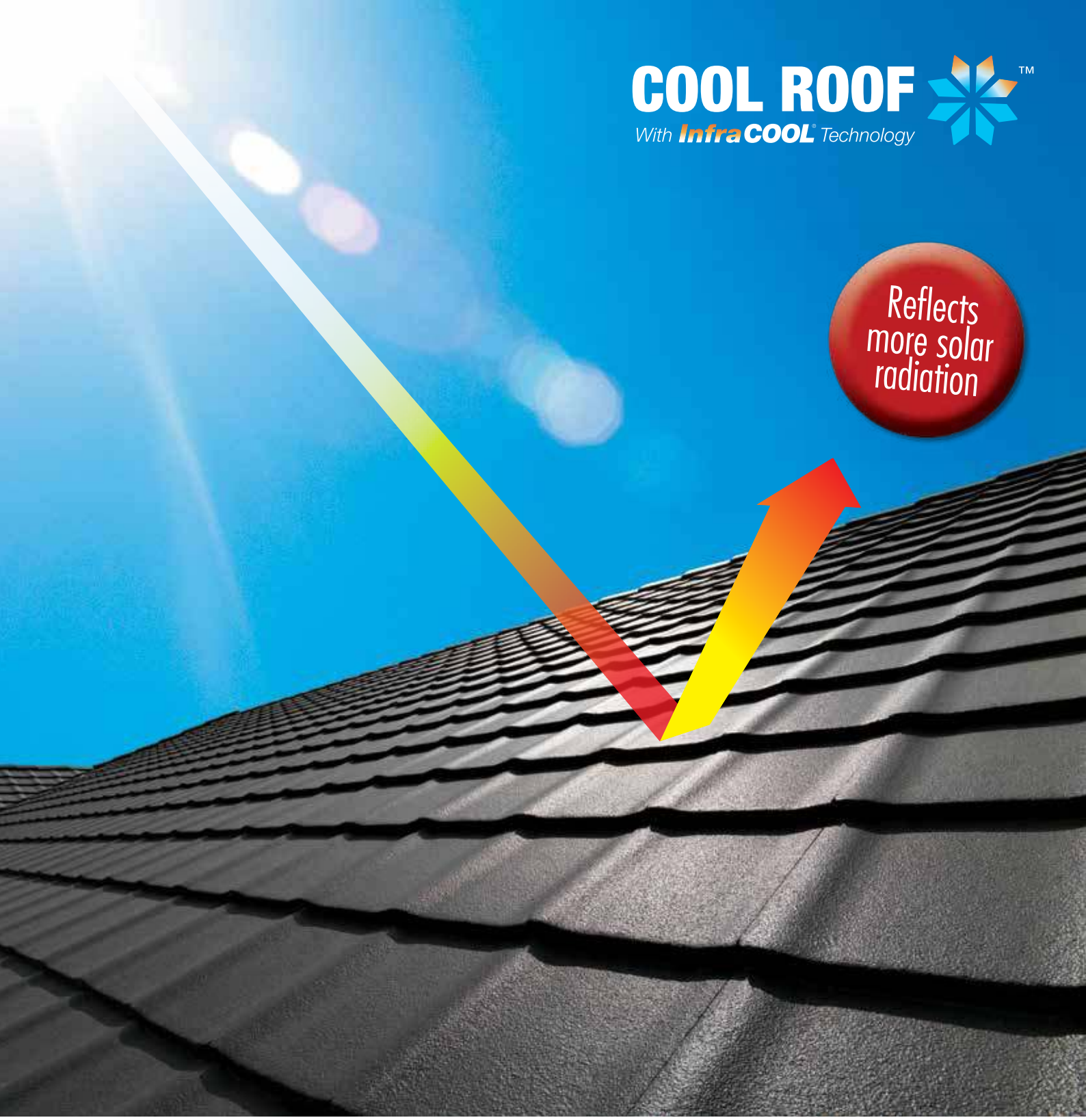
COOL ROOF™
With InfraCOOL® Technology



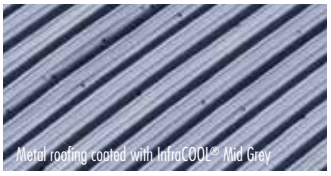
Cool Roof Residential... *Colour Selector*

next generation
TECHNOLOGY

Dulux®
Acra·Tex®

Concrete tiles coated with InfraCOOL® Birch Grey

Roof tiles coated with InfraCOOL® Charcoal


Metal roofing coated with InfraCOOL® Mid Grey

Metal roofing coated with Cool Roof White

Cool Roof by Dulux® AcraTex® has you covered for Professional Roof Restoration

As the largest and most trusted coatings company in Australia, we don't just stop at walls -
Cool Roof by Dulux® AcraTex® is part of our Roof Membrane Next Generation Range for Professional Roof Restoration

Roof Restoration Specialist Systems → **Tile or Metal Roofs** → **Cool Roof Heat Reflective Colours** → **Registered Roof Restorer Network**

InfraCOOL® Colours that can help keep your home cooler*

By reflecting more of the Sun's energy, InfraCOOL® can keep surfaces cooler to help reduce heat build up in roof spaces that can filter into living zones*

The extent to which InfraCOOL® may translate to internal benefits in each situation will depend on variables such as colour choice, building design, insulation and location.

InfraCOOL® Pastel Range - ALL deliver greater than 70% Total Solar Reflection (TSR), providing best cooling benefit

Cool Roof White TSR: >90%	Palmao TSR: >70%	Surf White TSR: >70%	Cool Grey TSR: >70%
Windstorm TSR: >70%	Haze TSR: >70%	Ice TSR: >70%	Dusk TSR: >70%
Shadow TSR: >70%	Quartz TSR: >70%	Pearl TSR: >70%	Storm TSR: >70%

Colour accuracy is limited by the printing process. Your Dulux AcraTex Roof Membrane Professional can provide samples of your final selection in real colour to ensure your total satisfaction. InfraCOOL® Pastel colours qualify under BCA and Basix "LIGHT" Rating for potential insulation concessions. For a fact sheet go to infracool.com.au

InfraCOOL® Traditional Range - increases InfraRed reflection without changing the colour so even darker colours stay cooler

Smooth Cream
InfraCOOL TSR 75.2 vs Std 65.8 - 14% increase

Merino
InfraCOOL TSR 60.5 vs Std 46.00 - 32% increase

Birch Grey
InfraCOOL TSR 58.90 vs Std 40.90 - 44% increase

Moss Vale Sand
InfraCOOL TSR 62.00 vs 57.30 - 8% increase

Mid Grey
InfraCOOL TSR 41.00 vs Std 21.70 - 89% increase

Slate Grey
InfraCOOL TSR 29.60 vs 20.80 - 42% increase

Earth Grey
InfraCOOL TSR 35.00 vs Std 26.00 - 35% increase

Gun Metal Grey
InfraCOOL TSR 25.20 vs Std 9.40 - 168% increase

Iron Bark
InfraCOOL TSR 28.90 vs Std 9.10 - 218% increase

Dark Grey
InfraCOOL TSR 23.60 vs Std 8.50 - 178% increase

Charcoal
InfraCOOL TSR 26.90 vs Std 6.80 - 296% increase

Ebonite
InfraCOOL TSR 17.60 vs Std 4.2 - 319% increase

Terracotta
InfraCOOL TSR 49.50 vs Std 41.50 - 19% increase

Dark Terracotta
InfraCOOL TSR 42.80 vs Std 38.20 - 12% increase

Indian Red
InfraCOOL TSR 23.30 vs Std 14.40 - 62% increase

Torres Blue
InfraCOOL TSR 27.70 vs Std 12.20 - 127% increase

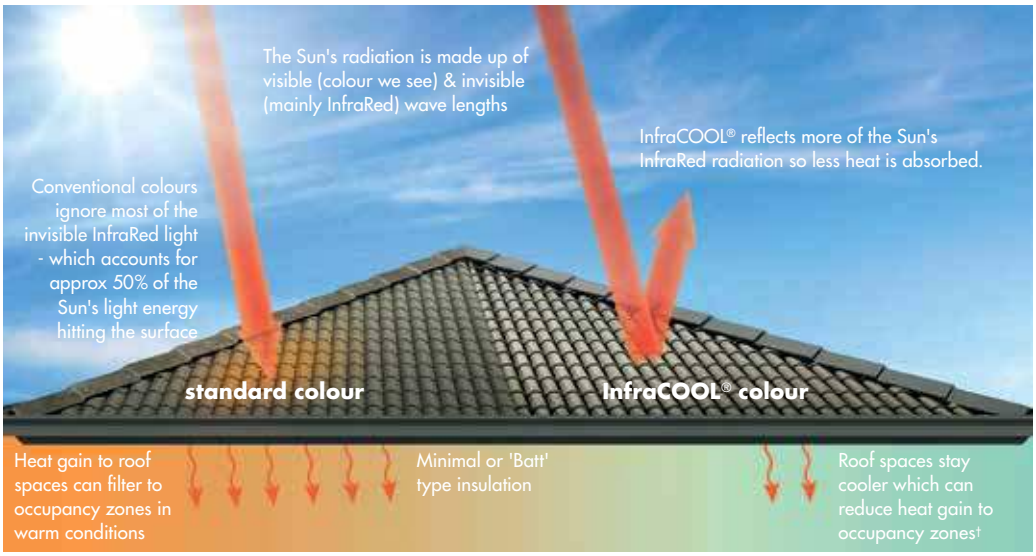
Mist Green
InfraCOOL TSR 42.30 vs Std 21.70 - 95% increase

Rivergum
InfraCOOL TSR 33.00 vs Std 17.30 - 91% increase

Caulfield Green
InfraCOOL TSR 25.40 vs Std13.50 - 88% increase

Mountain Blue
InfraCOOL TSR 26.50 vs Std 7.50 - 253% increase

*How Dulux® Cool Roof with InfraCOOL® Technology works



InfraCOOL® reflects more sunlight BEFORE it can be absorbed as heat.

Because of their large surface area, and exposure, ROOF SURFACES can capture and radiate the Sun's energy.

† The extent to which InfraCOOL® may translate to internal benefits in warm conditions will depend on variables such as colour choice, building design (including roof pitch, materials & window placement), insulation, ventilation, occupancy use, shading, location, climate and ratio of exposed roof area to floor area.

Cool Roofs internationally have been identified as part of an effective strategy to combat Urban Heat Island effects and reduce cooling energy demand.

See FAQ page & references for more facts.

Colour choice can still make a difference - Cool Roof White and Pastel shades are the coolest choice overall.
InfraCOOL® increases Total Solar Reflection (TSR) to make colours cooler than their standard equivalent. Higher TSR % means COOLER surface temperature.
TSR comparisons for each colour are provided on the colour chart and Full TSR reports including Surface Temperature predictions are available at infracool.com.au

FAQ's - Dulux® AcraTex® Cool Roof Residential with InfraCOOL® Technology

Q. InfraCOOL® Technology – what is it?

A. InfraCOOL® Technology is about making cooler colours using specific pigments that reflect the invisible INFRA-RED portion of the Sun's radiation which accounts for around 50% of the total light energy from the Sun.

Q. What colours are available?

A. Dulux® InfraCOOL® technology is an option for most colours across the AcraTex® Roof Membrane Next Generation colour range. Additionally Dulux® has formulated comparable colour matches to most popular tile and metal roofing colours. Some colours benefit more than others from InfraCOOL® Technology. Refer to the InfraCOOL® colour range charts and website for confirmation of availability and performance potential by colour.

Q. Light Colours are Cool and Dark colours are hot – aren't they ?

A. Well – Yes and No! The reason we see the colours we see is because of the portions of the visible light spectrum that are either absorbed or reflected (think of the portions of visible light as the colours in a rainbow).

White reflects almost all visible light - and we see the colour white as a result.

Black absorbs almost all visible light, and any light not reflected is absorbed as heat - which is why dark surfaces are hotter.

Visible (or "colour") light makes up less than half of the Sun's total light energy. The other 50% (mainly invisible InfraRed) is largely ignored in conventional products. Dulux® InfraCOOL® reflects more InfraRed radiation so dark colours can be made cooler.

Q. What is Dulux Cool Roof ?

A. Dulux Cool Roof is our high-build Roof Membrane that incorporates InfraCOOL® Technology to reflect more of the Sun's light radiation from surfaces before it can be converted to heat.

Q. How much cooler are InfraCOOL® Colours?

A. It varies depending on the colour chosen, the construction and the weather conditions. For a Charcoal coloured roof, surface temperature reductions greater than 10°C can be achieved in hot weather.

Q. So will all colours be 10°C cooler?

A. No. InfraCOOL® works on the invisible InfraRed portion of the Sun's light energy. The visual colour still makes a difference because what is absorbed or reflected in the visual spectrum determines the colour we see. The TSR (Total Solar Reflection) of the colour is an indicator of which colours are coolest. The higher the TSR, the cooler the colour. The colour card shows TSR for each colour and our website has a full test report for each colour including its predicted surface temperature based on specific weather conditions.

Q. Why state TSR, not temperature?

A. TSR (Total Solar Reflection) is the best way to compare colour vs colour because it shows only the absolute difference the colour makes. We can give a prediction of the surface temperature any colour can reach by measuring its TSR (Total Solar Reflection) and using the Internationally accepted Test method (ASTME1980) to estimate the surface temperature under specific conditions for air temperature, wind, solar intensity and heat escape or "emissivity".

Q. Will my home be cooler ?

A. Because roofs are often exposed to so much sun light, they can capture and transmit significant heat to the building. The degree of change Cool Roofs can make to interiors depends on things such as colour choice, building design (including roof pitch, materials & window placement), insulation, ventilation, occupancy use, shading, location, climate and ratio of exposed roof area to floor area. What we say about InfraCOOL® is that it reflects light as light, before it can be absorbed as heat and that means less heat to combat in the first instance.

Q. Is Insulation important?

A. Insulation is important in the overall efficiency of buildings as is ventilation. Insulation slows heat transfer - including heat loss in winter. Insulation types work at different levels which is important to consider also. Cool Roof paint will be most effective in homes with minimal or just "batt" type insulation over ceilings as roof spaces can get very hot and heat can be transferred to occupancy zones. InfraCOOL® reflects light before it can be captured as heat, reducing heat gain into roof spaces in the first instance.
Cool Roof paint is less effective in homes with radiant barrier insulation (e.g. foil directly under roof).

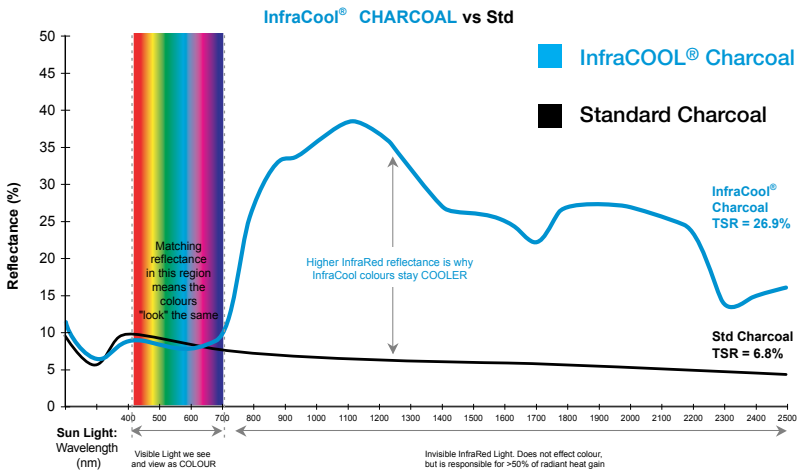
Q. Can I save money on cooling ?

A. If your home is cooled by a refrigerate Air Conditioner, then reducing heat gain via your roof can make sense to lower cooling energy demand. There are many variables associated with running costs from site to site so we are unable to confirm savings for every case.

What we can say, based on studies published internationally[1], is that Cool Roofs can be an effective strategy, combined with other building efficiency aspects to reduce cooling energy demand.

There are more facts and studies including links to Independent Research on our website www.infracool.com.au and at the following referenced sources.
[1] Cool Roof International Research Data : Heat Island Group, Lawrence Berkeley Laboratory, http://heatisland.lbl.gov/coolscience; Cool Roof Rating Council, http://coolroofs.org/HomeandBuildingOwnersInfo.html; United States Environmental Protection Agency, http://www.epa.gov/hiri/mitigation/coolroofs.htm

How can colours look the same but be cooler?



This chart shows the "Spectral Reflectance" of InfraCOOL® Charcoal vs Standard Charcoal. Its the way we measure reflectance of sun light across the full spectrum. The rainbow portion depicts the wave lengths of light in the "visible spectrum" which determines colour as we see it.

- The matching reflectance lines in this portion say both colours reflect equally and we see the same colour.

The wave lengths above 700 nanometers (to the right of the rainbow) are invisible InfraRed light which accounts for over 50% of the Sun's total light energy hitting a surface.

- InfraCOOL® reflects significantly more InfraRed light energy meaning less is absorbed as heat.

Total Solar Reflection (TSR), is increased from 6.8% to 26.9% for InfraCOOL® Charcoal.

Visit **www.infracool.com.au** for full system and colour range information.
For general enquiries, call **13 23 77**

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Certified System Quality ISO 9001 SAI GLOBAL
Certified System Environment ISO 14001 SAI GLOBAL
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