

Foamular Extruded Polystyrene is manufactured by Owens Corning Asia Pacific. Owens Corning has been producing insulation since 1938 and is a member of EPA Climate leaders program. It is CFC free, virtually 100% moisture resistant. Polyboard Enviro 300 is a Zero Ozone Depletion Potential (ODP), and Green Star Compliant. It releases no chemicals and has minimal global warming potential. Foamular is distributed in Australia by Austech External Building Products.

Applications for concrete roof, deck and balcony

Extruded Polystyrene (XPS) insulation maintains its ability to insulate in the presence of water. It has high load bearing strength, that makes it excellent for insulating roofs. Commonly referred to as upside-down, Insulated/Protected Roof Membrane Assembly (IRMA or PRMA) roofs, which is to place insulation above the waterproofing membrane and held in place by a specified ballast, usually river pebbles or concrete pavers. Foamular is guaranteed to maintain its physical properties and a minimum resistance to heat 90% R-value for 20 years.

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. Material can be laid in 2 layers to achieve a specific R-value, for example, 40mm plus 50mm = R3.21

Foamular Metric thermal resistance R-value:

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

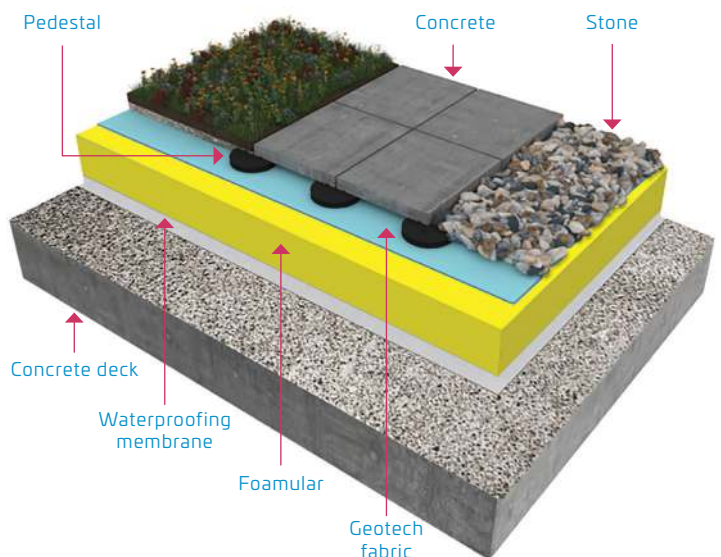
The Application is simple, quick, cost-effective and energy-efficient.

Foamular is lightweight and durable, making it easy to hoist and install. Board size is 2450 x 600 in thicknesses can range from 25 to 100mm.

Here is an example of a basic application procedure, individual projects will have design requirements specific to their project however certain steps must be followed in all cases in respect to the insulation boards.

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 loosely laid over the membrane and slip-sheet. The insulation boards protect the membrane from degradation and weathering as well as insulating the concrete slab. (A common practice is to run 2 layers of the boards in alternate directions with the thicker boards as the bottom layer)



Step 3: To prevent membrane damage, suitable filter fabric is laid over the insulation. (Black coloured fabric should not be used, grey colour is preferred)

Step 4: The specified ballast is spread over the roof, allowing additional drainage. (The ballast may be clean round river pebbles, or concrete pavers, placed directly on the insulation.)

Other applications of foamular metric

Under slab / under floor insulation, render substrate, cold storage, wine cellars, chicken sheds and model making.

Ballast

Ballast will be specified by architect/engineer but generally, the gravel will be clean rounded river pebbles 20-40 mm.

The 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 sound-absorbing material, for example, Regupol to be included in the membrane, insulation and ballast system. Several 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 areas, 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 close-cell structure gives Foamular superior physical and thermal properties that guarantee ongoing long term performance.

| Tech Data | Compressive Strength | Water Vapour Transmission | Thermal Resistance R Value -50mm |
|----------------------------------|----------------------|---------------------------|----------------------------------|
| Foamular Metric 300 | 300kpa minimum | 100ug/m | R 1.8 |
| Expanded Polystyrene Grades SL-M | 70-105 kpa | 630-520 ug/m | R .120 |



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