

CLASSIFICATION REPORT

<i>Contract No.</i>	1386/2011/1 – BB	12/1/2012 MAI/STS
<i>Customer</i>	KLH Massivholz GmbH AT-8842 Katsch/Mur 202	
<i>Subject</i>	Classification report about the fire resistance of a load-bearing cross-laminated timber element "KLH 95 / 5 s DL NSI"	
<i>Date of contract</i>	25/7/2011 (letter)	
<i>Date of sample delivery</i>	--	
<i>Date/Period of testing</i>	September 2011 to January 2012	
<i>Period of validity</i>	January 2012 to January 2017	
<i>Pages</i>	5	
<i>Enclosures</i>	--	

1. Contract

With the letter of 25/7/2011, the company KLH Massivholz GmbH, AT-8842 Katsch/Mur, Austria, assigned Holzforschung Austria with the classification of the fire resistance of a load-bearing cross-laminated timber wall according to ÖNORM EN 13501-2.

2. Details on the structural elements classified

2.1. General

The load-bearing cross-laminated timber wall is defined as a type-classified structural element. Its function consists in resisting fire in respect of load-bearing function, thermal insulation, separating function, and resistance against mechanical load. Fasteners and distances of fasteners according to approval or respective standard.

2.2. Wall structure

Fire compartment

Cross-laminated timber element KLH 95 / 5 s DL NSI 95 mm (19 19 19 19 19)

Unexposed side

On the exposed side, a wall socket with ducts was installed.

3. Test reports/reports on the extended scope of application and test result for verification of the classification

The following test and classification report is taken as the basis for the classification of the structures described in Section 2.2.:

ÖNORM EN 13501-2 Fire classification of construction products and building elements

3.1. Test report MA 39 – VFA 2011-1749.01

The test report this classification report is based on was generated by the Test Authority MA 39, Magistrate of the City of Vienna, Magistrate Division 39 - VFA Laboratories for Structural Engineering, Test, Monitoring and Certification Authority of the City of Vienna accredited for that, with report number MA 39 – VFA 2011-1749.01 "Test report about the fire resistance of a load-bearing multi-layer wall element made of cross-laminated timber with the designation "KLH 5s 95 DL" according to ÖNORM EN 1364-1 and ÖNORM EN 1363-1.

3.1.1. Structure:

Fire compartment

Cross-laminated timber element KLH 95 / 5 s DL NSI 95 mm (19 19 19 19 19)

Cross-laminated timber wall consisting of 2 elements

Overall dimensions: 3000 mm x 3000 mm x 95 mm (W x H x D)

Unexposed side

3.1.2. Test result

Table 1: Results

Test duration [min]	76
Separating function	76
Time until ignition of the cotton-wool pad [min]	--
Time until occurrence of permanent flames [min]	--
Time until failure of the gap criterion [min]	--
Thermal insulation	76
Time, mean temperature increase on the unexposed side exceeds 140 °C [min]	--
Time, maximum temperature increase on the unexposed side exceeds 180 °C [min]	--

Table 3: Total result

Test method	Parameter	Test result (min)
ÖNORM EN 1365 - 1	E	76
	I	76

The employees of Holzforschung Austria were present during the tests, and are thus authorised according to accreditation to use the test reports as the basis for the classification reports.

Due to the tests within the scope of the research project "Fundamental investigations on the fire resistance of timber frame elements", in coordination with the Austrian Fire Test Authorities MA 39 Test, Monitoring and Certification Authority of the City of Vienna VFA – Laboratories for Structural Engineering and the IBS Institute for Fire Protection Engineering and Safety Research, the following can be determined:

- at least equal fire resistance for additional facade structures on the unexposed side

4. Classification and scope of application

The classification was undertaken in accordance with Section 7.3.2. of ÖNORM EN 13501-2.

4.1. Classification

The structural element as described under Point 2.2. is classified as follows in respect of its fire resistance behaviour:

Table 4: Classification of the structural elements

Cladding	Construction [mm]	Load [kN/r.m.]	Report number	Classification
---	95 (19 19 19 19 19)	35	VFA 2011-1749.01	EI 60

4.2. Direct scope of application

This classification is valid for the structure described in Point 2.2.

5. Validity

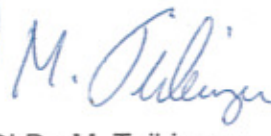
The validity of this classification report is determined to five years from January 2012 to January 2017.

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

HOLZFORSCHUNG AUSTRIA



Dipl.-HTL-Ing. I. Matzinger
Authorised signatory and technical consultant



DI Dr. M. Teibinger
Head of unit

In case of dispute the original German version prevails. This translation is for information purposes only.

Accredited as test and monitoring authority by BMWFJ (Federal Ministry of Economics, Family and Youth) and by OIB (Austrian Institute of Construction Engineering) with notification OIB-190-004/98-008.

The results and statements given in this document relate only to the tested materials, the present information and the state of the art at the time of investigation. Publication in excerpts is only permitted with the written approval of Holzforschung Austria.