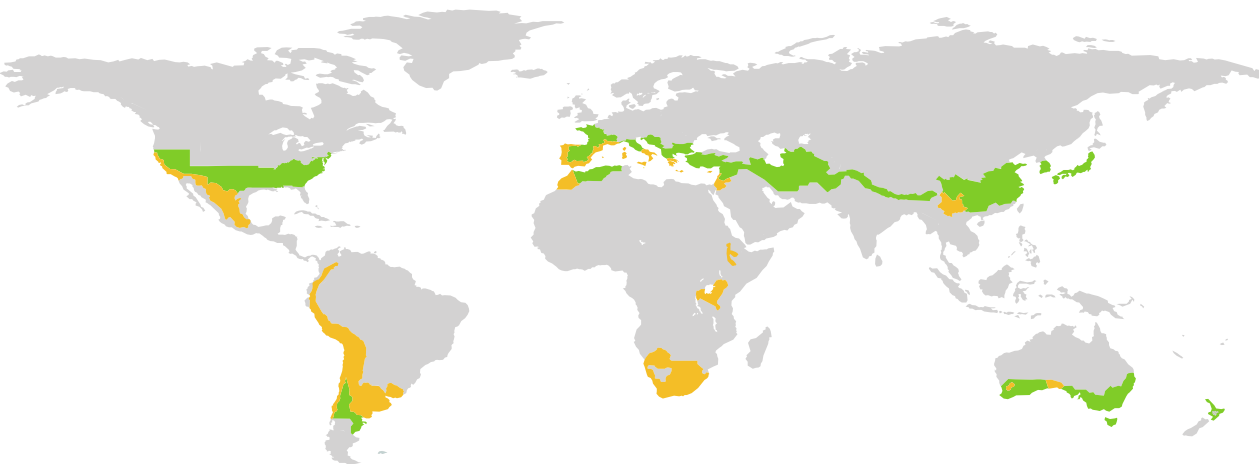


CERTIFICATE

Certified Passive House Component

ID: 1426rc04 valid until 31. December 2026

Passive House Institute
Dr. Wolfgang Feist
64342 Darmstadt
GERMANY



Category **Roof system | Solid construction with EIFS**
Manufacturer **VEDAG (China) Trade Co. Ltd.**
200122 Shanghai
CHINA
Product name **Passive House Roof System**

This certificate for the warm, temperate climate zone was awarded based on the following criteria

Hygiene criterion

The minimum temperature factor of the interior surfaces is $f_{Rsi=0,25m^2K/W} \geq 0,65$

Comfort criterion

The U-value of the installed windows is $U_{W,i} \leq 1,05 \text{ W/(m}^2\text{K)}$

Efficiency criteria

Heat transfer coefficient of building envelope $U \cdot f_{PHI} \leq 0,30 \text{ W/(m}^2\text{K)}$
Temperature factor of opaque junctions $f_{Rsi=0,25m^2K/W} \geq 0,82$
Thermal bridge-free design for key connection details $\Psi \leq 0,01 \text{ W/(mK)}$

An airtightness concept for all components and connection details was provided



Opaque building envelope

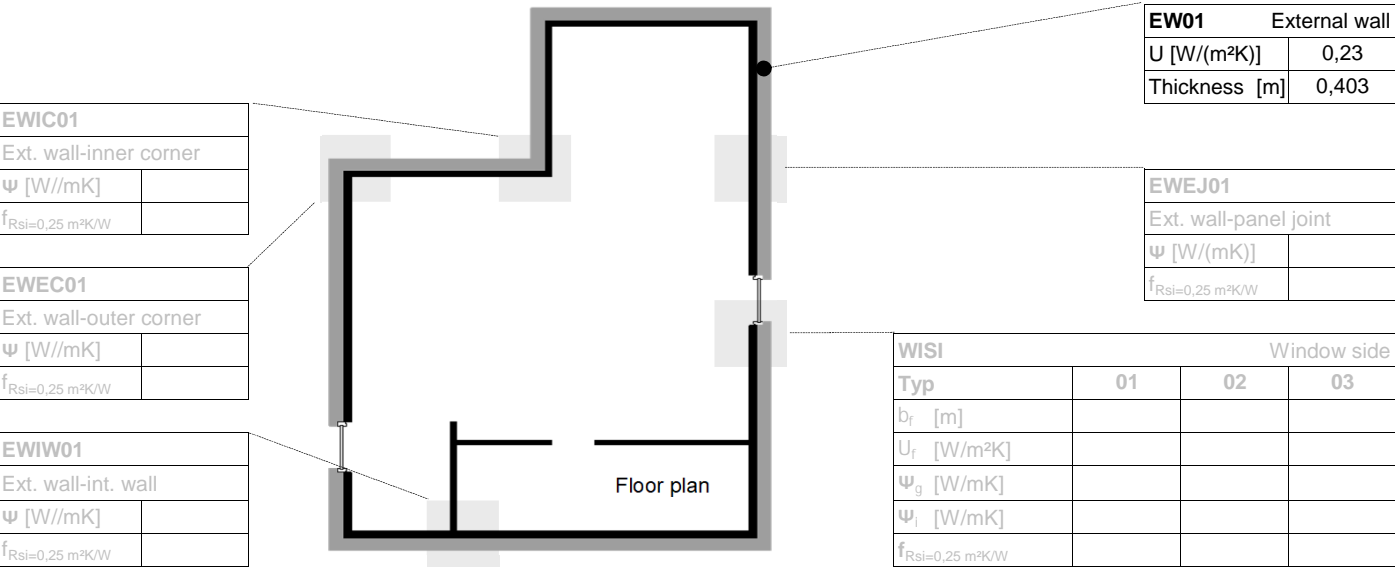
The VEDAG Roof Waterproofing System ensures both comprehensive weather proofing and Passive House standard thermal protection. The system is intended to be used with reinforced concrete construction with EIFS and comprises an exterior insulation finishing system of G-EPS (0,033 W/mK) installed using compatible adhesive materials. VEDAG membranes are applied on top of the insulation to form the weather barrier. The system has been assessed according to the Passive House Institute's criteria for roof systems and has been validated as suitable for Passive House projects in the cool-temperate and warm-temperate climate zone.

Explanatory notes

The Passive House Institute has defined international component criteria for seven climate zones based on hygiene-, comfort- and affordability criteria. In principle, components which have been certified for climate zones with higher requirements may also be used in climates with less stringent requirements. This use might make sense in certain circumstances.

Thermal bridge not calculated
Criteria achieved

Efficiency criteria not achieved
Hygiene or comfort criterion not achieved



Windows

Analysis was undertaken for two separate roof window types; the 'Composite Glazing - öffnungsfähiges Glasoberlicht' from Glas Trösch (U_w = 0,94 W/m²K with U_g = 0,75 W/m²K) and the 'Nauheimer Lichtkuppel' from Hans Börner GmbH & Co. KG (U_w = 0,68 W/m²K with U_g = 0,89 W/m²K), based on dimensions 1,5 x 1,5 m. The calculations undertaken demonstrate that the window installation locations are suited to the cool-temperate climate, with no risk of surface condensation and subsequent mould growth.

Airtightness concept

Air tightness is achieved by the following procedure: Roof windows are to be constructed with permanently elastic + tight materials. Internal surfaces are to be plastered over the entire surface; internal surfaces in lightweight construction are to be covered over the entire surface with continuous, airtight membranes; windows are to be properly connected with suitable airtight window connection membranes or profiles.

