ROOF - Insulation

SISALATION
The Original and The Best

WHAT IS SISALATION?

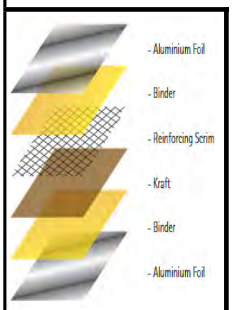
It is a high quality reflective foil insulation product that cost-effectively insulates and protects residential, commercial and industrial buildings against heat, cold, dust and moisture as well as reducing wind noise. Each layer is insulated from the next so heat transfer is minimal.

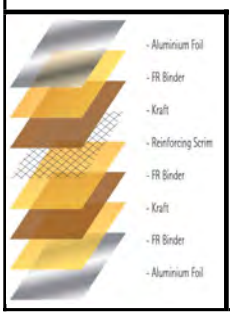
WHY SHOULD I INSTALL SISALATION?

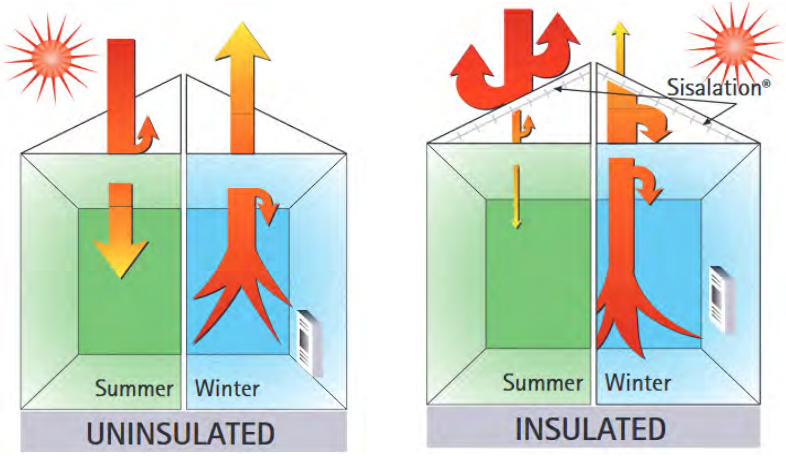
It's Energy Efficient and Fire Retardant in accordance with SANS 10400. It will reduce radiant heat gain up to 97% making your attic much cooler in the summer and warmer in the winter. Properly installed you can reduce your energy cost dramatically while increasing your overall comfort.

HOW DOES IT WORK?

Insulation maintains a constant and comfortable temperature in a building by preventing heat transfer between indoor and outdoor climates, keeping the heat in during winter and out during summer.

Product Code	Description	Specs	Properties	Function
135105	Sisalation MD430 1350mm x 30m Roll (O.D) 40.5m2			
	Sisalation® Medium Duty (430) is a fire retardant double-sided reflective foil laminate. Recommended for use in residential and commercial applications as a : • Thermal insulating material • Vapour barrier in the sarking of walls • Vapour barrier for metal deck roofing • Vapour barrier in the lining and lagging of exposed air-conditioning ducts, pipes and vessels • Facing for building insulation blankets • Barrier against moisture, water vapour, wind, heat and dust penetration when overlapped and sealed with a tape.	1250 mm x 40 m (50 m2) Effective coverage including 150mm overlap (44 m2) Roll mass ±8,49 kg	Tensile strength (kN/m) - Longitudinal direction 7 Transverse direction 5 Water vapour permeance, g/(s.MN) <0, 002 Burst strength kPa 400 Emissivity of foil surface < 0,05 Nominal grammage g/m2 163 Category A Tested in accordance with SABS 1381-4: 2009	Features and Benefits : • High edge tear resistance to preventing ripping during installation • Faced on both sides with Albar® to provide scuff resistance and prevent damage to surfaces during construction • Two-way fibreglass reinforcement for greater strength • Fire retardant and will not support combustion or the spread of flame • Highly reflective to enhance lighting conditions • Low emissivity to limit heat loss • Manufactured with pure aluminium foil to provide an effective barrier against vapour

Product Code	Description	Specs	Properties	Function
135115	**Sisalation FR430** 1350mm x 30m Roll - 50m2			
	Sisalation® FR 430 when used in conjunction with an airspace is an effective thermal insulating membrane due to the high reflectivity and low emissive properties of its aluminium foil surfaces fire retardant ASTM E84 Class I SANS 10177 Part 5, 9, 10 and 11 Classification: Class B/B1/3/H&V	1350 mm x 30 m (40.5m2) Effective coverage including 150mm overlap (38 m2) Gross mass ±13,7 kg	Tensile strength (kN/m) - Longitudinal direction 15 Transverse direction 9 Water vapour permeance, g/(s.MN) <0. 002 Burst strength kPa 990 Emissivity of foil surface <0.05 Nominal grammage g/m2 267 Category A Tested in accordance with SANS 1381-4: 2009	Sisalation® FR 430 when used in conjunction with an airspace is an effective thermal insulating membrane due to the high reflectivity and low emissive properties of its aluminium foil surfaces. This combination makes Sisalation® an excellent barrier to heat flow via radiation. When installed in industrial buildings as an exposed roof lining, the reflectivity of the foil will enhance the lighting of the building.



ADVANTAGES :

Temperature Control: Sisalation® has proved effective and beneficial in building in the comfort factor, keeping the home and workplace cooler in summer and warmer in winter.

Thermal Resistance: R-Values (m².K)/W or thermal resistance is determined by the overall roofing or wall system design. (Visit the Sisalation® website for typical applications, calculations and advice.)

Fire: Sisalation® fire retardant products have been tested by Firelab and have a fire performance classification of **B/B1/2/H&V-SP&USP - with and without sprinklers.**

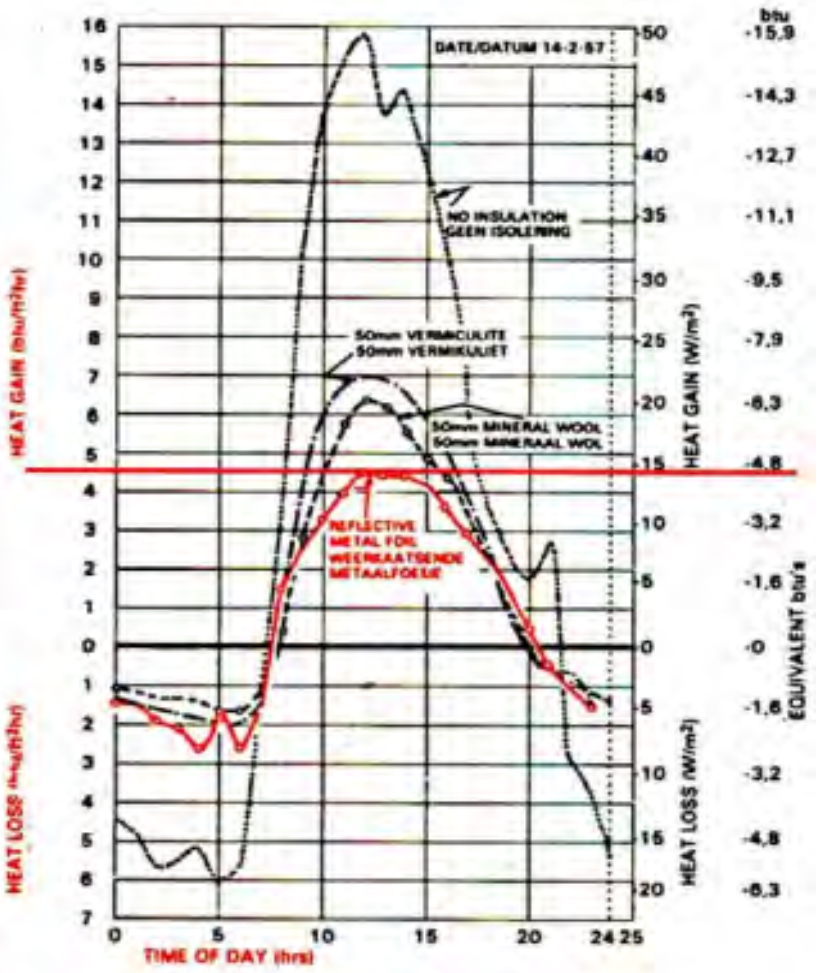
Economical: Easy to install Sisalation® is maintenance free and long-lasting. Used as an exposed roof lining, lighting is greatly improved due to the foil's high reflectivity.

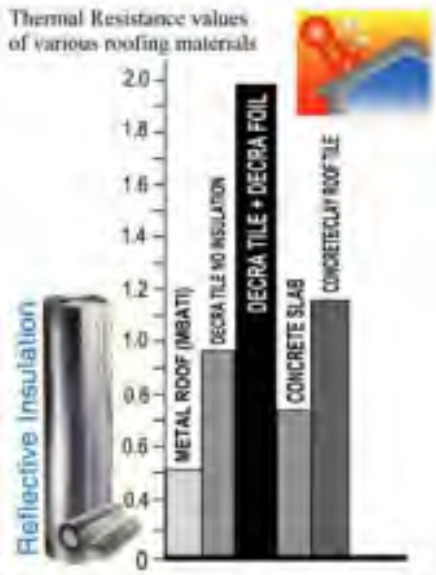
Dustproofs: Keeping the building as dust free as possible can be an important factor in reducing allergens in the air we breathe, thus reducing allergy and asthma symptoms.

Vapour Barrier: Sisalation® prevents moisture being introduced into the ceiling by outside weather conditions such as rain, humidity or condensation.

Energy Efficient: Sisalation® is totally compliant with the requirements for thermal insulation products as specified by the Energy Efficiency Standards, SANS 10400 XA.

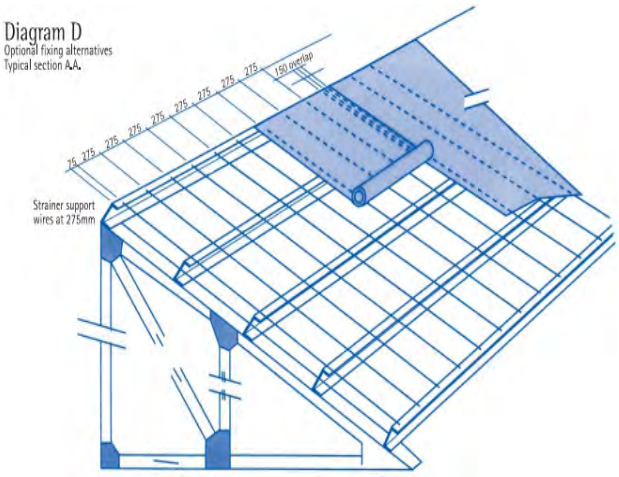
Environmentally-friendly: The use of Sisalation® will impact positively on the environment. It helps reduce environmental pollution and the consumption of natural resources and also reduces noise pollution.





INSTALLATION :

Decra® foil/Sisalation® sits beneath the roof tile. Supplied in 45m rolls, the foil is installed on top of the rafters before the roof battens and tiles are installed.

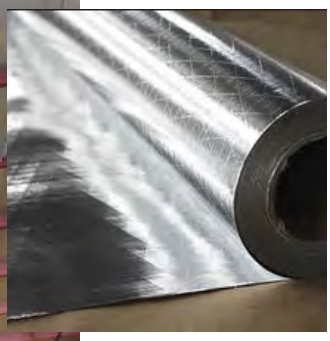


RETROFITTING :

Decra® foil/Sisalation® can also be retrofitted - either internally in the attic of under the ceilings, even laminated between Geotextiles in concrete!

RESIDENTIAL

COMMERCIAL



The Fiberglass vs Foil debate :

Fiberglas insulation has been the undisputed standard for buildings for many years, but foil insulation is the new contender. Fiberglass has been in use by builders since the later portions of the 1800's. Fiberglass insulation comes in larger batted rolls, but is also found as a blow insulation that is primarily used attic. The effectiveness of fiberglass insulation is attributed to its thickness and a resemblance to a blanket. Foil insulation is typically in sheets, but can exist as foil that can be wrapped freely around most any pipe, joist or duct work. There are 3 ways that heat is transferred: conductive, radiant and convective. It is the job of foil insulation and fiberglass insulation to stop heat from escaping. The following article will help to explain the differences between foil insulation and fiberglass insulation.

The R factor

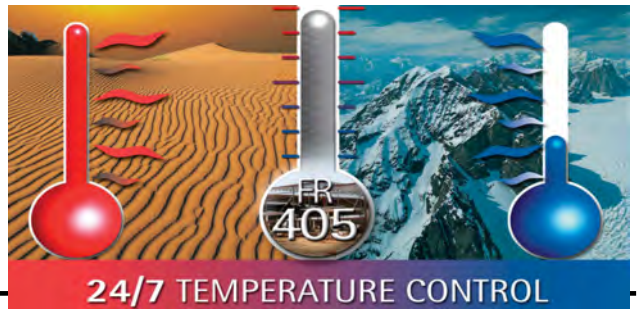
The R-Factor
When you look at fiberglass insulation you will notice that they have on the packaging something called the R-value. This measures how much the fiberglass insulation transfers heat for each inch of the material being used. R-value does not measure radiant heat which is the main way that heat is transferred which makes the R-value a useless measurement. Radiant heat is heat that is in the air and foil insulation can block up to 97% of radiant heat. Radiant heat makes up about 75% of the total loss or gain of heat in a building. Fiberglass and other insulating materials are great at reducing convection and conduction heat but not radiant heat. This type of heat is either absorbed or reflected. Foil insulation is produced from aluminum which reflects heat.

Downside of Fibergalss/Wool Insulation

Fiberglass Insulation
Even though fiberglass insulation is used the entire world over and is the standard it is not the best insulation you can have and there are many cons. Just look on the warning label of fiberglass material. Everyone knows that fiberglass is scratchy, but not many know the full extent of its hazards to your health. When you use fiberglass insulation you should do so with caution as breathing in the fibers can cause serious lung damage. Fiberglass insulation is made from cheap recycled materials like limestone and glass. Fiberglass insulation should also not be used in areas of high humidity because it is very susceptible to mold. Vapor barriers must always be used when using fiberglass insulation. It also bulky so expensive to import.

Advantages :

Inexpensive
Easy to install
Readily available
Perfect for conductive and convection heat
Foil Insulation
Foil insulation is 97% effective in blocking radiant heat and it also forms a vapor barrier and thermal break. Foil insulation, unlike fiberglass insulation, reflect heat. This means the heat from the sun does not get mixed in with cool air. The reverse is also true for the winter.



EPS Boards (Expanded Polystyrene) :

830110 EPS Board 2.4mx0.3m x25mm
830120 EPS Board 3mx1.2mx20mm
830130 EPS Board 3mx1.2mx30mm
830150 EPS Board 3mx1.2mx50mm
830200 EPS Board 3mx1.2mx100mm
830220 EPS Board 3mx1.2mx200mm