CERTIFICATE

Certified Passive House Component
ID: 1238cs04 valid until 31. December 2025

Passive House Institute
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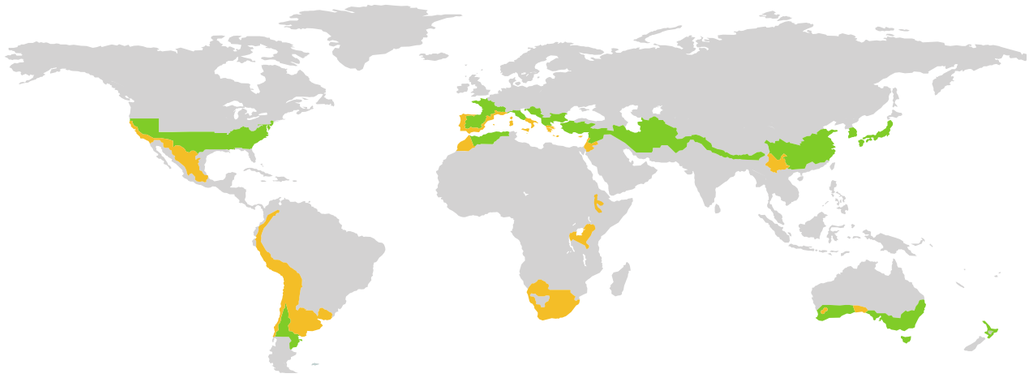
Aditional thermal bridges

Name	Thermal bridge	f_{Rsi}	Description
EWPA01	X= 0,127 W/K	0,84	Steel bracket
EWPA02	X= 0,005 W/K	0,70	Insulation anchor



Category	**Construction system | Solid (Prefabricated)**
Manufacturer	**Construcciones Juan Zorzano Blanco S. L.** **AGONCILLO** **SPAIN**
Product name	**INSUPANEL**

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** W/(m²K)

Efficiency criteria

Heat transfer coefficient of building envelope	$U*f_{PHI} \leq$	**0,25** W/(m²K)
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** W/(mK)

An airtightness concept for all components and connection details was provided

warm, temperate climate

CERTIFIED COMPONENT
Passive House Institute

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Opaque building envelope

Insupanel is a monolithic construction system, consisting of 70mm thick reinforced concrete panels fixed using steel brackets. The panels are insulated to the inside with 150mm of EPS (0,035 W/mK), which is fixed using steel and plastic insulation anchors. 70mm lightweight steel C-sections are used to form a service cavity, which is insulated with rock wool. The system has undergone analysis by the Passive House Institute against the thermal performance criteria for warm-temperate climate zones, and has been deemed suitable for the construction of passive houses in both warm-temperate and warm climates. The ceiling connection does not meet the efficiency criteria of <0,01 W/mK, however this is typical for such details and, because the hygiene criterion is met, the system has been deemed certifiable.

Windows

Analysis was undertaken using a generic, passive house-standard timber-framed, triple-glazed window unit, featuring phA thermal values for the spacer and a polysulfide secondary seal. The calculations undertaken demonstrate that the window installation locations are suited to the warm-temperate climate zone, with no risk of surface condensation and subsequent mould growth.

Airtightness concept

The airtightness of the construction system is achieved through the use of an airtight membrane fitted between the steel profiles forming the service cavity and the insulating layer. For the junctions between membrane sections and connections to openings and the floor slab, specialist air tightness tape is to be used.

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. Their use might make economic sense in certain circumstances.