenge

An under-insulated home will experience substantial heat loss and gain throughout the year—and there are literally millions of older homes that lack sufficient insulation. Sealing leaks and installing high quality CertainTeed insulation benefits homeowners in several ways:

- Improved comfort, with fewer drafts and hot and cold spots
- Lower energy bills year-round for the life of the home
- Helps ensure performance of HVAC systems
- Potential higher re-sale value
- Protect roofs against winter ice dams

A Lifetime of Savings

Properly installed fiber glass and spray foam insulation reduces a home's energy use from the moment it's installed, and continues to do so for as long as the house is standing. That means lower energy bills for your customers for many years to come.

For example, owners of a 2,000-square-foot home in Valley Forge, Pennsylvania, are saving about \$1,475 a year after sealing air leaks and upgrading insulation. This enabled them to pay off the \$5,243 cost of the upgrades in three and a half years — and the savings have been adding up ever since.

Every home presents unique insulation challenges, which are compounded by the weather in the climate zone it's located in. To help you, CertainTeed provides a number of resources that make it easy to choose the right solution every time.

Choosing Smart

What are the optimum R-Values for different parts of the house in your climate zone? Visit CertainTeed.com/itools and click on the Insulation Calculator for information on recommended insulation levels.

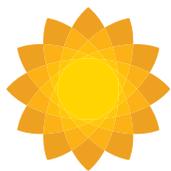
Once you've determined the right amount of insulation for a particular job, being able to give customers an idea of how much they'll save is a great selling tool. Use the Calculate Your Energy Savings link on our website to find out.

Upgrading insulation is an investment for any homeowner. But financial assistance from government agencies and utilities is available in many areas — and the Rebates & Incentives button on the CertainTeed website enables you to provide this valuable information to your customers.



Insulation Benefits

All CertainTeed insulation products provide:



Thermal Performance High efficiency fiber glass and spray foam insulation enable you to significantly improve the thermal performance of your customers' homes. They'll save money on energy bills and enjoy a more comfortable living space.



Acoustics Adding insulation helps prevent unwanted outside noise from penetrating the living space, and — when added to interior walls — limits transmission of noise from room to room.



Fire Safety Because fiber glass is made primarily from sand and glass, it's naturally noncombustible and stays that way for the life of the home. Other types of insulation require fire-retardant additives, which lose their effectiveness over time.*

Key product attributes:



Superior Moisture Protection Beyond traditional facings, vapor retarders can help reduce the risk of mold and mildew, improving indoor air quality and providing a healthier environment for occupants. There's also less chance you'll be called back to deal with moisture problems.



Air Barrier Sealing air leaks and infiltration points creates a tighter building envelope. In addition to reducing drafts and hot and cold spots throughout the home, conditioned air stays inside where it belongs, increasing overall thermal efficiency.

	Thermal Performance	Air Barrier	Superior Moisture Protection	Acoustics	Fire Safety
Sustainable Insulation® - unfaced	☀️			🔊	🔥
Sustainable Insulation® - kraft	☀️			🔊	🔥
SpeedyR™	☀️			🔊	🔥
Basement Wall	☀️			🔊	🔥
Masonry Wall	☀️			🔊	🔥
Noise Reducer™	☀️			🔊	🔥
ISSP	☀️			🔊	🔥
OPTIMA®	☀️			🔊	🔥
TrueComfort®	☀️			🔊	🔥
CertaSpray® - Open Cell	☀️			🔊	🔥*
CertaSpray® - Closed Cell	☀️	🌊	💧	🔊	🔥*
CertaCoat™					🔥
FortiCel™					🔥
MemBrain™		🌊	💧		🔥

*Spray foam must be covered with an ignition barrier as defined by local code.

Hybrid Insulation Solutions



By combining CertaSpray® closed cell foam insulation, OPTIMA® blow-in insulation and MemBrain™ Smart Vapor Retarder & Air Barrier Film, you can provide your customers with exceptionally comfortable and energy efficient homes. The CertainTeed Hybrid Insulation System is flexible enough to suit your business model, climate zone and customer preferences.

Our Building Science team can help you select the ideal combination of products to create the ultimate thermal, air and moisture barrier. See other parts of this brochure for information on individual products, and www.certainteedhybrid.com for more on how they work together to deliver outstanding performance.



Unfaced Batt

Fiber Glass Insulation

Fiber glass insulation delivers exceptional energy efficiency and thermal performance that result in more comfortable living spaces and lower energy costs for homeowners. Fiber glass batts and rolls are an easy, cost-effective way to bring these benefits to your customers.

CertainTeed fiber glass insulation is compression packaged for ease of handling and comes in a wide range of R-Values, sizes and facings — ensuring the right product for every job.

sustainable insulation.

CertainTeed is dedicated to Building Responsibly™. This commitment means more than simply producing high performance insulation that has a positive impact on the environment by reducing energy consumption. It also means minimizing the impact of our manufacturing and shipping operations, and developing next-generation insulation products that raise the bar for environmental performance.

Our new line of Sustainable Insulation® is just such a product. It is made from a renewable, plant-based binder, and does not have any formaldehyde, harsh acrylics, dyes or unnecessary fire-retardant chemicals added. What's more, the manufacturing process for Sustainable Insulation requires less water and consumes less energy than standard processes.

With exceptional handling benefits including superior rigidity, recovery and cutability, Sustainable Insulation improves job site efficiency. Batt and rolls are less dusty and easier to work with, while also providing the excellent thermal, acoustical and indoor air quality performance that customers demand.



Product Benefits

Sustainable Insulation can save 12 times as much energy in the first year as the energy used to produce it. It will also last for the life of the building, as it won't settle, accumulate moisture or lose its R-Value over time.

Green Stewardship

Sustainable Insulation meets or exceeds all performance standards required for insulation products in the U.S. and Canada. It is also GREENGUARD Gold Certified and Home Innovation NGBS Green Certified product. CertainTeed Insulation has a number of corporate affiliations and accreditations as well, including:

- 2013 ENERGY STAR® Sustained Excellence Award (ENERGY STAR Partner for 5 years in a row)
- GreenCircle® Certified — 3rd party recycled content certification
- U.S. Green Building Council (USGBC) — member
- Canada Green Building Council (CaGBC) — member
- North American Insulation Manufacturers Association (NAIMA) — member
- All US manufacturing facilities are ISO 14001:2004 certified



Quality of Living.

Easy to Maintain. Delivers long-lasting comfort through thermal performance, reduced noise and better air quality.



Renewable. Recycled.

Organic. Made of rapidly renewable content (sand), a high percentage of recycled glass and a plant-based binder.



Make it. Move it.

More Efficient. Less waste in manufacturing and optimized distribution further reduce SI's impact.



Easy Installation.

Softer touch makes product easy to handle and install, but does not compromise rigidity or recovery.

Unfaced Batts

R-VALUE	R	11	13	15	19	21	25	30	30C*	38	38C*
	RSI		1.9	2.3	2.6	3.3	3.7	4.4	5.3	5.3	6.7
THICKNESS	in.	3½	3½	3½	6¼	5½	8	10	8¼	12	10¼
	mm	89	89	89	159	140	203	254	210	305	260
WIDTH	in.	11¼, 15, 15¼, 19, 23, 23¼, 44, 48, 84	15¼, 16, 23¼, 24	15¼, 23¼	11, 11¼, 15, 15¼, 16, 19, 23, 23¼, 24, 48	15, 15¼, 23¼	15, 16, 19, 23, 24, 32, 46¼	16, 19, 24	15¼, 23¼	16, 24	15¼, 23¼
	mm	286, 381, 387, 483, 584, 591, 1118, 1219, 2134	387, 406, 591, 610	387, 591	279, 286, 381, 387, 406, 483, 584, 591, 610, 1219	381, 387, 591	381, 406, 483, 584, 610, 813, 1181	406, 483, 610	387, 591	406, 610	387, 591

Kraft Faced Batts

R-VALUE	R	11	13	15	19	21	22	25	26	30	30C*	38	38C*
	RSI		1.9	2.3	2.6	3.3	3.7	3.9	4.4	4.6	5.3	5.3	6.7
THICKNESS	in.	3½	3½	3½	6¼	5½	6½	8	8	10	8¼	12	10¼
	mm	89	89	89	159	140	165	203	203	254	210	305	260
WIDTH	in.	11, 15, 16, 23, 24	11, 15, 16, 19, 23, 24	15, 23	11, 15, 16, 19, 23, 24	15, 23	15, 19, 23	15, 23	16, 24	11, 15, 16, 19, 19¼, 24	15, 23	16, 24	15, 23
	mm	279, 381, 406, 584, 610	279, 381, 406, 483, 584, 610	381, 584	279, 381, 406, 483, 584, 610	381, 584	381, 483, 584	381, 584	406, 610	279, 381, 406, 483, 489, 610	381, 584	406, 610	381, 584

*Cathedral Ceiling Batts For all standard sizes, availability and made-to-order requests, please contact your CertainTeed representative.



SpeedyR™ Tabless Batts



Unfaced with MemBrain™ Insulation



Tabless Fiber Glass Insulation

R-VALUE	R	13	19	21
	RSI	2.3	3.3	3.7
THICKNESS	in.	3½	6¼	5½
	mm	89	159	140
WIDTH/ LENGTH	in.	15¼ x 93, 15¼ x 105	15¼ x 93, 15¼ x 105	15¼ x 93, 15¼ x 105
	mm	387 x 2362, 387 x 2667	387 x 2362, 387 x 2667	387 x 2362, 387 x 2667

SpeedyR™ is intended for use as thermal insulation in walls with standard-width wood-framed construction where a vapor retarder is needed. This product also provides excellent acoustical performance. SpeedyR has a kraft facing without flanges and can be friction-fit between wall studs for non-exposed applications; stapling is not required because the fiber glass fills the entire cavity. Installing this product will save time and improve productivity by reducing field labor. See chart for standard sizes — for additional sizes and minimum order quantities, contact your CertainTeed representative.



Providing Comfort

Our breadth of products, multi-product solutions and building science support help you exceed the toughest new building codes and consumer demands. No matter what the challenge, you'll always find the right solution to achieve maximum comfort and efficiency — which really is at the center of every insulation project.



Basement Wall Insulation



Masonry Wall Insulation



Basement Wall Insulation

R-VALUE	R	11	11
	RSI	1.9	1.9
THICKNESS	in.	3 $\frac{1}{8}$	3 $\frac{1}{8}$
	mm	79	79
WIDTH	in.	48	48
	mm	1219	1219
FACING		White PSK, Perforated	FSK, Perforated

Basement wall insulation is available with two facings — white PSK and standard FSK, both perforated — and is designed for use in residential applications where code or builder preference specifies an insulated basement area. This product is intended for applications where the insulation will be left exposed. It can be applied either half-wall or full-wall. (Half-wall is not recommended for hollow block walls; they should be insulated full height.) Rolls are available in 50-foot (15.25 m) lengths.

Masonry Wall Insulation

R-VALUE	R	3	6
	RSI	.5	1.1
THICKNESS	in.	$\frac{3}{4}$	1 $\frac{3}{4}$
	mm	19	44
WIDTH	in.	15	15, 23
	mm	381	381, 584
FACING		Unfaced	Unfaced

Masonry wall insulation is unfaced fiber glass insulation for use behind paneling or in masonry-type construction where cavity depth is limited. No stapling is required because the batts are designed to fit tightly between furring strips. Use with a separate vapor retarder or in applications where no vapor retarder is required or recommended. The R-3 roll is available in 48-foot (12.19 m) length and R-6 roll is available in 94-foot (23.88 m) length.



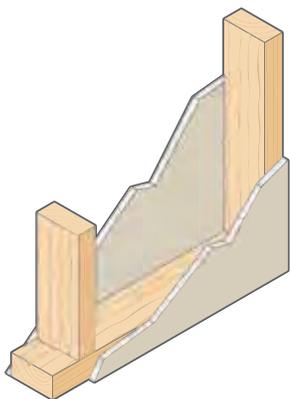
Providing solutions for quieter spaces

Sound Transmission

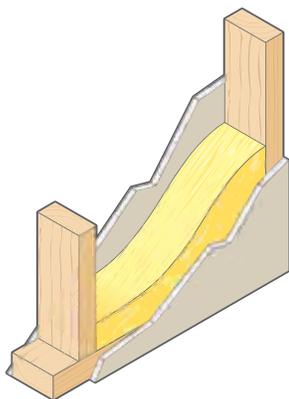
Sound Transmission Class (STC) is a performance rating of the ability of a wall or floor section to block noise. The higher the STC rating, the less sound is transmitted. The illustrations below show how insulation and robust wall construction improve STC.

The way a home's walls and floors are constructed affects its acoustic performance, which in turn has a large impact on the well being of its occupants. CertainTeed offers a number of insulation products that are designed to limit sound transmission through different types of wall and floor/ceiling assemblies.

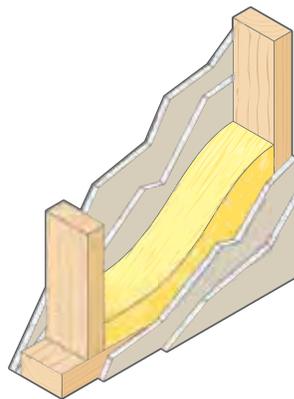
There are two types of sound paths: airborne and structureborne. Airborne sound is transmitted directly from a source into the air. The source can be noise from within the home — generated by appliances, home theaters and video games, even voices from an adjacent room — or external noise like traffic and low-flying airplanes. Structureborne sound travels through solid materials that are usually either in direct contact with the sound source or receive the impact of that source, such as vibrations from a loudspeaker sitting on the carpet or footsteps on a hardwood floor.



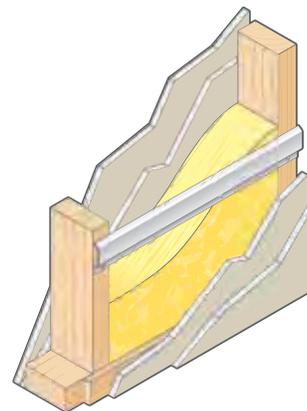
Conventional wood stud construction, single layer gypsum wallboard each side. **STC 30-35.**



Conventional wood stud construction, single layer gypsum wallboard each side, 3½" thick fiber glass insulation in wall cavity. **STC 39.**



Double layer gypsum wallboard each side increases mass. **STC 55.**



Resilient channels help minimize transmission of vibration through wall. **STC 57.**



NoiseReducer™ Sound Control Batts



NoiseReducer™ Sound Attenuation Batts



NoiseReducer™

While all CertainTeed insulation products help reduce sound transmission in addition to improving thermal performance, the NoiseReducer™ line is specifically designed to help create quieter, more restful indoor environments for occupants.

Sound Attenuation Batts

Sound attenuation batts are unfaced fiber glass batts designed to improve acoustical performance in all commercial applications. They are slightly wider and longer than conventional fiber glass batts to fit conveniently in interior walls and floors.

Acoustical Ceiling Batts

Acoustical ceiling batts are designed to lie directly on suspended ceilings, providing excellent thermal protection and acoustical performance. They are available unfaced or with a kraft facing. Kraft faced acoustical ceiling batts have no stapling flanges.

Residential Sound Control Batts

Residential sound control batts are for wood stud interior walls and floors. They include a kraft facing for fast, easy installation and provide a sound absorber that fills the void between interior studs. This absorber effectively breaks the path of sound. They are lightweight, economical and can add 4 to 12 points to the Sound Transmission Class rating of a wall assembly.

R-VALUE	R	8	11	19
	RSI	1.4	1.9	3.3
THICKNESS	in.	2½	3½	6¼
	mm	64	89	159
WIDTH	in.	16, 24	15, 16, 23, 24	24
	mm	406, 610	381, 406, 584, 610	610

All sizes come unfaced with the exception of R-11 3½ x 15 and 3½ x 23 (kraft), R-11 3½ x 24 (kraft, no tabs) and R-19 6¼ x 24 (kraft, no tabs).

5 Noise Control Tips

It's a noisy world. Twenty-four hours a day we are assailed by unwanted sound, not only from outdoor sources, but also inside our built environments.

- 1. Understand the basics of noise control and current construction best practices**
- 2. Address indoor and outdoor noise concerns before a project is started**
- 3. Conduct a detailed study of noisy equipment**
- 4. Use a systems approach to noise control**
- 5. Seal all air leaks in the building envelope**

For more information on this topic, see the CertainTeed brochure "Noise Control for Buildings" (30-29-121).



InsulSafe® SP

Fiber Glass Blowing Insulation

CertainTeed offers loose fill fiber glass blowing insulation products designed specifically for attics (InsulSafe® SP and TrueComfort®) and closed cavity applications like sidewalls and cathedral ceilings (OPTIMA®). The pneumatic blowing machines used to install these products are fast and efficient, so you can finish more projects in a day and maximize your revenue. The insulation fills every nook and cranny to deliver both thermal and acoustical benefits, and will not settle over time.

Why insulate the attic?

If insulation is just level with or below the floor joists, an upgrade is needed. Adding insulation to a home's attic is the easiest and most cost-effective way to improve energy efficiency and reduce utility bills.



Under-insulated attic: you can see the joists

InsulSafe® SP

Premium Loose Fill Fiber Glass Insulation

InsulSafe® SP premium loose fill insulation improves energy efficiency and reduces energy consumption in both new and older homes. Installing thermally efficient InsulSafe SP fiber glass insulation is one of the most cost-effective energy conservation measures you can offer your customers. Because it's blown in, it fills in even the most hard-to-reach areas of the attic. And it can be quickly, cleanly and easily installed right over existing attic insulation.

InsulSafe SP is manufactured with no formaldehyde and is GREENGUARD Gold Certified for low chemical emissions into indoor air during product usage.

Open Attic Application

R-VALUE	BAG REQUIREMENTS	MAXIMUM COVERAGE	MINIMUM WEIGHT	MINIMUM INSTALLED THICKNESS	MINIMUM SETTLED THICKNESS
To obtain a thermal resistance (R) of:	Number of bags per 1000 sq. ft. of net area:	Contents of bag shall not cover more than: (sq. ft.)	Weight per sq. ft. of installed insulation shall not be less than: (lbs./sq. ft.)	Should not be less than: (in.)	Should not be less than: (in.)
11	5.3	190.5	0.163	4.5	4.5
13	6.2	161.7	0.192	5.25	5.25
19	9.3	107.4	0.289	7.75	7.75
22	10.8	92.9	0.334	8.75	8.75
26	12.8	77.9	0.398	10.25	10.25
30	14.9	67.1	0.462	11.75	11.75
38	19.1	52.5	0.591	14.5	14.5
44	22.4	44.6	0.695	16.75	16.75
49	25.2	39.7	0.780	18.5	18.5
60	31.4	31.9	0.972	22.0	22.0

R-Values are determined in accordance with ASTM C687 and C518. Complies with ASTM C764 as Type 1 pneumatic application.



OPTIMA®

OPTIMA®

Loose Fill Fiber Glass Insulation for Closed Cavity Applications

OPTIMA® gives homes a custom-designed, seamless, thermally efficient sound-reducing blanket that completely fills any void. No other fiber glass product installs better or can be trusted to perform better than OPTIMA. OPTIMA insulation is blown behind a special OPTIMA fabric, or equivalent, in new construction. It can also be used for retrofitting existing sidewalls. This product is formaldehyde-free and is designed specially for closed-cavity applications.

Sidewall, Cathedral and Other Closed Cavities

THICKNESS INCHES	R-VALUE	DENSITY LBS. PER CU. FT.	MINIMUM WEIGHT LBS. PER SQ. FT.	BAGS PER 1,000 SQ. FT.	MAXIMUM SQ. FT. COVERAGE PER BAG
3.5 (2 x 4)	15	1.8	0.525	18.8	53.3
5.5 (2 x 6)	23	1.8	0.825	29.5	33.9
7.25 (2 x 8)	30	1.8	1.088	38.8	25.7
9.25 (2 x 10)	39	1.8	1.388	49.6	20.2
11.25 (2 x 12)	47	1.8	1.688	60.3	16.6
13.25 (2 x 14)	56	1.8	1.988	71.0	14.1

Coverages above are based on a nominal 28-lb. bag weight. For optional densities, refer to OPTIMA brochure (30-24-300).

*For additional dense pack information, contact your territory manager or refer to dense pack sell sheet (30-24-325).

**BPI-102, "Standard for Air Resistance of Thermal Insulation Used in Retrofit Cavity Applications — Material Specification," is BPI's approved technical standard for insulation used in air sealing, and requires that such products limit maximum air permeance to 3.5 cm²/ft² (as measured using ASTM C522). InsulSafe SP achieves this permeance rating at a density of 2.2 lbs/ft³ and OPTIMA at 2.5 lbs/ft³. This compares to 3.5 lbs/ft³ for cellulose.

Dense Packing* and BIBS®

InsulSafe SP and OPTIMA loose fill fiber glass insulation provide the same reductions in air permeance** as cellulose in dense packing applications — with a higher R-Value per inch, high recycled glass content and fewer packages required. Fiber glass doesn't settle, won't absorb moisture or support mold growth, and generates less dust during installation.

OPTIMA is an excellent choice for loose fill sidewall applications installed with the Blow-In-Blanket® System (BIBS®). Thanks to its seamless installation, BIBS with OPTIMA provides outstanding thermal efficiency that reduces heating and cooling energy consumption.



OPTIMA® Fabric



TrueComfort® Machine and Product

TrueComfort® Installation

Go Retrofitting™

Millions of older homes either have no insulation at all in the attic or are woefully under-insulated. The TrueComfort system is an excellent way to tap this lucrative retrofit market. Distributors can purchase blowing machines and rent them to local contractors, while contractors who are serious about adding insulation retrofits to their service offering can buy their own machines.

TrueComfort is easy to transport: 16 packages vs. 46 packages of cellulose for a 1000 sq. ft. area.

Achieve the same R-Value more easily and with less waste.



TrueComfort®

Blown-in Fiber Glass Insulation

TrueComfort® is the perfect product for contractors and remodelers who want to add attic insulation retrofits to their list of services. It's actually a system: TrueComfort blown-in fiber glass insulation and the blowing machine used to install it. The insulation is super-expanding, so fewer bags are required to achieve the target R-Value than with cellulose insulation products. And, like other CertainTeed fiber glass blowing insulation, it's easy to install, less dusty, noncombustible and noncorrosive, and won't settle over time.

The TrueComfort machine is portable and simple to operate. It consists of two pieces for easy transportation, a base and a hopper. Wheels on the base make it maneuverable, and it runs off of one basic 15-amp outlet.

Open Attic Application

R-VALUE	BAG REQUIREMENTS	MAXIMUM COVERAGE	MINIMUM WEIGHT	MINIMUM INSTALLED THICKNESS*	MINIMUM SETTLED THICKNESS
To obtain a thermal resistance (R) of:	Number of bags per 1000 sq. ft. of net area:	Contents of bag shall not cover more than: (sq. ft.)	Weight per sq. ft. of installed insulation shall not be less than: (lbs./sq. ft.)	Should not be less than: (in.)	Should not be less than: (in.)
11	5.7	176.9	0.167	4.90	4.90
13	6.6	150.5	0.196	5.70	5.70
19	9.9	101.5	0.291	8.20	8.20
22	11.3	88.3	0.334	9.30	9.30
26	13.4	74.7	0.395	10.80	10.80
30	15.5	64.5	0.457	12.30	12.30
38	19.8	50.5	0.584	15.20	15.20
44	23.1	43.4	0.680	17.30	17.30
49	25.8	38.8	0.761	19.00	19.00
60	32.1	31.2	0.947	22.75	22.75

R-Values are determined in accordance with ASTM C687 and C518. Complies with ASTM C764 as Type 1 pneumatic application.

*Minimum Installed Thickness: When using the TrueComfort blowing machine and 2-1/2-inch-diameter x 100-foot internally corrugated blowing hose. Based upon 29.5-lb. package net weight. This product is designed to be installed using the TrueComfort blowing machine and accessory equipment. Product performance, including coverage, may vary if installed using different equipment.

For Minnesota coverage chart, go to www.certainteed.com/truecomfort.

A New Generation of Volu-Matics for the Next Generation of Energy Efficiency

With their compact size, lighter weight and competitive price, the performance-proven Volu-Matic® series is perfect for today's changing market and the increased emphasis on energy efficiency.



Volu-Matic® Series Blowing Machines

Go Retrofitting™

TrueComfort® Blowing Machine

This easy-to-learn system can generally insulate a 1,000 square foot attic in about four hours with a two-man crew. Its compact, two-piece design transports easily in an SUV or pick-up. From set-up to tear-down, we supply complete instructions, making it easy for you to start insulation jobs right away.



TrueComfort® System

CertainTeed Machine Works

CertainTeed Machine Works — formerly Unisul — has been a leader in the development of sophisticated machinery used to install insulation and fireproofing materials for 76 years. Backed by CertainTeed's decades of experience in the insulation industry, CertainTeed Machine Works has the resources and expertise to meet the specialized needs of insulation contractors and remodeling/retrofit specialists who work with loose fill fiber glass, spray polyurethane foam and fireproofing materials.

Products

- Insulation blowing machines
- Spray foam systems and equipment
- Insulation vacuums
- Fireproofing machines

Services

- Installation (PTO and engine driven blowing machines, generators and air compressors, spray foam systems)
- Maintenance and repair (complete blowing machine overhauls, preventive maintenance, spray foam system repairs)
- Extensive spare parts and accessories for speedy service and delivery

Call Machine Works
today: 800-237-7841



CertaSpray® Installation System



CertaSpray® Open Cell

Spray Foam Insulation

Spray polyurethane foam (SPF) insulation is made up of millions of small cells filled with an inert gas such as fluorocarbon or carbon dioxide. The low conductivity of this totally encapsulated gas translates to high R-Values and excellent insulating properties. SPF seals air leaks and insulates in one easy step and is ideal for complex cavities and hard-to-reach areas. It offers moisture management and sound control as well as outstanding thermal performance.

Hybrid System

A cost-effective application of three innovative CertainTeed products for superior insulating performance



MemBrain™ Smart Vapor Retarder & Air Barrier Film

OPTIMA® Blow-in Fiber Glass

CertaSpray® Closed Cell

See page 3 for more information on Hybrid Systems

CERTASPRAY®

Spray Foam Insulation

CertainTeed CertaSpray® SPF insulation eliminates uncontrolled air leakage by providing a continuous air barrier within the building envelope, expanding into voids and cracks to minimize the movement of air into and out of the building.

CertaSpray is available in open and closed cell formulations. Either formulation can be used alone, or closed cell can be combined with standard fiber glass insulation to create a high performance hybrid system.

CertainTeed offers dependable product availability, a comprehensive CertaSpray training program and custom spray foam installation systems (through CertainTeed Machine Works).

Spray polyurethane foam is created by the controlled mixing and application of two basic ingredients. The foam expands to many times its original volume to provide air sealing and insulation in one step.





CertaSpray® Training and Support



Closed Cell

CertaSpray closed cell spray foam insulation has exceptional air and vapor barrier properties and it expands 35 to 50 times its original volume adding structural integrity to wall cavities. It provides an aged R-Value of 6.4 per inch at a 1-inch thickness.

THICKNESS	in.	1	1½	2	2½	3	3½	4	4½	5	5½	6	7
	mm	25	38	51	64	76	89	102	114	127	140	152	178
AGED R-VALUE*	(h-ft ² • °F) / BTU	6.4	9.6	12.8	16.0	19.2	22.4	25.6	28.8	32.0	35.2	38.4	44.8
	(m ² • °C) / W	1.13	1.69	2.26	2.82	3.38	3.95	4.51	5.07	5.64	6.20	6.76	7.89

Tested in accordance with ASTM C518 and/or C177 at 75°F (24°C) mean temperature.

Open Cell

CertaSpray open cell spray foam insulation expands to about 150 times its original volume to fill entire wall cavities, and is ideal for most spray foam applications.

R-Value per inch is 3.7.

THICKNESS	in.	1	2½	3	3½	5½	6	7	8	9	10	12
	mm	25	64	76	89	140	152	178	203	229	254	305
AGED R-VALUE*	(h-ft ² • °F) / BTU	3.7	9.3	11.2	13.1	20.6	22.5	26.2	30.0	33.7	37.5	45.0
	(m ² • °C) / W	0.65	1.64	1.97	2.31	3.63	3.96	4.62	5.28	5.94	6.60	7.92

Tested in accordance with ASTM C518 and/or C177 at 75°F (24°C) mean temperature.

*Aged 90 days at 140°F.

While actually applying spray foam insulation is relatively simple, many aspects of working with SPF require professional skills. Knowledge of safety procedures, personal protective equipment, material handling and installation equipment maintenance is critical — and CertainTeed provides a comprehensive training program that covers all the bases: classroom instruction, hands-on experience and testing. Technical support and materials (e.g., job site signage, equipment troubleshooting guidelines) are also available.



CERTA COAT™ IC

Intumescent Coating

CertaCoat™ IC is an intumescent coating that is applied to the surface of CertaSpray open cell spray polyurethane foam insulation to enhance its fire-rated performance. CertaCoat IC is a certified ignition barrier (tested to NFPA 286) that meets building code requirements per International Code Council Evaluation Service (ICC-ES) Acceptance Criteria 377 (AC-377). The easy-to-use single-component formulation is latex based — which gives the contractor flexibility to choose either an airless sprayer (recommended) or a roller or brush for application — and covers a maximum of 200 square feet per gallon. CertaCoat IC ships with every order of CertaSpray open cell SPF.



Supporting Results

You need what you ordered, on the date you expect it. You need products with a high quality standard, so that you can count on them every time. And finally, you need the business support and tools that put you ahead of the competition. Through our Service Advantage and Customer Bill of Rights, we promise to deliver just that. And we pledge open and honest communications with our customers at every step, from corporate direction to every support call.



Engineering Performance

Every solution starts with your challenges.

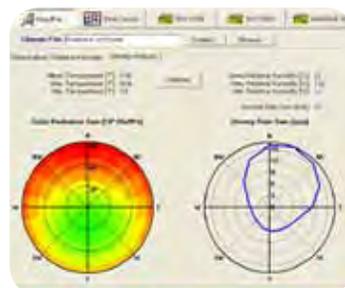
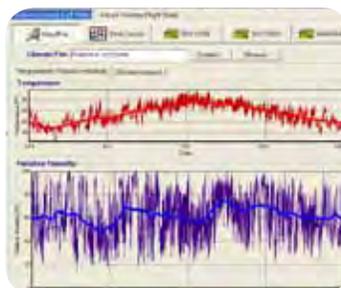
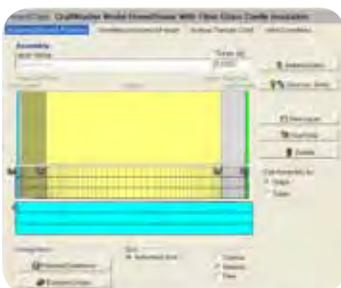
We do it all with a foundation of Building Science expertise and training that helps you achieve the highest total building performance.

There's more to improving a home's energy performance than simply adding insulation ... though it's an excellent starting point! Every home is a system made up of separate components — the building envelope, mechanical systems and occupants — whose interactions affect how much moisture the home generates and how well it manages that moisture. CertainTeed offers innovative products that work with our insulation to provide improved protection against moisture's potentially damaging effects.

Moisture

A family of four can produce two to three gallons of water vapor every day simply by bathing, laundering, cooking — even breathing. During the heating season this vapor is drawn from the home's warm interior to the cooler exterior. If its movement into attics and exterior wall cavities is not minimized by a vapor retarder, condensation occurs when the vapor contacts a cold surface. Continued exposure to such damp conditions can compromise insulation performance, damage wood framing and cause mold and mildew to grow.

CertainTeed High Performance Insulation Products



CertainTeed's Building Science experts use many forms of testing and analysis, including sophisticated energy and moisture modeling, to help bring the best products and solutions to the insulation marketplace.



Vapor Retarders

A vapor retarder is any material that limits or restricts the transmission of water vapor. CertainTeed fiber glass insulation is available with kraft, standard foil or flame resistant facings that function as vapor retarders.

Unfaced insulation requires a separate vapor retarder, typically polyethylene film. CertainTeed MemBrain™ Smart Vapor Retarder & Air Barrier Film is an innovative new option that actually changes its permeability to water vapor depending on ambient humidity; see pages 20-21 for more information.

Ventilation

To allow excess water vapor to escape, provisions should be made for proper ventilation when installing insulation. In attics, the most common approach is a static system with some combination of simple gable, eave or ridge vents. The basic rule of thumb is to provide one square foot of vent area for every 150 square feet of net floor area. When a vapor retarder is present, that figure doubles to 300 square feet — but note that an attic vapor retarder is not required if there is sufficient ventilation (unless the home is located in a very cold region or has higher than normal interior humidity).

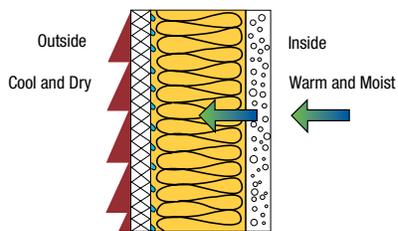
Airtightness

Only when the building envelope is airtight can warm air be retained within the building and cold air kept outside. Preventing leaks gives greater thermal comfort, increased energy efficiency, and protects the building materials against damage, helping to maintain its appearance and extending the building's life. But the benefits are not purely financial, as high levels of airtightness also ensure healthy indoor air quality for the occupants.

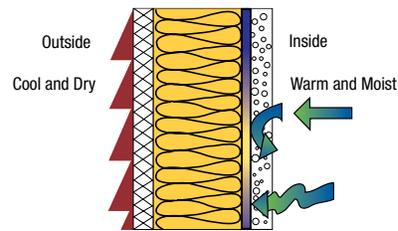
CertainTeed MemBrain™ Smart Vapor Retarder & Air Barrier Film and CertaSpray® Closed Cell spray foam insulation can both be installed to perform as building envelope air barriers to create an air tight home.

Compliances

For compliance information on CertainTeed insulation, see the specification sheet for each individual product. Specification sheets can be found at www.certainteed/insulation.



Without a vapor retarder, moisture can penetrate wall and condense on cold surface



With a vapor retarder, moisture can't reach cold surface to condense



Interesting Mold Facts

There are thousands of known species of mold, but they all require the same four things to live:

- Food source - typically starch or sugar
- Temperature - cozy 41° F to 140° F
- Oxygen
- Water

Once mold growth has started, each mold colony (mycelium) produces millions of microscopic spores within a few days.

What Homeowners think of mold*:

- Health Risk - 65% listed as #1 concern
- Expense of Repair - 31% listed as #2 concern
- Structural Damage - 27% listed as #3 concern

84% would not buy a home with a history of mold, and 48% said they would sue a builder, previous owner or landlord if they found mold in their walls.

Simple steps can be taken to prevent mold and subsequent effects to health and home, but once mold starts to grow, remediation is a lengthy and costly process.

*Conducted by National Opinion Research for CertainTeed Corp.



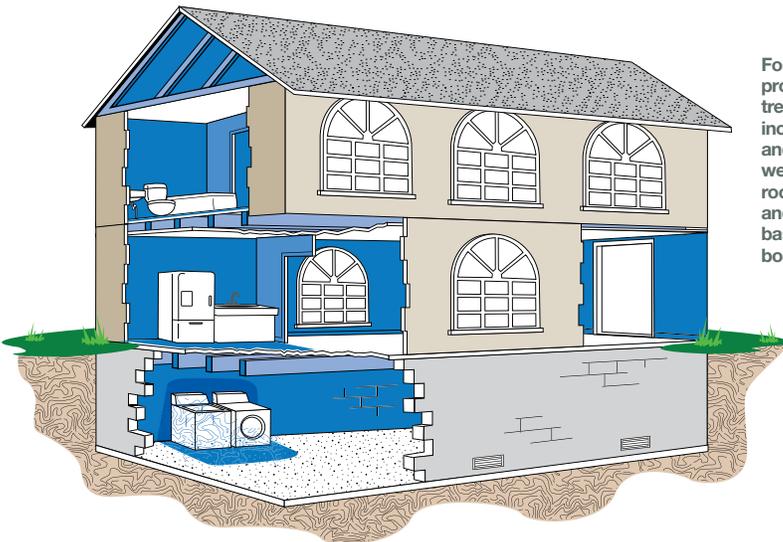
FortiCel™ and FortiCel™ Crawlspace Mold Prevention Coating System

FortiCel™ is a protective coating system available exclusively from CertainTeed that is professionally applied to the structural framing of a home during construction, before the insulation is installed. FortiCel helps to prevent the growth of mold on treated surfaces, providing protection against structural damage and the potential health affects of mold.

Unlike other mold prevention technologies, FortiCel works by preventing mold spores from ever germinating on the treated surface. It's been independently tested by ASTM and is endorsed by Moldhelp.org. Safe for families and pets, FortiCel contains no VOCs and is approved for use in all states.

FortiCel is backed by a fully transferable 25-year warranty that covers all remediation costs in the unlikely event mold growth occurs.

FortiCel™ provides protection on treated surfaces, including interior and exterior walls, wet areas, trusses, roof sheathing and crawlspace/ basement floor boards and joists.

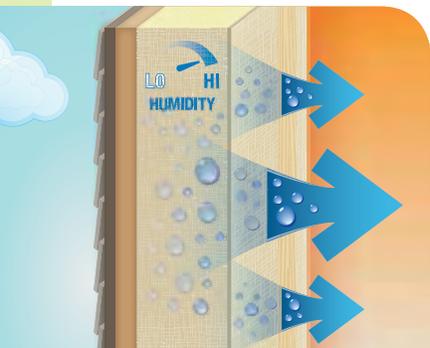


How MemBrain™ Works



Blocks Moisture

When humidity levels in the wall are low, MemBrain prevents indoor moisture from entering.



Releases Moisture

When humidity levels in the wall increase, MemBrain becomes more porous to let excess moisture escape.

MemBrain is unique among vapor retarders because of its ability to change its molecular structure. When humidity is low, it functions as a standard vapor retarder, like asphalt coated kraft paper. When humidity is high, it ranges from Class III (semi-permeable) to permeable. MemBrain is the only product on the market that straddles three vapor retarder categories.

MEMBRAIN™

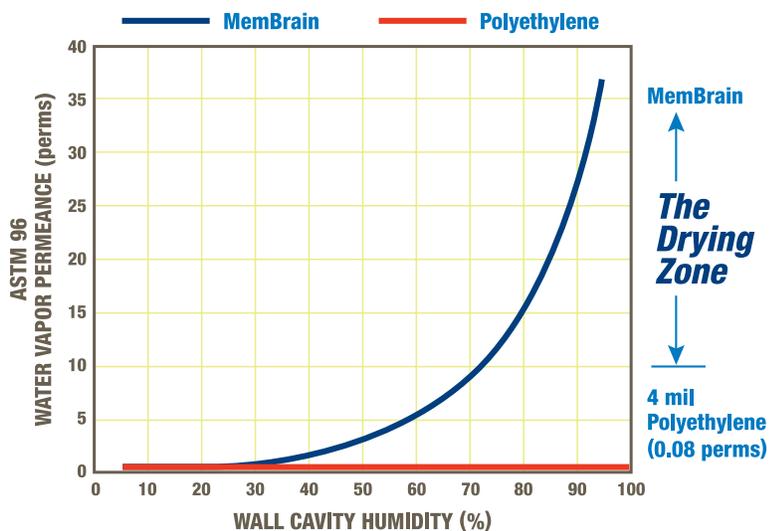


The Smart Vapor Retarder & Air Barrier Film

It's nearly impossible to keep air and moisture from entering a home's walls. That's why traditional vapor and air barriers only do half the job. Poly helps block moisture and air, but can also block moisture from escaping — hindering the home's natural drying potential and increasing the risk of costly mold and mildew.

MemBrain's innovative technology not only blocks moisture and air, it is designed to help wall cavities stay dry. Unlike traditional poly vapor barriers, MemBrain blocks moisture when humidity is low in the cavity yet increases its permeability when humidity is high to let moisture escape while still maintaining its air tightness.

Water Vapor Permeance



Why is MemBrain So Smart?

IT COVERS MULTIPLE CLASSES FOR YOUR PROTECTION

Vapor Barrier (Class I)	Vapor Retarder (Class II)	Semi-permeable (Class III)	Permeable
Perm 0.01 to 0.1	Perm 0.1 to 1	Perm 1 to 10	Perm 10 to 100

6 mil polyethylene (0.05-0.06)
 MemBrain (0.8-36)
 Plain gypsum board (45-85)



MemBrain™ Hybrid Application

Airtightness

Only when a building envelope is airtight can warm air be retained within and cold air kept outside, preventing unpleasant drafts, giving greater thermal comfort and increased energy efficiency.

Benefits

Energy Efficiency:

With energy prices continually on the rise, airtightness becomes increasingly more important to control air exchange and heat loss, reducing energy costs.

Thermal Comfort:

A home's interior environment is more than just protection from heat and cold — fresh air and excellent thermal comfort are expected.

MemBrain Benefits

MemBrain vapor retarder and air barrier is a smart solution to help protect homes from the costly threat of moisture damage and unhealthy mold and mildew growth.

- Actively changes permeability to help reduce moisture buildup in wall cavities
- Helps prevent expensive mold, mildew and rot damage, offering long-term peace of mind
- Can protect indoor air quality and lower the risk of occupant respiratory health problems
- Easy to handle and installs just like traditional poly
- Can be installed as an interior air barrier system providing an additional level of air tightness and energy efficiency
- Class A Fire Rated



MemBrain™ and Unfaced Application

NOMINAL PRODUCT SIZE		NOMINAL WEB WIDTH		ACTUAL WEB WIDTH		COVERAGE		BOX LENGTH		ROLL WEIGHT*		ROLLS PER PALLET	WEIGHT PER PALLET	
ft.	m	in.	mm	in.	mm	sq. ft.	sq. m	in.	m	lbs.	kg	**	lbs.	kg
8	2.44	96	2438	100	2450	800	74.3	28.3	718	11.1	5.0	45	545	247
9	2.74	108	2743	112	2845	900	83.6	31.5	800	12.5	5.7	45	608	276
10	3.05	120	3048	124	3150	1000	92.9	34.5	876	13.7	6.2	40	593	269
12	3.66	144	3658	148	3759	1200	111.5	41.0	1041	17.0	7.7	30	555	252

*With box and core

**48" (1219 mm) maximum pallet height

Protected by one or more of the following U.S. and foreign patents: U.S. Pat. Nos. 6,808,772; 6,878,455; 6,890,666; and 7,008,800. Can. Pat. No. 2215502. Other U.S. and foreign patents pending.

For every insulation challenge, there's a CertainTeed solution.



Residential Sustainable Insulation



CertaPro® Commercial Insulation



Machine Works



Mold Prevention



Spray Foam Insulation



HVAC / Mechanical



Premium Blow-in Insulation



[Be Certain]™

You can **Be Certain**™ no other manufacturer offers the depth and breadth of interior and exterior building solutions, knowledge, innovation and sustainability that CertainTeed does. Our advanced, multi-product solutions optimize building efficiency, while creating beautiful, comfortable environments where people can thrive. We continue to shape the future of the building materials industry with a new generation of integrated building solutions.

That's confidence worth building on.™



ASK ABOUT ALL OF OUR OTHER CERTAINTEED® PRODUCTS AND SYSTEMS:

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www.certainteed.com/insulation <http://blog.certainteed.com>

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