

COOL ROOF 
With **InfraCOOL**™ Technology



InfraCOOL™...*heat reflective coatings*



InfraCOOL™ Technology from Dulux®

Reflects more of the Suns Light Energy by working beyond the visible light spectrum to maximise reflection of the suns invisible infrared rays.

Total Solar Reflection

(TSR) Over 50% of the suns total light energy is invisible infrared. InfraCOOL focuses on that portion so even dark colours can be made cooler.

Reflect Heat BEFORE

it can be absorbed.
By reflecting heat in the first instance surfaces don't super-heat and capture the heat load.
Insulation (by contrast) is "after the event".

COOL Roofs

Due to their large surface area and angle of exposure, Roof Surfaces capture enormous amounts of the Suns energy and COOL ROOFS offer maximum cooling & energy efficiency.

COOL Roof White

Dulux COOL ROOF White reflecting over 90% of the suns total light energy maximises reflection of both visible (colour) and invisible (infrared) providing maximum cooling efficiency.

The need for Cool Roofs

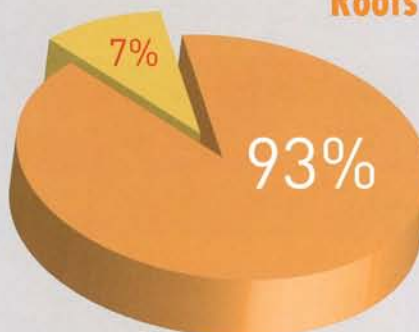
Roofs represent 20-25% of Urban Surfaces

"Cool Roofs.... can offset 24 billion tonnes of CO₂ - the equivalent of taking half the cars in the world off the road"

"The offset provided by cooling urban surfaces affords us a significant delay in climate change"

Lawrence Berkeley National University
- White Roofs Cool the World.

Roofs are Solar Radiators



- 93% of a buildings Heat Gain is RADIANT (Suns Rays converted to heat AFTER absorption)
- 7% (only) by Convection & Conduction (air temperature and direct contact)

It makes sense...

... to design a barrier that combats the specific Heat Source - and that means reflecting the suns rays BEFORE they're absorbed, converted and magnified as heat.

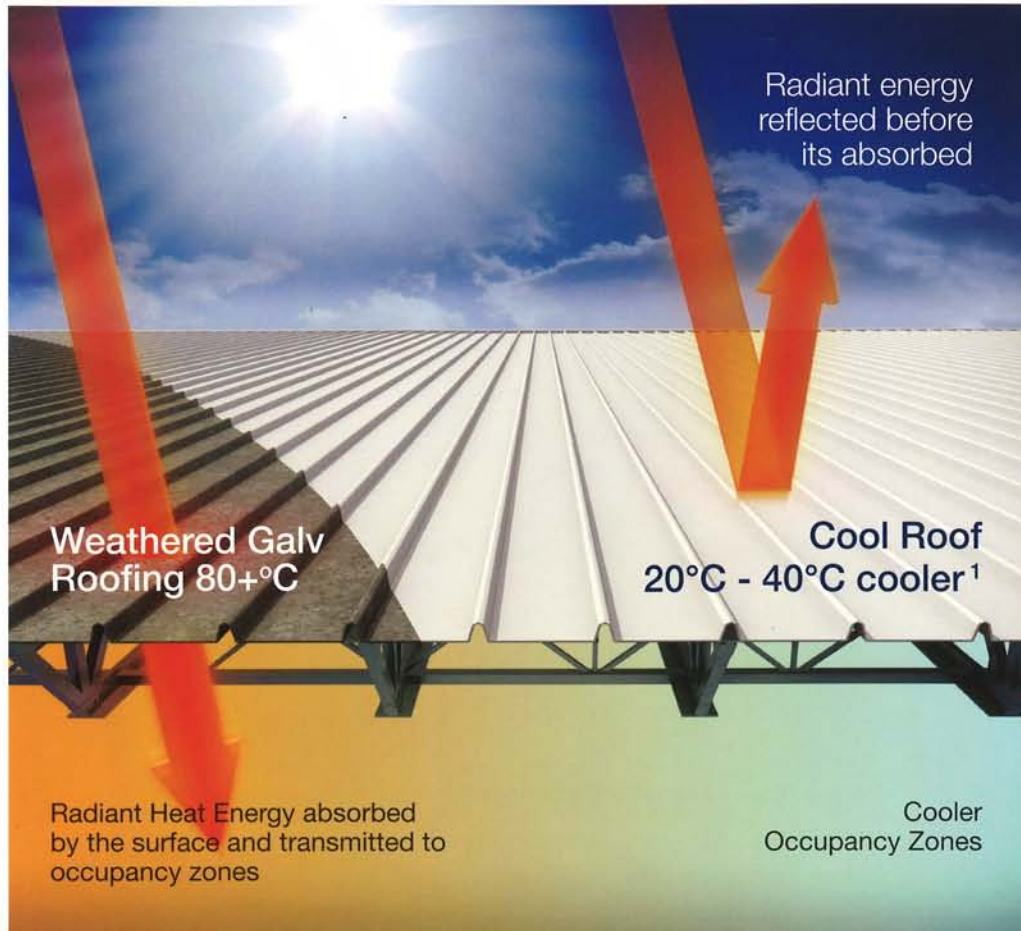
Reflects Radiation
Lessens Heat

Reduces
Cooling Costs

Improves
Occupancy Comfort

Lowens
Carbon Footprint

The benefits of Dulux® Cool Roof



Maximum Solar Reflection

Weathered Galv and Dark Coloured roofs absorb massive amounts of solar radiation which in-turn transmit heat into occupancy zones. Cool Roofs reflect heat energy in the first instance - before heat is absorbed, meaning insulation & cooling efficiencies are maximised

Reduced Cooling Costs

Less Heat penetration means lower cooling costs. Comparative studies² identify cooling energy savings of 20-40% are possible using Cool Roof technology.

Improved Occupancy Comfort

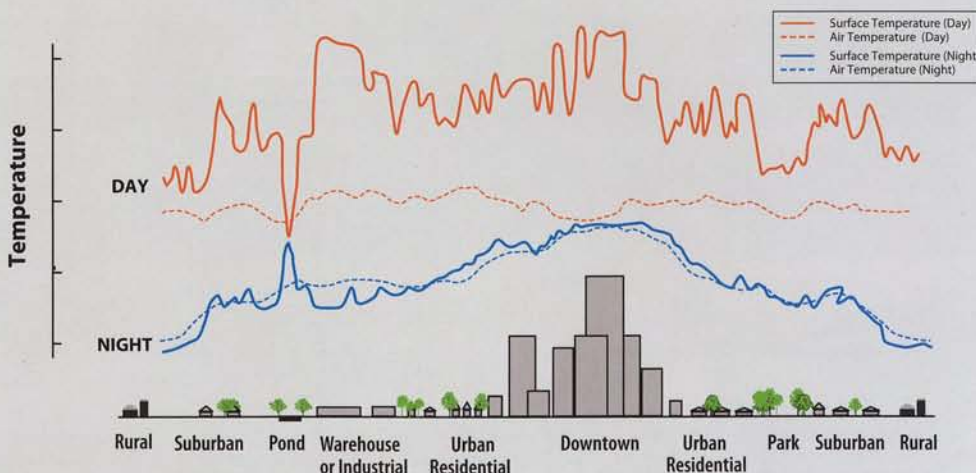
In non-air conditioned facilities such as workshops and warehousing, cool roofs translate immediately to cooler working and warehousing facilities, improving productivity and stability of stored goods.

Lowens Carbon Footprint

Less use of air conditioning reduces power consumption and associated greenhouse gasses which is good for the environment and for you.

Urban Heat Island Effect

The term "urban heat island" describes built up areas (eg cities) that are hotter than nearby rural areas.



Studies in regions of the USA such as California and Florida (with similar climate patterns to Australia) quantify significant potential benefits that Cool Roofs offer:
• Energy Savings • Lower Peak Energy Demand • Improved health & Comfort • Cost Benefits of installation • Greenhouse emission reductions and improved health and comfort.

Information and Graphic from US EPA : Reducing Urban Heat Island — Compendium of Strategies
Further data and information: Heat Island Group - Laurence Berkeley University, California

The annual mean air temperature of a city with 1 million people or more can be 1-3°C warmer than its surroundings.

In the evening, the difference can be as high as 12°C as the built environs' absorbed heat is released back as it cools.

Heat islands can affect communities by increasing summertime peak energy demand, air conditioning costs, air pollution and greenhouse gas emissions.

COOL ROOF technology reduces HEAT ABSORPTION in the first instance, minimising the built environs' stored heat energy and thus its ability to artificially increase surrounding air temperatures.

COOL ROOF

With **InfraCOOL™** Technology



project examples

Broad Span Roofing - Shopping Centre*

OBJECTIVE:

Improve customer comfort to the upper food court level which was not air conditioned - relying on ceiling fans for cooling.

SCOPE:

External Roof - Weathered zinc & aluminium flat deck with sisilation

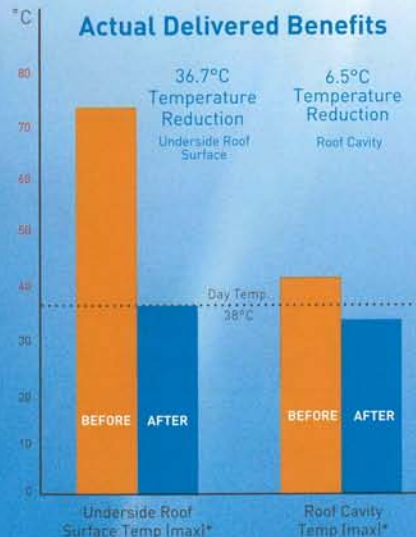
Ceilings - Various: Corrugated sheet or Plasterboard.

SPECIFICATION:

Surface preparation and application of AcraTex Cool Roof White with InfraCOOL™ Technology



* Full Case History Test Reports available on request



Workshop Environment - Crash Repairer*

OBJECTIVE:

Improve Worker Comfort and Productivity Workshop Environment - high activity, no air conditioning

SCOPE:

External Roof: Galvanised metal roof

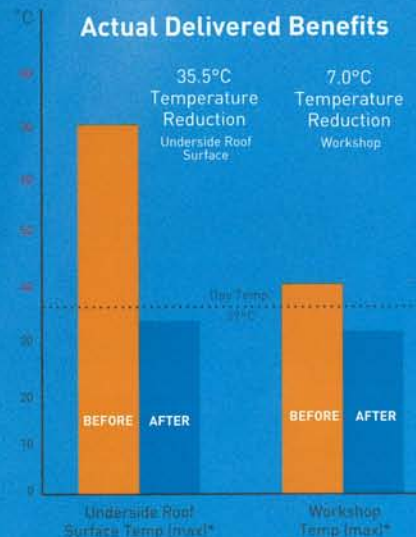
Ceiling: Sisilation, No cavity

SPECIFICATION:

Surface Preparation and application of AcraTex Cool Roof White with InfraCOOL Technology



* Full Case History Test Reports available on request



Ideal for • Retail • Health & Education • Industrial & Warehousing • Commercial



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¹ 20-40°C cooler surface example based on ASTM E1980 methodology and principles as published by the US EPA

² 20-40% cooling energy saving potential based on Cool Roof Case Studies by Lawrence Berkeley Heat Island Group using comparative (high solar reflectance) technology as defined by Dulux Cool Roof White verified TSR (Total Solar Reflectance) Data and Test Reports available on request