

# Certificate

## Thermal Bridge Free Connection

for cool, temperate climate, valid until 31.12.2012

Passive House Institute  
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Category: **Facade anchor**  
Manufacturer: **mCon Manfred Hoffmann**  
Product name: **D-57258 Freudenberg**  
**mCon Handline-Reihe**

The following criteria were used in awarding this certificate:

### Efficiency Criterion

In two typical applications\*, the construction is

$$\Delta U_{WB} \leq 0,010 \text{ W}/(\text{m}^2\text{K})$$

### Comfort Criterion

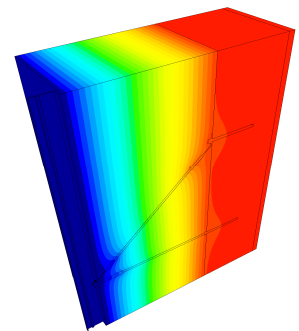
The inner surface must be warm enough to prevent mould as well as uncomfortable down-drought and radiation losses.

$$\theta_{i,\min} \leq 17^\circ\text{C}$$

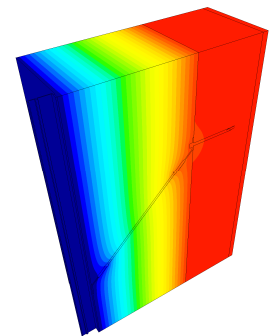
### Thermal data of the window frame

Typ	thermal bridge coefficient $\chi$ [W/K]	minimum inner surface temperature $\theta_{i,\min}$ [°C]
Triangle	0.003	19.48
Horizontal rod	0.002	19.48
Angular rod	0.001	19.50

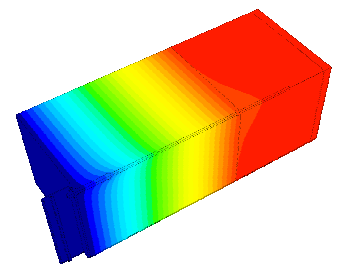
\* The criterion was validated on both, a row house and a school building.




Isothermal map of the triangle



Isothermal map of the angular rod



Isothermal map of the horizontal rod

 **Passive House**  
**suitable**  
**component**  
Dr. Wolfgang Feist