

SUN BLOCK

How to protect your manufactured home from too much heat

Heat from the sun shining through windows and on roofs is a major reason for needing mechanical cooling systems in manufactured or “mobile” homes. The most effective way to reduce solar heat is simply to block it. You can use shade trees, vines and trellises, window films, awnings, sun screens and bright roof coatings.

Shade trees and trellised vines provide the most effective shading. They don't allow the sun's rays to reach the home and they create cool buffer zones outside near the home.

Effective shading can also be gained from reflective roof coatings, window films, interior window treatments, sun screens, awnings, low-e glass and reflective glass.

Reflective roofs and walls

Avoid dark colors for walls and roofs in hot climates, because they absorb too much solar heat. Exterior walls and roofs should be reflective to reflect unwanted solar heat.

If repainting exterior walls, choose white or light colors.

When you re-roof your home, choose a reflective roofing or roof coating. The most common reflective coatings are asphalt-based, mixed with aluminum particles and mineral fibers. They reflect about 60 percent of solar heat hitting the roof. These reasonably-priced asphalt coatings vary in quality, mainly due to amount of aluminum particles in each five-gallon container. The better, more expensive coatings contain more aluminum and are more reflective. Stir this asphalt/aluminum coating often during its application.

Bright white latex rubber coatings reflect up to 75 percent of solar heat. These latex coatings are more dependent on proper surface preparation than asphalt coatings. The roof surface must be clean and dry before application. Some latex coatings require a primer coat.

Most large hardware stores and lumber yards carry both asphalt and latex roof coatings.

Interior window treatments

Interior window treatments with reflective surfaces—either metalized or bright white—can block solar heat effectively. Opaque roller shades with white surfaces facing the exterior

repel about 80 percent of the solar heat entering the window. These roller shades block most of the light and all the view.

White Venetian blinds and white slim shades (a smaller-scale Venetian blind) repel 40 to 60 percent of the solar heat entering the window, but also tend to block most of the light and view.

TO LEARN MORE

Excerpted from “Your Mobile Home: Energy and Repair Guide for Manufactured Housing,” by John Krigger, Saturn Resource Management. 224 pages, \$19.95 for print version or \$16.95 for the CD.

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VA-Kool film distributors

Window film can block 50 to 75 percent of solar heat transmitted through single-pane glass. Left pane shows “spectrally selective” film that does not change the appearance of the glass and allows a normal view and interior light. Right pane contains no film.

To retain some light or view, install roller shades made with metalized plastic window film. Like reflective films applied to glass, these metalized plastic roller shades can preserve the view and transmit some light, while blocking the heat.

Reflective window films

Metalized plastic window films (similar to those applied to automotive windows) can block 50 to 75 percent of the solar heat transmitted by single-pane glass.

A microscopic layer of metal on these films reflects solar radiation. Installed on the interior side of single-pane glass, reflective window films repel solar heat, cut glare and reduce fading. The most effective films look like a mirror when viewed from outdoors during the daytime. Tinted films that color the glass are not as effective in blocking solar heat.

Because reflective window films block daylight in addition to solar heat, consumer acceptance has been slow. Newer films (sometimes called low-e films) recently introduced to the marketplace transmit more light while blocking most of the heat. These low-e films also reflect heat back into the home in winter.

Window films may be installed for \$3 per square foot or less. Installing reflective window film is a moderately difficult do-it yourself project. These films—manufactured with removable protective layers—require careful placement and are very sensitive to dirt.

Unlike sun screens, reflective window films do not obstruct the operation of any kind of window.

Window films are probably the best shading method for unshaded sliding glass doors. Window films also work well for outwardly opening windows that wouldn't open if you installed an exterior sun screen.

Lower-quality window films may get cloudy or deteriorate because of intense sunlight, harsh cleaning fluids, or abrasion from cleaning by rough towels. ☹