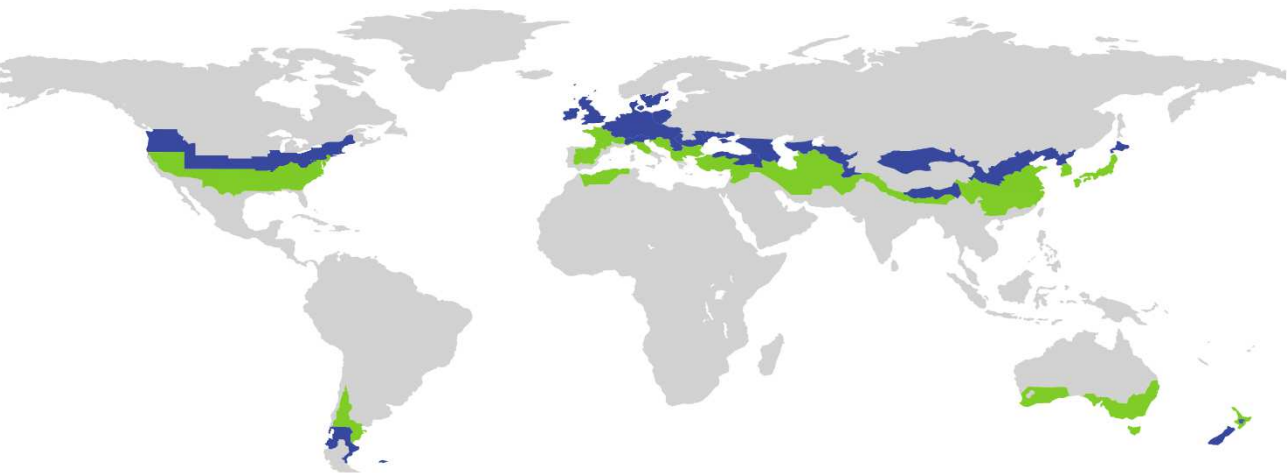


CERTIFICATE

Certified Passive House Component

ID: 0902ws03 valid until 31. December 2018

Passive House Institute
Dr. Wolfgang Feist
64342 Darmstadt
GERMANY



Category **Construction system | Lightweight timber construction**
Manufacturer **MEDITE SMARTPLY
Waterford
IRELAND**
Product name **MEDITE SMARTPLY PROPASSIV - TYPE S**

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 $f_{Rsi=0,25m^2K/W} \geq 0,70$

Comfort criterion

The U-value of the installed windows is $U_{W,i} \leq 0,85 W/(m^2K)$

Efficiency criteria

Heat transfer coefficient of building envelope $U \cdot f_{PHI} \leq 0,15 W/(m^2K)$
Temperature factor of opaque junctions $f_{Rsi=0,25m^2K/W} \geq 0,86$
Thermal bridge-free design for key connection details $\Psi \leq 0,01 W/(m^2K)$

An airtightness concept for all components and connection details was provided



Opaque building envelope

The system is a timber-frame with a stud thickness of 180mm, with both external and internal insulation. As MEDITE SMARTPLY manufactures the MEDITE VENT and SMARTPLY PROPASSIV products, these are the only products in the system for which product-specific lambda values have been provided. All other simulated lambda values have been applied based on the specification of MEDITE SMARTPLY, with materials sourced from the Passive House Institute's own database. The use of such generic materials means that consumers are free to use, for example, an insulation product of their choosing (such as wood fibre, mineral wool or EPS), so long as the rated lambda value of the material used is equal to the value stated in this certification report. This value should take any punctual penetrations into account. The system is designed to be constructed with rain-screen cladding.

Windows

Certification was undertaken using a generic, Passive House-standard triple-glazed window unit, featuring Super Spacer Tri Seal thermal values for the spacer, a polysulfide secondary seal and argon gas filling. Solid timber frames were used throughout. Type 01 refers to outward-opening windows and Type 02 refers to inward-opening windows.

Airtightness concept

The airtightness of the wall systems is achieved mainly with the use of SMARTPLY PROPASSIV airtight OSB panels. SMARTPLY PROPASSIV was evaluated by the Passive House Institute in 2016 and it was concluded that the air leakage rate (q_{50}) was $< 0.01 \pm 0.04 \text{ m}^3/\text{h}/\text{m}^2$. For the floor/wall connection details an airtight membrane may be used around the floor cassette and taped with specialist airtight tape. The airtight layer is shown on the detail files as a dotted red line.

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.

