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for consumers

ENERGY STAR

Save Energy • Save Money • Protect the Environment



ENERGY STAR® Labeled Roof Products Frequently Asked Questions

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What is an ENERGY STAR labeled roof product?

It is a reflective roof product that lowers roof surface temperature by up to 100° F, thereby decreasing the amount of heat transferred into a building's interior. ENERGY STAR labeled roof products save money and energy by reducing the amount of air conditioning needed to keep a building comfortable.

What does the ENERGY STAR label signify?

Products bearing the ENERGY STAR labels are more energy efficient than standard products, thereby saving energy and money. In general, ENERGY STAR labeled products including appliances, HVAC equipment, office equipment, residential lighting, and even homes, can save energy costs by at least 30%.

How does a roof product qualify for the ENERGY STAR label?

Roof products that meet or exceed solar reflectance, without compromising product quality or performance, qualify for the ENERGY STAR label. Manufacturers voluntarily sign an agreement with ENERGY STAR called a Memorandum of Understanding (MOU) allowing them to place the ENERGY STAR label on the packaging of qualifying roof products. They can also use the label in promotions and advertising for qualified products.

What types of roof products will carry the ENERGY STAR label?

ENERGY STAR roof specifications are not restricted to any particular type of roof product. ENERGY STAR expects that, at least initially, metal, single-ply membrane, and roof coat will be most widely represented.

Why is ENERGY STAR interested in increasing the reflective roofing market?

Ninety percent of the energy in the United States is generated by burning fossil fuels, which creates the air pollution associated with smog, acid rain, and global climate change. By reducing the amount of energy needed to cool buildings, ENERGY STAR labeled roof products help reduce the production of these air pollutants. Additionally, reflective roof products can help reduce the "heat island effect," a phenomenon in which cities can be 2 to 8° F warmer than the surrounding countryside. Such heat islands occur, in large part, because many buildings and paved areas are designed with dark materials that absorb heat from the sun. This heat is released into the air, causing the air temperature to remain high. The resulting elevated temperature leads to increased demand for air conditioning in buildings, increased fuel use for vehicle air conditioning, increased levels of smog, and associated increased levels of heat-related and smog-related problems. Installing reflective roofs helps reduce the heat island effect, decreasing the amount of smog in the air and benefiting the entire community.

What are the benefits of ENERGY STAR labeled roof products?

Benefits of ENERGY STAR labeled roof products include:

- *Cost and energy savings.* Reflective roofs can reduce roof surface temperature by up to 100°F preventing the sun's heat from transferring into the home or building. ENERGY STAR labeled roof products keep buildings cooler, reducing energy use, utility bills, and air pollution.
- *Downsized A/C equipment.* A reflective roof can reduce peak cooling demand for a home or building owner may be able to purchase a smaller, less-expensive cooling system.
- *Extended roof life.* Roofs undergo significant expansion and contraction as they heat and cool throughout the day. Heat absorbed by the roof can also accelerate degradation from ultraviolet rays and water. A reflective roof can reduce the amount of thermal stress that occurs on the roof surface and make the roof last longer.
- *Decreased pollution.* When widely used in a community, ENERGY STAR labeled reflective roofs decrease air temperature and cooling demands, which reduces the amount of smog in the air and benefits the entire community.
- *Reduced Heat Island Effect.* Roofs made of non-reflective products cause the temperature of the air passing over them to rise, resulting in an increase in the overall temperature of the area, also known as a "heat island effect." The elevated temperature leads to increased building and vehicle air conditioning demand, increased levels of smog, and the increased incidence of heat- and smog-related health problems. Because ENERGY STAR labeled roof products lower surrounding air temperature and decrease necessary cooling demands, they reduce the amount of smog in the air.

How much can businesses expect to save by installing ENERGY STAR labeled roof products?

Energy savings from installing ENERGY STAR labeled roof products will depend on the building location and climate where it is installed, existing insulation levels in the building, the type of roof replaced, the type of roof installed, and how well it is kept clean and maintained. In general, cooling energy savings can be as high as 50%. Additionally, a reflective roof can reduce peak cooling demand by 10 to 15%. As a result, building owners may be able to purchase less expensive HVAC systems.

Will installing an ENERGY STAR labeled roof product save me money no matter where I live?
Homes and buildings located in hot and sunny climates will realize the greatest energy savings. So, people living in southern geographic areas that use more air conditioning will realize greater reductions in their energy bills than people living elsewhere in the country.

Under which circumstances will ENERGY STAR labeled roof products generate the greatest savings?

In general, building owners will save the most money on energy bills by installing an ENERGY STAR labeled roof product if their building has the following characteristics: high air-conditioning load, large roof surface as compared to the building's overall size, lower levels of insulation, and location in a hot, sunny climate. The most cost-effective time to install an ENERGY STAR labeled roof product is when re-roofing, constructing new buildings, or maintaining a roof by applying a coating.

Will I save money by using reflective roof products if my home or building already has a high level of insulation?

An energy-efficient home or building has both reflective roof surfaces and adequate insulation. But, you will notice greater savings on your cooling bills if you install ENERGY STAR labeled roof products on a building with a lower level of roof insulation. However, when installing a roof while constructing a new building, doing a major renovation, or replacing your whole roof system, you should consult with your contractor to maximize savings by making sure the highest level of insulation is installed.

Can I expect the same level of savings over the entire lifetime of my roof?

Due to normal wear and tear, some degradation of roof reflectivity can be expected, particularly within the first few years after installation. Flat roofs may accumulate more dirt and debris if their slope is not great enough to allow washing by rain. Following maintenance procedures that minimize degradation and maximize energy savings. Consult your roofing contractor or [manufacturer](#) to learn more about recommended maintenance procedures and schedules.

How do ENERGY STAR labeled roof products compare with standard roof products in terms of durability?

ENERGY STAR understands that the water tightness, durability, and longevity of a roof are primary concerns of building and homeowners. These participating manufacturers manufacture compliant roof products with warranties that are comparable to their other roof products.

How can I find ENERGY STAR labeled roof products?

The ENERGY STAR label will appear on roof product packaging and advertisements. If you are installing or replacing a roof on a commercial or residential building, be sure to ask your contractor or manufacturer about ENERGY STAR. [Click here](#) for a list of ENERGY STAR labeled roof product manufacturers.

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