

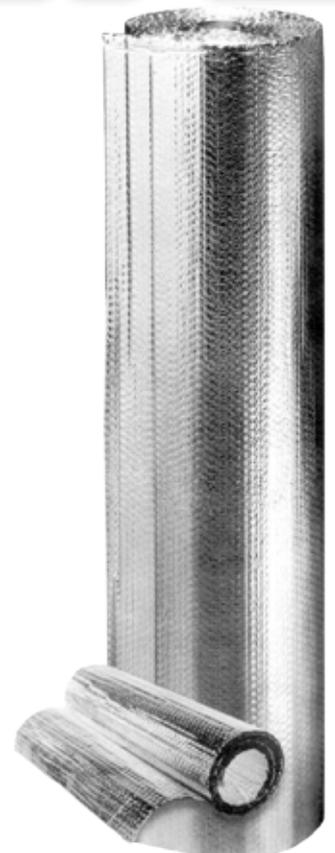
**Save time and money!**

# INSULATE

## with Reflective Foil

**Domestic and Industrial Applications**

- Stay cool in summer
- Warm during winter
- Improves your comfort
- Environmental friendly
- Imperishable and clean
- Reduces aircon costs
- Re-insulation projects
- Seals draughty buildings
- Easy mounting - no special tools needed



**DMS AFRICA**

**50%  
FASTER**

# Reflective Insulation



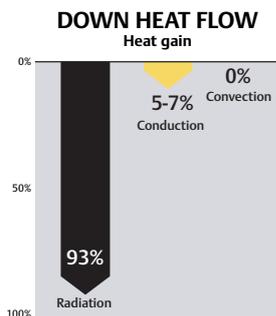
## Save with Reflective Foil insulation

93% of ceiling heat gain from the sun exposure can be attributed to heat from the attic space above the house ceiling caused by radiant energy transferred. The radiant heat from the sun is absorbed by roofing shingles and transferred to the roof decking below and into the attic space.

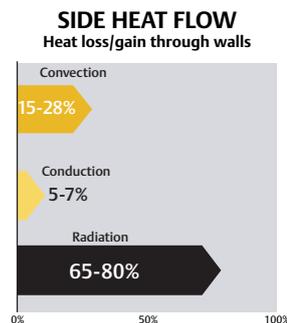
When stapled to the bottom of roof rafters in an attic space, R+HEATSHIELD radiant barrier insulation can block 95-97% of the radiant heat from the roofing surface and thereby lower overall attic temperatures by almost 30 degrees bringing the attic temperature closer to the true outdoor temperature or even lower. By lowering the temperature in your attic, you can reduce the amount of heat transferred to your living spaces below by up to **50%** giving you greater comfort in your home and lessening the strain of your air conditioning unit.

If you further want to improve the conditions use reflective insulation as one advantage the use of a reflective insulation product has over the use of a radiant barrier is that reflective insulation has an R-Value measuring its ability to resist conductive heat – and R-Value rated products are quite often mandated by various building code agencies. Reflective insulation products also help to control condensation in certain applications.

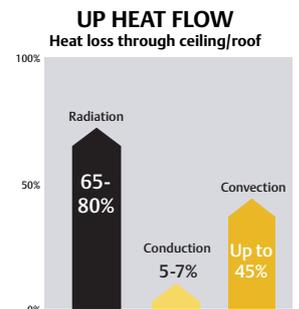
No matter the requirements  
DMS-Africa has the solution!



The heat gained in a building from sun exposure is mainly radiant heat. Reflective foil stops 97% of the radiation and reduce needs for aircon.



The major part of heat loss/gain through walls happens via radiation. Reflective foil effectively reduces the heat loss/gain and maintains a comfortable climate inside the building.



Up heat flow is caused mainly by radiation. Insulation of ceiling with reflective foil will avoid downdraft and significantly improve the indoor environment and thereby boost productivity.



ASTRO-E reflective foil insulation consists of a layer of polyethylene bubble film sandwiched between two layers of 99% pure aluminium foil making the structure 1/4" thick. ASTRO-E saves up to 50% energy.



If your goal is to simply control heat, a R+HEATSHIELD WHITE or R+HEATSHIELD III radiant barrier product is all you need. R+HEATSHIELD radiant barriers saves up to 40% energy.

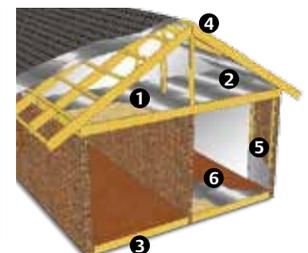
### FUNDAMENTALS OF HEAT TRANSFER:

Heat flows from a hot or warm medium to a cold medium in 3 ways :

- 1) Radiation:** Heat transfer from warm surface to cooler surface through air space
- 2) Conduction:** Heat transfer through solid or fluid materials
- 3) Convection:** Physical movement of air (e.g. a fan)



ASTRO-E reflective foil insulation consists of a layer of polyethylene bubble film sandwiched between two layers of 99% pure aluminium foil making the structure 1/4" thick



- Reflective insulation is suitable for
1. Roof insulation over purlins and girts
  2. Attic insulation (perforated foil) and under trusses
  3. Insulation under floor heating
  4. Over joists under roof sheathing
  5. Outer-Wall insulation
  6. Insulation under flooring

**30%**

### DID YOU KNOW THAT...

- You can **save 30%** on your aircon running costs by using reflective insulation

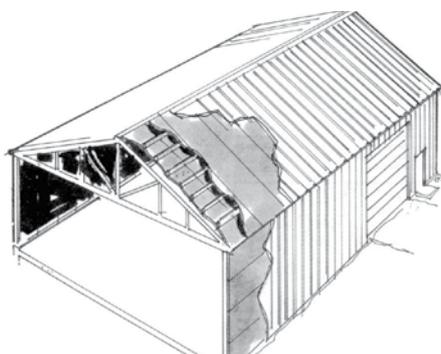
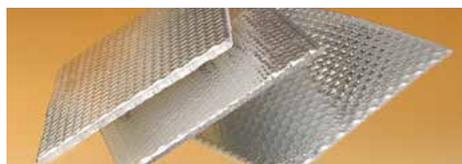
# Reflective Insulation



Reflective foil can be cut easily with a razor blade or scissors and installed with common staples, nails or screws.

## ASTRO-E SUPER EFFICIENT alu-bubble-alu insulation

ASTRO-FOIL is a revolutionary type of industrial, commercial and general purpose insulation incorporating state-of-the-art technology in design and manufacture. It includes a building code approved vapor barrier, air infiltration barrier and powerful insulation all in one.

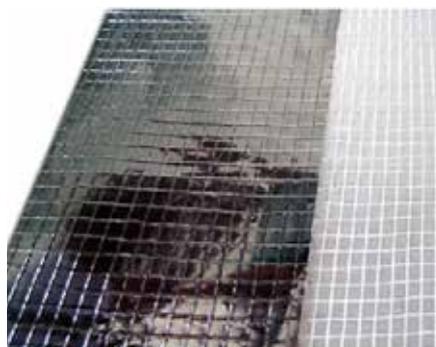


### SPECIFICATION

Reflectivity	97%
Emissivity	3%
Flame & smoke rating	25/35 class 1, class A
Tensile strength	5,7 kg/cm <sup>2</sup>
Puncture resistance	4 kg/m <sup>2</sup>
Weight	300 g/m <sup>2</sup>
Perm rating	0,001 (impermeable)
Thickness	6,35 mm

## R+HEATSHIELD WHITE ECONOMICAL one-sided Radiant Barrier

R+HEATSHIELD WHITE is a radiant barrier insulation product made from a woven polyethylene material covered by a metalized film. This metalized film provides a reflective surface that blocks 97% of radiant heat, so it helps keep spaces cooler in summer and warmer in winter. R+HEATSHIELD WHITE can dramatically improve thermal performance and energy efficiency, keeping energy costs lower and interior spaces more comfortable.

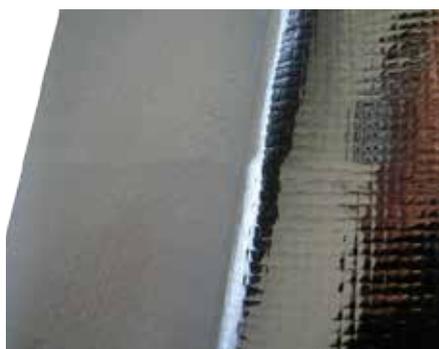


### SPECIFICATION

Reflectivity	97%
Emissivity	3%
Flame & smoke rating	25/35 class 1, class A
Tensile strength	5,7 kg/cm <sup>2</sup>
Puncture resistance	22 kg/m <sup>2</sup>
Weight	92 g/m <sup>2</sup>
Perm rating	0,001 (impermeable)
Thickness	0,1 mm

## R+HEATSHIELD III The PREMIUM DOUBLE Radiant Barrier

R+HEATSHIELD III is also a radiant barrier insulation product made from a woven polyethylene material covered by a metalized film on both sides. This metalized film provides a reflective surface that blocks 97% of radiant heat, so it helps keep spaces cooler in summer and warmer in winter. R+HEATSHIELD III can dramatically improve thermal performance and energy efficiency, keeping energy costs lower and interior spaces more comfortable. R+HEATSHIELD III is a cost effective budget solution if you want to save money on your aircon bills – it keeps heat out and aircon cooling in.



### SPECIFICATION

Reflectivity	97%
Emissivity	3%
Flame & smoke rating	25/35 class 1, class A
Tensile strength	5,5 kg/cm <sup>2</sup>
Puncture resistance	26 kg/m <sup>2</sup>
Weight	150g/m <sup>2</sup>
Perm rating	0,001 (impermeable)
Thickness	0,15 mm

# What solution to go for?

It is important to understand the differences between a radiant barrier and a reflective insulation product in order to make the correct purchase decision for your application.

In general, a radiant barrier is a reflective sheet which encompasses a middle reinforcement layer, referred to as a "scrim" that gives the product strength and durability.

Radiant barrier products are intended for use in the following applications: attic floors, attic roof rafters, and as a house wrap behind brick or siding.

A reflective insulation product is a radiant barrier which encompasses a middle insulator rather than just a scrim. The insulator can be air bubbles as in ASTRO-E.

The main difference between a radiant barrier and a reflective insulation product is that reflective insulations have an R-Value associated with it as the middle insulator provides a small thermal break between the two outer layers. Reflective insulations are used when you need to achieve a certain R-Value for building code requirements or if you need to control condensations issues typically incurred with metal buildings.

Reflective insulation are higher in cost due to the fact that they are comprised of more raw material under a more involved manufacturing process than a radiant barrier. Most quality radiant barriers and reflective insulations as ASTRO-E AND R+HEATSHIELD reflect the same amount of radiant heat, up to 97%.

ASTRO-E bubble product are intended for use in the following applications where a solid vapor barrier or specific R-Value is required: crawl spaces, basement walls, floors, metal buildings, pole barns, concrete slabs and many more.

If the goal is simply to reflect radiant heat, a radiant barrier like R+HEATSHIELD WHITE or R+HEATSHIELD III would be the best choice.



## Please contact DMS-Africa for further information:

### Our business partners

DMS Africa works closely with numerous partners globally and always seeks new partners in related fields.

Partnering and Joint Ventures forms an integral part of our business dealings as we are often stronger together.

DMS Africa seeks to establish long term relationships with our partners, so we together can develop innovative solutions to a broad range of the market requirements we discover every day in our business dealing to the benefit of us all.

Below are some of our current partners:

- Astrofoil
- Danish Modular Systems
- DUOL Air supported structures
- Freight in Time
- G4 Industries
- Multidome Air supported structures for Sports
- Rohlig
- Scanvogn
- Skalcem
- US Modular Systems



Visit us at [www.dms-africa.com](http://www.dms-africa.com)

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