



*Supporting you with Smart Solutions*

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

## Foamular Extruded Polystyrene Insulation for Use in Flat Roof Waterproofing Applications

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[Foamular Extruded Polystyrene for use in concrete roof, deck and balcony insulation applications.](#)



Commonly referred to as “ upside down , *irma* or *prma* roofs ” this method of insulated roofing simply means the insulation is placed above the waterproofing membrane and held in place by a specified ballast , usually river pebbles or concrete pavers.

Foamular Metric xps insulation maintains its ability to insulate in the presence of water. This, plus its high load bearing strength, makes it excellent insulation for all roofing applications.

Guaranteed to maintain its physical properties and a minimum 90% R value for a period of 20 years Foamular Metric has superior performance to expanded polystyrene ensuring long term cost and insulation efficiency.

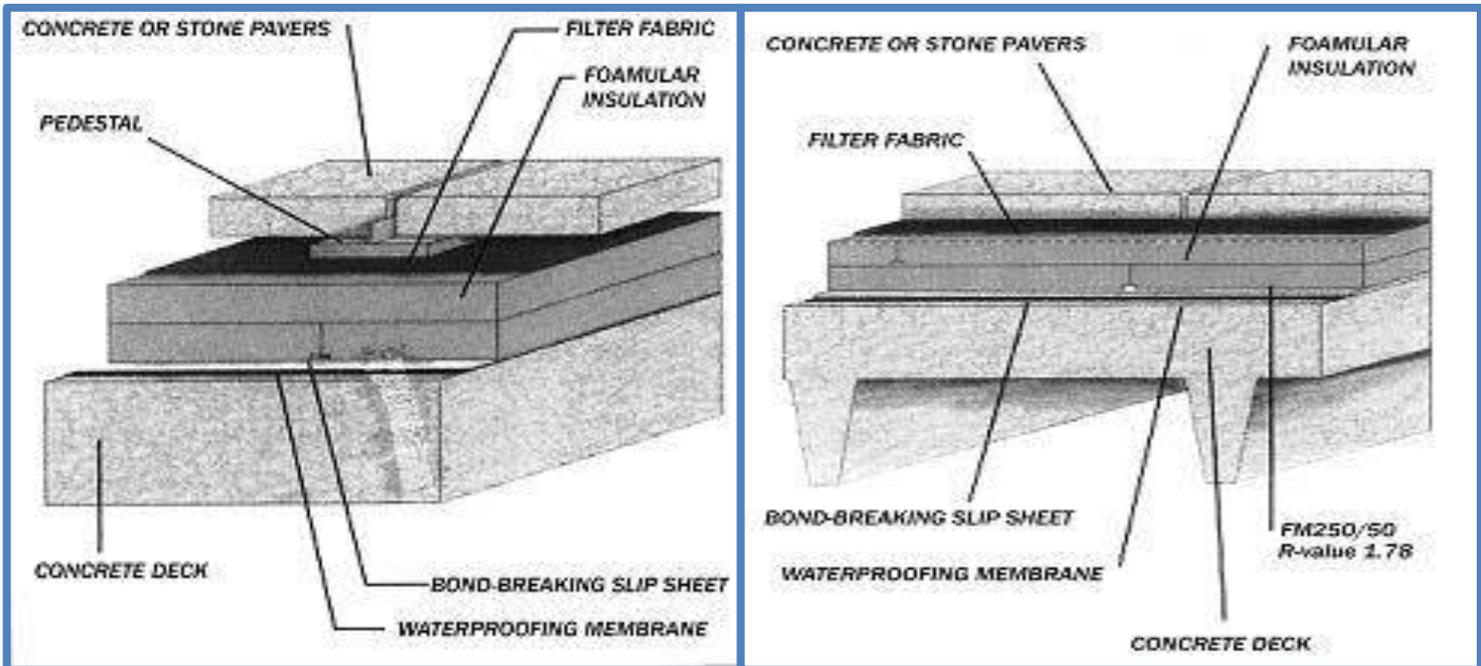
**Foamular Metric thermal resistance (R value) are as follows:**

**30mm/R1.07, 40/R1.42 , 50mm/R1.78 , 60mm/R2.14 , 75mm/R2.67 , 100mm/R3.56**

**Material can be laid in 2 layers to achieve a specific R Value. Eg 40mm plus 50mm = R3.21**

These R values are for the Foamular Metric insulation material only.

The components of a common concrete roof assembly would add approx R0.5 to the above r values.



Lightweight yet tough and durable Foamular metric boards are easy to hoist, handle and install. The boards add little weight to the overall roof structure while providing long term protection to the waterproofing membrane. Board size is 2450 x 600 in thicknesses from 25 to 100mm

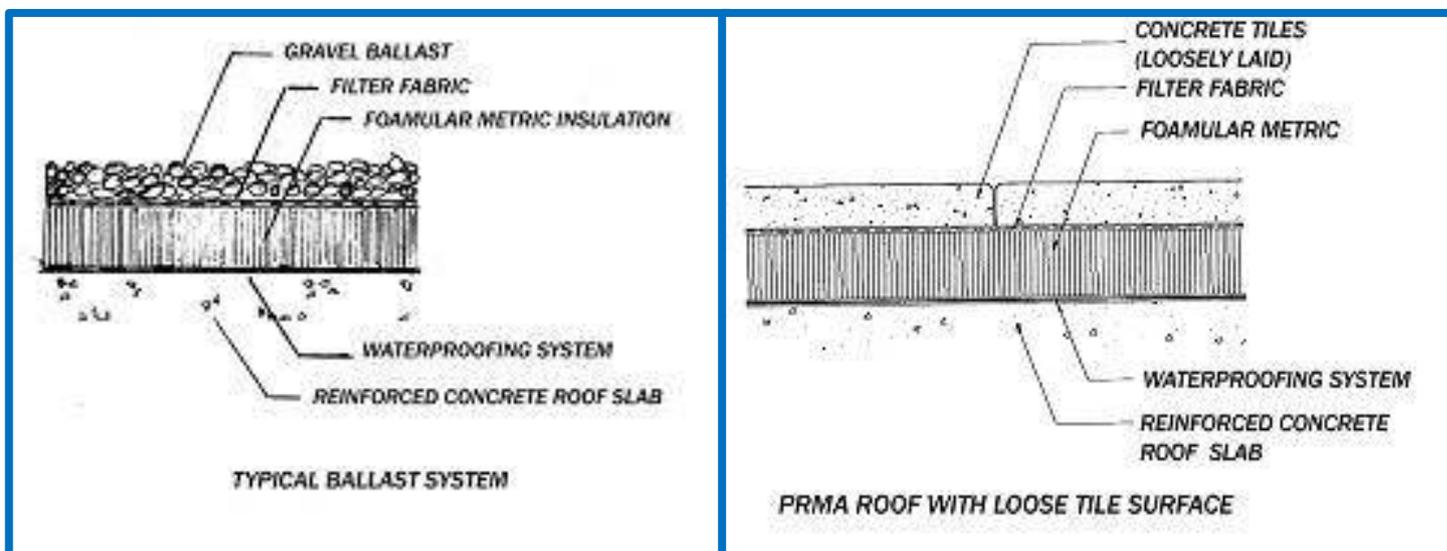
**The Application is simple, quick, cost effective and energy efficient.**

- Step 1:** The specified membrane is laid over the concrete slab and covered by a bond breaking slip-sheet.
- Step 2:** Foamular metric extruded insulation boards are loose laid over the membrane and slip-sheet. The insulation boards protect the membrane from degradation and weathering as well as insulating the concrete slab. Common practice is to run 2 layers of the boards in alternate directions with the thicker boards as the bottom layer
- Step 3:** Suitable filter fabric is laid over the insulation to prevent fines and grit being washed down damaging the membrane. Black colored fabric should not be used, grey color is preferred.
- Step 4:** The specified ballast is spread over the roof. The ballast may be clean round river pebbles, concrete pavers placed directly on the insulation or pavers supported on spacer pads to allow additional drainage.

The above application is a very basic explanation of the procedure. Individual projects will have design requirements specific to that project however certain procedure must be followed in all cases in respect to the insulation boards.

**These procedures are CRITICAL: ESPECIALLY DURING HOT WEATHER**

1. Prior to laying, insulation boards and membrane must be checked for compatibility.
2. Insulation must be covered with filter fabric and ballast directly after laying. The material must not be left exposed to direct sunlight especially during the summer months. Damage to the boards will result.
3. Material **MUST** be stored in an undercover area away from direct sunlight. Boards may buckle or distort if left exposed to summer heat.



### **BALLAST**

Ballast will be specified by architect / engineer but generally the gravel will be clean rounded river pebbles 20-40 mm. Thickness of 50mm for insulation up to and including 50mm, 75mm thick for 75mm -100mm insulation. Concrete Pavers should be a 40-50mm thick as a minimum.

### **ACOUSTIC AND THERMAL COMBINATIONS**

Building design is now incorporating both acoustic and thermal insulation for roofs, decks and balconies. What this requires is the use of a sound absorbing material, eg regupol, to be included in the membrane, insulation and ballast system. A number of combinations may be specified sometimes with waterproofing both below and above the insulation materials.

### **ROOF TRAFFIC**

Foamular metric is available in various compressive strengths to meet specific live and dead load requirements . For most applications with foot traffic , 300kpa material will suit.

For projects where vehicular traffic will use area, such as parking or plaza decks, Foamular metric is available in higher compressive strengths to meet those specifications. ( up to 650kpa)

### **COMPARISONS OF SIMILAR INSULATION**

Foamular metric extruded polystyrene insulation is a closed cell extruded polystyrene. This closed cell structure gives Foamular superior physical and thermal properties that guarantee ongoing long term performance.



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<b>Tech Data</b>	<b>Compressive Strength</b>	<b>Water Vapour Transmission</b>	<b>Thermal Resistance R Value -50mm</b>
Foamular Metric 300	300kpa minimum	100ug/m	R 1.78
Expanded Polystyrene Grades SL-M	70-105 kpa	630-520 ug/m	R .120

#### Other Applications of Foamular Metric

- Under slab / under floor insulation – commercial and residential.
- Render substrate – external insulation perfect for render coat.
- Cold storage and Cool room insulation.
- Wine cellars, chicken sheds and model making.

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