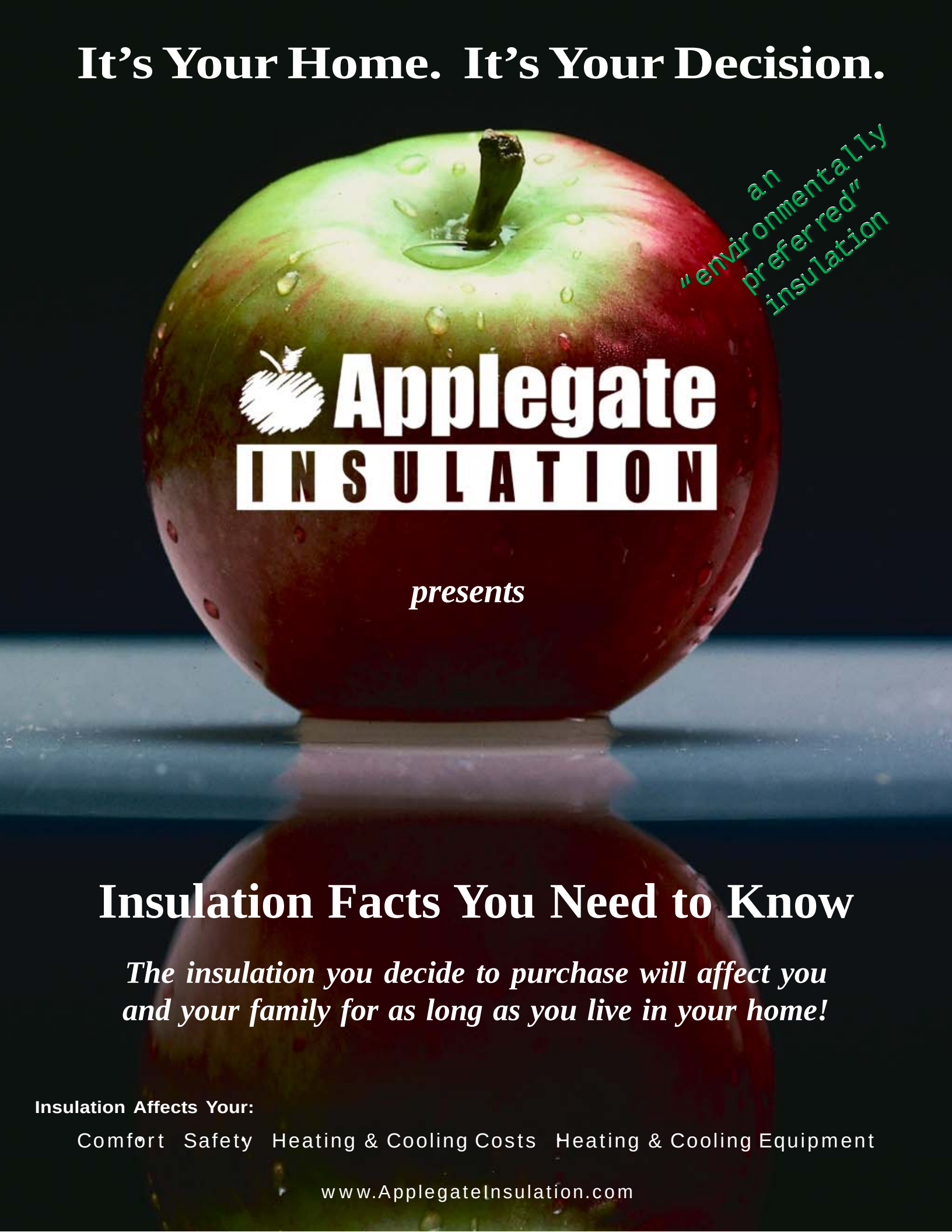
It's Your Home. It's Your Decision.



Insulation Facts You Need to Know

The insulation you decide to purchase will affect you and your family for as long as you live in your home!

Insulation Affects Your:

Comfort • Safety • Heating & Cooling Costs • Heating & Cooling Equipment

www.ApplegateInsulation.com

Can I Depend On R-Values When Comparing Insulations?

Yes - and No.

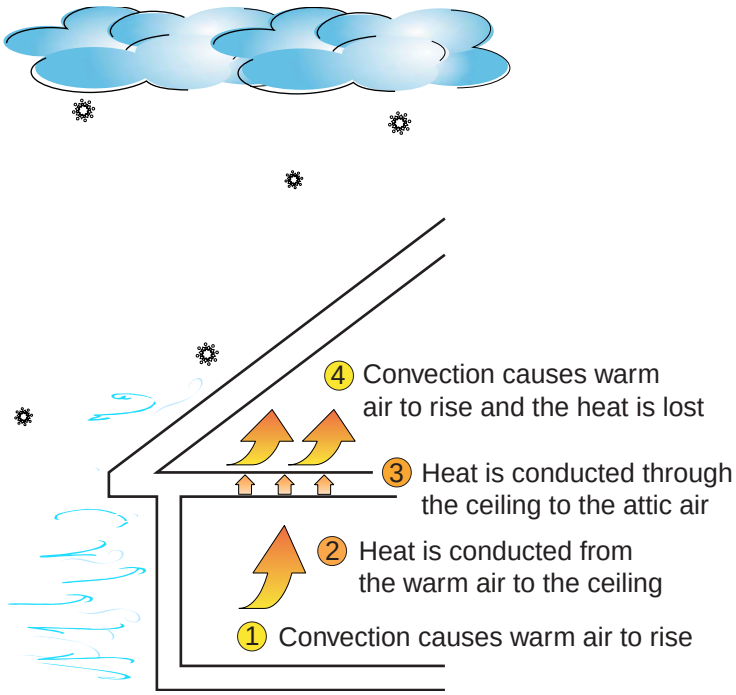
R-values tell only part of the story. Unfortunately, they don't tell you how well the insulation will perform in your home. R-value is a laboratory measurement that measures only one heat transfer mechanism (conduction) and does not effectively measure all 3 methods of heat transfer that occur in your home: convection, conduction, and radiation.

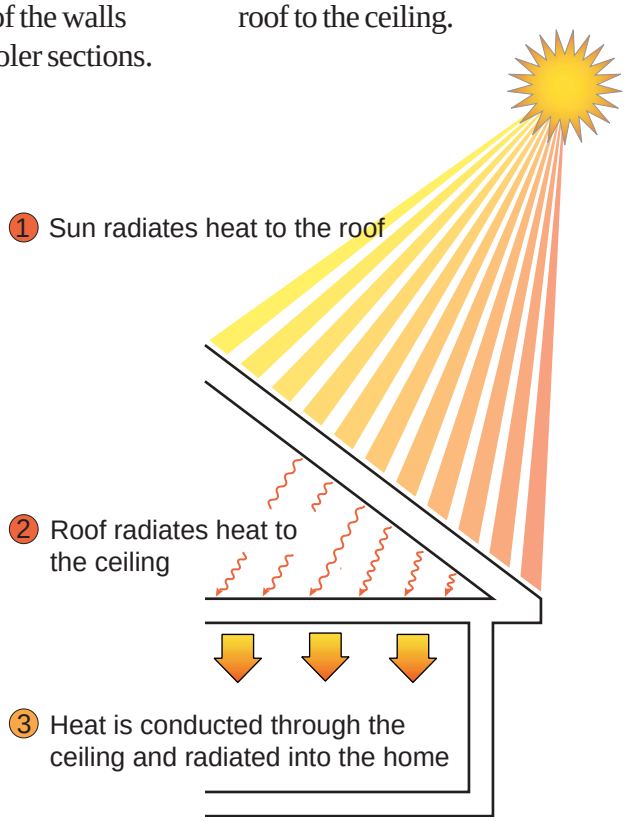
"...conduction, radiation, and convection are the primary mechanisms [of heat transfer]."
-U.S. Department of Energy

Problem #1: We can not base our choice of insulation on R-value alone.

Your Home Loses and Gains Heat in 3 Ways

	Convection	Conduction	Radiation
Definition:	The transfer of heat by moving air.	The transfer of heat through a solid material.	The transfer of heat in the form of electromagnetic waves.
Example:	Warm air rises and transfers heat to the ceiling	Heat is transferred from warmer sections of the walls and ceilings to cooler sections.	Heat is transferred from the roof to the ceiling.





R-value is a narrowly focused laboratory measurement. For a comfortable, energy efficient home, insist on insulation that effectively controls all 3 methods of heat transfer: convection, conduction, and radiation.

Will My Choice of Insulation Really Effect My Monthly Heating & Cooling Bills?

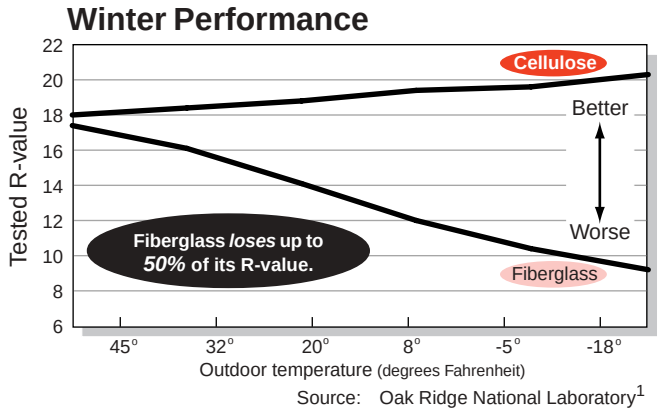
Yes!

Different insulations are made from fundamentally different materials. Tests at Oak Ridge and Brookhaven National Laboratories and the University of Illinois reveal that insulations with the same laboratory R-values ***do not*** perform equally in real homes. Researchers found that the effective R-value of blown fiberglass plunges during cold weather, while the effective R-value of cellulose actually increases. The researchers also discovered that summer temperatures offer no relief for fiberglass, since its effective R-value withers then, too.

Utility bills were 32% lower in the cellulose insulated building. **-Leominster Housing Authority**

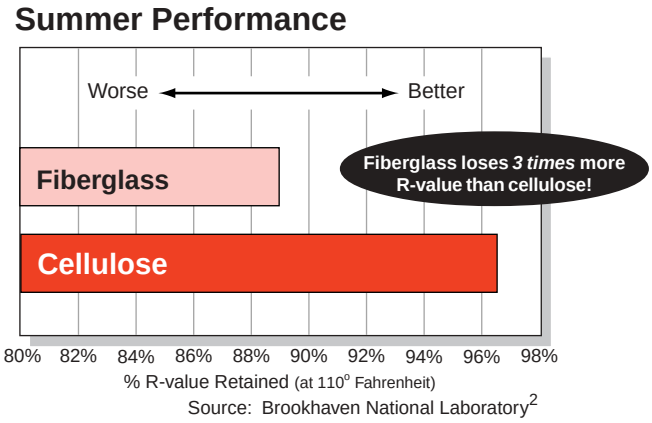
Problem #2: Which insulation will provide the best performance and value in my home?

Applegate cellulose helps keep your home *warmer* in the winter,



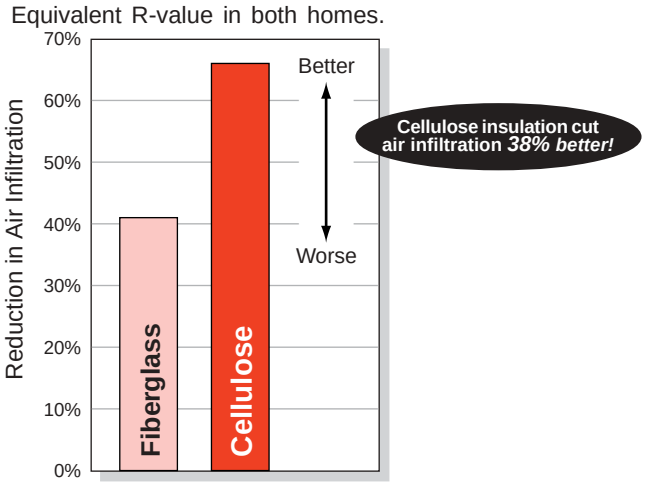
Source: Oak Ridge National Laboratory[1]

cooler in the summer,



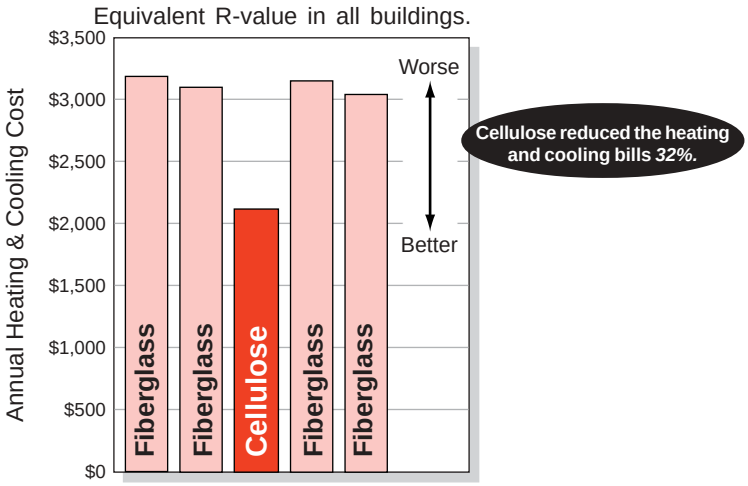
Source: Brookhaven National Laboratory[2]

blocks air infiltration,



Source: University of Colorado School of Architecture[3]

and saves you money!



Source: The Leominster Housing Authority[4]

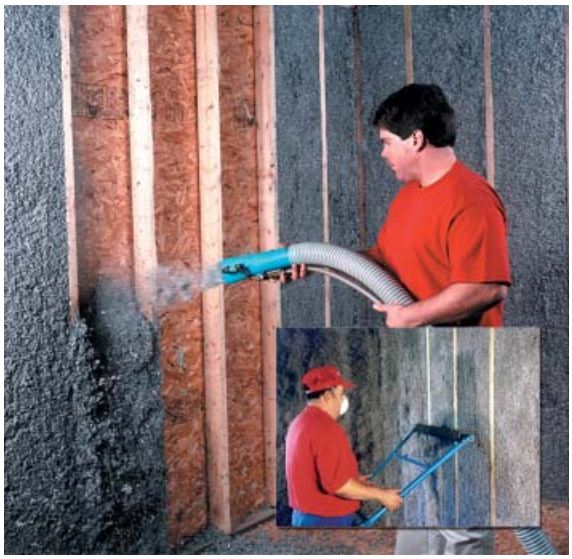
Test after test demonstrates that cellulose insulation significantly outperforms fiberglass.

Do Different Installation Methods Make a Difference?

The walls, ceilings, and floors of your home are full of odd shaped cavities and obstacles like plumbing, air ducts, and wiring. For your insulation to work effectively, it must completely fill around these obstructions without gaps or voids.

"About half of all wall cavities in residential construction are nonstandard in width and height or obstructed with wiring, pipes, and other things. Any void area in conventional batt insulation can reduce the R-value significantly." **-Guardian Fiberglass**

Problem #3: How should your insulation be installed? Is there a difference between batts & wall-spray?



Applegate cellulose being sprayed into a new home

Custom Fit For Your Home

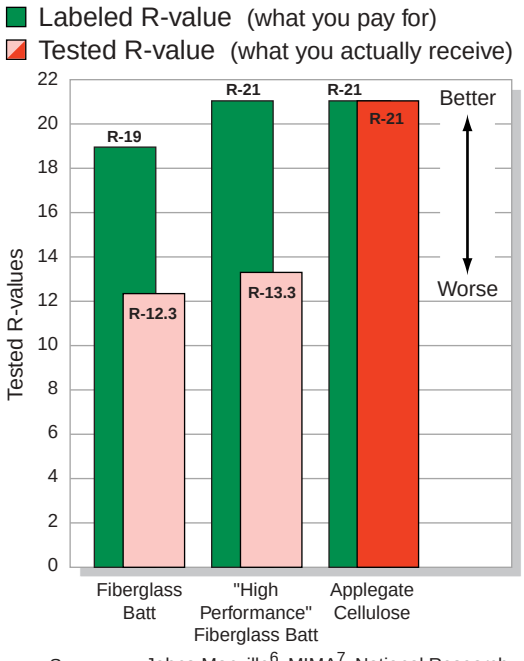
Installation is critical in determining how insulation performs in your home. How well does it fit in different size wall cavities and around countless obstacles? Is it cut and patched in? Or is it custom fit?

Applegate cellulose insulation is sprayed or blown into walls, conforming to *your* home and surrounding you and your family with a seamless insulation system. Fiberglass batts, on the other hand, are cut and pieced together, leaving gaps, voids, & areas of compression.

Excess insulation is removed for recycling

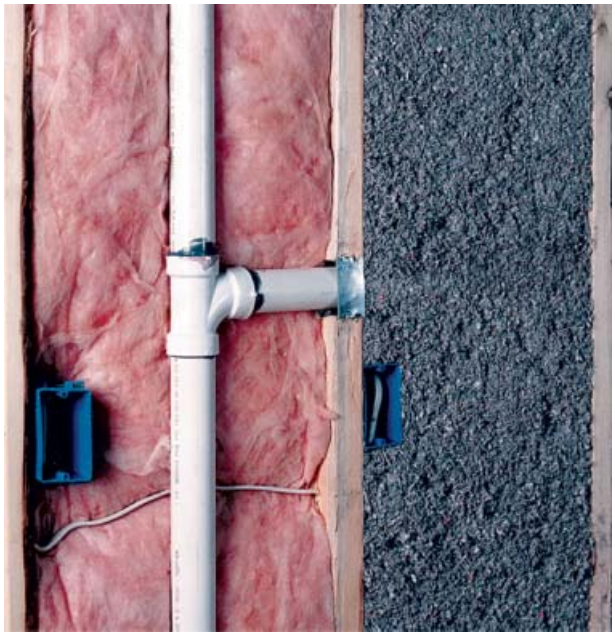
Getting What You Paid For

Tests conducted by a fiberglass manufacturer reveal that the *actual performance of batts can be 14% to 45% less than their labeled R-value* when gaps and voids associated with normal batt installation are considered.[5] With Applegate cellulose insulation, you receive the insulation performance you paid for.



Sources: Johns-Manville[6]; MIMA[7]; National Research Council Canada[8]; Applegate Insulation Mfg.

A Difference You Will See, Feel, and Enjoy



Conventional batts *Applegate wall-spray*

Installing Applegate insulation in new or existing homes is one of the best decisions you can make for yourself and your family.

Walls are fully and tightly insulated, forming a monolithic thermal barrier.

No more gaps. No more voids. No more drafts. Just years of comfort.

Custom-fit Applegate wall-spray surrounds your home with a monolithic cellulose insulation system. Your home will be dramatically more comfortable and energy efficient.

Superior Attic Insulation for Your New Home

Applegate cellulose insulation forms a seamless blanket of natural fibers that provide outstanding protection from the elements. Best of all, on the hottest and coldest days, (when you need it most) Applegate insulation won't lose R-value like fiberglass.

Applegate insulation has an R-value of 3.8 per inch (nearly twice as much as blown fiberglass).

Applegate also offers Stabilized Cellulose™ that locks in place and virtually eliminates dust and settling.

Installing Applegate Stabilized™ insulation

Problem #4: Can existing homes be insulated, too?

The Benefits of Applegate Insulation for Existing Homes

Whether your home was built a century ago or just completed, it's probably not too late for you and your family to enjoy the benefits of Applegate insulation! A simple, quick inspection by an insulation professional is all that is needed.

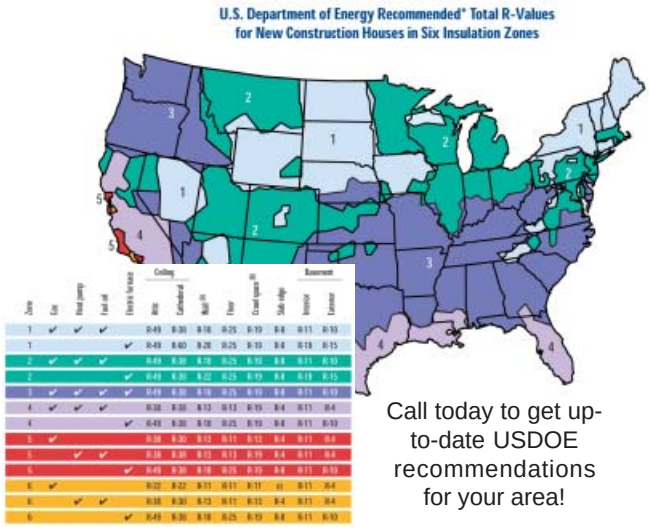
W A L L S

Siding is carefully removed

Small holes are drilled

Applegate is blown in

Siding is replaced



Call today to get up-to-date USDOE recommendations for your area!

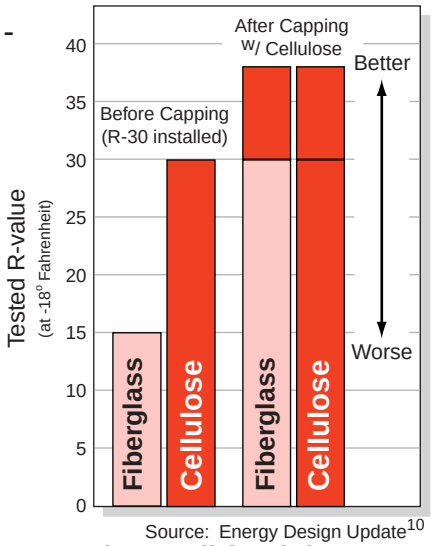
A T T I C S

Chances are good that your home could benefit from Applegate attic insulation. Many homes have inadequate attic insulation - often none at all! Or your attic may be insulated with fiberglass that is doing a poor job.

Older homes are frequently insulated with loose fill fiberglass. Adding a layer of Applegate insulation helps control convection and boosts the R-value.

New homes are sometimes insulated with fiberglass batts. A layer of Applegate insulation fills in around the gaps & seams and helps restore lost R-value.

Researchers at Oak Ridge found that capping fiberglass with cellulose not only adds R-value, it actually restores the effective R-value that fiberglass loses during cold weather. The researchers also learned that capping fiberglass with more fiberglass "fails to restore the lost R-value"[9].



Source: Energy Design Update[10]

Applegate cellulose helps restore the R-value of fiberglass.

Existing homes can have all the benefits of Applegate insulation.

What Other Factors Should I Cons

Insulation is an integral part of your home. Depending on the insulation you choose, there may be additional benefits (or dangers) that you may not have considered.

Problem #5: Since the insulation is a permanent part of our home, are there other important considerations?

"11 minutes into the burn the ceiling of the unisulated house collapsed . . . 10 minutes later the ceiling of the fiberglass house also collapsed. The ceiling of the cellulose house did not collapse until 1 hour and 10 minutes after the burn started."

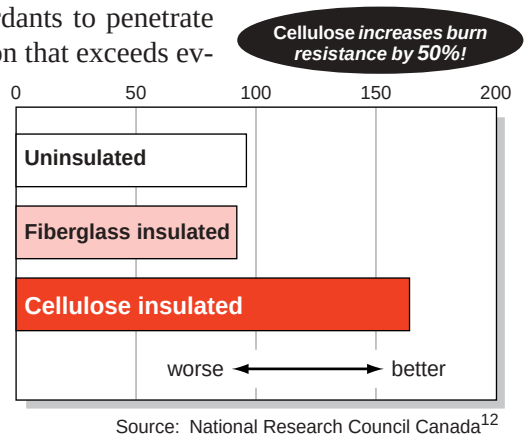
-Insulator's Guide, news account of fire demonstration

Applegate Exceeds Tough Fire Standards

Applegate insulation is manufactured with permanent fire retardants.

Applegate insulation is the only building material in your home that is commonly treated with fire retardants. Applegate takes this a step further with a unique, two-stage process that injects dry *and* liquid fire retardants to penetrate the fibers. The result is exceptional insulation that exceeds every required fire safety standard and helps protect you and your family.

Cellulose insulation actually helps make homes safer by providing up to 50% better fire resistance than fiberglass.[11] In practical terms, this means that occupants have more time to reach safety in case of fire. Unlike fiberglass, it greatly restricts the amount of oxygen available to support combustion - it won't pump oxygen to the fire.



Source: National Research Council Canada[12]

A Matter of Health

"In essence, the dusts from cellulose insulation materials can be considered as any household dusts. Cellulose, per se, is non-toxic. Biologically, cellulose is innocuous."[13]

-Dr. Arthur Furst (one of the world's foremost toxicologists)

"In December 1993, a panel of top public-health experts voted unanimously to add fiberglass to the National Toxicology Program list of substances that are 'reasonably anticipated' to cause cancer."[14]

-The Washington Post

A Comparison of Health Concerns

	Fiberglass	Cellulose
Microscopic, respirable glass fibers?[15]	Yes	No
Formaldehyde?[16]	Yes	No
NTP classified probable carcinogen?[17]	Yes	No
Specified dust-mask rating required?	Yes	No

Relief For Your Heating & Cooling System

Not only will you save money on utility bills - you will also save on the cost of original and replacement equipment (since you will need smaller capacity systems) and maintenance. Applegate insulation does such a good job protecting your home from the weather that your heating and cooling system:

- can be downsized
- will last longer
- will run less
- will require less maintenance

ider Before Making My Decision?

"Cellulose insulation should be a preferred insulation for (the) envirmentally concerned"

-Environmental Building News

The Environmentally Friendly Choice

Performance. Comfort. Safety. These are reasons enough to install Applegate cellulose insulation. But there is another reason that is often overlooked -- when you choose Applegate you help protect the environment. Applegate insulation is made from 80% post-consumer recycled materials. Also, manufacturing our insulation uses ***one-fifth the energy*** required to make fiberglass[18] and generates ***one-fifth the carbon dioxide***[19] (for a typical home, insulated to the same R-value).

ENERGY STAR Rated

When you see the ENERGY STAR logo, you know that the product is designed to conserve energy. Applegate cellulose insulation is approved to carry the ENERGY STAR Logo by the Environmental Protection Agency. Applegate plays a key role in any home sealing effort.

Non-Corrosive

Applegate cellulose insulation is tested and certified in accordance with federal regulations and ASTM Standard C 739-91 to be non-corrosive. This reassurance gives homeowners a peace of mind that is absent with other insulations that are untested and unregulated.

The Sound of Silence

A quiet home is relaxing and serene. Applegate insulation quiets a home better than fiberglass and creates a peaceful haven of quality and solitude in new and existing homes and commercial buildings.

Insulating interior walls is also a good idea. This one-time luxury is now affordable. Your family will then be able to enjoy different activities simultaneously (such as using the computer, watching television, reading, and sleeping).

Why Applegate?

Since 1952.

Now you know the facts. You see that there is a huge difference in insulation. But the company that stands behind the product you buy is equally important. Applegate is unique in many ways.

Training - Our staff works with insulators around the country and offers ongoing professional training to continually sharpen installation methods and techniques.

Quality - Many companies talk about quality, but few invest the time and expense to make it happen. We do. Take our hybrid dry/liquid fire retardant injection system, for example. Making insulation this way is expensive and complex, and we are one of the few companies using this advanced technology. But the result is worth the trouble: insulation that performs better and is safer.

Experience - You will appreciate the fact that Applegate personnel are among the most experienced in the industry. From manufacturing to customer service, their knowledge and experience have been built over decades.

Integrity - If you want to stay in business, your word and reputation are everything. Since 1952, "Applegate" has been synonymous with honesty, trust, and our commitment to every single customer.

Focus - We make just one building product - insulation. We don't make shingles or siding or windows. What this means to you is that we are completely focused on bringing you the best insulation possible.

Industry Leader - Our long-term dedication to our customers has led us to the forefront of the industry.

Performance

Comfort

Fire Safety

Health

Environment

Sound Control

Heating & Cooling Equipment

Non-corrosive

Quality

Experience

Integrity

AGES Gurarenteed Energy Bills

Does It Matter Who Installs My Insulation?

Applegate INSULATION Installer

Insulation is permanent, critical, and invisible - hidden in your walls, floors, and ceilings. The discomfort of a poorly insulated home is often wrongly blamed on furnace and air conditioning problems when the actual cause is the insulation or installation. That is why you must be able to trust your insulator to do good work. Remember, the lowest bid is not necessarily your best value - quality work takes time and normally costs a little more.

Problem #6 How can I get the best value for my money?

Make sure that you hire a qualified, reputable insulator - or your will pay for the cheap job for the life of your home.

Insist on: ☑ **Highest quality insulation materials** ☑ **Trained, knowledgeable, & conscientious installers**

Applegate Insulation Began Because of a Mistake?!

Aaron Applegate

That's right, in 1952, I accidentally discovered the difference in insulations! I was installing electric resistance heating and guaranteeing heating bills. The first year I nearly went out of business because I wasn't controlling the insulation that was installed.

What happened was that my customers used whatever insulation was suggested to them - often fiberglass. After that first winter I knew I had to become educated about insulation or there would be no second winter for me. I had heard of a utility company that was successfully promoting electric resistance heating so I paid them a visit. It was then that I first heard about cellulose insulation. The utility company told me that it was necessary to use cellulose because it worked so much better than other insulations.

After conducting extensive research into the benefits of cellulose insulation, I was convinced. I recommended only cellulose insulation to all my customers for the next 35 years. Our customers were delighted with their heating systems — but cellulose was the reason those systems were successful.

Premium quality insulation was tough to find, so in 1978 we built a plant in Michigan to manufacture our own. We soon found that other insulation contractors had the same need and before long we were running at 100% of capacity and turning away orders. To better serve our customers, we built a new, state-of-the-art plant. As our reputation spread as a dependable company with the highest quality insulation we acquired other manufacturing plants in Pennsylvania, Georgia, Kentucky, Louisiana and Wisconsin. We installed our unique processes and now produce premium cellulose insulation throughout most of theU.S.

We try to run this business according to biblical principals. That is why you'll find scriptures on our bags - to share God's word and to glorify Him.

Aaron Applegate

Applegate INSULATION

1 - 8 0 0 - 6 2 7 - 7 5 3 6

www.ApplegateInsulation.com

Your authorized Applegate installer is:

Applegate Cellulose Insulation
Class 1 Building Material

Complies with CPSC Standards 16 CFR 1209 & 1404
Complies with FTC Standard 16 CFR 460

Tested in accordance with ASTM Standard C 739-91:

Flammability Characteristics

Critical Radiant Flux	Greater than or equal to 0.12 $^{W}/_{cm^2}$
Smoldering Combustion	Less than or equal to 15.0%

Environmental Characteristics

Corrosiveness	Acceptable
Fungi Resistance	Acceptable

Physical Characteristics

Thermal Resistance	R 3.8/in. (at 4 in. thickness)
Moisture Absorption	Acceptable
Odor Emission	Acceptable
Starch Content	Negative

Tested in accordance with ASTM Standard E 84:

Flame Spread	Less than or equal to 25
Smoke Development	Less than or equal to 25

CIMA

POST 80% CONSUMER

SEE US IN Directory Catalog Files CD SWEETS.COM

[1] Oak Ridge Nat. Lab. "Evaluation of Cellulose Insulation" National Roofing Contractors Assoc. "1991 International Symposium".
[2] Brookhaven National. Lab. "Assessment of Insulations".
[3] University of Colorado. "Fiberglass vs. Cellulose Installed Performance"
[4] Leominster Housing Authority Report, Leominster, MA.
[5] Johns-Manville Research and Development Center. "Effects of Insulation Gaps".
[6] Ibid.
[7] Mineral Insulation Manufacturers Assoc. "Installation Faults Reduce Effectiveness".
[8] Reported in Energy Design Update. "The Effect of 'Minor' Installation Defects on Batt Performance".
[9] Energy Design. Update. "Fixing Fiberglass Problems with Cellulose".
[10] Ibid.
[11] National Research Council Canada. "Fire Resistance Tests".
[12] Ibid.
[13] Furst, A. Tenth International Conference on Thermal Insulation.
[14] The Washington Post.
[15] Washington Post Magazine. "Breathing Uneasy".
[16] Johns-Manville Ad.
[17] National Toxicology Program; fiberglass "reasonably anticipated to be a carcinogen".
[18] North American Insulation Mfrs. Assoc., Cellulose Insulation Mfrs. Assoc.
[19] Ibid.

***Work brings wealth; talk brings poverty.* Proverbs 14:23**