

Press Release

May 09, 2014

insulbar LEF: Low-E film as an alternative to foam

Ensinger optimizes thermal separation in windows, doors and facades using highly heat-reflecting film

With a view to improving thermal insulation properties, Ensinger has advanced the design of its proven insulbar insulation profiles with a groundbreaking new technology. The use of Low-E Film (LEF) is reflected in the name of the new product: insulbar LEF. Applied to the flag of the thermal insulation profile, this film reflects the thermal radiation between the inner and outer shell of the aluminium frames used in windows, doors and facades. The functional principle is similar to that used in a thermos flask, whose mirror-finish inner coating maintains the temperature over long periods as a result of reflection.

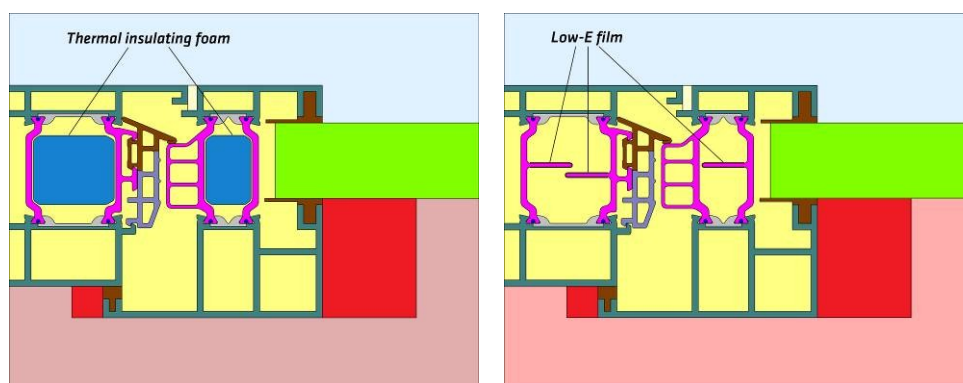
insulbar LEF is a simple alternative to thermally insulating foam. When using insulbar LEF, the U_f values achieved are equivalent to those of thermal insulation profiles with foam – and in many cases even better. The rated emissivity of Low-E film corresponds to $\epsilon = 0.03$ (standards and directives: EN 12898 and EN ISO 10456). This value can be used to draw up computed verifications in compliance with EN ISO 10077-2 and was confirmed by a test certificate from the Institute of Window Technology ift Rosenheim.

Frame system manufacturers can optionally use the Low-E film on all existing and new insulbar profiles with flag. The benefit: Only a single standardized profile design needs to be used. This eliminates the costs for additional extrusion tools. At the same time, the requirements stipulated in different markets can be adhered to without the need for a change of geometry.

insulbar LEF is supplied with a foil-covered flag and, unlike foam, can be directly further processed – without the need for additional cost-intensive work steps. LEF is heat resistant up to 200°C, is able to withstand this temperature for up to 20 minutes and so permits powder coating in the finished assembly. Standard anodizing is also possible. As an alternative to foam, using insulbar LEF permits significantly simplified processes.

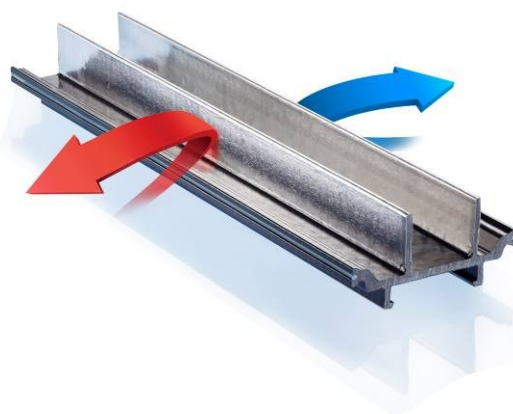
Ensinger is pleased to offer its support to customers requiring bespoke optimization of insulbar profiles. For more information in the internet, go to www.insulbar-LEF.de/en

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Picture left: $U_f = 1.8 \text{ W/m}^2\text{K}$: insulbar thermal insulation profile with foam (marked in blue)

Picture right: $U_f = 1.7 \text{ W/m}^2\text{K}$: insulbar thermal insulation profile with Low-E film (marked in grey), $\varepsilon = 0.03$



Picture caption: insulbar LEF: The thermal insulation profile uses Low-E film which reflects thermal radiation. This provides an optimum thermal separation of the outside and inside shells of metal frames for windows, doors and facades.

Picture caption: Ensinger GmbH

In high resolution: [Download ZIP](#) or press.info@oha-communication.com

About insulbar®

Ensinger GmbH is among the world's leading developers and producers of thermal insulation profiles for window, door and facade construction. The profiles marketed under the brand name insulbar® create a thermal barrier between the inside and outside shells of metal frames. Insulation systems with insulbar® profiles achieve optimum values in terms of energy savings and cut the cost of heating and cooling. At the same time, insulbar® profiles comply with the most stringent quality standards in every respect. They have been in successful operation around the world for over 30 years. For more information, go to www.insulbar.de/en

About Ensinger

The Ensinger group is engaged in the development, manufacture and sale of compounds, semi-finished materials, profiles and technical parts made of engineering and high-performance plastic. Ensinger makes use of a number of different manufacturing methods, in particular extrusion, machining and injection moulding. Employing a total workforce of 2,100 in 27 locations, the family firm is represented in all the important industrial regions of the world with its own production plants or sales branches. For more information, go to www.ensinger-online.com

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