

3M[™] Thinsulate[™] provides a pleasant indoor environment at the Swedish National Museum of Science and Technology (Tekniska Museet)

The Tekniska Museet in Stockholm is a broad summary of yesterday's technology. Yet fitted to the inside of the windows is 3M's Thinsulate window film, which is state-of-the-art.

During the summer, office staff work in an environment similar to a greenhouse with temperatures up to 35 degrees. Using Thinsulate the temperature drops by about ten degrees and in the winter the film contributes towards retaining the heat in the premises.



Thinsulate, which is applied to the inside of the window, is an elegant and discreet solution. It is virtually impossible to discern the film, as it blends in with the glazing. In total, Tekniska Museet has installed about 400 square metres of Thinsulate and this may soon be more, as the experience has been so good.



Tekniska Museet is one of the first users in Sweden of Thinsulate, an innovative product from 3M, which both insulates windows during the cold months and keeps the indoor temperature at a comfortable level during the summer months. Museet has five buildings at its disposal. So far Thinsulate has only been fitted to most windows in the main building. In total this amounts to about 400 square metres, including the museum rooms frequented by hundreds of visitors daily and who at times complain about the heat. Some rooms are not equipped with comfort cooling.

"This meant during the summer the heat in some offices on the second floor was unbearable, at times up to 35 degrees," says Dzevad Subasic, property manager at Tekniska Museet. This is really not an ideal indoor environment.

Currently, Tekniska Museet has no experience of Thinsulate during a whole summer.

"However, we expect the temperature to drop by about ten degrees when the sun is at its hottest," adds Dzevad Subasic. "In the future, the summers will probably be even warmer. So, it is important to ensure a comfortable indoor climate. Thanks to Thinsulate, which has replaced the older window film on some windows and been newly fitted to others, we were also able to remove the old blinds installed in some rooms. In the winter, Thinsulate contributes towards keeping the heat in the premises."

Replaces expensive energy glass

The alternative would have been to install specially manufactured energy glass to harmonize with the listed buildings.

"This would have been much more expensive," says Dzevad Subasic. Thinsulate, which is applied to the inside of the window, is also an attractive and discreet solution. It is virtually impossible to discern the film, as it blends in with the glazing. Furthermore, as it is applied to the inside of the window it acts both as energy glass and as a solar film. The film is easy to clean, and scratches are also avoided by using the right tools.

3M provides a 15-year warranty on Thinsulate. "The warranty means that the film maintains its full effect for 15 years," says Dzevad Subasic. "The long warranty was an important element in why we chose Thinsulate. It may also be appropriate to install this film in other buildings. A reduced energy requirement for cooling and heating could potentially result in large savings. With Thinsulate in all five buildings the savings could be substantial. Even from an environmental standpoint it is important to reduce energy consumption to be able to bring down carbon dioxide emissions."

Less waste

"It was possible to perform the installation without disrupting operations," says Per Turegård, owner of PT Installation AB the company that installed Thinsulate at the Tekniska Museet. "We were also able to keep to the delivery schedule drawn up by the customer and were praised for the installation and the product."

Thinsulate does not require sealing.

"This means the installation is quick, which lowers costs for the customer," adds Per Turegård. "Besides there are more roll widths available than for competing products. This reduces waste and with that material costs. All-in-all, Thinsulate is the best product available on the market in terms of U-value (thermal insulation) and G-value (incident solar radiation, measured in watt per square metre)," concludes Per Turegård.



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