

Frequently Asked Questions

Q- I don't want to be sold, I want to be told how others feel about Icynene®. Is there an unbiased place for me to learn?

A- Yes- click here to to HGTVpro and read what others have to say.

1- What Is The Icynene Insulation System®?

The Icynene Insulation System® is a complete insulation, air and moisture barrier system that wind proofs and seals wall, floor and ceiling cavities against air movement, including spaces around electrical outlets and light fixtures, at baseboards and where walls meet windows and doors. This means that outside air (either hot or cold) cannot seep through walls, causing drafts or cold spots. It also means that humid interior air cannot enter the walls and condense.

The system combines a material with a Certified Service providing any builder or homeowner with a truly cost effective method of energy efficient construction. The material is polyicynene foam see, (Product Specifications), an organic material developed from products of the petrochemical industry similar in composition to many that are already in home use today, such as upholstery padding, pillows and mattresses. The service is a custom installation on the building site by trained and licensed installers, providing a custom insulation fit into any size cavity.

By virtue of its' low permeability to air, its' adhesion to other building materials and its' flexibility, The Icynene Insulation System® becomes much more than just insulation. It provides good air leakage control, moisture control and sound control in addition to insulation, thus becoming a one step insulation, moisture/vapor barrier, wind barrier system. The Icynene Insulation System® takes the place of building wrap, fiberglass, polyethylene vapor barrier, tape, foam and caulking, and eliminates the labor intensive work associated with air-tightness detailing when insulating with conventional insulation products.

Unlike "loose fill" insulation methods that do not wind proof building cavities, the air sealing characteristics of The Icynene Insulation System® provide virtually the same R-Value in the field as it does in the laboratory where the R-Value is measured. Cold air in winter and hot muggy air in summer just cannot pass through polyicynene foam like it can through most other insulating materials.

2- Are There Building Code Approvals?

The product was evaluated by the Canadian Construction Materials Center of The National Research Councils', (NRC), Institute for Research in Construction. Health and Welfare Canada examined the NRC emissions tests. Icynene® has been evaluated by the Ontario Ministry of Housing, Materials Evaluation Commission and the Council of American Building Officials National Evaluation Service.

Icynene® complies to the BOCA, SBCCI and the ICBO Uniform Building Codes and the Canadian National Building Code. It has been evaluated by the Council of American Building Officials National Evaluation Service. It has been the subject of research projects by the NAHB Research Center, Upper Marlboro, Maryland; Oak Ridge National Laboratories, Oak Ridge, Tennessee and the Florida Solar Energy Center, Cape Canaveral, Florida.

Health problem concerns associated with other building products in recent years such as asbestos, urea formaldehyde and glass fibers, lead Canadian Authorities to dictate the ground rules for acceptance of new building materials. The Icynene® product became, to the best of our knowledge, is the most extensively tested insulation material on the market today. The testing included the most sensitive emissions tests developed to date, tests that few other building materials have ever been through.

3- Advantages of Icynene® Insulation?

As well as simplifying the construction process for the builder, Icynene® Insulation eliminates the major causes of building envelope problems, air-borne moisture movement and entrapment. Blower door tests have shown that a steel framed home insulated with Icynene® Insulation, and with no polyethylene vapor barrier, measures 1.2 ACH at -50 Pascal depressurization. This is well under the 1.5 ACH50 rating for the most energy efficient home. Heating and cooling costs are typically reduced by 30 to 50%, and smaller, less expensive heating and cooling equipment can be used.

For the homeowner the advantages are:

- * Compared to other technologies, The Icynene Insulation System® is a less expensive method of building an energy efficient home.

- * A more energy efficient home means that energy costs can usually be reduced between 30 and 50%.

- * A more comfortable home, free from drafts, cold spots and frozen pipes.

- * A quieter home because Icynene® creates a continuous sound barrier against outside noises.

- * A healthier home - when used with a mechanical ventilation system, superior indoor air quality provides your family with a much healthier place in which to live.

4- What is Icynene® Insulation Made Of?

It is a soft plastic foam made of similar materials to many products that are already in home use today, such as upholstery padding, pillows and mattresses.

Icynene® has the texture and look of angel food cake. It is made up of millions of tiny cells filled with air which provide permanent control of air and moisture movement. See Specifications for more physical data.

5- How Long Does Icynene® Take to Cure?

The foam is created in seconds after spraying. You can watch it expand within seconds to 100 times its' original volume, literally before your eyes. It completely cures within a few minutes.

6- Does Icynene® Absorb Water?

No, it looks like a sponge but it is actually hydrophobic, i.e., it repels water. If placed in water it will float and on removal it will dry rapidly and lose none of its' insulating properties.

7- Does Icynene® Entrap Moisture?

Icynene® Insulation is a breathing foam, and any moisture in the buildings' concrete or lumber can escape through the insulation as the building dries out, thus eliminating any risk of rot or mildew.

8- Does Icynene® Change Physically Over Time?

No, it is inert. Its' physical and insulating properties are constant.

9- Does Icynene® Produce Off-Gasses?

No, the product is environmentally safe.

10- Any Worries Environmentally?

All materials create some off-gasses, the question is, are they harmful? The most sensitive tests have not detected anything from the foam which is injurious to human health.

11- Flammability and Fire-Rating?

Icynene® Insulation is flame retarding and contributes no fuel in the event of fire.

Icynene® Insulation will be consumed by flame, but it will not sustain flame upon removal of the flame source. It must be covered by gypsum board or other acceptable thermal barrier, as required by applicable building codes.

Strictly speaking, fire-rated materials are non-combustible and can be used uncovered. As with all foam materials, Icynene® Insulation must be covered by an approved thermal barrier such as drywall.

12- What Does the Smoke Contain?

Smoke from Icynene® foam, like that of all organic materials including wood, is a complex of many gasses. The major components in the smoke from Icynene® Insulation are carbon dioxide and carbon monoxide.

13- Any Harmful Emissions?

Icynene® is safe for both you and the environment. Icynene® is water-based, and does not produce formaldehyde, CFCs or HCFCs. It has been extensively tested in both Canada and the United States and found to have no harmful emissions.

The product is in fact recommended for use in homes for many environmentally concerned or sensitive people. The Icynene Insulation System® has been selected for use in the Lung Association endorsed Envirodesic Home Program and for demonstration Healthy Houses being built by the Lung Association in Orlando, Florida and Des Moines, Iowa.

14- How is The Icynene Insulation System® Installed in Walls and Ceilings?

Icynene® Insulation is sprayed-in-place by a professionally trained and licensed contractor after electrical and plumbing services are in place. As the foam is installed it expands 100 times its' original volume in seconds, completely filling all the cracks, joints and spaces between other building materials to form an air and moisture barrier around your home. Drywall is installed directly over the Icynene® Insulation. There is no need for building wrap, polyethylene, taping, foaming or caulking. The Icynene Insulation System® takes the place of all these materials.

15- How Long Has Icynene® Been in Use?

Icynene® has been on the market since 1986 and is in tens of thousands of homes across the United States.

16- Any Electric Wiring Overheating Problems?

No, Icynene® Insulation has been tested and is not a concern to electrical authorities.

17- Is Icynene® Corrosive to Metals?

No, Icynene® Insulation is non-corrosive. It is neutral, neither acidic or alkaline.

18- Does Icynene® Support Bacteria or Fungal Growth?

No, Icynene® Insulation offers no food value therefore it cannot support bacteria or fungal growth.

19- What About Mice and Termites?

Icynene® Insulation offers no food value, but it would not present a sufficient barrier to their entry if they decided to gnaw through it.

20- What Are the Acoustic Properties?

Icynene® Insulation is comparable to fiberglass acoustically with a noteworthy difference. As an effective air seal it eliminates the air gaps through which sound travels easiest. Those air gaps help to defeat fiberglass batts' sound deadening properties. Icynene® Insulation is superior in controlling midrange frequencies which include the most common sounds, the human voice and stereo music.

21- Is Icynene® Urea Formaldehyde?

No, it is composed of totally different ingredients and a completely different method of application is required. and a completely different method of application is required.

22- Does Icynene® Break Down, Sag or Shrink?

No, Icynene® Insulation is stable. It does not shrink or sag. The reaction that creates Icynene® Insulation is irreversible and it cannot break down into its' constituent parts.

23- Advantages of Icynene® Flexible Foam?

A foam that adheres to building materials must remain flexible in order to maintain its' air seal. Building materials expand and contract with changes of season and temperature. If the foam is rigid, it will inevitably develop hairline cracks along the studs and ultimately the air seal will be destroyed.

24- R-Value of Icynene® Insulation?

The R-Value of Icynene® Insulation is rated at R-3.6 per inch. In a nominal 4 inch wall the R- Value is about R-13. In a 6" wall about R-20.

25- Are These Aged Values?

Unlike foams filled with CFC or HCFC, the R-Value of air filled foam does not decline as it ages.

26- R-Value of The Icynene Insulation System® Wall or Ceiling?

R-Values of insulating materials are measured in laboratories and are designated a nominal R-Value per inch. In the wall or ceiling of a building, most factory made insulation materials suffer a reduction in performance due to air leakage and infiltration. The

insulating value of many building components may be as low as 50% of the nominal R-Value of the insulation they contain.

By contrast, the insulation of a wall containing The Icynene Insulation System® will perform closely to the laboratory tested R-Value of the material and seal the wall cavity from air infiltration as well.

The Icynene Insulation System® is particularly suited to steel frame construction. Icynene® expands 100:1 as it is installed, adhering to surrounding building components. It completely seals joints, crevices and voids, including difficult-to-insulate spaces such as steel stud "U" and "C" sections, double studs and non-standard stud locations. A continuous air/vapor barrier is formed around the building structure in a single application.

27- At What Stage is The Icynene Insulation System® Installed?

The Icynene Insulation System® is installed after the windows, doors and roof are in, the electrical and plumbing inspections are complete, and after any other electrical or mechanical system located behind the drywall is installed. It is the last installation to take place before drywall installation.

28- How do I Arrange for The Icynene Insulation System® to be installed in My Home?

Talk to your builder early. Show your builder our Web Site, plus any brochures and video tapes you may have from Icynene Inc. If he is not yet familiar with pricing or installing The Icynene Insulation System®, or does not yet offer the system as standard, we can furnish the builder with a "Builder Demonstration" video tape as well as technical support so that it is made available as an option to you.

Quotations for The Icynene Insulation System® are calculated based on estimates of time and materials. Materials costs are calculated using the board feet method, (1 sq. ft. x 1 in. thick material = 1 bd. ft.), and installation costs are calculated at a rate dependent on the crew size, equipment used and the time taken for installation. Most homes are completed in one day.

The Icynene Insulation System® is less expensive than Urethane for an equal R-value and a little more expensive than fiberglass, (not counting the cost of building wraps, etc. which should be added to a house that does not have The Icynene Insulation System®. The modest premium to upgrade from standard fiberglass is an insignificant part of the cost of a home. If you are planning to install any upgraded insulation package, the cost of The Icynene Insulation System® upgrade will most likely be less expensive and it is guaranteed to give the best performance and comfort value. Any additional cost typically pays for itself in about three years and keeps on paying every year thereafter.

Your builder wants to build you the very best house, be patient and persistent if he is unfamiliar with our product, The Icynene Insulation System® will make his job easier and you get the energy efficiency and control you want.

* The Frequently Asked Questions section was adapted (with permission) from the FAQ on the Icynene, Inc. web site at www.icynene.com.