

CLASSIFICATION OF FIRE RESISTANCE FIRES-CR-125-18-AUPE

Wooden ceiling made of panels “NOVATOP element”

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**CLASSIFICATION OF FIRE RESISTANCE
IN ACCORDANCE WITH
EN 13501-2: 2016
with direct field of application
FIRES-CR-125-18-AUPE**

Name of the product: Wooden ceiling made of panels "NOVATOP element"

Sponsor: AGROP NOVA a.s.
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Czech Republic

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1. INTRODUCTION

This classification report defines the resistance to fire classification assigned to element Wooden ceiling made of panels “NOVATOP element” in accordance with the procedures given in EN 13501-2: 2016.

2. DETAILS OF CLASSIFIED PRODUCT

2.1 GENERAL

The element, Wooden ceiling made of panels “NOVATOP element”, is defined as a horizontal loadbearing construction - ceiling with declared fire resistance from below.

2.2 PRODUCT DESCRIPTION

Dimensions of panels „NOVATOP element”

Variant 1: (4300 x 1520 x 273) mm (length x width x thickness)

Variant 2: (4300 x 1520 x 240) mm (length x width x thickness)

Dimensions of panels „NOVATOP element”

Variant 1

- three-layer board with thickness 33 mm (9 + 15 + 9) mm,
- three-layer board with thickness 27 mm (9 + 9 + 9) mm,
- loadbearing wooden frame raster type, made of boards 27 mm and 60 mm thick,
- three-layer board with thickness 27 mm (9 + 9 + 9) mm.

Variant 2

- three-layer board with thickness 27 mm (9 + 9 + 9) mm,
- loadbearing wooden frame raster type, made of boards 27 mm and 60 mm thick,
- three-layer board with thickness 27 mm (9 + 9 + 9) mm,

Three-layer boards are made of spruce (manufacturer: AGROP NOVA a.s., Czech Republic). Bulk density of boards is 475 kg.m⁻³. Boards are glued together and to wooden frame by polyurethane glue. Ceiling cavity is not filled by insulating material.

Intumescent tape GYSO-Roku-Strip L with dimensions (15 x 1,5) mm (width x thickness) mm (manufacturer: Gyso, Klotten, Switzerland) is placed along the panels joint inside the milled groove.

More detailed information about product construction is shown in the test report [1] and [2].

3. TEST REPORTS IN SUPPORT OF CLASSIFICATION

3.1 TEST REPORTS

No.	Name of laboratory	Name of sponsor	Test report No.	Date of the test	Test method
[1]	FIRES, s.r.o., Batizovce, SK	AGROP NOVA a.s., CZ	FIRES-FR- 173-07-AUNS	13. 09. 2007	STN EN 1365 -2:2001
[2]	FIRES, s.r.o., Batizovce, SK	AGROP NOVA a.s., CZ	FIRES-FR- 175-07-AUNS	14. 09. 2007	STN EN 1365 -2:2001

[1] - [2] Test specimens were conditioned according to EN 1363-1 before the fire resistance test.



3.2 TEST RESULTS

No./ Test method	Parameter	Results	
[1] STN EN 1365-2 Ceiling, Variant 1	applied load	continuous load 3,0 kN.m ⁻²	
	supporting construction	Specimen laid on supports. Span between supports was 4 000 mm.	
	temperature curve	standard temperature time curve	
	loadbearing capacity	84 minutes no failure	
	integrity	cotton pad	84 minutes no failure
		gap gauges	84 minutes no failure
		sustained flaming	84 minutes no failure
	thermal insulation	Average temperature	84 minutes no failure
		Maximum temperature	84 minutes no failure
	radiation	-	
other parameters	specimen orientation: specimen exposed from bellow		
[2] STN EN 1365-2 Ceiling, Variant 2	applied load	3,0 kN.m ⁻²	
	supporting construction	Specimen laid on supports. Span between supports was 4 000 mm.	
	temperature curve	standard temperature time curve	
	loadbearing capacity	47 minutes no failure	
	integrity	cotton pad	47 minutes no failure
		gap gauges	47 minutes no failure
		sustained flaming	47 minutes no failure
	thermal insulation	Average temperature	47 minutes no failure
		Maximum temperature	47 minutes no failure
	radiation	-	
other parameters	specimen orientation: specimen exposed from bellow		

[1] The test was discontinued in 85th minute because of the danger of specimen collapse.

[2] The test was discontinued in 48th minute because of the danger of specimen collapse.

4. CLASSIFICATION AND FIELD OF APPLICATION

4.1 REFERENCE OF CLASSIFICATION

This classification has been carried out in accordance with clause 7.3.3 of EN 13501-2: 2016.

4.2 CLASSIFICATION

The element, **Wooden ceiling made of panels “NOVATOP element”, variant 1 (according to clause 2.2 of this document)** is classified according to the following combinations of performance parameters and classes as appropriate.

**Fire resistance classification:
RE 60 / REI 60**



The element, **Wooden ceiling made of panels “NOVATOP element”, variant 2 (according to clause 2.2 of this document)** is classified according to the following combinations of performance parameters and classes as appropriate.

**Fire resistance classification:
RE 30 / REI 45**

4.3 FIELD OF APPLICATION

Classification stated in clause 4.2 of this document is directly applicable according to EN 1365-2 to similar ceiling constructions, e.g.:

- ceiling, stressed with higher/lower loading than $3,0 \text{ kN.m}^{-2}$,
- ceiling with span length between supports smaller than 4 000 mm,
- ceiling from panels “NOVATOP element”, of which length and width are smaller as stated in clause 2.2 of this document,
- ceiling from panels “NOVATOP element”, of which thickness is higher as stated in clause 2.2 of this document,

provided that:

- maximum bending moments and maximum normal force calculated on the same base as during the fire test [1], [2] may not be higher than bending moments and normal force arisen at fire test [1] and [2] acc. to paragraph 3.2 of the document,
- slope of the roof is within a range of $0^\circ \div 15^\circ$.

5. LIMITATIONS

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

The classification is valid provided that the product, field of application and standards and regulations are not changed.

Approved:

Signed:

Ing. Štefan Rástocký
leader of the testing laboratory



Ing. Henrieta Lapková
technician of the testing laboratory