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Knauf Insulation roots for green roofs

Knauf Insulation's **Polyfoam**[®] *Slimline* System is featured in this year's Construction

Products Association's showcase publication, *Construction Products Innovations and Achievements*. Specifically designed for insulating protected membrane roofs, the system consists of a base layer of **Polyfoam**[®] *Roofboard* beneath a vapour permeable, polyethylene separation membrane that reduces the 'rainwater cooling effect' on the roof. **Polyfoam**[®] *Roofboard* is a tough, high-performance, extruded polystyrene (XPS) insulation board with a high compressive strength and is ideal for use in the construction of the increasingly popular green, or living, roofs.



Green roofs offer many benefits to developers, owners and users. They are visually appealing; can make a building's environment quieter; can help regulate its temperature; can improve air quality by removing pollutants and increasing oxygen levels; can ameliorate water run-off in heavy rain; have a cooling effect from the plants use of heat to evaporate moisture; have a positive effect on urban biodiversity and bring enjoyment to those who use them – and all win points with city planners! Creating 'something from nothing' – and turning what would normally be considered 'wasted space' into a positive aesthetic and environmental feature – has the benefit of improving the value of the project for both its owner and occupier.

There are two basic categories of roof garden: 'extensive' and 'intensive'. Extensive roof gardens are 'simpler', usually being designed for their aesthetic appeal and use lightweight sub-soils that will support only a limited range of plants; typically, sedums. Intensive roof gardens are designed for use as recreational spaces, support a wide range of plants and sometimes require irrigation and maintenance.

The load bearing capacity of the structure and the quality of the components determine the success and longevity of either type. The depth of soil needed to support an extensive green roof weighs between 60 and 150 Kg/m² when saturated – surprisingly favourable compared to paving slabs which generally weigh between 160 and 220 Kg/m² – but, as the depth increases to support an intensive green roof, that weight can rise to 500 Kg/m². Clearly, if the insulation material is going to have any chance of protecting the waterproof membrane, it's a fundamental requirement that it has the compressive strength and impact resistance to withstand both the soil's weight and the odd prod from a gardener's fork!

Polyfoam[®] Roofboard is a high-performance, extruded polystyrene insulation board ideally suited for insulating green roofs. Made from **Polyfoam[®] Extruded Polystyrene** (XPS), its high compressive strength (up to 500 kPa), impact and moisture resistance provide an outstanding structural insulation solution.

Polyfoam[®] Roofboard is available in three grades – *Standard*, *Extra* and *Super* – giving designers the opportunity to specify the optimum product to meet the intended use of the roof. The three grades cater for everything from the light loads associated with occasional pedestrian maintenance traffic, through the demands of green roofs right up to the very high loads imposed by vehicle movement. All have interlocking, rebated edges,



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come in one manageable size (1250 mm x 600 mm), are available in a range of thicknesses and are lightweight, easy to store, handle and install.

For further information, please visit www.knaufinsulation.co.uk or call the enquiries hotline on 08700 668 660 quoting CU71106.

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Editor's Notes

Knauf Insulation is a multinational manufacturer of insulation products with operations in the UK, Europe and the USA. Knauf Insulation Limited is insulation market leader in the UK and employs around 500 people at its four manufacturing plants at St. Helens, Queensferry, Cwmbran and Hartlepool.

The company manufactures a wide range of insulation products to meet the growing demand for energy efficiency and acoustic performance in both new and existing homes and commercial buildings. Products include glass mineral wool, rock mineral wool, expanded polystyrene and extruded polystyrene marketed under the trademarks **Crown**[®], **Rocksil**[®] and **Polyfoam**[®].

Knauf Insulation is committed to the environment: its products use recycled and naturally abundant materials.

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