

SopraStar[★]

**WHAT'S COOL ABOUT
A SOPRASTAR WHITE
SURFACE ROOF?**

**ONCE INSTALLED, SOPRASTAR KEEPS THE MAJORITY OF ITS REFLECTIVITY
FOR 10+ YEARS, CUTTING BUILDING ENERGY USAGE BY 10-50%.**

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SOPRASTAR RETAINS THE MOST REFLECTANCE!

In fact, SOPRASTAR earned the highest rating for "solar reflectance after three years" among six major manufacturers of SBS modified bitumen roofing within this ENERGY STAR product category.

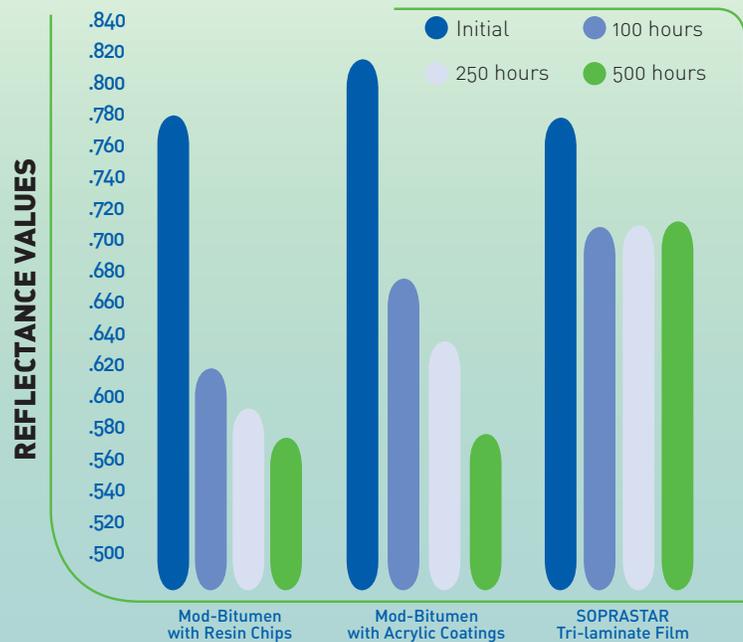
What's more, SOPRASTAR was given a lofty ranking by the prestigious Cool Roof Rating Council® for extremely high reflectivity.



What is a cool roof? It's one that reflects and emits the sun's heat back to the sky instead of transferring it to the building below, thus reducing energy usage primarily for HVAC equipment.

The greater the reflectivity, the cooler your rooftop remains, hence keeping the building's interior cooler. SOPREMA has made the SOPRASTAR thin-layer, heat-reflective waterproof membrane for years and recently earned the coveted ENERGY STAR® standard for roofing reflectivity.

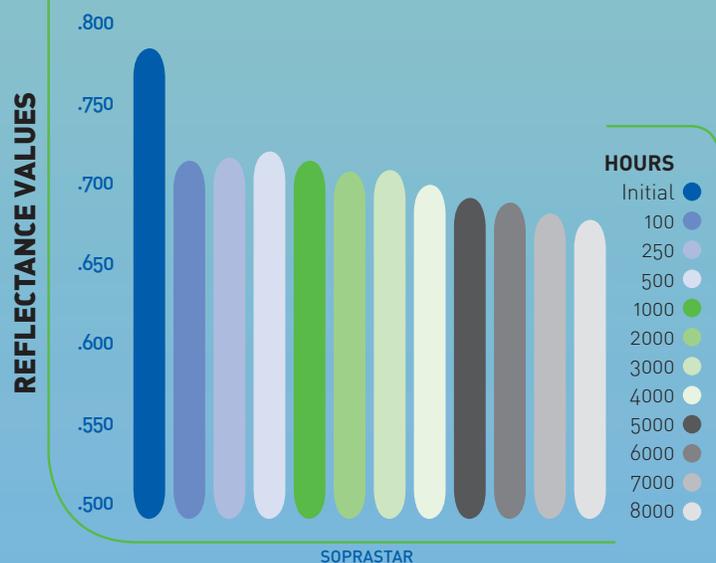
ENERGY STAR STUDY QUV CHANGE IN REFLECTANCE*



Reflectance is the proportion of light that a surface reflects compared to the amount of light that falls on that surface. The color black has a reflectance value close to zero while white has a reflectance value of nearly 100, which keeps a building light and cool. All colors fit between these two extremes (called the start value).

- SOPREMA's SOPRASTAR has the highest Solar Reflectance after three (3) years among all modified bitumen manufacturers with ENERGY STAR status.**
- After 8000 hours, SOPRASTAR still maintains reflectance values close to the initial start value.

QUV AGING OF SOPRASTAR



* The information contained in this brochure has been verified in SOPREMA's own and/or independent laboratories; based on ASTM 459 4 hours.

** Source - www.energystar.gov 8.16.08

White vs. Dark Roofs

Most of the roofs in the world (including more than 90% of roofs in the United States) are dark-colored. The surface of a black roof (usually coated with asphalt) can increase in temperature as much as 90°F, reaching temperatures of 150-190°F.

White, reflective membrane roofs — like SOPRASTAR — typically increase only 10-25°F during the hottest period of the day. This reduces heat-gain which can, in turn, decrease the demand for electric power by up to 5%, depending upon your building's interior square footage, size and type of HVAC equipment, R-value of insulation and other criteria.



SOPRASTAR uses a patented tri-laminate synthetic film that adheres on top of the SBS membrane. Competing products use a factory-applied coating or synthetic chips fused to a granular surface.

Differences

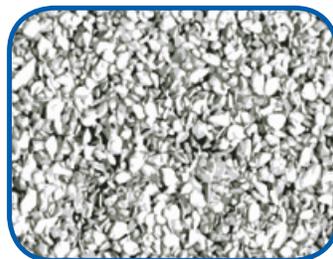
- Membranes that are coated show tobacco staining (yellow stains) after six months of UV exposure.
- Membranes with synthetic chips can lose their reflectivity as the chips flake off during normal wear and tear (called degranulation).
- Granule surfaces harbor pollutants and promote black algae growth, resulting in a reduction of reflectivity.



Advantages

Installing SOPRASTAR in your next new building or refurbishment has other distinct advantages over synthetic-coated membranes:

- No re-coating every few years to maintain reflectivity
- Long-lasting protection
- Comprehensive warranty
- High tear resistance
- Retention of high reflectivity and whiteners
- Superior dirt pick-up resistance
- Easy maintenance



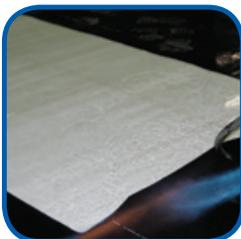
Competitors' Cool Roofs



SOPREMA's SOPRASTAR Cool Roof

Application methods

SOPREMA offers 4 application methods, allowing you to choose which method is the best for your next project:



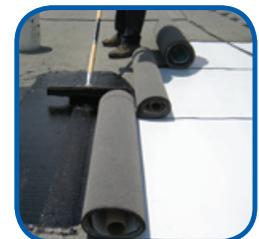
Heat-welded



Self-adhered



Hot asphalt



Cold adhesive

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Contributing to a Greener Environment

Building owners see lower energy bills throughout the year when using SOPRASTAR. But there are many additional benefits that go a long way toward a healthier, greener environment.

SOPRASTAR helps reduce air pollution, greenhouse gas emissions and smog formation, particularly in congested areas. It also helps diminish what's known as the "heat island effect" in cities and suburbs.



For millions of Americans living in and near cities, the "heat island effect" is a growing concern. This occurs when there is an expanse of dark parking lots, road pavement, black rooftops and sparse vegetation. These conditions are ripe for raising ambient air temperature as much as 8-10°F higher than the temperature in the surrounding countryside.

A commercial building with a cool roof — or any other sustainable measure — will help lessen environmental impact and bring us closer to a greener planet.

For more information about SOPRASTAR cool roof technology, talk to your SOPREMA representative.



Conservation-minded manufacturers of products used by the building industry evaluate the impact of their products on the environment during the lifespan of a building (from manufacturing to construction, operation and demolition).

SOPREMA contributes to environmental protection and sustainable construction by manufacturing high quality products that meet the highest environmental standards. The Ginkgo Biloba leaf is the symbol selected by SOPREMA to represent its ecological commitment. This ancient oriental tree represents sustainability, health, aesthetics and resistance to attack.

SOPREMA was one of the first roofing manufacturers to establish an Environmental Management Program, and the first modified bitumen manufacturer to be ISO 14001 certified for its environmental management practices. SOPREMA's global research facilities are developing products made from renewable resources and recycled materials to reduce SOPREMA's carbon footprint.



SOPREMA[®]

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