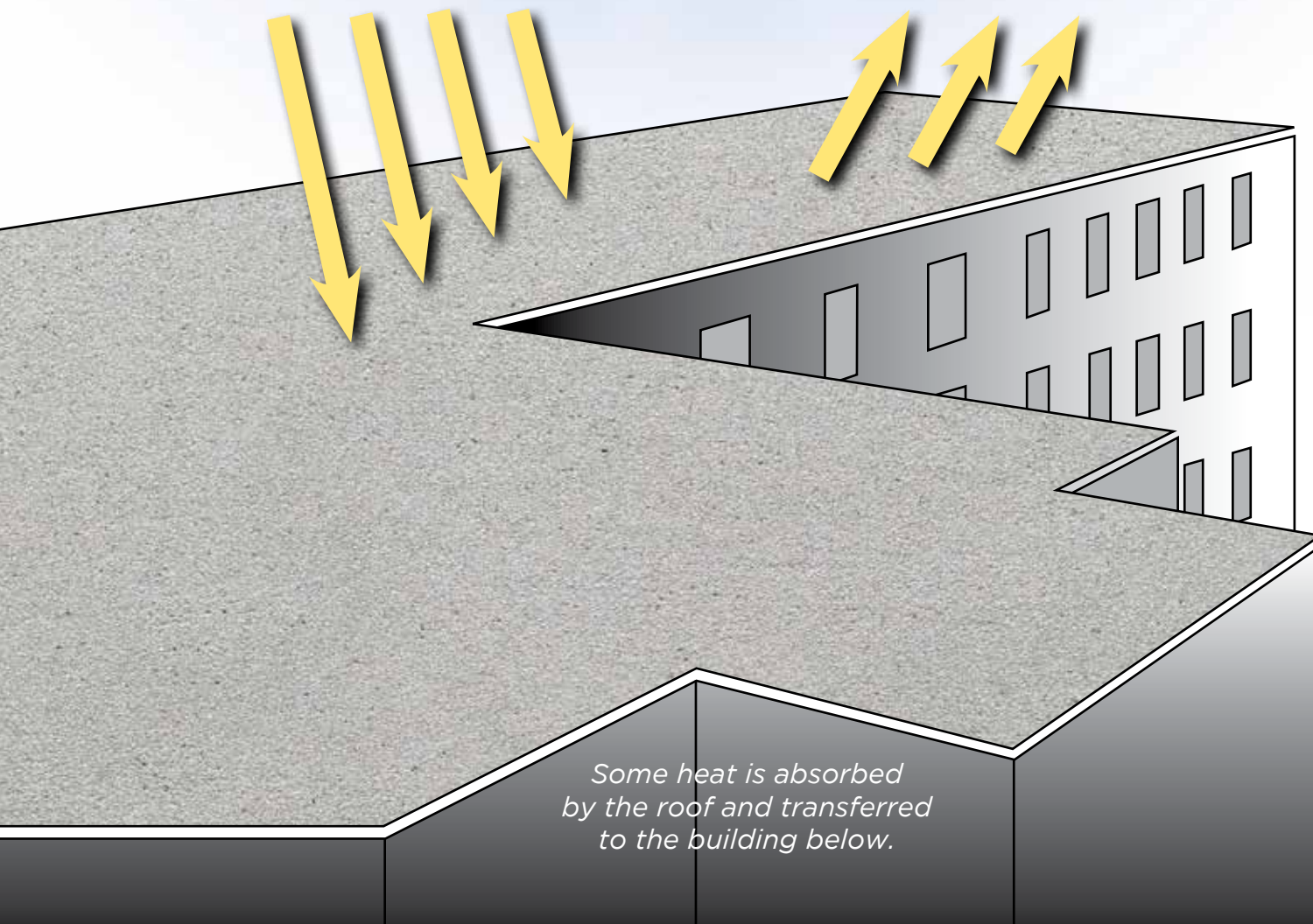


# USING COOL ROOF TECHNOLOGY IS ONE OF THE EASIEST, MOST COST-EFFECTIVE WAYS TO LOWER ENERGY CONSUMPTION.

**Thermal Emittance:**  
The relative ability of the roof surface to radiate absorbed heat.

**Solar Reflectance:**  
The fraction of solar energy that is reflected by the roof.



## SELF-ADHERED SBS-MODIFIED BITUMEN CAP SHEET

Product Name	Description	ASTM	Radiative Properties				SRI	
			Solar Reflectance Initial	Solar Reflectance Aged	Thermal Emittance Initial	Thermal Emittance Aged	Initial	Aged
Flintlastic SA Cap CoolStar	Granule surfaced self-adhering cap membrane; highly stress resilient with pliable SBS modified bitumen and polyester reinforcement	D6164 Grade G,	0.71	0.62**	0.90	0.90**	87	75**
Flintlastic SA Cap FR CoolStar	Granule surfaced, fire retardant self-adhering membrane; combines the strength of a heavy cap duty fiberglass reinforcement and the pliability of SBS modified bitumen	D6163, Grade G, Type I UL 2218, Class 4	0.71	0.62**	0.90	0.90**	87	75**

## APP-MODIFIED BITUMEN CAP SHEET

Product Name	Description	ASTM	Radiative Properties				SRI	
			Solar Reflectance Initial	Solar Reflectance Aged	Thermal Emittance Initial	Thermal Emittance Aged	Initial	Aged
Flintlastic® GTA CoolStar®	Workhorse granule surfaced cap membrane; offers the strength and UV resistance of APP modified bitumen with the stress resistance of a quality polyester reinforcement- for torch applications	D6222, Grade G, Type I	0.71	0.67**	0.92	0.91**	0.88	0.82**
Flintlastic GTA-FR CoolStar	Enjoy the benefits of 'GTA' with fire retardant additives for Class A Fire Ratings	D6222, Grade G, Type I	0.71	0.67**	0.92	0.91**	0.88	0.82**

## SBS-MODIFIED BITUMEN CAP SHEET

Product Name	Description	ASTM	Radiative Properties				SRI	
			Solar Reflectance Initial	Solar Reflectance Aged	Thermal Emittance Initial	Thermal Emittance Aged	Initial	Aged
Flintlastic FR Cap 30 CoolStar*	Granule surfaced cap membrane; combines the strength of a heavy duty fiberglass reinforcement and the pliability of SBS modified bitumen with fire retardant additives- for hot asphalt or cold adhesive application	D6163, Grade G, Type I	0.71	0.62**	0.90	0.90**	87	75**
Flintlastic FR Cap 30 T CoolStar*	Enjoy the benefits of "FR Cap 30" for torch applications	D6163, Grade G, Type I	0.71	0.62**	0.90	0.90**	87	75**
Flintlastic GMS CoolStar	Workhorse granule surfaced cap membrane; highly stress resilient with pliable SBS modified bitumen and polyester reinforcement- for hot asphalt and cold adhesive applications	D6164, Grade G, Type I	0.71	0.62**	0.90	0.90**	87	75**
Flintlastic Premium FR-P CoolStar*	Enjoy the benefits of "FR-P" with increased modified asphalt per square and a heavier, high-performance, extra-tough, stress resistant polyester reinforcement mat	D6164, Grade G, Type II	0.71	0.62**	0.90	0.90**	87	75**
Flintlastic GTS-FR CoolStar*	One of CertainTeed's most robust granule surfaced cap membranes with 67 pounds of modified asphalt per square; highly stress resilient with pliable SBS modified bitumen and polyester reinforcement- for torch applications	D6164, Grade G, Type II	0.71	0.62**	0.90	0.90**	87	75**

## BUILT-UP ROOFING (BUR)

Product Name	Description	ASTM	Radiative Properties				SRI	
			Solar Reflectance Initial	Solar Reflectance Aged	Thermal Emittance Initial	Thermal Emittance Aged	Initial	Aged
MS Cap Sheet CoolStar	Granule-surfaced non-modified asphalt membrane, commonly specified as weathering layer for hot asphalt-applied built-up roof assemblies in lieu of flood coat and gravel.		0.69	0.65**	0.90	0.89**	0.84	0.79**

\*Made to Order, 300 Roll Minimum Order Requirement \*\*CRRC Rapid Rating

CoolStar touch-up granules are available in 5-gallon buckets for use on asphalt bleed-out areas.



**CertainTeed**

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# COOLSTAR®

## Energy-Saving Reflective Roof Surfaces



**CertainTeed**  
SAINT-GOBAIN

## Is a Cool Roof right for every building?

Climate is an important consideration when calculating the benefits of a cool roof. While significantly reducing the demand for energy associated with cooling (usually electricity), a cool roof could potentially lead to a slightly increased need for heating energy in winter. This is because a cool roof keeps your “lid” cooler year-round. To calculate what the savings may be in your area, Oak Ridge National Laboratory has an easy to use on-line calculator: <https://web.ornl.gov/sci/buildings/tools/cool-roof/>

Please remember that environmental benefits may outweigh economic benefits for some consumers. Changes in the types of fuels used for heating vs. cooling (and their associated environmental impacts) and the reduction in Urban Heat Island effect may be more important to some building owners than utility bills alone. In those cases, cool roofs are the obvious choice.

Moisture management is a key aspect of any roof assembly, especially for reflective roofs as water dissipation is less efficient beneath cooler surfaces. Sealing roof and ceiling penetrations that could allow moisture transmission to the interior, properly ventilating attics, and installing air- and vapor-retarders are effective strategies to limit moisture damage.

Just as for other building assemblies, proper roof design and installation are key to ensuring durability and long-term performance.

### Roof system selection questions?

Consult CertainTeed Commercial Roofing Technical Services Department for the best way to optimize your future energy savings and meet local building codes.

## Do reflective roofs remain cool over time?

CertainTeed’s CoolStar membranes are engineered to deliver long-term performance without significant fading or color change. An important benefit of modified bitumen cap sheets is that its granules tend to be “self-cleaning” when sufficient positive surface drainage occurs, helping to keep the roof covering clean and reflective. In areas where rainfall is infrequent, CertainTeed recommends hosing off the roof as part of a routine maintenance program to regain its higher solar reflectance.

Many other bright white, reflective low-slope solutions such as TPO membranes and silicone coatings, are valued for high initial reflectivity but are well known for relatively quick dirt pick-up, significantly reducing their reflective properties and performance benefits.

Over time, soiling of the roof occurs, on any low-slope roof, especially where water ponds, decreasing its solar reflectance. This is why the California Title-24 standards are based off

aged values. These values are ultimately determined by a national average performance measurement after a product has been in the field for three years, though a Rapid Ratings test can be performed to temporarily assign a predictive aged value while actual aging takes place.

