

TECHNICAL DATA

Insultec

Description

Insultec membranes and coatings have a remarkable ability to stop solar heat transfer. Insultec is applied to the external surface of a structure in fluid form and dries to a solid protective finish. Insultec can stop 90% of infrared and 85% of ultra violet light from entering a structure, re-radiating it back into the atmosphere.

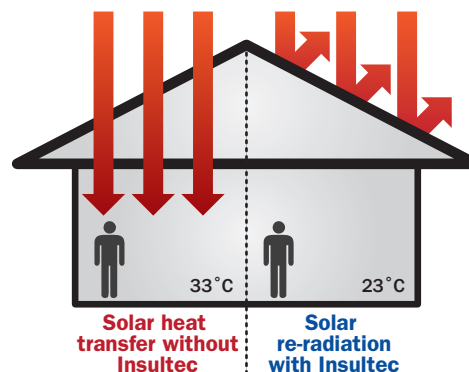
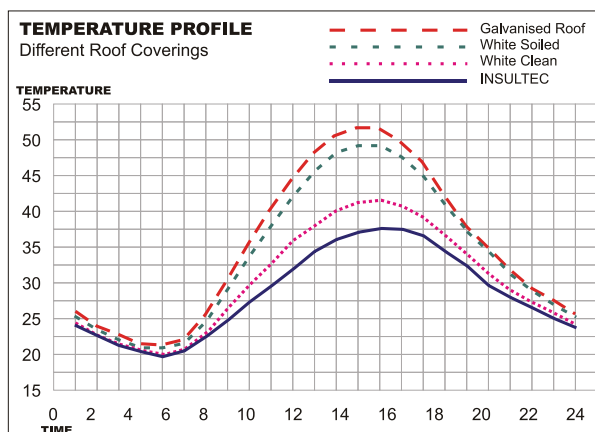
The formulation of Insultec is unique. It is unsurpassed in its ability to stop damage caused by the transfer of solar heat. By a successful method of combining an unique re-radiating component in a resin base which has inherent special attributes, the manufacturers have developed a range of coatings which has maximum efficiency for a wide range of applications.

Benefits

- › Unsurpassed insulation against solar radiation.
- › Environmentally friendly.
- › Long life, cost effective.
- › Reduces or eliminates use of air conditioning.
- › Easy to apply fluid system.
- › Decreases structural movement.
- › Elastomeric, excellent adhesion.
- › Use on virtually any substrate.

Technical Data

Insultec is a water based co-polymer compound containing inert pigments and special filters. It is a one component system, with excellent adhesion, is a microporous, impervious to salt spray and airborne pollution, mould and fungus resistant and will not flake, crack or peel. Insultec has been thoroughly tested and is acclaimed by world authorities on heat transfer.



Solar Heat Transfer

Throughout the day infra red and ultra violet rays transfer through the roof and subjective walls to the infrastructure and inside air, continually adding heat as the day progresses. Once the heat is in, it is trapped. Long after the sun has set and the air outside has cooled, it is still uncomfortably hot inside. Internally fitted systems such as batts, foam etc. only slow the rate of heat transfer. They do not stop it.

The Insultec Difference

The unique properties of Insultec prevent the penetration of heat transfer to an unsurpassed level. It is unique in the principle upon which it works. Reports of its effectiveness have shown differences on very hot days as high as 20°C and more. In the cooler periods, the difference is not so great. In simple terms, with Insultec, there is less fluctuation in internal temperature, providing a more comfortable interior. This marked difference had direct and indirect effect in financial benefits.

Insultec effectively reduces costs by extending structural life expectancy and by reducing energy consumption. Saving on air conditioning usage have been labour, energy and structural repair add up to economical sense.

Application

On metal, to reduce expansion and contraction - a cause of structural damage which requires continual maintenance or leads to premature replacement.

On concrete, to reduce expansion and contraction - a cause of masonry cracking. To reduce the reliance on mechanical means of cooling internal air space. In air conditioned buildings, less wattage is needed. Where air conditioning is required, a smaller unit may be sufficient.

Insultec can be retrofit or applied to new substrate. It can be used over virtually any substrate and can be sprayed in hot conditions.



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Environmental Impact

Directly and indirectly, an application of Insultec makes environmental sense, with;

- › Notably less energy consumption.
- › Extended structural life.
- › Less maintenance.

With rapidly increasing emphasis on our environment, choosing the right solution to solar heat stress is paramount. The manufacturers of Insultec believe environmental issues are a global concern.

Research & Development

Insultec is the result of many years of research by Raymond Brooks, an Australian paint technologist. His experience in producing special-purpose coatings and membranes, particularly in the field of solar radiation, resulted in an outstanding breakthrough in this vitally important area. Insultec has been presented with the "Most Innovative New Product" Award by the New South Wales Department of Minerals and Energy.

Performance Data

K Value:	0.050 W m ⁻¹ K ⁻¹
U Value:	R=2.07=0.483
Radiation Value:	
Infra red light	90%
Ultra violet	85%
Crack BRIDGING:	ASTM C836-89 Bridges gap to 1.6mm
Fire Resistance:	Class A BS476:Part 7
Accelerated Weathering:	E.A.B., England 2000+QUVhrs
Adhesion:	1.6 NF 30-062
Heat Reduction:	12-15°C (Unisearch)
Water vapour transmission:	ASTM E96-94
Insultec system, 300mm:	40.7g/m ² /24hrs
Water Absorbtion:	ASTM C642-90
Insultec system, 300mm:	0.19% over 41 days = reduction of 88%
Carbon Dioxide Diffusion 300mm:	AS/NZS 458.5 -1999 6.2 x 10 ⁻⁷ cm ² sec ⁻¹
Reduction in Chloride Ion:	90% BS1881:Pt124



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