

# Extruded Polystyrene Insulation **FOAMULAR**<sup>®</sup>



*Supporting you with Smart Solutions*

## Application: Residential On Ground Slabs with Floor Heating Systems

**Improved energy efficiency is achieved by using Foamular as a thermal barrier under the slab and around the exposed slab perimeter**

In simple terms heat will transfer to cooler medium such as the ground and external air. To keep the slab warm a continual supply of energy is required to replace escaping heat.

Fixing Foamular as a thermal barrier minimises heat loss so less energy is required to maintain slab temperature.

Long term energy efficiency is achieved by this simple application.

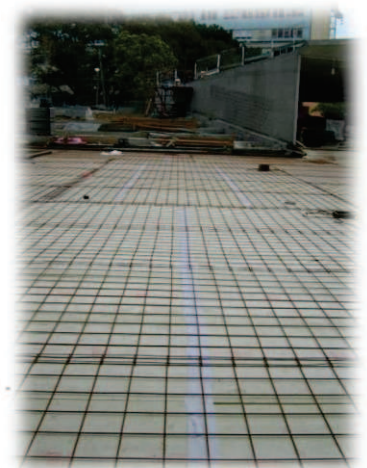
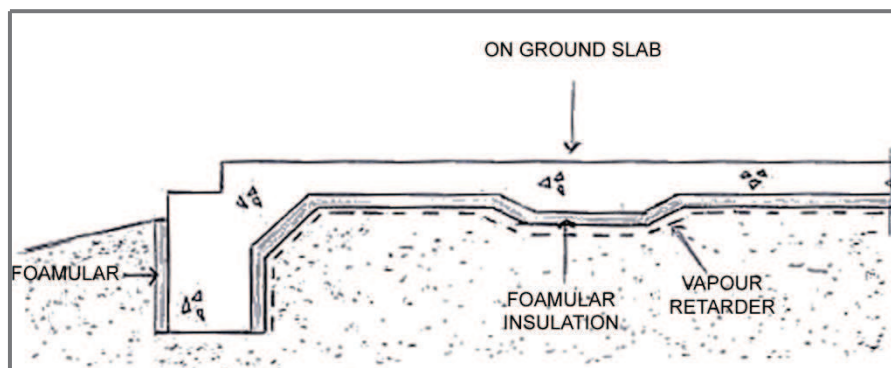


## **“Lower Energy Demand = Lower Operating Costs = Lower Greenhouse Gas Emissions”**

Installation: Foamular is laid directly over the slab area, on top of the plastic sheeting, with supports and reinforcement placed over the Foamular.

As Foamular is not effected by moisture, soil born bacteria or mould it can be back filled against for gardens etc. with no loss of thermal a physical properties.

Recommended Material: Foamular Metric 250/30mm (R1.07) or FM 250/50mm (R1.78) is recommended for this application.



For Additional Information,  
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↑ Foamular Insulation at the University of Sydney, ready to have the slab laid on top.



Austech External Building Products Pty Ltd

## **Foamular Metric 250 Extruded Polystyrene Insulation**

### **Underslab / Under Floor Insulation Residential and Commercial**

Foamular Metrics physical strength long term thermal performance and rigidity make it an ideal insulation material for underslab application.

Whether residential on ground slabs or commercial car parks, shopping centres, and or warehouse situations.

#### **Commercial Application**

As an effective thermal barrier, Foamular Metric has many cost saving advantages, both with initial fixing / fit out and long term on going energy savings.

The tough yet lightweight sheet allows quick fixing from scaffold or scissor lift with minimal risks handling.

Fixing is usually by a mechanical method such as Hilti Xie, or ramsets rigid insulation pin/washers systems.

Due to its high tensile strength (300 kPa) Foamular can also be fixed using construction adhesives ready available in the market place.

Direct fix to slab or to furring channel are options.

Note contact should be made with adhesives manufacturers to confirm compatibility and suitability for the specific use prior to installation.

Foamular metric 250 – 50mm and 75mm.

Examples – Mega poxy PF, Enerbond, 3M VHB adhesives and tapes, Bostik construction adhesives.



## Foamular Metric 250 Extruded Polystyrene Insulation

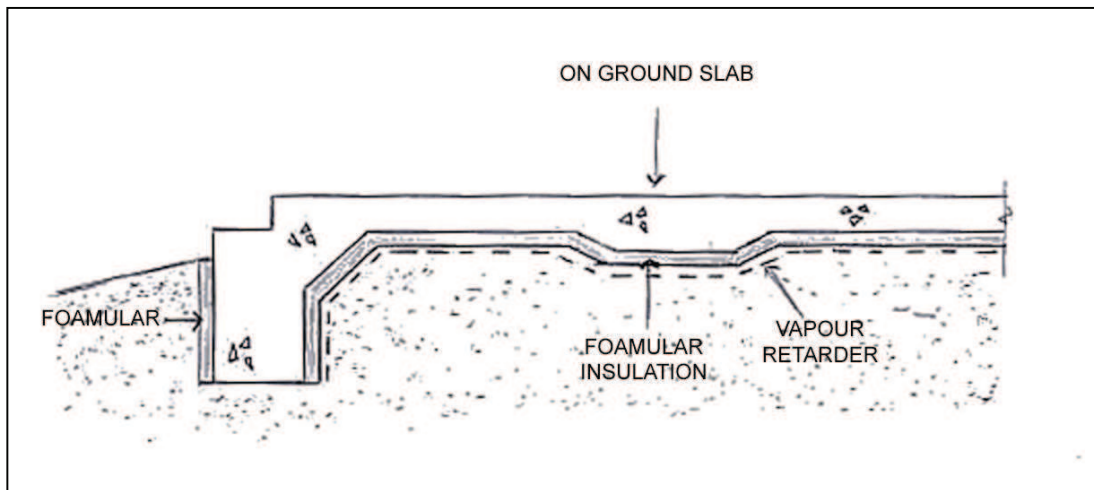
### Residential on Ground slabs

When heated on ground concrete slabs are specified the energy efficiency of the heating systems is greatly improved by using Foamular as a thermal barrier under the slab and adhered to the exposed slab edges.

In simple terms heat will transfer to cooler medium such as the ground and or external air. To keep the slab warm a continual supply of energy is required to replace escaping heat. Minimising heat loss by fixing Foamular as a thermal barrier, less energy is required to maintain slab temperature.

Long term energy efficiency is achieved by this simple application.

Foamular Metric 250/30mm (R-value 1.03) or FM250/50mm (R-value 1.78) are recommended for this application.



The Foamular is laid directly over the slab area with supports and reinforcement placed on the Foamular.

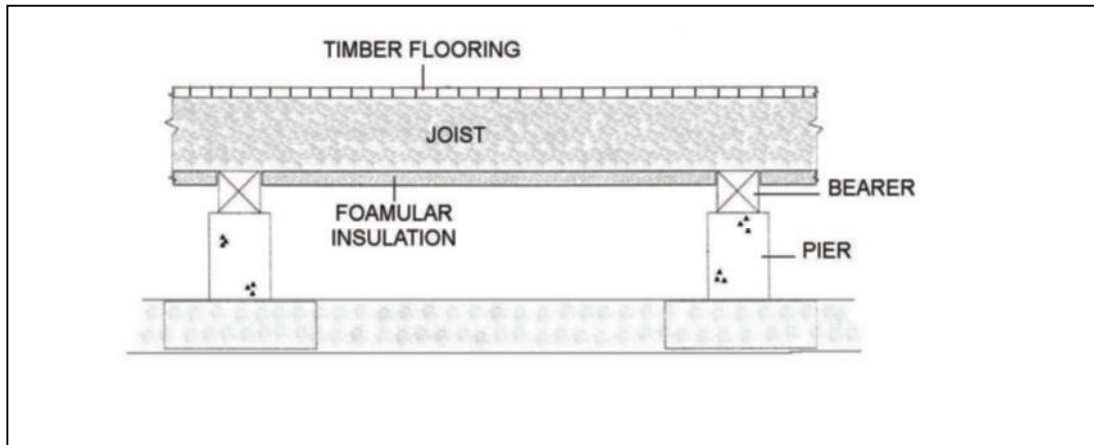
The Foamular around slab perimeter should be fixed using a compatible construction adhesive such as mega poxy, liquid nails fast, Enerfoam etc.

As Foamular is not effected by moisture, soil born bacteria or mould it can be back filled against for gardens etc. with no less of thermal a physical properties.



## Foamular Metric 250 Extruded polystyrene Insulation:

### Flooring Applications



#### Timber floors.

Heat loss from your floor can be up to 25% of the total heat lost from your home. Older tongue and groove flooring and flooring of pole homes are very susceptible to heat loss.

Foamular Metric 250 extruded polystyrene is an excellent insulation for under timber floors. Foamular Metric250 is a lightweight rigid board that is extremely easy to use. Simply screw fix the insulation under the floor with 6 to 8 galvanized screws per sheet. Screw fix the insulation to the joists butting them up to the bearers. Keep edges tightly butted together. Boards can be cut to size using a straight edge and utility knife.

The Thermal Resistance (R rating) of Foamular Metric 250 Insulation is very good even in areas exposed to moisture. Its closed cell construction gives it excellent moisture resistant properties. 30mm = R.1.03, 50mm = R 1.78

The composite R-value of a common construction timber floor with 30mm Foamular Metric butted to bearers and nailed to joists can be calculated as follows:

R value of	
30mm Foamular Metric Insulation board	R 1.03
Airspace between floor (bearers & joists)	R 0.64
Timber flooring, 19mm tongue & groove	R 0.12
Air films indoor and outdoor (total)	R 0.32
Total R-value of insulated floor	R 2.11
Less assumed frame area approx. 15% Total =	R 1.79

*(One should refer to BCA requirements for different climate zones as these require different R-values).*

Foamular Metric 250 Extruded Polystyrene Insulation will not rot, shrink, saturate or crumble and it has no nutritional value to insects or rodents. Foamular is guaranteed to maintain its physical properties and minimum of 90% thermal retention for a period of twenty (20) years.