BASF
We create chemistry

Constructing Tomorrow

Slim solution with SLENTITE®: Renovating old buildings without compromises.

The demands placed on modern interior insulation are many and varied. It must reduce energy consumption, fit seamlessly into the architecture and also create a pleasant indoor climate. The new high-performance insulating material SLENTITE® meets all these requirements and has now proven this under challenging conditions – when used in a listed Hamburg brick villa.

Old buildings radiate a special charm and shape the cityscape of Hamburg in large parts. For their buyers, however, the pieces of jewellery often entail an energetic redevelopment. Efficiency and aesthetics have to be considered equally.

The need for renovation of Germany‘s residential buildings is still massive. By 2050, the primary energy requirement in this area is to be reduced by 80 %, and the renovation rate is to be doubled accordingly. This means great savings potential, which can be achieved by energetic refurbishment with a focus on thermal insulation.

Customized climate management with high-performance insulating materials from BASF.

www.slentite.com

Old building in Hamburg-Alsterdorf, Germany

”Especially if the historical character of an old building is to be preserved, there is currently no other product more efficient than SLENTITE.”

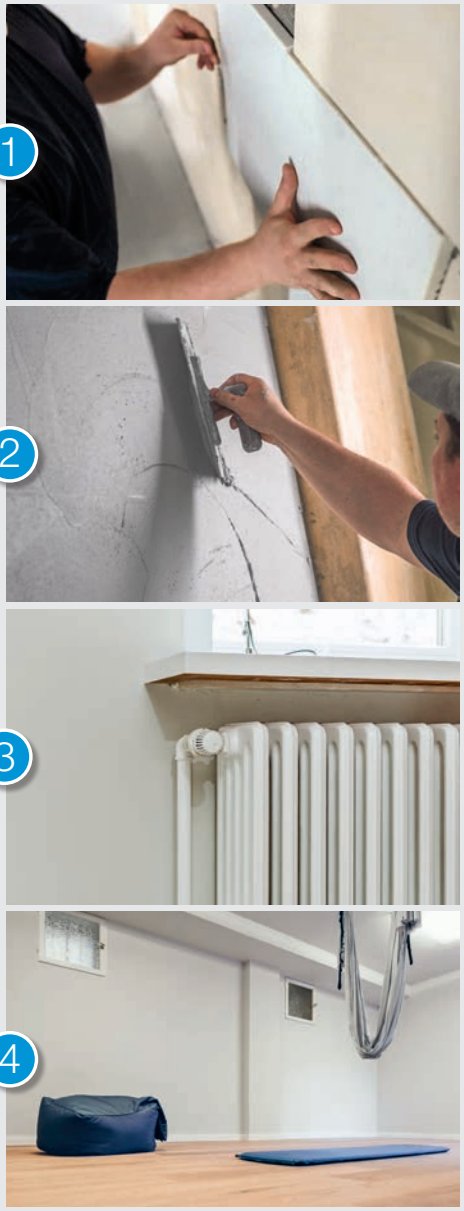
Dr. Marc Fricke, Project Manager Slentite®, BASF Polyurethanes

BAKA Award WINNER 2019

GERMAN DESIGN AWARD WINNER 2018

SLENTITE® Features

- Slim, efficient insulation
- Robust, strong PU aerogel panel
- Lambda: λ = 0,018 W/m·K
- Water vapour permeability: μ = 8
- Excellent moisture regulation
- Easy handling and processing with standard tools
- Design freedom



1./2. Processing and application of SLENTITE® panels
3./4. Finished interior insulation with SLENTITE® in the radiator and basement area

The desire for a home with a feel-good climate must meet one‘s own aesthetic requirements in equal measure. This was also the case for the new owner of a classic Hamburg red brick villa from the 1930s. It was clear from the start: When the house was purchased, it was an energy waster, and appropriate renovation measures were unavoidable.

However, the regulations for the protection of historical monuments have considerably restricted the scope. Two areas were particularly critical: the basement, which was to be used not as a cellar but as a work and wellness floor in future, and the typical heating niches, which offered little space for insulation.

Since the familiar standard materials are relatively thick when applied with the appropriate thermal conductivity, the search for an alternative began. It was found in SLENTITE®, BASF’s new high-performance insulating material. With the aerogel panels based on polyurethane, it is possible to insulate 25 to 50 % thinner than with the materials currently available on the market – and that is permanent without aging. This has paid off especially in the radiator niches. They shape the character of the house, which is why the classic ribbed radiators should neither be changed in position nor replaced by new ones. At the same time, insulation was most necessary at this point, as the masonry cross-section was significantly reduced here – which ultimately meant heating to the outside. A maximum of three centimeters was available between the wall and the heating. Adhesive, SLENTITE® and plaster together came up to just two centimeters, because the new high-performance material is used in slender 15 millimeters.

In the basement, the priority was to create a pleasant indoor climate for work and leisure. In addition to offices, there is also a small sports and wellness area. The requirements were easily formulated: Keep moisture out, heat in. SLENTITE® not only has an above-average insulating performance, it is also open to diffusion and the panels can both absorb and release moisture – the key to a good room atmosphere. The low material thickness was also decisive here: thanks to the slender application, the connection to the window reveals could be retained, so that the original character of the rooms was preserved. The result convinces the owner: “It is obvious that the rooms have been given a completely different climate – without us having to make any compromises in terms of space or design.” After this initial success, further pilot projects with SLENTITE® are currently in progress.

SLENTITE® – one panel for all climates.

BASF Polyurethanes
High Performance Insulation Materials

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