

# Certificate

## Certified Passive House component

for cool, temperate climate, valid until 31.12.2022

Category: **Facade anchor**  
 Manufacturer: **SFS Group Fastening Technology Ltd.**  
**Leeds, UNITED KINGDOM**  
 Product name: **SFS NVELOPE® NVS + Thermal**

The following criteria were used in awarding this certificate:

### Efficiency Criterion

In a typical application\*, the construction fulfills the requirements of

$$\text{Eff.fa} \leq 0.200 \text{ W/(kNK)}$$

### Comfort Criterion

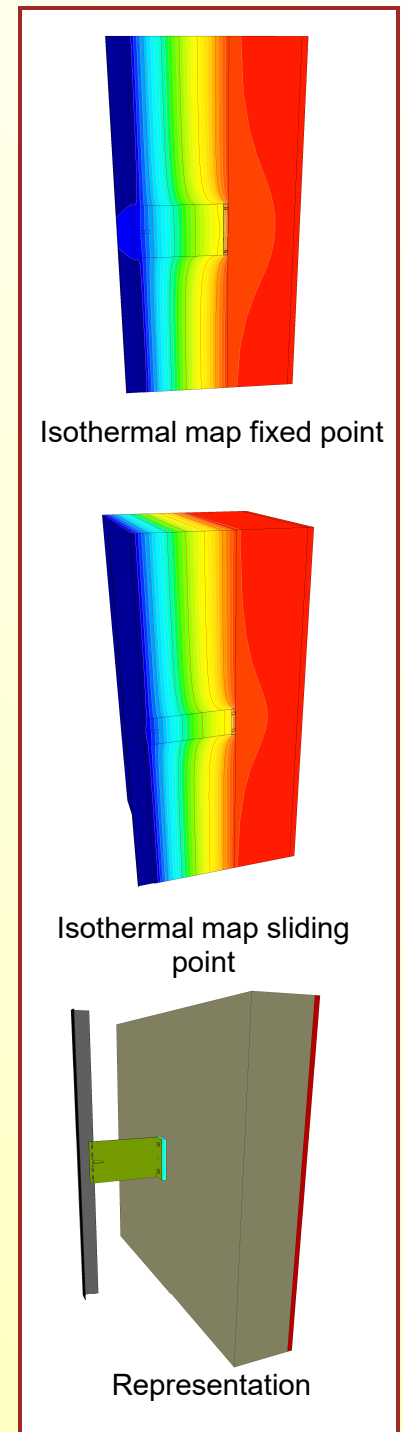
The inner surface must be warm enough to prevent mold as well as uncomfortable down-drafts and radiation losses.

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

### Thermal data of the certified component

SFS NVELOPE® NVS + Thermal - stainless steel	Thermal bridge coefficient	Minimum interior surface temperature
	$\chi$ [W/K]	$\theta_{i,\min}$ [°C]
Fixed point	0.0157	19.14
Sliding point	0.0082	19.23

\* The criterion has been validated with a representative facade of a school building



# Data sheet

SFS Group Fastening Technology, SFS NVELOPE® NVS + Thermal

**Manufacturer** SFS Group Fastening Technology  
 153 Kirkstall Road, LS4 2AT Leeds  
 Tel.: +44 170 780 81 09  
<http://www.nvelope.com>

Criteria validated based on reference facade	<b><math>\Delta_U</math> [W/m<sup>2</sup>K]</b>
<b>LC VI</b>	<b>0.0230</b>

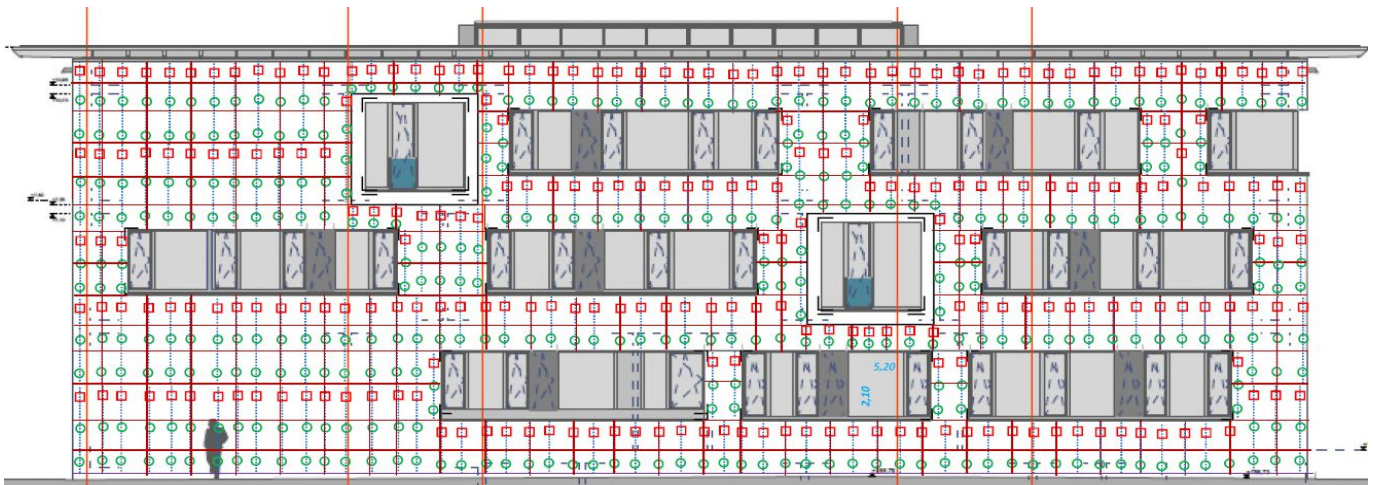
In order to validate the suitability, the manufacturer provides a static calculation and an associated installation plan for the reference facade.

The calculations are carried out for a reference facade with 24 cm insulation (0.035 W/(mK)). To achieve a heat transfer coefficient of  $U_{\text{effective}} = 0.15 \text{ W / m}^2\text{K}$ , an additional insulation thickness of 1 cm is necessary.

Load class / Facade weight		Thermal bridge coefficients [W/K]	
LC / Material	[kN/m <sup>2</sup> ]	X <sub>FP</sub>	X <sub>SP</sub>
6 / Stone	0.5	0.0157	0.0082

Quantity / m <sup>2</sup>		[W/m <sup>2</sup> K]	[W/(kNK)]
FP	SP	$\Delta_U$	Eff. fa
0.84	1.20	0.023	0.046



Installation-plan reference facade of the certified component (LC VI)

Load-class (LC)	Facade cladding	Facade weight [kN/m <sup>2</sup> ]	Efficiency criterion fulfilled?
I	Aluminium laminated	0.10	no
II	Plastic	0.15	yes
III	Fiber-cement plates	0.20	yes
IV	Acrylic glass	0.25	yes
V	Ceramics	0.30	yes
VI	Stone	0.50	yes

The classification criteria and the load class allocation can be found in the current criteria "Certified Passive House components – Facade anchors, Version 2.1, 27.05.2021".