

Certificate

EnerPHit Insulation System

For cool temperate climates, valid until 31 December 2018

Passive House Institute
Dr. Wolfgang Feist
64283 Darmstadt
GERMANY



Category: **EnerPHit-System (For Retrofits)**

Manufacturer: **Saint-Gobain ISOVER**
92400 COURBEVOIE, FRANCE

Product name: **Refurbishment of existing solid constructions**
(with a rear ventilated facade and a timber substructure)

This certificate was awarded based on the following criteria:

Heat transfer coefficient of building envelope:

$$f * U_{\text{opaque}} \leq 0.15 \text{ W}/(\text{m}^2\text{K})$$

with f: temperature reduction factor

Thermal bridge free design:

$$\Psi_e^* \leq 0.01 \text{ W}/(\text{mK}) \text{ for key connection details (if feasible for the existing structure)}$$

with Ψ_e : linear heat transfer coefficient
* see appendix

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

with standard window: width 1.23 m; height 1.48 m

Interior surface temperatures above 12,6°C

$$\text{at } \vartheta_e = -10^\circ\text{C} \text{ und } \vartheta_i = 20^\circ\text{C}$$

Moisture

Damaging levels of moisture within the component or on its surface must be ruled out.

Airtightness of all components and connection details

Certified connection details as per the certification report are listed below:

(Enumeration of thermal bridge free connections, if feasible for the existing structure)

Foundation / : ISOV_M-AD_2a_MB-HLF-H, ISOV_M-AD_2b_MB-HLF-H, ISOV_M-AD_2d_MB-HLF-H, ISOV_M-AD_2e_MB-Exterior
Exterior Wall HLF-H, ISOV_M-AD_2f_MB-HLF-H, ISOV_M-AD_2g_MB-HLF-H

Exterior wall: ISOV_M-AD_3a_MB-HLF-H, ISOV_M-AD_3c_MB-HLF-H, ISOV_M-AD_3d_MB-HLF-H, ISOV_M-AD_3e_HLF-H,
ISOV_M-AD_3h_MB-HLF-H, ISOV_M-AD_4a_MB-HLF-H, ISOV_M-AD_4b_MB-HLF-H, ISOV_M-AD_4c_MB-HLF-H,
ISOV_M-AD_4d_MB-HLF-H, ISOV_M-AD_4e_HLF-H, ISOV_M-AD_4f_MB-HLF-H, ISOV_M-AD_4g_HLF-H,
ISOV_M-AD_4h_MB-HLF-H, ISOV_M-AD_4i_MB-HLF-H, ISOV_M-AD_4k_MB-HLF-H, ISOV_M-AD_4l_MB-HLF-H,
ISOV_M-AD_4n_MB-HLF-H

Roof: ISOV_M-AD_5a_MB-HLF-H, ISOV_M-AD_5af_MB-HLF-H,
ISOV_M-AD_5b_MB-HLF-H, ISOV_M-AD_5c_MB-HLF-H,
ISOV_M-AD_5d_MB-HLF-H, ISOV_M-AD_6a_MB-HLF-H,
ISOV_M-AD_6af_MB-HLF-H, ISOV_M-AD_6b_MB-HLF-H,
ISOV_M-AD_6c_MB-HLF-H, ISOV_M-AD_6d_MB-HLF-H,
ISOV_M-AD_7a_MB-HLF-H, ISOV_M-AD_7af_MB-HLF-H,
ISOV_M-AD_7b_MB-HLF-H, ISOV_M-AD_7c_MB-HLF-H,
ISOV_M-AD_7d_MB-HLF-H, ISOV_M-AD_9_MB-HLF-H,
ISOV_M-AD_10_MB-HLF-H

Windows*: Fall 1.1 / 1.2, Fall 2.1 / 2.2, Fall 3.1 / 3.2, Fall 4.1 / 4.2

* only for certain connection variants

