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MA 39 – 20-05533

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Classification

OF FIRE RESISTANCE IN ACCORDANCE WITH EN 13501-2:2016

Sponsor: Ekovilla OY

Prepared by: Municipal Department 39 –
Research Centre, Laboratory and Certification services

Notified Body No.: 1139

Product name: Load-bearing wooden stud wall insulated with Ekovilla mat,
thickness 125 mm with the designation "US 1 KIP"

Classification report No.: MA 39 – 20-05533

Issue number: 1

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This classification report may only be used or reproduced in its entirety.

The original version of this classification report is issued in German language (MA 39 – VFA 2019-0347.03).

In any case of doubt the German version is valid.



1 Introduction

This classification report defines the resistance to fire classification assigned to load-bearing wooden stud wall insulated with Ekovilla mat, thickness 125 mm with the designation "US 1 KIP" in accordance with the procedures given in EN 13501-2:2016.

2 Details of classified product

2.1 General

The load-bearing wooden stud wall insulated with Ekovilla mat 125 mm with the designation "US 1 KIP", is defined as a type-classified component. Their function is to withstand the fire in terms of loadbearing capacity, integrity and thermal insulation.

2.2 Description

The Load-bearing wooden stud wall insulated with Ekovilla mat 125 mm with the designation "US 1 KIP" consists of:

- Inner paneling 13 mm Gyproc GN 13, mass per unit area approx. 9 kg / m²
- EKOvilla X5 airtight membrane
- Construction wood C24, 48 mm x 123 mm k 600, thermal insulation Ekovilla mat, thickness 125 mm, density approx. 40 kg / m³
- Windbreak gypsum fiber board 9 mm Gyproc GTS 9, mass per unit area approx. 7.2 kg / m²
- Rear ventilation 22 mm x 100 mm k 600
- Faceplate 35 mm x 125 mm

The construction is fully described in the test reports listed in point 3.1 on which the classification is based.



3 Test reports and test results in support of the classification

3.1 Test reports

Name of laboratory	sponsor	Report ref. No.	Test standard
MA 39 Rinnböckstraße 15/2 1110 Vienna Austria	Ekovilla OY Katajaharjuntie 10 45720 Kuusankoski Finland	MA 39 – VFA 2019-0347.01 12 June 2019 und MA 39 – VFA 2019-0347.02 12 June 2019	EN 1365-1

3.2 Results

Table 1: terms and conditions

Defined heating:	Standard temperature/time curve
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Table 2: Results

Fire resistance test 26 March 2019 (MA 39 – VFA 2019-0347.01):

Exposed side: inner surface

Duration of the test [min]	46
Loadbearing capacity	46
Time until breakdown [min]:	-
Deflection criteria exceeded after [min]:	-
Vertical contraction – limit exceeded after [min]:	-
Integrity	46
Time until the cotton pad ignited [min]:	-
Time until sustained flaming arose [min]:	-
Time until cracking [min]:	-



Thermal insulation	46
Time until the mean temperature increase at the unexposed surface exceeds 140°C [min]:	-
Time until the maximum temperature increase at the unexposed surface exceeds 180°C [min]:	-

Table 3: Results

Fire resistance test 4 April 2019 (MA 39 – VFA 2019-0347.02):

Exposed side: outer surface

Duration of the test [min]	45
Loadbearing capacity	45
Time until breakdown [min]:	-
Deflection criteria exceeded after [min]:	-
Vertical contraction – limit exceeded after [min]:	-
Integrity	45
Time until the cotton pad ignited [min]:	-
Time until sustained flaming arose [min]:	-
Time until cracking [min]:	-
Thermal insulation	45
Time until the mean temperature increase at the unexposed surface exceeds 140°C [min]:	-
Time until the maximum temperature increase at the unexposed surface exceeds 180°C [min]:	-


Table 4: Summarised results
(MA 39 – VFA 2019-0347.01)

Test procedure	Parameter	Test result
		(min)
EN 1365-1	R	46
	E	46
	I	46

(MA 39 – VFA 2019-0347.02)

Test procedure	Parameter	Test result
		(min)
EN 1365-1	R	45
	E	45
	I	45

4 Classification and direct field of application

4.1 Classification reference

This classification was carried out in accordance with EN 13501-2: 2016, section 7.3.2.

4.2 Classification

The element (described in the cited test report) is classified according to their fire resistance as follows:

**Load-bearing wooden stud wall insulated with Ekovilla mat 125 mm
with the designation "US 1 KIP":**

REI	15	20	30	45
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Classification fire resistance: REI 45

4.3 Direct applicability of test results

This classification is valid for the following practical application (end use).

Reference standard EN 1365-1:	Direct applicability of the test results
13	The results of the fire test are directly applicable to similar constructions where one or more of the changes listed below are made and the construction continues to comply with the appropriate design code for its stiffness and stability: • Decrease in height • Increase in the thickness of the wall • Increase in the thickness of component materials • Decrease in linear dimensions of board or dimensions of panels of but not thickness • Decrease in stud spacing • Decrease in distance of fixing centres • Increase in the number of horizontal joints when tested with one joint not more than 500 ± 150 mm from the top edge • Decrease in the applied load • Increase in the width provided that the specimen was tested at full width or 3 m wide, whichever is the larger

5 Limitations

This classification report is valid for a maximum of 5 years, which means that it ends on 10 January 2025 at the latest. Any provisions of European product standards that limit this validity must be observed.

This classification document does not represent type approval or certification of the product.


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