

MonierTM
SAINT-GOBAIN

**Energy
efficient roof**



CSR

The roof of your home makes up to 30% of the entire façade and is exposed to high levels of UV, making the roof design of your home an important decision.

To create an energy efficient home the first step is starting from the top. Understanding the climate zone of your home will provide guidance on colour selection of your roof. In warmer climate zones, it's advisable to opt for a light colour roof with a lower Solar Absorption (SA) value. Conversely, in cooler climate zones, darker tiles may be more appropriate. Selecting your roof colour is affected by the following colour testing methods; Solar Absorption, Light Reflective Value & Solar Reflective Index.

Solar Absorption (SA)

SA is a measure of how much of the sun's radiation is absorbed by a material. The level of SA is impacted by roof colour and is measured by a value ranging from 0 to 1. Higher value indicates the surface absorbs a larger amount of sun's radiation. Depending on the location of your home, in warmer climate the use of lighter-coloured roof tiles with a lower SA value can optimise a buildings' energy efficiency

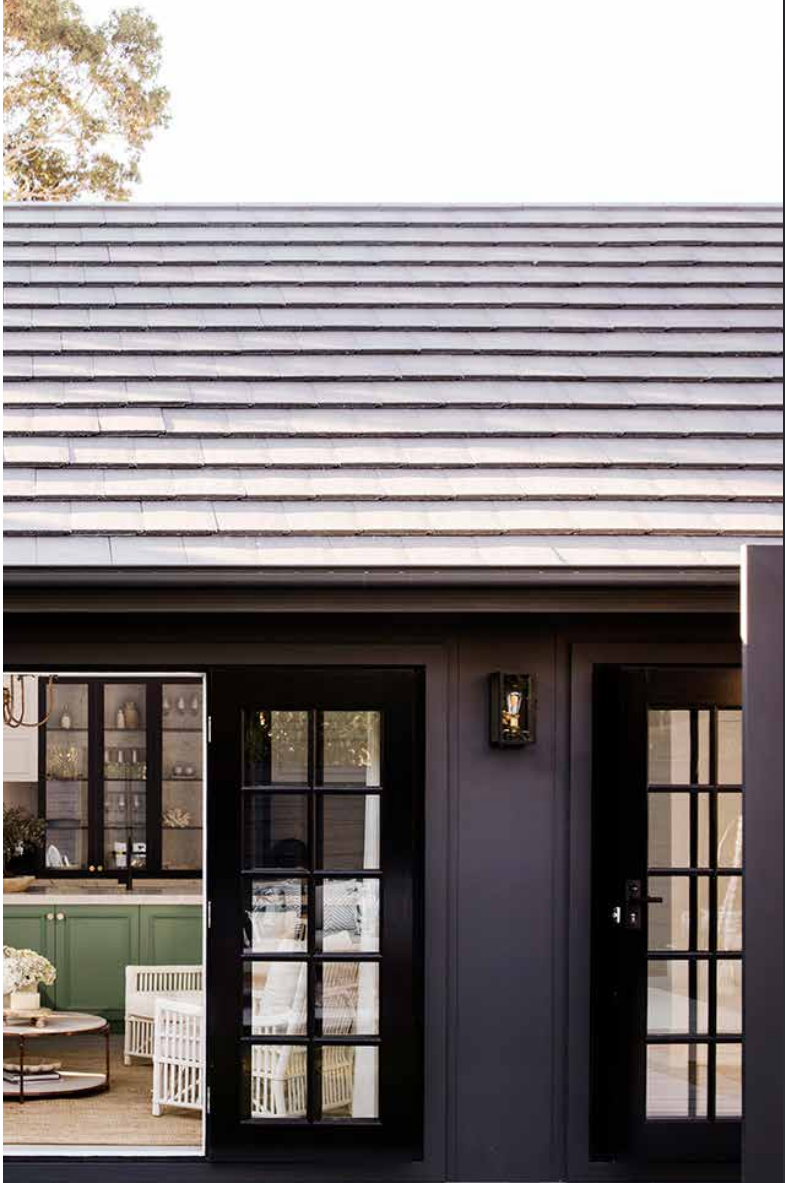
through reduced cooling costs. Likewise, darker coloured roof tiles are preferred in cooler climate to save costs on heating your home.

Solar Reflective Index (SRI)

SRI is an indicator of the ability of a roof surface to return solar energy to the atmosphere. The lower the SRI, the hotter a material surface is likely to become under the sun. There are several factors that affect SRI value, such as thermal emittance, solar reflectance, roof pitch, weight, and aging.

Light Reflective Value (LRV)

LRV quantifies the lightness and brightness of a colour, and measures how much a colour can affect your building's natural or artificial light. When designing an aged care or hospital facility, which are purpose-built for people, the LRV will impact the number and type of light fixtures required to ensure adequate vision is achieved.



Additional benefits of roof tiles

Thermal performance

The thermal mass of roof tiles creates a temperate lag which slows the transfer of external temperatures into the roof space. This assists with reducing the level of air conditioning required to create a comfortable home, while helping you save money.

Superior durability and performance

It is important your home performs at its best from the day of purchase and into the future. With over 100 years of testing, Monier roof tiles are Australian made and certified, long lasting and built to withstand the harsh Australian conditions. Providing peace of mind, Monier offers a 30-year performance guarantee for both concrete and terracotta roof tiles.



Understanding the affects of solar radiation on a roof

Solar Reflectance

A measure of how much sun's radiation is being reflected by the roof.

Solar Absorptance

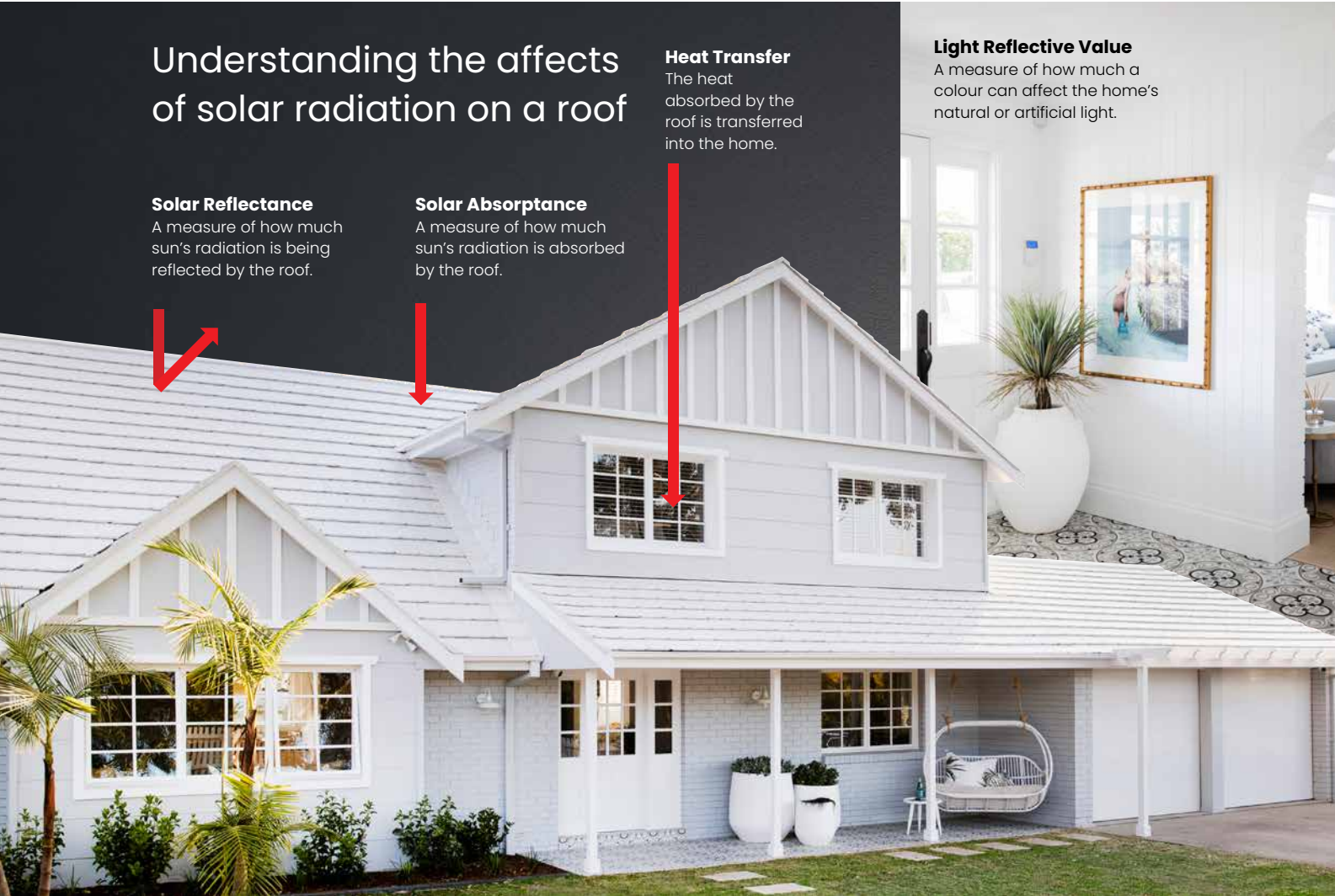
A measure of how much sun's radiation is absorbed by the roof.

Heat Transfer

The heat absorbed by the roof is transferred into the home.

Light Reflective Value

A measure of how much a colour can affect the home's natural or artificial light.



TERRACOTTA TILE COLOURS

Luxe Collection

Titan	Titan Gloss	Bedrock	Peak	Mystic Grey	Ravine	Pottery Brown
SA: 88.20% SRI: 4.44% LRV: 5.12% N & U	SA: 88.30% SRI: 3.53% LRV: 4.79% M	SA: 86.60% SRI: 9.01% LRV: 5.81% M, N & U	SA: 83.40% SRI: 13.48% LRV: 7.59% M, N & U	SA: 56.00% SRI: 11.80% LRV: 10.03% M	SA: 73.40% SRI: 24.49% LRV: 10.58% N & U	SA: 84.30% SRI: 10.42% LRV: 5.86% M
Comet	Delta Sands	Riverstone	Florence Red	Cottage Red	Mars	Sunset
SA: 78.70% SRI: 20.50% LRV: 14.60% M & N	SA: 73.50% SRI: 27.57% LRV: 10.75% M	SA: 67.10% SRI: 32.41% LRV: 19.12% M & N	SA: 77.90% SRI: 21.28% LRV: 9.22% M	SA: 82.30% SRI: 25.56% LRV: 9.97% M	SA: 56.90% SRI: 47.09% LRV: 21.16% M & N	SA: 64.60% SRI: 45.17% LRV: 14.69% M
Earth	Aurora	Tanbark	Burgundy	Bungalow	Not all colours are available for Marseille, Nouveau & Urban Shingle. Please refer to key M Marseille, N Nouveau & U Urban Shingle.	
SA: 56.90% SRI: 45.58% LRV: 17.77% M, N & U	SA: 85.10% SRI: 21.56% LRV: 11.59% M	SA: 84.70% SRI: 12.62% LRV: 5.69% M	SA: n/a SRI: 16.51% LRV: 5.73% M	SA: n/a SRI: 5.74% LRV: 12.50% M		

CONCRETE TILE COLOURS

Premium & Classic Collection

Sambuca	Barramundi	Soho Night	Chocolate	Wollemi	Camelot	Babylon
SA: 95.70% SRI: -0.80% LRV: 4.70% A, CT, E, H & T	SA: 92.70% SRI: 3.95% LRV: 9.55% A, CT, E, H & T	SA: 93.40% SRI: 2.07% LRV: 6.82% C & M	SA: n/a SRI: 7.84% LRV: 9.97% CT & T	SA: 90.20% SRI: 4.70% LRV: 13.01% A & H	SA: 91.70% SRI: 4.70% LRV: 7.81% A & H	SA: 87.80% SRI: 8.68% LRV: 13.24% A, E & H
Aniseed	Caraway	Silver Perch	Wild Rice	Mist Grey	Seashell	Salt Spray
SA: 84.80% SRI: 11.68% LRV: 14.73% A, E, H & T	SA: 89.00% SRI: 6.34% LRV: 10.75% A & H	SA: 78.80% SRI: 16.84% LRV: 23.32% A & H	SA: 68.00% SRI: 35.80% LRV: 34.35% A, E & H	SA: 56.00% SRI: 60.18% LRV: 40.25% H	SA: 42.50% SRI: 61.66% LRV: 60.56% H	SA: 41.70% SRI: 63.67% LRV: 13.04% A, CT, E & H
Chilli	Saffron	Not all colours are available for Madison, Cambridge, Horizon, Atura, Tudor, Elabana & Centurion. Please refer to key M Madison, C Cambridge, H Horizon, A Atura, T Tudor, E Elabana & CT Centurion.				
SA: 88.40% SRI: 7.72% LRV: 7.42% A, E & H	SA: 69.00% SRI: 33.81% LRV: 14.94% CT, E & T					

SA = Monier tiles were assessed through Solar Absorptance test to ASTM E903-20 Standard Test Method for Solar Absorptance, reflectance and Transmittance of materials using integrating spheres.
SRI = Monier tiles were assessed through SRI test to ASTM E1980-01.
LRV = Monier tiles were assessed through LRV test to BS 8493:2008 Light Reflective Value (LRV) of a Surface - Method of Test.