

# CERTIFICATE

Certified Passive House Component

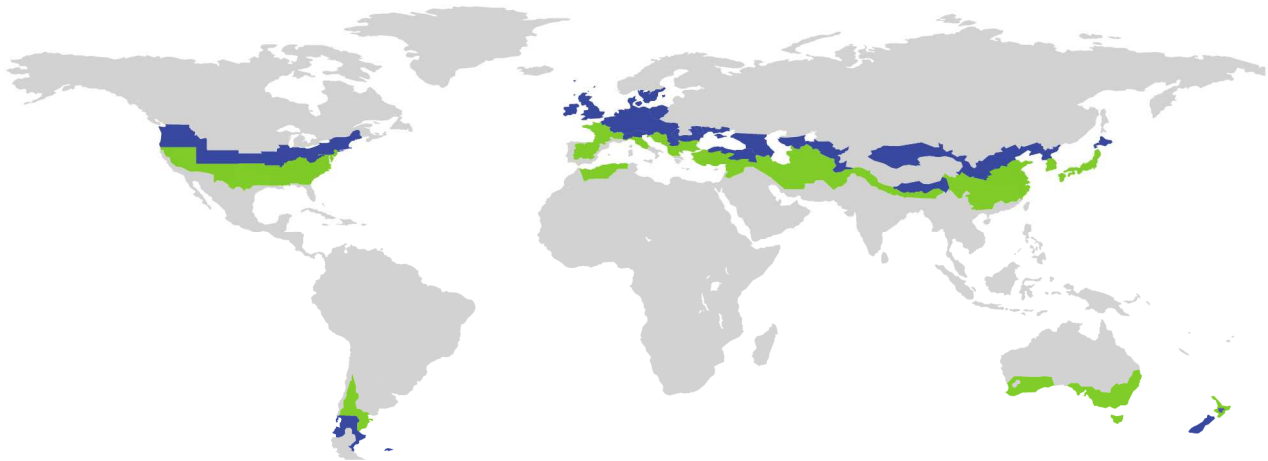
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Passive House Institute

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Category **Construction system | Lightweight construction**  
Manufacturer **Kingspan Insulation Ltd**  
**Herfordshire**  
**UK**  
Product name **Kingspan TEK Bausystem**

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

## Hygiene criterion

The minimum temperature factor of the interior surfaces is

$$f_{R_{si}=0,25m^2K/W} \geq 0.70$$

## Comfort criterion

The U-value of the installed windows is

$$U_{w,i} \leq 0.85 \text{ W}/(m^2K)$$

## Efficiency criteria

Heat transfer coefficient of building envelope

$$U \cdot f_{PHI} \leq 0.15 \text{ W}/(m^2K)$$

Temperaturfactor of opaque junctions

$$f_{R_{si}=0,25m^2K/W} \geq 0.86$$

Thermal bridge free design for key connection details

$$\Psi \leq 0.01 \text{ W}/(m^2K)$$

An airtightness concept for all components and connection details was provided.



cool, temperate climate

[www.passivehouse.com](http://www.passivehouse.com)

## Determined values

<b>Thermal heat transfer coefficient</b>	<b>Dimension [m]</b>	<b>U-Wert [W/(m<sup>2</sup>K)]</b>
EW01 - External Wall	0.29	0.128
RO01 - Roof	0.28	0.129
BC01 - Basement Ceiling	0.46	0.118
FS01 - Floor Slab	0.54	0.120
BW01 - Basement Wall	0.51	0.133

<b>Thermal bridge coefficient opaque envelop</b>	<b>fRsi [-]</b>	<b>Ψ [W/(mK)]</b>
EWEC01 - External Wall Outer Corner	0.93	-0.038
EWIC01 - External Wall Inner Corner	0.87	-0.012
FSIW01 - Floor Slab Internal Wall	0.98	0.031
BFBW01 - Basement Floor Basement Wall	0.90	-0.049
BFIW01 - Basement Floor Internal Wall	0.97	0.015
BCEW01 - Basement Ceiling External Wall	0.92	-0.016
BCEW02 - Basement Ceiling External Wall	0.93	-0.053
BCIW01 - Basement Ceiling Internal Wall	0.98	0.041
BCIW01 - Basement Ceiling Internal Wall	0.98	0.041
BWBC01 - Basement Wall Basement Ceiling	0.95	0.013
BWBC02 - Basement Wall Basement Ceiling	0.95	0.023
EWCE01 - External Wall internal CEiling	0.96	0.009
EWEC01 - External Wall Outer Corner	0.91	-0.086
EWIC01 - External Wall Inner Corner	1.00	0.061
EWIW01 - External Wall Internal Wall	0.97	0.002
ROEA01 - Roof Eaves	0.90	-0.032
ROVE01 - Roof Verge	0.90	-0.058
ROIW01 - Roof Internal Wall	0.96	0.022