

THERMAL + FIRE PERFORMANCE

Technical proof layer for the EBOS wall concept

Purpose. This draft consolidates the verified component data and the proposed EBOS wall build-up into one technical sheet for architects, engineers and partners. Performance values are stated only where supported by test reports or marked as indicative.

SGS TESTED THERMO-PAN

0.039 W/mK

INTERTEK TESTED CALSIL+

A1 fire class

Reaction to fire
classification according to
EN 13501-1:2018 for the
tested CalSilplus sample.

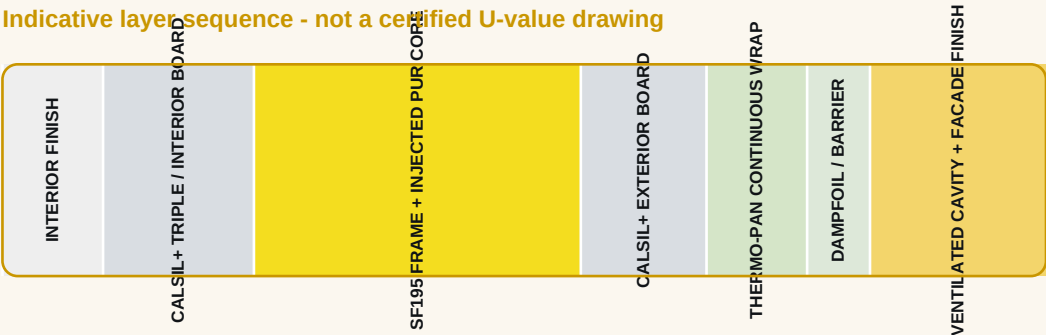
INDICATIVE CORE ONLY

8.48 m2K/W

EBOS wall concept

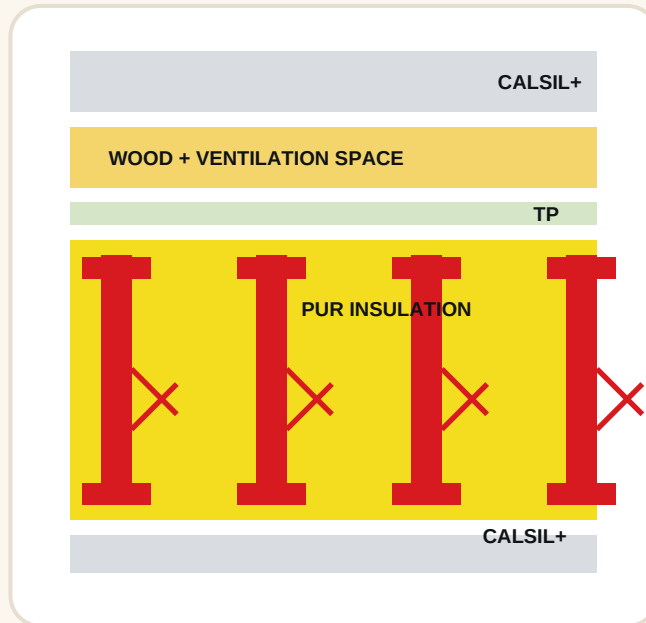
SF195 aluminium frame injected with PUR, enclosed with CalSil+ on both sides and wrapped externally with Thermo-Pan. A ventilated cavity and facade finish complete the exterior envelope.

Indicative layer sequence - not a certified U-value drawing



CONTINUOUS THERMAL ENVELOPE

How the structure, nodes and cold bridges are wrapped



- 01 Injected core**
SF195 profile is filled with PUR, improving continuity inside the structural frame.
- 02 Board enclosure**
CalSil+ boards protect and close the structural build-up on both sides.
- 03 Wrapped junctions**
Thermo-Pan is applied as a continuous external layer over frame zones and junctions.
- 04 Ventilated finish**
A ventilated cavity separates the thermal envelope from the facade finish.

Thermal calculation note

The material-only indicative resistance of 195 mm PUR at λ 0.023 W/mK is $R = 8.48 \text{ m}^2\text{K/W}$. Adding two 9.33 mm CalSil+ boards and one 5.3 mm Thermo-Pan layer gives approx. $R = 8.73 \text{ m}^2\text{K/W}$ before surface resistances, ventilation strategy and frame/connection effects. A declared wall U-value still requires a project-specific 2D/3D thermal bridge calculation.

TEST-BACKED COMPONENT DATA

Values used in the draft technical sheet

Component	Source / method	Result used in this draft
Thermo-Pan	SGS SUIN1912009775PS; EN 12664:2001	lambda = 0.039 W/(m*K); specimen approx. 5.3 mm; density approx. 56.1 kg/m3. Used as continuous external wrap component value.
CalSil+	Intertek 200825008SHF-001; EN 12667:2001	Average: 9.33 mm; lambda 0.168 W/(m*K); thermal resistance 0.056 m2K/W. Used as board enclosure component value.
CalSil+	Intertek; EN ISO 1182 / EN ISO 1716; EN 13501-1	Reaction to fire classification: A1. Delta T 1.5 C; mass loss 14.9%; sustained flaming 0 s; PCS 0.5765 MJ/kg.
SF195 + PUR	SF195/SKY-DBA1662 profile drawing + owner parameters	Frame depth 195 mm. PUR density 35 kg/m3 and lambda 0.023 W/(m*K) stated by owner. Indicative core calculation only; final wall value needs modelling.

Claims discipline

Use the tested component values as proof points, but keep full wall U-values, psi-values, REI values and CO2e/m2 out of the public claim set until specific calculations or certification documents are available. Preferred wording: "tested component performance" and "designed to reduce thermal bridging".

Source documents: SGS Thermal Conductivity Test Report SUIN1912009775PS (2019); Intertek Test Report 200825008SHF-001 (2020); SF195/SKY-DBA1662 profile drawing; EnWalls product family overview.