

## SUMMARY REPORT

Contract no.: 1720/2011/02 – BB 04.10.2011  
MAI/STS

Customer: Stora Enso Wood Products GmbH  
Brand 44  
AT-3531 Brand

Subject: Summary report on the REI 90 fire resistance rating for  
load-bearing cross-laminated timber elements as "Stora Enso  
CLT 80 C3s" wall elements non-faced  $\geq 80$  mm and faced with  
gypsum boards

Date of contract: 24.10.2011 (letter)

Date of sample delivery: --

Date/Period of testing: October 2011

Period of validity: October 2011 to October 2016

Pages: 3

Enclosures: --

## 1. Task

In its letter dated 24.10.2011 Stora Enso Wood Products GmbH, 3531 Brand, Austria commissioned Holzforschung Austria to draft summary reports with a classification rating for load-bearing cross-laminated timber elements. The summary report is based on classification report 1720/2011/02 of Holzforschung Austria. In the event of any discrepancies, the original report has sole validity.

## 2. Field of application

Classification was carried out in compliance with para. 7.3.2. of Austrian standard ÖNORM EN 13501-2.

### 2.1. Classification mark for the components

**Table 1: Classification mark for the components**

Cladding	Service cavity	Cross-laminated timber element	Load [kN/m]	Test report	Classification
12,5 mm	---	CLT 100 C3s 100 mm (3s – 30 40 30)	35	VFA – MA 39 2010-1377-02 VFA – MA 39 2010-1377-03	REI 90
12,5 mm	---	CLT 100 C5s 95 mm (5s 20 20 20 20 20)	35	VFA – MA 39 2010-1858-01 VFA – MA 39 2010-1377-03	REI 90
12.5 mm fire- protection plasterboard	---	CLT 100 C3s 100 mm (3s – 30 40 30)	35	VFA – MA 39 2010-1377-04	REI 90
12.5 mm fire- protection plasterboard	Mineral wool (40 mm)	CLT 100 C3s 100 mm (3s – 30 40 30)	35	VFA – MA 39 2010-1377-04	REI 90
2 x 15 mm	---	CLT 80 C3s 80 mm (3s – 30 20 30)	---	VFA – MA 39 2010-1377-02 VFA – MA 39 2009-0495.08	EI 90

### 2.2. Evaluation

The following may be stated on the basis of the tests carried out as part of the research project "Fundamental research into the fire resistance of timber frame components" in conjunction with the Austrian fire-testing centres MA 39 Test, Monitoring and Certification Centre of the City of Vienna VFA – Laboratories for Building Research and the Institute for Technical Fire Protection and Safety Research (IBS):

- At least equivalent fire resistance when using gypsum fibreboard to Austrian standard ÖNORM EN 15283-2 and ETA based on CUAP 05.04/04 or gypsum board (fire-protection plasterboard) to Austrian standard ÖNORM B 3410
- At least equivalent fire resistance when using an additional wood wool panel  $\geq 50$  mm to Austrian standard ÖNORM EN 13168 with a 15 mm plaster coat on the side facing away from the fire
- At least equivalent fire resistance with two plies of fire-protection plasterboard/gypsum fibreboard
- At least equivalent fire resistance with an additional service cavity with battens or spring clip
- At least equivalent fire resistance when using:
  - rock wool (to Austrian standard ÖNORM EN 13162) of density  $\geq 30$  kg/m<sup>3</sup>
  - cellulose (to CUAP 12.01/02) of density  $\geq 50$  kg/m<sup>3</sup>, fire rating B
  - hemp (to ETA 98/0009) of density  $\geq 30$  kg/m<sup>3</sup> or
  - sheep's wool (to ETA 05/0021)
  - softboard (to Austrian standard ÖNORM EN 13165) of density  $\geq 45$  kg/m<sup>3</sup> instead of glass wool (to Austrian standard ÖNORM EN 13162) of density  $\geq 11$  kg/m<sup>3</sup>
- At least equivalent fire resistance with additional façade structures or claddings on the side facing away from the fire

The small differences in the thickness of the individual layers of the structures to be classified when compared to the structures tested have no detrimental effect on the existing classifications, when the rates of combustion and the verified testing times are considered.

### 3. Validity

The validity is specified as five years, from October 2011 to October 2016, based on the validity of the classification report.

**This document does not constitute a type approval or product certification.**

HOLZFORSCHUNG AUSTRIA



Dipl.-HTL-Ing. I. Matzinger  
Technical consultant




DI Dr. M. Teibinger  
Head of Unit

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