

Certificate

EnerPHit Insulation System

For cool temperate climates, valid until 31 December 2019

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

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

Product name: **Refurbishment of existing solid constructions**
(with a Compound Insulation System)

This certificate was awarded based on the following criteria:

Heat transfer coefficient of building envelope:

$f * U_{opaque} \leq 0.15 \text{ W}/(\text{m}^2\text{K})$
with f: temperature reduction factor

Thermal bridge free design:

$\Psi_e^* \leq 0.01 \text{ W}/(\text{mK})$ for key connection details (if feasible for the existing structure)
with Ψ_e : linear heat transfer coefficient
* see appendix

$U_{w,standard \text{ window, installed}} \leq 0.85 \text{ W}/(\text{m}^2\text{K})$
with standard window: width 1.23 m; height 1.48 m

Interior surface temperatures above 12,6°C

at $\vartheta_e = -10^\circ\text{C}$ 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/
exterior wall: ISOV_M-AD_2a_MB-WDVS, ISOV_M-AD_2b_MB-WDVS, ISOV_M-AD_2d_MB-WDVS, ISOV_M-AD_2e_MB-WDVS,
ISOV_M-AD_2f_MB-WDVS, ISOV_M-AD_2g_MB-WDVS

Exterior wall: ISOV_M-AD_3a_MB-WDVS, ISOV_M-AD_3c_MB-WDVS, ISOV_M-AD_3d_MB-WDVS, ISOV_M-AD_3e_MB-WDVS,
ISOV_M-AD_3h_MB-WDVS, ISOV_M-AD_4a_MB-WDVS, ISOV_M-AD_4b_MB-WDVS, ISOV_M-AD_4c_MB-WDVS,
ISOV_M-AD_4d_MB-WDVS, ISOV_M-AD_4e_MB-WDVS, ISOV_M-AD_4f_MB-WDVS, ISOV_M-AD_4g_MB-WDVS,
ISOV_M-AD_4h_MB-WDVS, ISOV_M-AD_4i_MB-WDVS, ISOV_M-AD_4k_MB-WDVS, ISOV_M-AD_4l_MB-WDVS,
ISOV_M-AD_4n_MB-WDVS

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

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 (see appendix)

