



## Cool Roofing Information for Home and Building Owners

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### *What is a Cool Roof?*

A cool roof is one that reflects the sun's heat and emits absorbed radiation back into the atmosphere. The roof literally stays cooler and reduces the amount of heat transferred to the building below, keeping the building a cooler and more constant temperature. Imagine wearing a white or a black T-shirt on a hot day. By wearing the white T-shirt you will remain cooler than if you wore a black T-shirt because it reflects more sunlight and absorbs less heat. Cool roofs, like a white T-shirt, keep the internal temperature of the building cooler.

However, a cool roof need not be white. There are many "cool color" products which use darker-colored pigments that are highly reflective in the near infrared (non-visible) portion of the solar spectrum. With "cool color" technologies there are roofs that come in a wide variety of colors and still maintain a high solar reflectance.

The two basic characteristics that determine the 'coolness' of a roof are solar reflectance (SR) and thermal emittance (TE). Both properties are rated on a scale from 0 to 1, where 1 is the most reflective or emissive.

The CRRC measures these two properties for roofing products, both for the product's initial values and after three years of weather exposure. The CRRC publishes the results on the online Rated Products Directory. The online Directory is available to the general public at no charge, and it allows you to compare the rated values of various product types and brands.

What are the Benefits of a Cool Roof?

There are numerous benefits in having a cool roof:

# Energy Seal Coatings

Acrylic Coatings for Roof and Wall Applications



Increase ecological sustainability factor, or make your house "greener" by:

Reducing your utility bills associated with air conditioning.

Increasing occupant comfort and avoid installing an air conditioner where there is not already one in use.

Decreasing the size and prolong the life of your air conditioning system.

Lowering roof maintenance costs and extend roof life, avoiding re-roofing costs, tear off and dump fees.

Assist your home in meeting building codes and "Green" Certification.

Mitigate your community's Urban Heat Island Effect.

Maintain aesthetics with a roof that performs and looks good.

Receive utility rebates in some locations.

Indirect benefits

In a nut shell, a cool roof can significantly reduce your cooling energy costs and increase your comfort level by reducing temperature fluctuations inside your home. Average energy savings range from 7%-15% of total cooling costs.

When people think about making their home more "green" or ecologically sustainable, cool roofing isn't always the first thing to come to mind. However, certain green building programs, such as the U.S. Green Building Council's LEED, give credit for installing a cool roof. So if you are trying to save energy or make your home more environmentally-friendly, a cool roof is one way to achieve that goal.