

EXPANDING YOUR INSULATION OPTIONS

Ten great reasons to use **POLYFOAM.**

1 Exceptional insulation properties

- Polyfoam is ideally suited to meeting the performance requirements of the New Zealand Building Code.
- The method of calculating Polyfoam's insulation properties is simple: the thicker and denser the EPS, the better the insulation or thermal resistance (R value).
- EPS is one of the fastest growing insulation products because of its stable R-value and recognized energy efficiency.

2 Puts the brakes on heat transmission

- Research tells us that 10% of the heat in a home is lost through the floor, and a solid floor in contact with the ground tends to adopt a temperature similar to the soil beneath it.
- A layer of Polyfoam between the ground and the concrete slab works as a 'thermal break'. It prevents heat from the room above from getting lost into the ground, and it prevents the coldness from the ground from moving up into the rooms above.
- Exposed slab edges also cause heat loss. Bondor recommends that Polyfoam should also be installed around the perimeter of the foundations.

3 Increased household comfort

- Studies show that different parts of the body require different temperatures in order to feel comfortable. To feel warm, the soles of the feet require more heat than the head, body or hands.
- A Polyfoam-insulated floor can provide a higher level of comfort than heating the air in a room.

4 Value for money

- Compared to other forms of insulation material, EPS offers the best price/performance ratio. It soon pays for itself with reduced heating bills.
- For a new home, the cost of insulating the concrete floor slab and perimeter foundations costs less than 1% of the total building cost.

5 Reduced condensation

- Condensation happens when warm air comes into contact with cold surfaces.
- The effect of a Polyfoam-insulated floor reduces the need to over-heat air in the rooms above, reducing the potential for condensation.

6 Prevents mildew and moisture

- Polyfoam is kiln dried in the manufacturing process and is extremely resistant to water. Its properties inhibit the upward transfer of ground moisture and rising damp.
- Polyfoam is an inert material that does not rot, support fungus, mould, mildew or bacterial growth.

7

Durable

- Polyfoam is very light, its cellular structure makes it dimensionally stable and very strong. It doesn't deteriorate with age, contact with water or weather extremes.

8 Safe and environmentally friendly

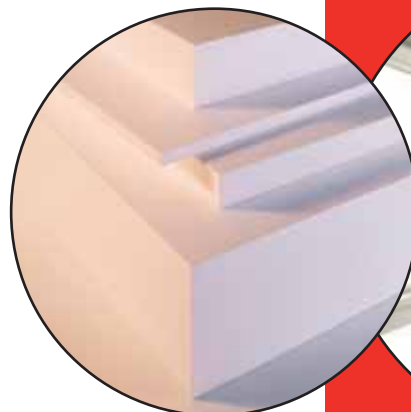
- Polyfoam contains no CFCs or HCFCs, and no ozone-depleting gases are used in its manufacture.
- It is odourless, non-toxic, non-allergenic and doesn't irritate the skin.
- Polyfoam is 100% recyclable and is re-used for a wide variety of applications, from building materials to cellphone cases.

9 Better for the planet

- With a Polyfoam-insulated concrete slab, less home heating is required to maintain a comfortable living environment.
- It is estimated that effective application of EPS insulation globally could cut CO₂ emissions by up to 50%.
- EPS is almost as light as air, so it saves fuel in transport.

10 Compatible with other building systems

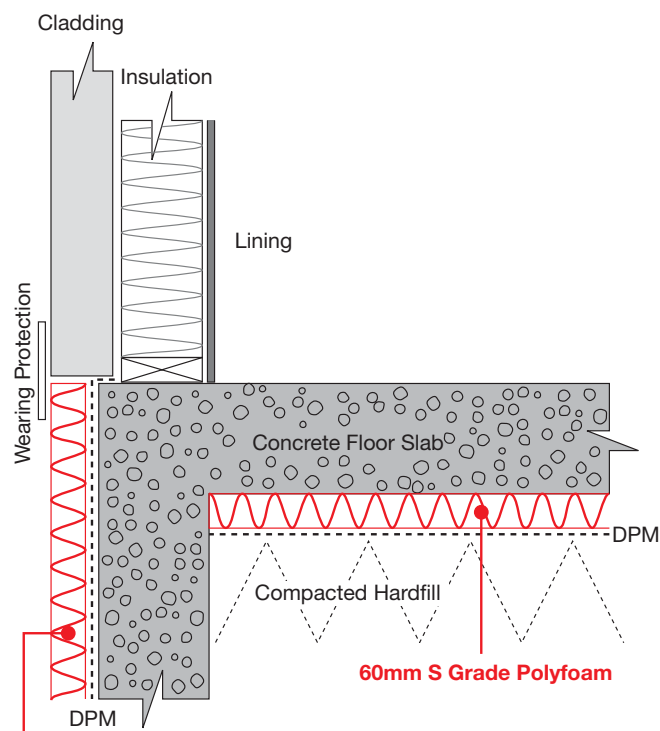
- EPS is an efficient building material that has been widely used in construction over the last 40 years. It integrates easily with other building systems.



Specifications at a Glance

	S Grade	H Grade	VH Grade
Nominal Density kg/m ³	16	24	28
Identification marking	Brown	Green	Red
Compressive performance	25kPa	40Kpa	50Kpa
Uses and applications	Domestic concrete slab insulation Standard cavity insulation Packaging Architectural shapes	EIFS systems Commercial concrete slab insulation Formwork Concrete precast walls	Freezer type floor systems Impact Resistance High Density

Suggested Detail for Insulating Concrete Slab Perimeter



60mm S Grade Polyfoam
1.2m High

Best Practice suggests 100mm concrete floor slab with R1.4 Polyfoam sheet around perimeter and underneath with carpet on top.

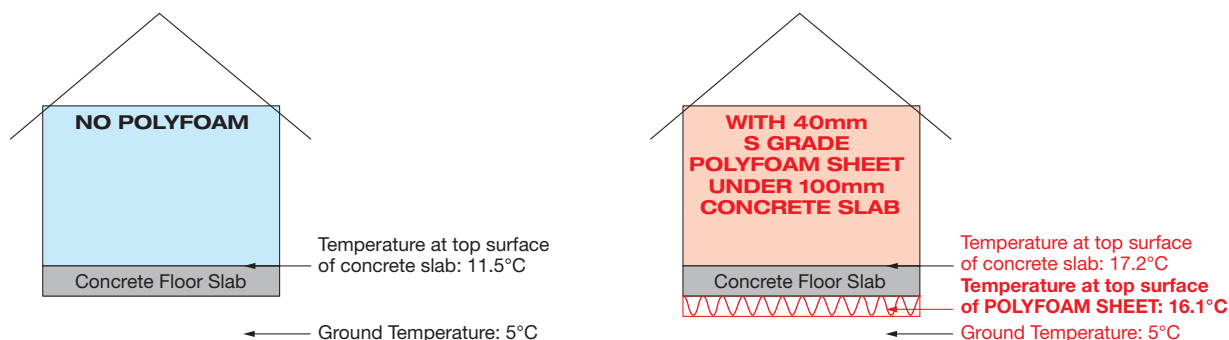
Polyfoam is manufactured to AS 1366.3 and is kiln dried.

Common Insulating Values at a Glance

k Values	S Grade	H grade	VH grade
k values W/ m.K 15°C	0.038	0.036	0.034
R Values			
40mm	1.052	1.111	1.176
50mm	1.315	1.389	1.470
60mm	1.579	1.667	1.765

Effect of Insulating with Polyfoam Sheet

Steady state heat flow calculations based on a room heated to 21°C shows the possible dramatic gain in warmth of the floor by using Polyfoam insulation.



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