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VERTICAL INSULATION WITH MISAPOR CELLULAR GLASS

The simple solution to healthy living, energy-optimised and thermal-bridge-free construction, and building renovation.

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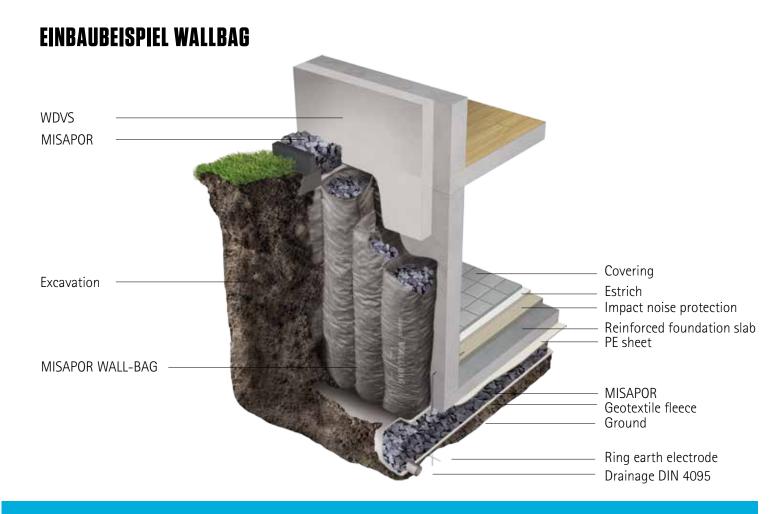
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VERTICAL INNOVATION

MISAPOR foam glass has long since established itself as horizontal perimeter insulation. But now, thanks to MISAPOR, vertical parts of buildings (such cellar walls) no longer present obstacles. This is the perfect solution for healthy, energy-optimised, thermal-bridge-free construction. This makes it possible to renovate cellars in existing properties, for example, in a cost-effective and time-saving manner.

The extremely user-friendly, easy handling of the Wall Bags is typical of MISAPOR:

- 1. Attach MISAPOR Wall Bags lightly to the walls
- 2. Fill the ready-made chambers with MISAPOR cellular glass
- 3. Filled fabric bags in combination with the perimeter insulation enclose the walls



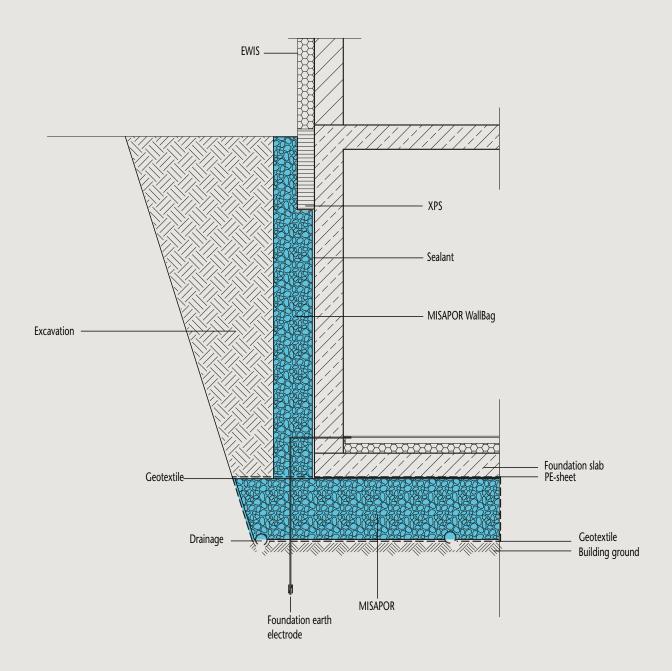
THE VERSATILE ADVANTAGES OF MISAPOR WALL BAG

- Optimal vapour diffusion no more moist cellar walls
- Perfect drainage water drains away
- Thermal-bridge-free construction (together with horizontal perimeter insulation)
- Resistant to damage from rodents and vermin
- Time-saving, easy installation
- Easy to combine with other systems for even lower U values

WALL BAG – A SYSTEM DESIGNED FOR COMFORT

When Wall Bags are combined with the MISAPOR thermal insulation under the foundation slab, the entire cellar floor is packed on all sides with the vertical insulation Wall Bags (blue), ensuring optimum living comfort.

The Wall Bag has an total height of 3.0 m, and can be cut to size as required. This allows flexible use for heights up to 3.0 m. The MISAPOR technical sales force will be happy to provide you with advice and answer any of your questions.



The drawing is a planning example; the actual arrangement may vary according to the object.

THE INSTALLATION IN PICTURES



Picture 1

Attach MISAPOR Wall Bags to the outer wall.



Picture 2
Fill Wall Bags with MISAPOR (each Big Bag contains 2 m³)



Picture 3
While filling the Wall Bags, also fill the excavation pit in layers and compact them

CALCULATION EXAMPLES

The 2009 Energy Saving Ordinance (EnEV) (in Germany) or the Swiss Society of Engineers and Architects Standard 180 (in Switzerland) prescribe the minimum U value for thermal insulation in new buildings.

Let us examine the U value calculation using an outer cellar wall construction with component layers from the inside as an example. The MISAPOR 10/75 material was used here.

Example: $U-Wert \le 0.30 \text{ W/m}^2 \cdot \text{K}$



When installed vertically, the MISAPOR Standard 10/75 and the MISAPOR Standard Plus 10/50 have a slightly reduced lambda value. These lambda values are listed below.

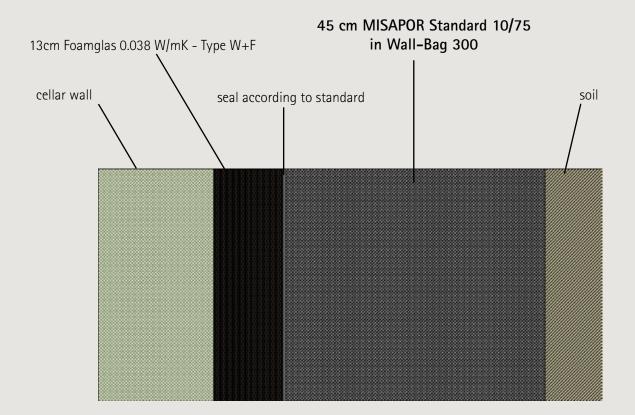
Lambda value MISAPOR Standard 10/75 vertical: 0,15 W/m · K

Lambda value MISAPOR Standard Plus 10/50 vertical: 0,16 W/m · K

POSSIBLE COMBINATION

The Wall Bag system can be combined with other systems as required. A combination can provide a number of advantages, especially in areas where very high insulation values are required.

Example: $U-Wert \le 0.15 \text{ W/m}^2 \cdot \text{K}$



A pure mineral combination was selected in this example. The planner must use this information to define the insulation that is attached directly to the cellar wall as well as the correct seal. We recommend complying with the current applicable standards and measured values.