

# ThermaSlab™

**RMAX**  
Innovation working for you

HIGH PERFORMANCE  
UNDER SLAB THERMAL INSULATION

**MANUFACTURED TO  
AUSTRALIAN  
STANDARDS**

## ThermaSlab™

Cost effective and fast to install under slab insulation product.  
Delivers high R rating\*. Resistant to vermin.  
No CFCs or ozone depleting properties.  
Will not breakdown over time.

RMAX is a division of Huntsman Chemical  
Company Australia Pty. Limited  
ABN 48 004 146 338

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## RMAX ThermaSlab™

ThermaSlab™ from RMAX is a new and innovative high performing insulation panel that is designed for use in both commercial and domestic construction applications installed under the ground slab.

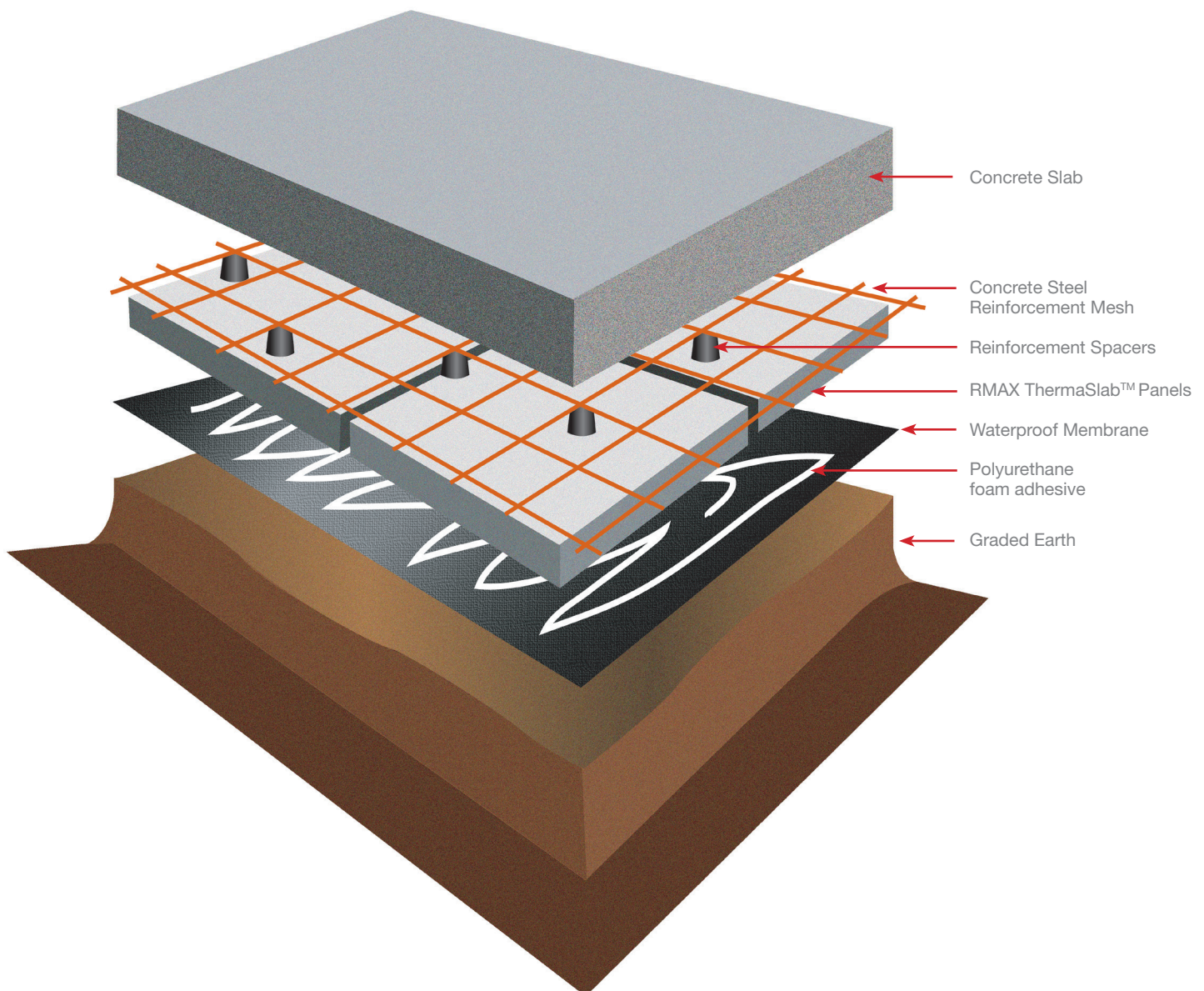
ThermaSlab™ is a unique product to RMAX and offers a cost effective alternative to current products. ThermaSlab™ is a high density EPS product that creates a thermal barrier under the slab, providing insulation for the building.

ThermaSlab™ contributes to the overall R-Value of the building and assists in the 'Total insulation' of your home.

### RMAX ThermaSlab™ At Work

ThermaSlab™ is free from ozone depleting substances in its manufacture and composition. In keeping with our commitment to the environment and safety, RMAX ThermaSlab™ requires minimal use of personal protective equipment (PPE) during the installation process. Single person installation is a real option given the optimal size of the product.

### RMAX ThermaSlab™ Process Installation Diagram



## Key Features of ThermaSlab™

- Low water absorption properties.
- Ease of installation.
- No mechanical fixings required.
- ThermaSlab™ is manufactured without CFCs, HCFCs or HFCs.
- High density.
- Creates a thermal barrier to reduce heat loss from the slab.
- Available in lengths of 5 metres, reducing insulation times.

## Key Benefits of ThermaSlab™

- Cost Effective and fast to install under slab product.
- Delivers High R-Value rating.
- Resistant to Vermin.
- Termite deterrent.
- Will not breakdown over time.
- Reduction in labour cost due to sheet sizes.

### Long Term Thermal Consistency

The thermal resistance (R value) of RMAX ThermaSlab™ insulation remains consistent over the life of the product due to the cellular structure of RMAX ThermaSlab™ that contains only stabilised air. Ageing has no effect on the insulation performance of RMAX ThermaSlab™.

### Cost Efficiency

RMAX ThermaSlab™ allows for very cost effective design and labour friendly installation.

### Temperature Cycling Resistance

RMAX ThermaSlab™ is able to withstand the effects of temperature cycling, assuring long term performance without loss of structural integrity or physical property deterioration.

### Strength Characteristics

RMAX ThermaSlab™ exhibits excellent compressive and flexural resistance strength and dimensional stability characteristics at a high strength to product weight ratio.

### Breathability

Although RMAX ThermaSlab™ exhibits low water vapour transmission, it is not a vapour barrier; instead it “breathes”. As it does not trap moisture, RMAX ThermaSlab™ does not need costly venting to be installed as do certain other relatively impermeable insulation materials.

### Performance

RMAX ThermaSlab™ insulation, being made from expanded polystyrene (EPS), is an inert material.

It provides no nutritive value to plants, animals or micro organisms. It will not rot and is highly resistant to mildew.

### Fabrication and Installation

RMAX ThermaSlab™ insulation can be installed quickly and easily, requiring limited labour. It can be easily cut to shape to ensure a tight fit and minimise heat loss channels. Its light weight nature allows ease during handling and storage.





# RMAX ThermaSlab™ Installation Process



**1.** Ensure slab site is clean, compacted and prepared in accordance with the building regulations in your state.



**2.** Lay down waterproof membrane (black builders plastic PVC). Slab floor area and footings to be completely covered with water proof membrane. Membrane to be sealed by silver tape at joins and around plumbing etc.



**3.** Once waterproof membrane has been laid down, RMAX ThermaSlab™ panels are to be cut and installed in place over pads as shown.



**4.** RMAX ThermaSlab™ panels can be directly affixed to the membrane over the pads with the use of Polyurethane foam adhesive. The PU adhesive is sprayed directly onto the black plastic as indicated with the panels then carefully being placed directly on top of the PU adhesive. The application of the adhesive ensures that the panels are located in place and do not shift under the influence of wind.

**PLEASE NOTE:** Always check product compatibility of PU foam adhesive to water proof membrane prior to application. Confirm material compatibility by applying a small amount of PU foam adhesive to small piece of membrane off-cut. There should be no visible change in appearance of membrane once the PU foam has been applied and allowed to set.



**5.** Once the panels have been located in place with the PU adhesive, any panel overhang that sits proud of the pad edge, can be trimmed off by Stanley knife or handsaw as shown. This enables for a clean finish of the panel edge with maximum panel coverage over the pad.



# RMAX ThermaSlab™ Installation Process



**6.** Once all the pads have been completely covered with the ThermaSlab panels and the panels have been trimmed to take up the entire pad area, the concrete Steel reinforcement mesh and bars can be applied in the slab footings and directly over the top of the pads as shown.



**7.** Once all the reinforcement bars have been layed down, spacers or chairs can be installed in line with building regulations to raise the reinforcement mesh so that it sits and is located above and clear of the pads as shown in readiness for the concrete pour. Ensure mesh ties are used as required to tie the reinforcement bars together.



**8.** In a single concrete pour commence filling in the footing of the slab (or just cover the top of the ThermaSlab™ panels) to avoid the panels from “floating” as shown. The concrete pour should be conducted in accordance with their relevant building regulations in your state.



**9.** Once the slab footings have been filled with the concrete and then levelled, the concrete pour continues with the concrete being poured directly over the pads starting from one corner of the slab and moving across. As the concrete is being poured, the pour is levelled and smoothed.



**10.** Once the concrete has been poured, levelled and smoothed, it is allowed to set. Once set the slab form work can be safely removed as per building regulations, revealing the completed concrete slab.



## Physical Properties

### RMAX ThermaSlab™ protection from exposure to fire

RMAX ThermaSlab™ is manufactured with a flame retardant which inhibits the early stages of fire development, however like many construction materials, EPS is combustible. Where RMAX ThermaSlab™ panel is to be laid, appropriate precautions should be implemented on site. The RMAX ThermaSlab™ panels should be suitably protected from exposure to open flame from processes such as welding or other hot work that may occur on a job site.

Once installed, the RMAX ThermaSlab™ panels will be protected from exposure to open flame or fire by the concrete slab.

### RMAX ThermaSlab™ UV light exposure

EPS is susceptible to ultra violet (UV) degradation. It is recommended that in areas of high UV concentration or where the ThermaSlab™ panels may be exposed to sunlight for extended periods of time (weeks or months), that where ever possible, the panels be kept under shaded cover or physically covered using a hessian canvas or other UV resistant type material. **Under no circumstances however should a clear plastic cover be used to cover the panels if they are intended to be on site for prolonged periods of time prior to installation.**

### RMAX ThermaSlab™ Wind Exposure

When handling or installing the RMAX ThermaSlab™ panels in windy conditions, particular care should be taken. Due to the light weight nature of the panels, unsecured panels can be picked up and hurled around and severely damaged or may themselves cause damage in windy conditions.

### RMAX ThermaSlab™ Chemical Resistance

RMAX ThermaSlab™ EPS panels are chemically resistant to most water based materials.

Resistance to diesel fuel, paraffin oils and vegetable oils however is limited, thus prolonged contact should be avoided. EPS will however be attacked by hydrocarbons, ketones, esters and solvents. Exposure to these chemicals should be completely avoided. Refer to the RMAX Isolite® EPS Material Safety Data Sheet for further details regarding storage and handling and compatibility with other chemicals.

### RMAX ThermaSlab™ Termite Resistance

The RMAX ThermaSlab™ panels can be manufactured with or without a Termite Resistance additive as part of their composition.





# Technical Specifications

Physical Property Minimum Density	Units	ThermaSlab™ 28kg/m³	Test Method
Compressive Strength @ 10% deformation, min.	kPa	165	AS 2498.3
Cross-breaking strength, min.	kPa	320	AS 2498.4
Rate of water vapour transmission, max. measured parallel to rise @ 23°C	µg/m².s	400	AS 2498.5
Dimensional stability of length, width, thickness, max. @ 70°C over 7 days	Percent	1	AS 2498.6
Thermal Conductivity at mean temperature of 23°C	W/m.K	0.035	AS/NZS 4859.1
Flame propagation characteristics - median flame duration max - eight value max. - median volume retained - eight value, min.	sec sec percent percent	2 3 50 47	AS 2122.1
Ozone depletion Potential (ODP)	0	-	-
Apparent Bulk Density, min.	g/L	28	ISO 845

## R Value Calculations @ 23°C

Product	Thickness (mm)	K value (W/m.K)	R Value (m².K/W)	R Value as Installed (m².K/W)	Test Method
ThermaSlab™	30	0.035	0.90	1.00	AS/NZS 4859.1
ThermaSlab™	45	0.035	1.30	1.40	AS/NZS 4859.1
ThermaSlab™	75	0.035	2.10	2.20	AS/NZS 4859.1
ThermaSlab™	100	0.035	2.80	2.90	AS/NZS 4859.1

\*R Value calculations based upon Australian Standard 4859.1 (Summer). Calculation is based upon the use of 100mm concrete and does not allow for the Thermal mass benefits that natural earth provides.



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## The Green Aspect

The RMAX ThermaSlab™ range of products are highly energy efficient. The energy saved over the lifetime of RMAX ThermaSlab™ in reduced heating demand, more than compensates for the raw material used in its production.

The effective application of EPS insulation can cut carbon dioxide emissions by up to 50%. The energy used in its manufacture may be recovered within six months by the energy saved in the buildings when EPS is used to insulate the building depending on the building design and the climatic conditions.

RMAX promotes the use of EPS, with its' superior thermal insulation properties, to lower energy requirements and reduce the impact of buildings on the environment.

RMAX EPS is free from ozone depleting substances in manufacture and composition. EPS is manufactured without CFCs, HCFCs or HFCs. Manufacturing is done with blowing agents that have Zero Ozone Depleting Potential (ODP).

## Recycling EPS

EPS products are recyclable and RMAX has established recycling facilities in all of its plants throughout Australia. RMAX is a member of PACIA (Plastics and Chemical Industries Association).

## Energy Efficient Manufacture

The manufacture of EPS is a low pollution process. There is no waste in production as all off cuts or rejects are re-used or recycled.

## RMAX – Innovation Working for You

RMAX is a company driven by innovation. We have pioneered Rigid Cellular Plastics product technologies, leading the development of innovative product solutions for our customers and international partners. In the Australian building industry.

We are committed to working with our customers to deliver high quality creative solutions to unique construction problems. Contact us and see how our innovative approach using EPS in building construction can help you.

Developed in Australia. Made in Australia.

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The pictures shown in this brochure are for illustrative  
purposes only to demonstrate creativity and design  
and construction flexibility. They do not imply that  
ThermaSlab™ was used in their construction.