Fiber Glass Insulation

So much depends on you choosing the right insulation.





Time to think differently about fiber glass insulation.

Fiber glass insulation may not be what you think about when you think of *home sweet home*. However, learning about the many features and benefits of fiber glass insulation may help your home become more efficient and comfortable.

You'll spend vast amounts of time choosing the right wall color or the perfect cabinetry for your home. While these are important things to concentrate on, they have little bearing on your home's performance, its resale value or the health of those who are living within it.

It's no wonder insulation doesn't command the same attention as marble countertops. You can't see any of it. Marble countertops you can easily change in 10 years. You have to live with insulation a lot longer. Considering the substantial benefits a fiber glass insulated home provides, understanding its role can go a long way toward taking better care of your home and family, as well as the environment.

Building is indeed a science.

With more than 50 years of research, fiber glass is one of the most examined building products in the world. Scientists agree that fiber glass insulation is safe to manufacture, install and have in your living environment. Building scientists also agree that the right fiber glass insulation and correct installation can have significant positive effects on a home's performance.

CertainTeed Building Science is all about understanding how different

building products used to construct walls, ceilings, roofs and other components interact with each other, as well as the home's occupants. The right conditions make homes more energy-efficient and more comfortable to live in—safer and healthier, too.

CertainTeed's Building Science department continues to develop the latest innovations in fiber glass insulation that deliver optimum performance. For more information, see www.certainteed.com/buildingscience.



THE VALUE OF R-VALUE.

Insulation's effectiveness is measured in R-Value. R stands for the insulation's resistance to heat flow; heat escapes from your home in the winter and heated air enters your home in the summer. The higher the R-Value, the greater the resistance to heat flow and the greater your potential for saving energy, natural resources and money. Insulation rated as R-19 will provide greater resistance to heat flow than insulation rated as R-13. Many different R-Values are used in homes today based on the needs of the application. For example, your walls may contain R-13 insulation and your attic could have R-38 material.

Insulate locally. Save globally.

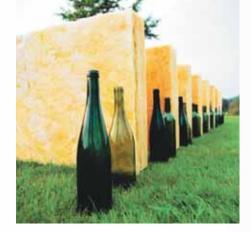
Under-insulated homes experience substantial heat loss in winter and heat gain in summer. This tremendous energy loss forces your home's heating and cooling systems to work overtime and waste your hard-earned money, along with our planet's limited natural resources.

When you decrease the amount of energy used to heat and cool your home, fewer overall emissions of greenhouse gases and other pollutants are produced. Better insulated homes also require fewer power plants to produce the energy needed to heat and cool them, which also helps cut down on greenhouse gas emissions. To keep performing efficiently and comfortably, a home insulated with fiber glass uses less natural resources. And fewer of your own financial resources. Taking care of your home is an important step in taking care of our world.

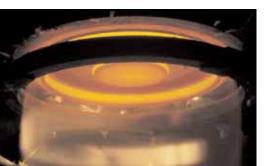
DID YOU KNOW?

Our insulation saves more resources than it costs to make. For every BTU used to manufacture fiber glass insulation, an average of 12 BTU's are saved yearly. In addition, CertainTeed is committed to promoting sustainable building practices and providing insulation products that contribute to green building. CertainTeed is a member of the United States Green Building Council (USGBC) and has developed a comprehensive Building Science program that provides education on sustainable building techniques to save energy and improve building performance.





From molten glass to fiber glass.



Fiber glass insulation is made mostly from sand and recycled glass. These ingredients are melted at high temperatures and then spun into thin fibers and held together, much like cotton candy.

Fiber glass is an extremely effective insulation material because it has millions of tiny air pockets, which provide the real insulating power. These air pockets help resist the flow of warm air, and determine the insulation's R-Value. CertainTeed fiber glass insulation lasts for the life of your home without losing its insulating value. And it resists settling or deterioration over time, which means it also continues to save you money and energy for years.

THE BENEFITS OF PROPERLY INSTALLED FIBER GLASS INSULATION:

- Reduces energy costs, lowers heating and air conditioning bills.
- Keeps you more comfortable, room to room and floor to ceiling.
- Controls noise, both inside and from outside.
- Contributes to cleaner indoor air.
- Helps use less of the earth's natural resources.
- Manages moisture.
- Can help prevent mold.
- Can pay for itself over time.
- Can increase the value of your home.

FIBER GLASS CONTROLS A LOT MORE THAN TEMPERATURES.

Advancements by CertainTeed in the science of fiber glass insulation go far beyond thermal efficiency. Our fiber glass insulation provides higher thermal efficiency, along with greater sound and noise control. And now we're proud to introduce DryRight,[™] the first insulation to help control moisture and prevent dangerous mold and mildew growth, even structural damage.



THE TOP FIVE PLACES TO INSULATE AND WHY.

- 1. Attic: Can account for up to 50% of a home's total heat loss.
- 2. Basement: Heat loss can be as high as 25–30%.
- 3. Floors and crawlspaces: Floors can be cold when uninsulated.
- 4. Exterior walls: Poorly insulated walls can account for 20% of total home energy loss.
- 5. Ducts: Forced heated and cooled air won't deliver consistent temperatures you want.

Stay warm. And cool.

An uninsulated or under-insulated home can cost you more than you think. With energy costs forever rising, investing in fiber glass insulation for your home can be well justified. You may not be able to influence the cost of a barrel of oil, but upgrading your home's insulation can maximize the energy once it's in your home.

CertainTeed has a number of solutions to help you gain control

over energy use and costs. We offer a wide selection of products to insulate every area of your home. For attics and walls, we offer premium-grade CertainTeed rolls, batts or blow-in fiber glass insulation. InsulSafe® and OPTIMA® are manufactured specifically to provide complete and uniform blow-in coverage. And we mean every nook and cranny that's letting your heated and cooled air leave for parts unknown.

It's also about peace and quiet.

Sound control is greatly aided with fiber glass insulation. Insulating interior walls, exterior walls and between floors adds to living in a quieter home. With more of us spending more time inside our homes, a little peace and quiet offers you a welcome respite from a noisy world.

To enhance the acoustical environment of homes, we offer NoiseReducer[™] fiber glass insulation for walls and ceilings. This product is designed to create thorough sound-absorption throughout a home's various living areas.

You can even rid your home of unwanted crosstalk (the kind you hear through your home's ventilation ducts) and the air-rush noise from your ductwork. Our ToughGard® Duct Board, ToughGard® Duct Liner and Duct Wrap not only keep things quiet, but also help maintain the desired temperature of the air coming from your furnace or air conditioner.





Helps prevent moisture and mold.

DID YOU KNOW?

Based on innovative technology, design, utility and affordability, DryRight has been named by Building Products magazine as a 2006 Most Valuable



Product award winner. And when DryRight wins, you win.

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. Most people generally think of fiber glass insulation only for its thermal and acoustical properties. Now there's a revolutionary new insulation that does all of the above—plus it helps control naturally occurring water vapor to help lower the risk of dangerous mold growth. CertainTeed introduces DryRight[™] insulation, an amazing breakthrough

DryRight is a remarkable advancement that combines dependable, thermally-efficient fiber glass insulation with a proven breathable clear membrane facing. DryRight's facing has microscopic paths that open and close to allow water vapor to escape from behind your walls.

in fiber glass insulation.

Mold only grows under the right conditions—where it's dark, damp and has access to an available food source. These are the same conditions that can exist behind your home's walls. To be sure, mold in homes is one of the most litigated homeowner issues playing out in the courts today. And when you think of all the ways moisture can get behind your walls—a leaking roof, poor window or door flashing, climatic changes, bathing, cooking, dishwashing, clothes washing, etc.—you can start to understand how mold can begin to grow. With serious health and property values at stake, choosing the right insulation really does matter.

A home of four can generate an average of two to three gallons of water vapor per day from cooking, bathing, washing dishes and laundry, as well as variations in humidity brought on by seasonal changes.





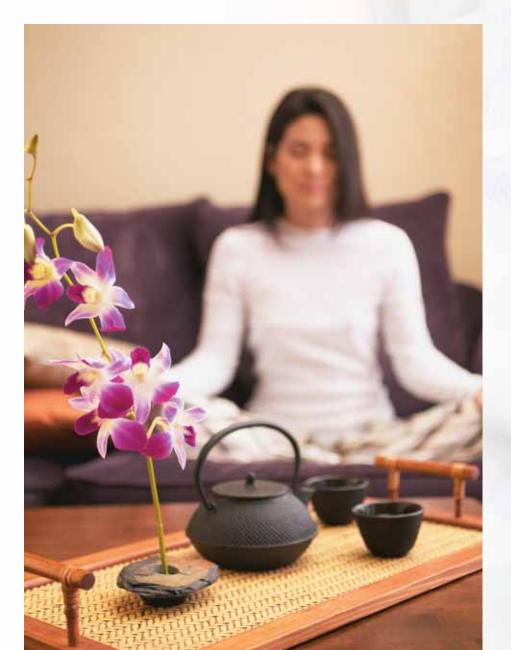




Ensuring quality, ensuring health.



To help protect your home's indoor air quality, CertainTeed insulation is GREENGUARD® Certified for superior indoor air quality. Using the strongest environmental standards, CertainTeed insulation is regularly tested by the GREENGUARD Environmental Institute for low emissions of formaldehyde, Volatile Organic Compounds (VOCs), respirable particles and other pollutants.





DID YOU KNOW?

CertainTeed was the first insulation manufacturer to have both its blow-in and blanket products certified by the National Association of Home Builders Research Center.

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The right choice is fiber glass.

Now you know how an unseen building product like fiber glass insulation can have a dramatic impact on the performance and value of your home. You also know how CertainTeed fiber glass can dramatically enhance your family's year-round comfort and health. And you know how a home insulated with fiber glass can have a positive impact on the environment, locally and globally. So enjoy spending time choosing the right wall coloring and those marble countertops you've always wanted. But also remember to insulate your home with CertainTeed fiber glass insulation products. A better fiber glass insulated home just may help you enjoy your countertops and painted walls even more.

Common terminology that's helpful to know.

Blow-in insulation – An insulation, usually fiber glass, rock wool or cellulose, that is fed into pneumatic blowing machines and blown under high pressure through a long flexible hose into attics and walls.

BTU – A BTU, British thermal unit, is the amount of heat required to increase the temperature of a pound of water just 1°F.

Building Science – The research and study of how various products used to construct walls, ceilings, roofs and other building envelope systems interact with each other, as well as with the home's occupants.

Facing – A material attached to fiber glass insulation to add additional advantages above the insulation's thermal benefit, such as helping to control drafts, moisture and mold. **Formaldehyde** – A common chemical compound used to make binders and adhesives found in plywood, carpeting, facial tissue and other products.

Friction fit – Fiber glass batts or rolls that are slightly wider and do not have to be stapled into place. Also referred to as tabless batts.

GREENGUARD® Certification –

A designation given to products that support superior indoor air quality. Using the strongest environmental standards, the GREENGUARD Environmental Institute regularly tests materials for low emissions of formaldehyde, volatile organic compounds (VOCs), respirable particles and other pollutants. **R-Value** – A measure of the capacity of insulation to impede heat flow; the higher the R-Value, the greater its resistance to heat flow.

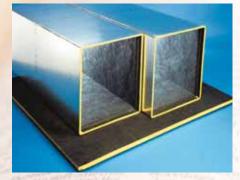
Vapor retarder – Any material (either attached to or separate from the fiber glass insulation itself) that adequately restricts or manages the transmission of water vapor.

VOCs (Volatile Organic

Compounds) – Organic chemicals that emit gases; and are used as ingredients in common household products like permanent markers, correction fluids, cosmetics and cleaning supplies. The GREENGUARD Environmental Institute tests for VOCs in insulation to ensure safe indoor air quality.











CERTAINTEED RESIDENTIAL INSULATION.

CertainTeed's full range of fiber glass insulation products offer a variety of R-Values for every need. Choose from batts, rolls, blankets, blowing wool, blow-in products and sound control—everything you need for comfortable living and energy efficiency.

CERTAINTEED DRYRIGHT[™] FIBER GLASS INSULATION.

Revolutionary DryRight helps keep wall cavities dry and helps reduce the risk of mold and mildew. Thermally efficient and breathable DryRight can help prevent moisture from getting inside your walls, while allowing trapped moisture to escape. DryRight is the ideal insulation for locations in the U.S. that experience changing, seasonal humidity conditions.

CERTAINTEED HVAC INSULATION.

CertainTeed duct board, duct liner, duct wrap and other fiber glass air-handling insulation products offer outstanding thermal, acoustical and moisture control. They're also lightweight, easy to clean and resistant to bacteria.

CERTAINTEED COMMERCIAL INSULATION.

CertainTeed commercial building insulation can enhance energy efficiency, lower energy bills, control sound, increase occupant comfort and comply with building codes. Through the CertaPro[™] line, CertainTeed offers a complete selection of fiber glass insulation for new and existing commercial buildings in batt, board and blanket forms.

CERTAINTEED METAL BUILDING INSULATION.

CertainTeed fiber glass insulation for metal buildings is engineered to meet the unique thermal and acoustical requirements of today's metal building designers, plus the cost control needs of building owners, and the ease-of-application needs of builders.



A history of building trust.

CertainTeed is one the nation's largest and most respected manufacturers of building products. For over 100 years, CertainTeed has been one of the most recognized brands among building professionals, as well as a leading researcher and producer of fiber glass insulation. You can depend on CertainTeed to continue to lead the building industry with creative advancements, innovative solutions and unparalleled service. For more information on insulation and all other CertainTeed building products, visit www.certainteed.com.

ASK ABOUT OUR OTHER CERTAINTEED PRODUCTS AND SYSTEMS:

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