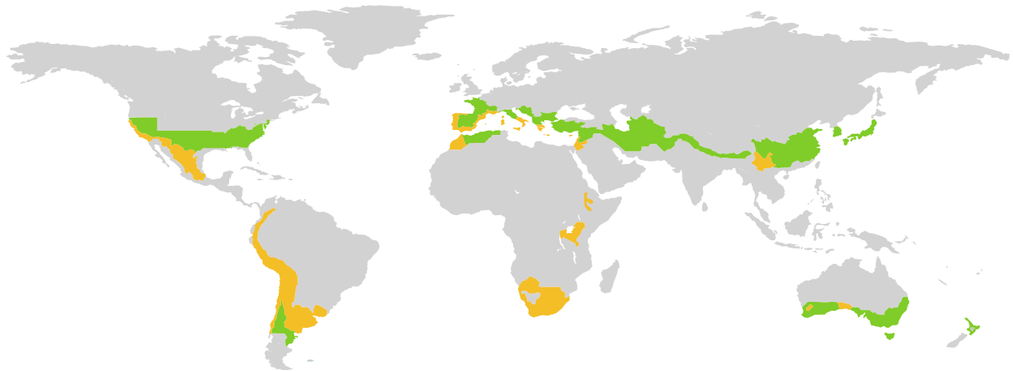
CERTIFICATE

Certified Passive House Component

ID: 1608rc04 valid until 31. December 2025

Passive House Institute
Dr. Wolfgang Feist
64342 Darmstadt
GERMANY



Category	**Roof system | Solid construction with EIFS**
Manufacturer	**BMI ROOFING SYSTEMS** **Villaluenga de la Sagra** **SPAIN**
Product name	**TECTUM FIRST**

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	$U*f_{PHI} \leq$	**0,30** 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

BMI ROOFING SYSTEMS
Ctra. De Villaluenga a Cobeja km 3,4, 45520, Villaluenga de la Sagra, SPAIN
Phone: | +34 925 53 07 08 | informacion.es@bmigroup.com | www.tejascobert.es

Opaque building envelope

The TECTUM FIRST roof insulation 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 exterior insulation panels of phenolic foam (Tectum First, 0,022 W/mK) installed using mechanical fixings. The latter are taken into account in the U-value calculation at 4 fixings per square metre - where this value is exceeded the U-value must be adjusted. 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 warm-temperate and warm climate zones.

Windows

Analysis for the roof window installation was undertaken using FTT U8 Thermo 2012 window from Fakro (Uw = 0,87 W/m²K with Ug = 0,70 W/m²K), based on dimensions of 1,14 x 1,40 m, resulting in a Uw-installed value of 1,00 W/(m²K). Project-specific structural aspects may influence the installation; it is the responsibility of the architect to ensure the final geometry matches the simulations carried out.

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 and sealed with air tightness tape; windows are to be properly connected with suitable airtight window connection membranes or profiles.

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.