CertainTeed

Residential Insulation

Product Selection Guide

CertainTeed
SAINT-GOBAIN

CertainTeed Insulation

Complete Comfort for your customers—and you

CertainTeed knows your business depends on giving your customers the best products and service—so we do the same for you.

We're the building science experts. We help you deliver the combination of thermal performance, air tightness, acoustic performance and moisture management your customers need. Like you, we know that no insulation product or system is right for every part of every home, budget or climate. That's why we offer **the most complete line of insulation products available from a single manufacturer.**

Bring us your projects. Bring us your challenges. We've been in this business—and dedicated to your success—for more than 100 years. We're here whenever you need us with the quality products, support and services that help you create the homes your customers want. Homes of Complete Comfort.

Quality—Selection—Service

Products
With the most comprehensive product line in the industry, CertainTeed has everything you need to satisfy even the toughest building codes and customer demands for any new build, retrofit or remodel.

Support
We're committed to helping you succeed. We provide prompt, outstanding technical assistance along with a full range of online calculators, marketing tools and other business-building resources.

Service
We'll help you select and customize the best insulation system—the best *solutions*—for your customers. With our Service Advantage, Customer Bill of Rights and unmatched expertise, you can be sure you get what you need, when you need it.

Sustainability
Like many of your customers, CertainTeed is committed to environmental responsibility. With the market for green buildings booming, we have the products, tools and certifications you need to meet green building standards.

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Comprehensive Solutions Through the Largest Product Offering

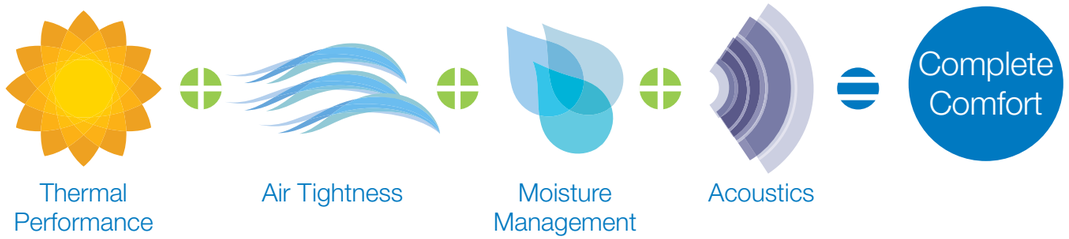
Inside this catalog you'll discover how CertainTeed Insulation's unmatched breadth of residential insulation products gives you the best solution for any location, building, budget and customer.

With fiber glass Sustainable Insulation® and blowing wool, spray polyurethane foam, smart vapor retarders 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.

Complete Comfort

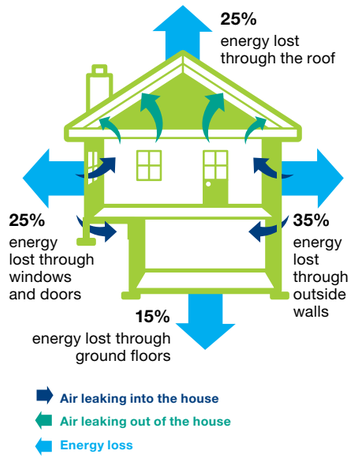
Your insulation choice impacts thermal performance as well as moisture management, air tightness and acoustics. It's important to choose wisely during a home's construction, as upgrading later can be difficult and expensive. When the insulation you choose successfully controls all of the following aspects, you can achieve a higher level of comfort for your customers.



The Benefits of Insulation

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



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.

Create a More Comfortable Home

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.

Air Tightness 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.

Moisture Management 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.

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.*

	Thermal Performance	Air Barrier	Superior Moisture Protection	Acoustics	Fire Safety
Sustainable Insulation® - unfaced	●			●	●
Sustainable Insulation® - kraft	●			●	
SMARTBATT™	●		●	●	
SpeedyR™	●			●	●
Basement Wall	●			●	●
Masonry Wall	●			●	●
Noise Reducer™	●			●	
Insulsafe® SP	●			●	●
OPTIMA®	●			●	●
TrueComfort®	●			●	●
CertaSpray® - Open Cell	●			●	●*
CertaSpray® - Closed Cell	●	●	●	●	●*
CertaSpray®X	●			●	●
FortiCel™					
MemBrain™		●	●		●**

*Spray foam must be covered with a thermal barrier as defined by local code.
**MemBrain is Class A fire rated.

Hybrid Insulation Solutions

By combining CertaSpray® closed cell foam insulation with OPTIMA® blow-in insulation or Sustainable Insulation Unfaced Batts, 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 certainteed.com/completecomfort for more on how they work together to deliver outstanding performance.

Fiber Glass Insulation

Thermal Performance

Fiber glass insulation delivers exceptional energy efficiency and thermal performance that result in more comfortable living spaces and lower energy costs for homeowners.

Heat constantly moves to colder areas, which is why homes need thermal resistance (measured by R-Value) between the indoors and outdoors. **The higher the R-Value, the greater the insulation power.**

CertainTeed fiber glass insulation is compression packaged for ease of handling and comes in a wide range of R-Values, sizes and facings. **It's critical to determine the recommended R-Value according to your region.** However, code is a recommended *minimum.*

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 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. Batts 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. CertainTeed Insulation has a number of corporate affiliations and accreditations as well, including:

- ENERGY STAR®
  Sustained Excellence Award
  ENERGY STAR Partner
- 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 U.S. manufacturing facilities are ISO 14001:2004 certified
- EPDs and HPDs are available for Sustainable Insulation products

Fire Safety

Naturally noncombustible, unfaced Sustainable Insulation™ requires no chemical additives to provide the fire protection that helps give your customers peace of mind.

- Classifies as noncombustible under ASTM E136 testing
- Meets Class A Standards under ASTM E84 testing
- Accepted as a fire block in wood frame walls under international and many local building codes

Other types of insulation may be naturally noncombustible, but Sustainable Insulation is more economical, more flexible and lighter weight.

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

Renewable. Recycled. Plant Based. 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.

Kraft Faced Batts

R-VALUE	R	11	13	15	19	20	21	22	25	26	30	30C*	38	38C*
	RSI	1.9	2.3	2.6	3.3	3.52	3.7	3.9	4.4	4.6	5.3	5.3	6.7	6.7
THICKNESS	in.	3½	3½	3½	6¼	5½	5½	6½	8	8	10	8¼	12	10¼
	mm	89	89	89	159	140	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	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	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.

Unfaced Batts

R-VALUE	R	11	13	15	19	20	21	25	30	30C*	38	38C*
	RSI	1.9	2.3	2.6	3.3	3.52	3.7	4.4	5.3	5.3	6.7	6.7
THICKNESS	in.	3½	3½	3½	6¼	5½	5½	8	10	8¼	12	10¼
	mm	89	89	89	159	140	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	15¼	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	387	381, 387, 591	381, 406, 483, 584, 610, 813, 1181	406, 483, 610	387, 591	406, 610	387, 591

SMARTBATT™

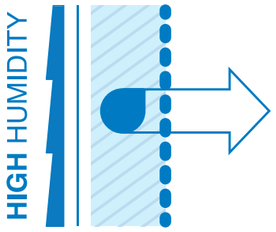
with MoistureSense™ Technology

Intelligent Moisture Management

Moisture is unavoidable. It can get into wall cavities from the outside during hot humid summers and from the inside during cold dry winters. Traditional vapor retarders can trap moisture within the walls, creating a breeding ground for mold, mildew and wood rot. Insulation performance and indoor air quality can suffer and eventually, structural damage becomes a real possibility.

SMARTBATT™ with MoistureSense™ Technology is the first and only insulation that actively helps protect homes from the damaging effects of moisture. It's a revolutionary way to manage moisture and create a healthier indoor environment for your customers.

Blocks moisture from getting in when humidity in the cavity is low



Lets it escape when humidity in the cavity is high

How It Works

At the core of SMARTBATT is CertainTeed's sustainable fiber glass wool, which has been engineered for superior drying capabilities as well as thermal resistance and noise reduction. The SMARTBATT MoistureSense facing performs as a smart vapor retarder—its permeability adjusts according to the humidity inside the walls. When it's low, SMARTBATT keeps moisture from getting in. When it's high, SMARTBATT lets the moisture inside the walls escape into the conditioned interior of the home, keeping walls dry year round.

SMARTBATT meets or exceeds even the most forward-looking building code requirements for a vapor retarder, and with 66% less asphalt, it's even easier to cut and install than traditional kraft.

R-VALUE	R	13	15	19	21	30	38
	RSI	2.3	2.6	3.3	3.7	5.3	6.7
THICKNESS	in.	3½	3½	6¼	5½	10	12
	mm	89	89	159	140	254	305
WIDTH	in.	15, 15¼, 23	15, 15¼, 23	15, 15¼, 16, 23	15, 15¼, 23	16, 24	16, 24
	mm	381, 387, 584	381, 387, 584	381, 387, 406, 584	381, 387, 584	406, 610	406, 610

SpeedyR™ Tabless Batts

Basement Wall Insulation

Masonry Wall 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™

Tabless Fiber Glass Insulation

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.

R-VALUE	R	11	11
	RSI	1.9	1.9
THICKNESS	in.	3⅛	3⅛
	mm	79	79
WIDTH	in.	48	48
	mm	1219	1219
FACING		White PSK, Perforated	FSK, Perforated

Basement Wall Insulation

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.

R-VALUE	R	3	6
	RSI	.5	1.1
THICKNESS	in.	¾	1¾
	mm	19	44
WIDTH	in.	15	15, 23
	mm	381	381, 584
FACING		Unfaced	Unfaced

Masonry Wall Insulation

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.

Acoustics

Solutions for Quieter Spaces

Everyone wants a peaceful, quiet home. And insulation can help by managing noise from outside and throughout the house. CertainTeed Insulation helps reduce exterior noise and is great for interior walls—helping quiet room-to-room sounds.

Common Acoustical Offenders

Exterior Noise
- Road and air traffic
- Lawn mowers
- Barking dogs

Interior Noise
- Appliances
- Home theaters and video games
- Plumbing pipes
- Footsteps on hard flooring

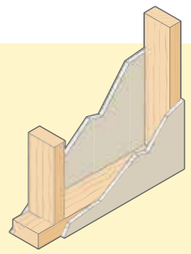
The way a home's walls and floors are constructed affects its acoustical performance, which in turn has a large impact on the well being of its occupants. CertainTeed offers a number of insulation products that are designed to limit sound transmission through different types of wall and floor/ceiling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

The Science of Sound

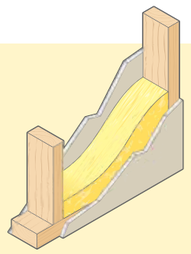
There are two types of sound paths: airborne and structureborne. Airborne sound is transmitted directly from a source into the air. The source can be noise from within the home—generated by appliances, home theaters and video games, even voices from an adjacent room—or external noise like traffic and 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.

Sound Transmission

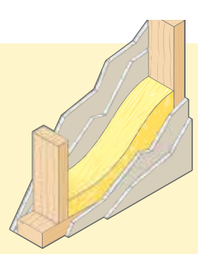
Sound Transmission Class (STC) is a performance rating of the ability of a wall or floor section to block noise. The higher the STC rating, the less sound is transmitted. These illustrations show how insulation and robust wall construction improve STC.



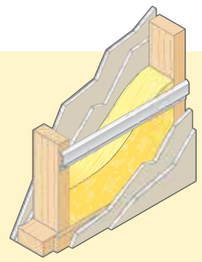
Conventional wood stud construction, single layer gypsum wallboard each side. **STC 30-35**.



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 45**.



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

NoiseReducer™ Sound Control 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).

6 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**
6. **Insulation thickness within the wall cavity is the most important property, not density**

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 for 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.

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.

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

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 Application—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 cfm/ft^2 (as measured using ASTM C522). InsulSafe SP achieves this permeance rating at a density of 2.2 lbs/ft^3 and OPTIMA at 2.5 lbs/ft^3. This compares to 3.5 lbs/ft^3 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® Fabric

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.

TrueComfort® Machine and Product

TrueComfort® Installation

Go Retrofitting™

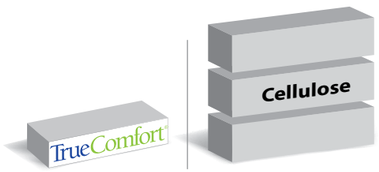
Forty-six million U.S. homes either have no insulation at all in the attic or are woefully under-insulated. The TrueComfort system is an excellent way to tap this lucrative retrofit market. Distributors can purchase blowing machines and rent them to local contractors, while contractors who are serious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

TrueComfort®

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.



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.

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.

Volu-Matic® Series Blowing Machines

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.

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 since 1936. 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

CertaSpray® Installation System

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

Go Retrofitting™

TrueComfort® Blowing Machine

This easy-to-learn system can generally insulate a 1000 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

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.

The Right Solution for Every Home

Our breadth of insulating solutions ensures you can meet every building need, achieving optimal comfort and efficiency. We've compiled a series of systems to help you explore how you can achieve the greatest comfort in every situation.

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).

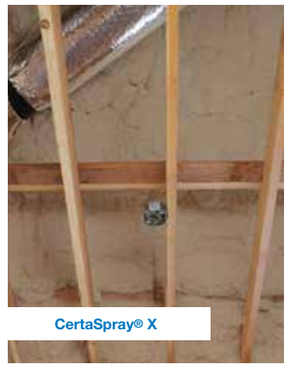
Spray polyurethane foam is created by the controlled mixing and application of two basic ingredients. The foam expands to many times its original volume to provide air sealing and insulation in one step.

CertaSpray® X

Open Cell Spray Foam Insulation

CertaSpray® X Open Cell Spray Foam Insulation is the newest high performance product in CertainTeed Insulation's CertaSpray portfolio. CSX meets the requirements of AC377 Appendix X and can be installed in attics and crawl spaces without the need for an ignition barrier or additional intumescent coating.* This means CertaSpray X Open Cell Spray foam can be applied in one step and left exposed in such areas, enabling contractors a quicker install time and less labor costs.

*Refer to local building code for complete requirements and approvals.



CertaSpray® X

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.

THICKNESS	in.	1	1½	2	2½	3	3½	4	4½	5	5½	6	7½	8½	10	11½	12
	mm	25	38	51	64	76	89	102	114	127	140	152	191	216	254	292	305
AGED R-VALUE*	(h-ft² • °F) / BTU	6.5	9.8	13	17	20	23	27	30	33	37	40	50	56	66	76	80

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

*Aged 90 days at 140°F.

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.

THICKNESS	in.	1	1½	2	2½	3	3½	4	4½	5	5½	6	7	8	9	10	11	12
	mm	25	38	51	64	76	89	102	114	127	140	152	191	203	229	254	279	305
AGED R-VALUE*	(h-ft² • °F) / BTU	3.7	5.6	7.4	9.3	11	13	15	17	19	21	23	26	30	34	38	41	45

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

*Aged 90 days at 140°F.

CertaSpray® Training and Support

CertaSpray® Closed Cell

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.

Become a CertainTeed Credentialed Contractor™ (C3) and stand apart from the competition with unmatched training, marketing support and exclusive incentives.

CERTAINTEED CREDENTIALED CONTRACTOR

Learn more at www.certainteed.com/C3.

Our Most Advanced Insulation Systems

CertainTeed's groundbreaking Hybrid Insulation Systems combine the most advanced products for a thermally superior, air-tight seal with excellent acoustics. That's something we can deliver, with the industry's most comprehensive and innovative insulation offering.

OPTION 1

CertaSpray + Sustainable Insulation Unfaced Batt

2×4 Wall **R-18***	2×6 Wall **R-25****

IDEAL APPLICATIONS

Achieving a near maximum degree of Complete Comfort with a cost-effective product combination in exterior walls.

EXCEPTIONAL PROPERTIES Thermal Performance, Air Tightness

*with R-13 batt **with R-15 batt ***2" OPTIMA R-8.58 ****4" OPTIMA R-17.16

OPTION 2

CertaSpray + OPTIMA Blow-In Insulation

2×4 Wall **R-18*****	2×6 Wall **R-28******

IDEAL APPLICATIONS

Achieving a true no-compromise level of Complete Comfort in exterior walls.

EXCEPTIONAL PROPERTIES Thermal Performance, Air Tightness, Acoustics

Residential Walls (Wood Stud)

		Standard		Enhanced			Optimal			
		Sustainable Insulation® Kraft Faced Batt + Caulk & Seal	Sustainable Insulation High Density Kraft Faced Batt + Caulk & Seal	SMARTBATT™ with Moisture Sense™ Technology + Caulk & Seal	CertaSpray® Open Cell Spray Foam†	Sustainable Insulation Unfaced Batt + MemBrain	OPTIMA® + MemBrain	HYBRID OPTION 1 — CertaSpray + Sustainable Insulation Unfaced Batt†	HYBRID OPTION 2 — CertaSpray + OPTIMA†	CertaSpray Closed Cell Spray Foam — Full Cavity†
R	R-Value (2×4)	R-13	R-15	R-13 to R-15	R-13.1	R-13 to R-15	R-15	R-18*	R-18***	R-22.4
R	R-Value (2×6)	R-19	R-21	R-19 to R-21	R-20.6	R-19 to R-21	R-23	R-25**	R-28****	R-35.2
	Exceptional Thermal Performance						✓	✓	✓	✓
	Exceptional Air Tightness				✓	✓	✓	✓	✓	✓
	Exceptional Moisture Management			✓		✓	✓			
	Exceptional Acoustic Performance						✓		✓	

Hybrid Systems include 1.5" CCSPF

*with R-13 batt **with R-15 batt ***2" OPTIMA R-8.58 ****4" OPTIMA R-17.16

†Blocks moisture and air, closed cell 2" or greater and open cell 3.5" or greater.

NOTE: Adding MemBrain™ Continuous Air Barrier & Smart Vapor Retarder to most systems can greatly increase moisture management and air tightness performance.

Building Science Solutions

Building Science is the key to developing products that can give your customers the Complete Comfort they want, and no one knows Building Science like CertainTeed. Here we present a few of the basics behind the groundbreaking moisture management technologies available only from CertainTeed.

Moisture

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.

It's unavoidable—but manageable

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.

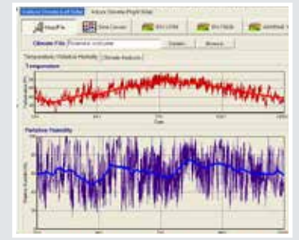
Vapor Retarders

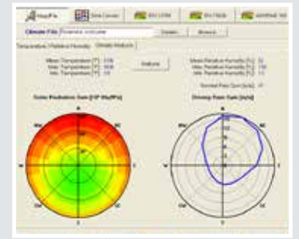
A vapor retarder is any material that limits or restricts the transmission of water vapor. CertainTeed fiber glass insulation is available with kraft, standard foil or flame resistant facings that function as vapor retarders.

Unfaced insulation requires a separate vapor retarder, typically polyethylene film. CertainTeed MemBrain™ Continuous Air Barrier & Smart Vapor Retarder is an innovative option that actually changes its permeability to water vapor depending on ambient humidity;
see pages 22-23 for more information.

Innovative Modeling

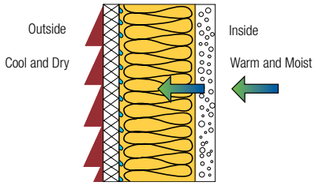
CertainTeed's Building Science experts use many forms of testing and analysis, including sophisticated energy and moisture modeling, to help bring the best products and solutions to the insulation marketplace.



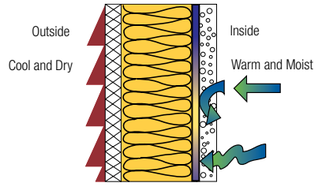


MemBrain™

FortiCel™



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

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).

Air Tightness

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

CertainTeed MemBrain™ Continuous Air Barrier & Smart Vapor Retarder 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.

Achieve Continuity

Air constantly moves from high to low pressure, finding every penetration into and out of a home, which is why proper air sealing is crucial to create a continuous seal at all joints and penetrations. MemBrain provides continuous air barrier protection.

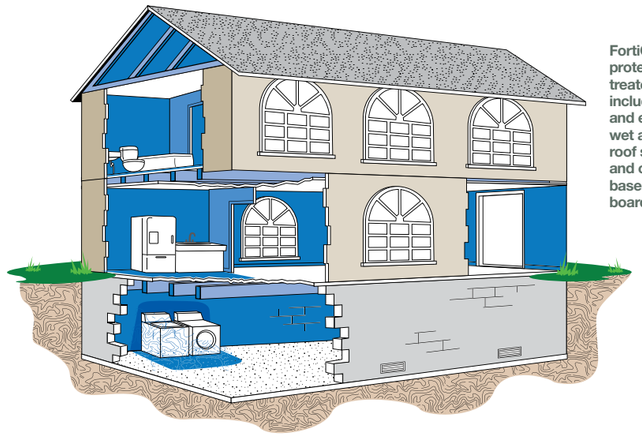
FORTiCEL™ 25 YEAR WARRANTY
Professionally Applied, Safe & Effective

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 effects 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.

Interesting Mold Facts

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

1. Food source—typically starch or sugar

2. Temperature—cozy 41° F to 140° F

3. Oxygen

4. 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.

How MemBrain™ Works

LOW HUMIDITY

Remains moisture tight in winter when humidity in the cavity is low

HIGH HUMIDITY

Increases permeability in summer to let moisture escape when needed

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.

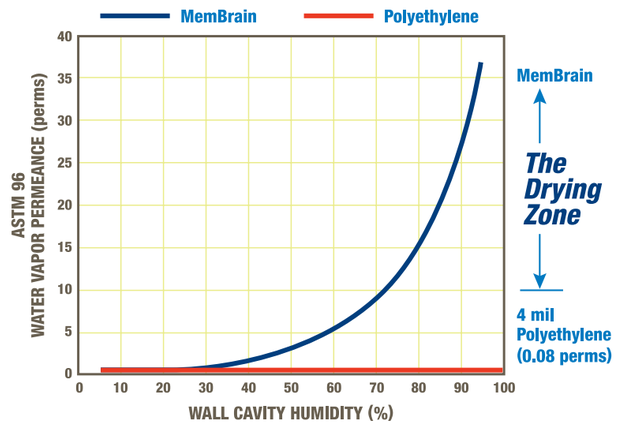
MEMBRAIN™

Continuous Air Barrier & Smart Vapor Retarder

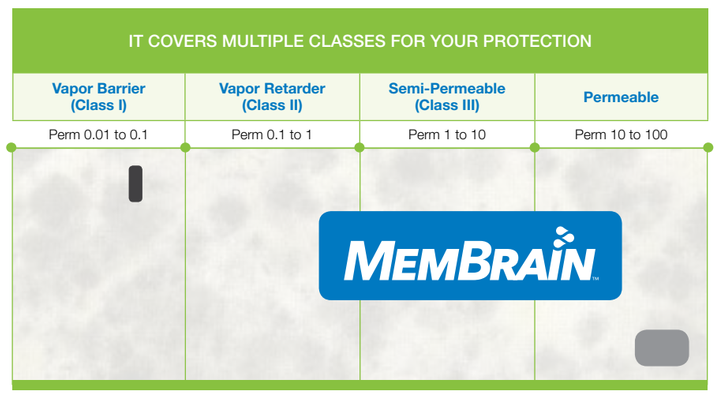
CertainTeed's exclusive MemBrain™ Continuous Air Barrier and Smart Vapor Retarder is the industry's most advanced technology to create a better performing home.

This revolutionary solution can provide a continuous air barrier along with advanced moisture management in a single product, helping achieve Complete Comfort. It's another reason why choosing CertainTeed means you're installing much more than trusted high-performance insulation products. You're installing confidence.

Water Vapor Permeance



Why is MemBrain so smart?



Building Science Solutions

MemBrain™ & OPTIMA® Application

Air tightness is rapidly becoming central to new building codes.

Indoor air quality, energy efficiency, acoustics, comfort and moisture management within the wall cavity can all be seriously compromised if a house is not air tight.

Tougher Codes Are Here

IECC 2012's far more stringent air sealing requirements will make improved air sealing and moisture management practices a necessity for you. These codes restrict the number of air changes in a structure per hour and call for use of vapor retarders in mixed climates. However, as the air tightness of a home increases, there's yet another new challenge. The same continuous seal that keeps air leakage out of the home could be trapping harmful moisture in the cavity.

Greater Air Tightness = Greater Moisture Challenges

In "mixed-climate" parts of the country, where homes heat in the winter and cool in the summer, homes using traditional polyethylene vapor retarders may actually trap moisture in the cavity during the summer—raising the risk of costly moisture and mold issues, structural damage, health consequences and liability.

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

MemBrain Benefits

- **Continuous indoor air barrier* creates a better performing building envelope**
- **Dynamic performance and permeance rating compared to traditional kraft insulation or polyethylene sheeting**
- **Senses and adapts permeance to varying humidity throughout the year to keep the cavity dry**
- **Prevents moisture vapor from entering the wall cavity in the winter**
- **Allows any moisture buildup to escape the cavity in the summer**
- **When installed with standard tape and sealing practices, creates an air barrier that has been tested under stringent performance guidelines**

* When installed with standard tape and sealing practices, MemBrain forms a continuous air barrier system that enhances air tightness and improves overall comfort.

MemBrain™ and Unfaced Application

CertainTeed
SAINT-GOBAIN
Insulation

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

Residential Sustainable Insulation®

Air and Moisture Management

CertaPro® Commercial Insulation

Spray Foam Insulation

HVAC / Mechanical

Machine Works

Premium Blow-in Insulation

Seal and Insulate with ENERGY STAR
LEARN MORE AT energystar.gov

U.S. GREEN BUILDING COUNCIL MEMBER

GREENGUARD GOLD

Home Innovation
NGBS GREEN CERTIFIED™
Cert. #00187/#00048

ENERGY STAR AWARD 2015
PARTNER OF THE YEAR
Sustained Excellence

[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:

ROOFING • SIDING • TRIM • DECKING • RAILING • FENCE
GYPSUM • CEILINGS • INSULATION

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

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Code No. 30-29-092

SAINT-GOBAIN