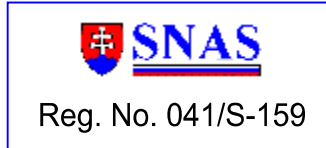


CLASSIFICATION OF FIRE RESISTANCE FIRES-CR-133-14-AUPE

Floor JOISTS, system Frame Factory

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CLASSIFICATION OF FIRE RESISTANCE IN ACCORDANCE WITH EN 13501-2: 2007 + A1: 2009 with direct field of application

FIRES-CR-133-14-AUPE

Name of the product: Floor JOISTS, system Frame Factory

Sponsor: FRAME FACTORY Sp. z.o.o.,
ul.Brzozowa 8A,
97-400 Bełchatów,
Poland

Prepared by: FIRES, s.r.o.
Osloboditeľov 282
059 35 Batizovce
Slovak Republic

Tested property: Fire resistance
Test method: EN 1365-2:1999
Type of test: Accredited / Notified (NB 1396)

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1. INTRODUCTION

This classification report defines the resistance to fire classification assigned to element Floor JOISTS, system Frame Factory in accordance with the procedures given in EN 13501-2: 2007 + A1: 2009.

2. DETAILS OF CLASSIFIED PRODUCT

2.1 GENERAL

The element, Floor JOISTS, system Frame Factory, is defined as a loadbearing floor.

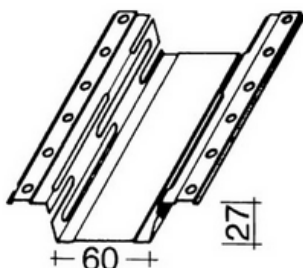
2.2 PRODUCT DESCRIPTION

Overall thickness of the floor: 332 mm

Construction of product from the bottom face:

: one layer of the fire resistance plaster board RigiStabil (DFRIEH2) (manufacturer: Rigips), 15 mm thick, with bulk density 840 kg/m^3 , fixed to the flexible steel profiles W622 by means of steel screws SC2/21-PH2-4,2x30 (manufacturer: SFS intec) placed in spacing 200 mm – 250 mm. The joints of plaster boards are covered by glass tape and standard gypsum mastic Rigips Vario (manufacturer: Rigips).

: flexible steel profile W 622 (60 x 27) mm (width x total thickness), placed across to loadbearing C profiles at the edges of C profiles and next in spacing 400 mm. W 622 profiles are fixed to the steel C profiles by means of steel screws SD5-H-15-4,75x15 (manufacturer: SFS intec), placed at the edges of profiles and next in spacing 200 mm – 250 mm.



: loadbearing steel construction made of 6 longitudinal perforated steel C profiles (254 x 50 x 15) mm, made of steel zinc coated sheet, 1,96 mm thick (grade of steel S 350 GD Zn 275_EN 10-346) (manufacturer: Framefactory Sp. Z o.o.-Poland). Perforation of profiles (holes for service installation): $\varnothing 195 \text{ mm}$ in spacing 2000 mm.

Shorter edges of specimen are closed by steel profiles U (254 x 70) made of steel zinc coated sheet, 1,96 mm thick (grade of steel S 350 GD Zn 275_EN 10-346) (manufacturer: Framefactory Sp. Z o.o. – Poland). Longitudinal C profiles 254 are fixed to U 254 profiles by screws SD6 –H15-5,5x25 (manufacturer: SFS intec.)

Cavity between C profiles is filled by blown mineral wool CLIMASTONE, 125 mm thick with bulk density $70 - 100 \text{ kg/m}^3$ (manufacturer: CIUR a.s.).

: two layers of chipboard OSB/EG OSB-3 4 PD, 18 mm thick, jointed together by groove-tongue joint. The maximal dimension of boards is (675 x 2000) mm. The second layer of chipboards is fixed to the specimen in the way, that they cover the joints of first layer of chipboards. The chipboards are fixed to the C profiles by means of steel screws SC3/35-PH2-4,8x45 (manufacturer: SFS intec).



Installation of product:

The floor is fixed to the constructions simulated loadbearing wall, made of steel C profiles (150 x 45 x 10) mm) placed at the shorter edges of floor by the means of screws SD6 –H15-5,5x25, (manufacturer: SFS intec.).

The parts of wall were laid on steel beams with cross section (200x250) mm, placed in spacing 4000 mm.

More detailed information about product construction is shown in drawings [1].

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, SR	BORABELA s.r.o., Czech Republic	FIRES-FR- 099-14-AUNE	29. 05. 2014	EN 1365-2: 1999

[1] Test specimen was conditioned according to EN 1363-1 before the fire resistance test

3.2 TEST RESULTS

No./ Test method	Parameter	Results	
[1] EN 1365-2	applied load	4,5 kN/m ² M _{omax} = 20,25 kNm	
	supporting construction	two support in spacing 4000 mm (single spam beam)	
	temperature curve	standard temperature time curve	
	loadbearing capacity	38 minutes	
	integrity	cotton pad	39 minutes
		gap gauges	39 minutes
		sustained flaming	39 minutes
	thermal insulation	I	39 minutes no failure
	radiation		39 minutes no failure
other parameters		test from the bottom of specimen	

[1] The fire test was terminated after period of 39 minutes because specimen integrity and loading capacity is failed.



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: 2007 + A1: 2009.

4.2 CLASSIFICATION

The element, **Floor JOISTS, system Frame Factory**, is classified according to the following combinations of performance parameters and classes as appropriate.

<p>Fire resistance classification: REI 30</p>

4.3 FIELD OF APPLICATION

This classification is valid according to EN 1365-2 for the following end use applications:

Thickness of materials	Increase in thickness of used insulation materials and steel loadbearing construction is allowed under condition that the increased thickness is considered by static analysis because of increased dead-weight of the product and the maximal loading and bending moments are not changed as tested;
Construction element (loading)	The maximal bending moments and normal force, calculated on the same basis as testing load may be not greater than those during the test;
Pitch angle of the roof construction	Results are valid for installation in practice 0°÷25° relative to plane;
Distance between supports	It is possible to increase or decrease of distance between supports, under condition, that the maximum moments and shear forces, with when calculated on the same basis as the test load, shall not be greater than those tested;
Ceiling	The total area occupied by fixtures and fittings relative to the area of the ceiling lining is not increased;
Cavity	The height of cavity (height of the beam) is the same or larger than those during the test; No combustible or insulating material is added to the cavity;

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:

Ing. Štefan Rástocký
leader of the testing laboratory



Signed:

Michaela Gorlická
technician of the testing laboratory