AEROBEL

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Technical Data Sheet

AEROMIX SHP®

Thermal insulation
λ 0,037 W/mK
European Technical Assessment ETA-21/0579 (dated 19/10/2021)

Technical Description

The thermally highly insulating filler layer is a cement-bound mortar, which consists of a mixture of fine, new EPS beads, which are coated with the right additives at the time of manufacturing so that the improved insulation properties are obtained. Sand should never be used. The product may only be pumped with a screw pump and certainly not with a screed pump or any other means of air transport.

The EPS (expanded polystyrene) beads must conform to the following:
- 95% consist of fine grains with a grain size of 1 to 4 mm, which are necessary to achieve the ideal concrete matrix.
- Achieve a density of 13 kg / m3, depending on the compressive strength.
- Low dust to avoid excessive water absorption.

The cement used must be CEM I 52.5 N/R with a clinker content of at least 95%.

The concrete laying surface and the ground pipes must be inspected and cleaned beforehand. The minimum thickness of the filling layer is 3 cm; preferably a thickness of 5 cm is provided. The insulating mortar is applied continuously and without interruption over the entire cleaned (brushed) warehouse floor and peeled off flat. The filling layer must never be used as a work surface without protection. (e.g. to carry out the cleaning work). The Aerobel Aeromix SHP® is pumped on site with specially developed trucks or trailer screw pumps. The installation is carried out exclusively by specialized personnel.

An important part of this Aeromix SHP® is the Aerobinder® - a gel-like, waste-based additive that significantly and homogeneously improves the thermomechanical properties of the Aeromix SHP®. This is achieved through a uniquely intertwined porous 3D microstructure, which is homogeneously and strongly bound to the matrix via hydrogen bonds. Due to the improved homogeneity, the pumpability is also optimized. This light blue Aeromix SHP® is put into the mixing tub on site.

Material Properties

- Coefficient of thermal conductivity:	lambda: 0,037 W/mK
- Volume mass:	93-98 kg/m3
- Compressive strength:	> 0,135N/mm2 (13.500kg/m2)
- Reaction to fire:	Class A1/M0 (non-flammable)
- Thickness:	3 - 100 cm
- Density Aerobinder® 1 Component:	1 L = 1,331 kg
- Density Aerobinder® 2 Components:	Component A: 1 L = 1,30 kg & Component B: 1 L = 1,05 kg

Applications

- Thermal insulation of all floors
- Filling pipes on the ground floor and on the upper floors
- Leveling differences in height
- Creation of a slope on flat roofs (leveling screed)

Implementation Conditions

- The building must be watertight.
- The warehouse floor must be brushed.
- The temperature of the storage floor must be frost-free.
- Openings in the base layer must be closed.
- Corner profiles of the plaster must be cut to a 0-pass.
- For windows down to the floor, a Ytong block must be placed on the base layer so that the cavity remains open.
- Stairs / cavities / elevator shafts etc. must be provided with edge formwork. In the absence of formwork, the Aeromix SHP® must be placed at an angle towards the opening.
- Floors under the floor where the Aeromix SHP® will be installed can be plastered, but should otherwise not be finished. (seepage of water)
- Water and electricity must be provided by the customer.
- The walls and the exterior joinery do not need to be covered, except at the wooden carpentry (by the customer).
- The execution is done completely seamless.
- The floor is accessible after a drying time of 3 days.
- The Aeromix SHP® floor insulation is installed in one layer until the required thickness (unlimited) is achieved.
- The top is flat, no sanding is required.
- After a drying time of 5 days, mechanical fastening (stapling) of the underfloor heating is possible.
- Screed of at least 7 cm must not be reinforced (without underfloor heating). Screed of less than 7 cm must be reinforced.
- Parking with a length of approx. 20 meters for the installation of an installers truck or trailer screw pump is at the expense of the Customer.

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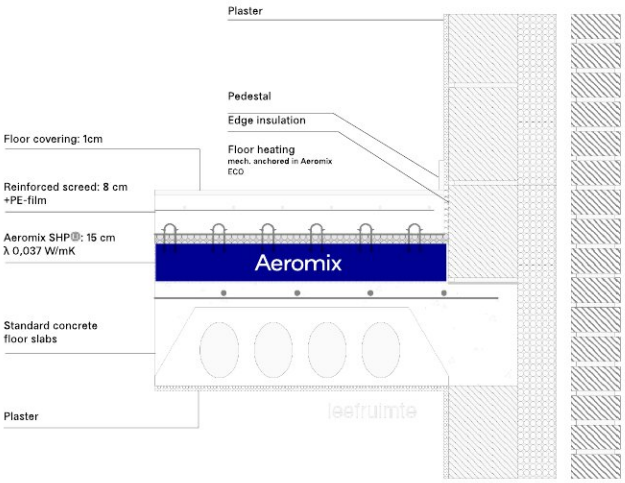
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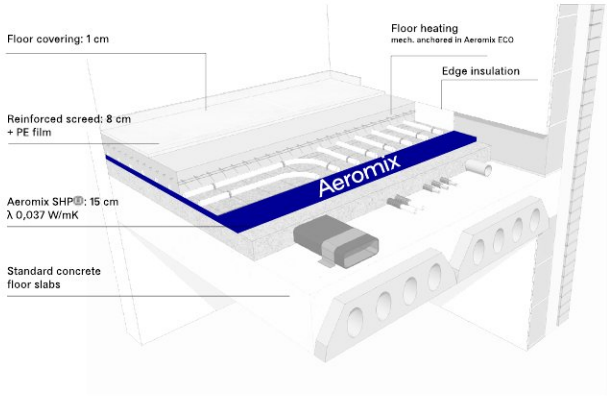
AEROMIX SHP®

Thermal insulation
λ 0,037 W/mK

Material Properties

	SHP
Coefficient of thermal conductivity (λ)	0,037 W/mK
Volume mass.	93-98 kg/m3
Compressive strength (σ)	> 135 kPa
Impact Sound Reduction	≥ 19 dB
CO2	80 KG
Min thickness	30 mm
Processing time (20°C/60%LF)	Min 40 minutes
Processing temp. Min./Max.	+5°C/+35°C
Drying time/ accessibility	3 days (*) / 5 days (*)
Ready for covering after (CM-measurement)	≤12 CM-%
Reaction to fire	Class A1 / M0 (non- flammable)
Shelf life (Aerobinder® 1 or 2 Component system	3 or 12 months
Freezing point	0°C
Storage Conditions	In original sealed container, out of direct sunlight, dust-free, min temperature of +7°C





Mix Design

	SHP
CEM I 52,5 N	80 KG
EPS (13g/l and 1-4 mm)	1000 L
Aerobinder® 1 Component	4,6 KG
Aerobinder® 2 Component - A/B	3,6 KG / 1,0 KG
Hardening Accelerator (optional)	/
Water	90-110L

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