



Building science and your choice of insulation

Rising energy costs and environmental concerns have led to a premium being placed upon energy conscience design, construction, and the materials used in the building industry. When planning a project whether it be a do it yourself project, work force housing, or a luxury estate home, when it comes to insulation, your choices are many. Of concern is the budget allocated for insulation compared to your desired end result.

The industry for years has been promoting the concept of R-Values (the higher the R-value the better the insulation). This concept has changed with improved building sciences and technology. We no longer look at insulation as a single item but rather we view the home as a system. How multiple products work together in creating healthy energy efficient living environment can reduce a home's energy footprint thus helping to reduce a homes impact on our planet. When deciding on a type of insulation, the choices include Cellulose, Fiberglass, Rockwool and Spray Foams. Which product and which manufacturer is right for your home is a tough decision. By utilizing information available on the internet and consulting a reputable contractor and or an organization such as the Hamptons Green Alliance can make the decision less complicated.

In the recent past the product recommended varied by region and project type. In a retrofit type project the choices might be cellulose and fiberglass, while, in new construction fiberglass has been the primary insulation of choice. A newer technology spray foam systems, is gaining rapidly in popularity with a more energy conscious environmentally concerned consumer.

An energy audit is where you begin when updating an existing home

Let's look at the concerns one might have selecting an insulation product in a retro-fit application. A thoughtful first step would be to contract a reliable company to do a complete home such energy audit. This audit will determine your requirements and help in calculating the return on investment of making changes to a home. The ROI should consist of multiple energy saving ideas such as eliminating air infiltrations, repairing leaky HVAC systems, weather stripping, caulking and insulation. The auditor should be able to recommend reputable contractors that focus on energy efficiencies using environmentally conscious products. The use of environmentally sound products, and the improved energy efficiency of your retro-fit project will not only save money but will make a positive contribution to our environment.

Insulation is a part of an entire system supplied by multiple vendors

Let's look at new construction. In the not too distant past it was not uncommon for a building contractor to select a subcontractor and the product used in insulating a home. This practice has been changing to one where the choices made are more team based with the understanding that product used to build a home, at times, should be looked at as a system. Before construction and during the design phase is the most opportune time to plan for a healthy home with a minimal impact on the environment. This could be accomplished by having planning sessions between your architect, builder, owner, and multiple sub contractors before the shovel goes in the ground.

The HVAC contractor must know what kind of insulation systems are being used, what type and size of windows are to being installed, and what impact the orientation of the house will have, to recommend the size and type of heating system used. This is but one of the concepts that encouraged the six founding members of the Hamptons Green Alliance to come together.

There are many choices - some common questions

Not unlike retro-fit installations, new construction primarily uses Cellulose, Fiberglass, Rockwool and Spray Foam. The insulation chosen should accomplish two things; control your living environment by keeping temperature stable (defined by the insulation's efficiency or R-Value), and air infiltration should be stopped. Foam has gained popularity because their characteristics allow them to virtually stop air flow.

When using fiberglass you should look at it as part of an overall wall system. When using fiberglass, we recommend you should additionally install an air infiltration package which would be a combination of low expansion foams and silicone caulking which would be applied to any framing voids, openings, holes or deficiencies in the framing. This should be done prior to installing the fiberglass insulation. This creates an airtight barrier and an efficient insulation system that can more economically be controlled by the HVAC system. This in turn lowers fuel costs and reduces a home's impact on the environment.