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CLASSIFICATION REPORT
No. CR-246-01/20.05.2020

In accordance with БДС EN 13501-2:2016

Sponsor:	**CONF BINALE IMPEX SRL,** Calea Moldovei nr.3, Focsani, Румъния
Prepared by:	F plus Ltd., 16 Konstantin Kostenechki str., 2042 Kostenets, Bulgaria
Notified body .	NB 2548
Product name:	A **single-leaf** wooden **door** named **„M BINALE“**
Contents of the test report:	7 pages

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1-st Edition

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Publication of excerpts only with written consent by "F PLUS".

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1. Introduction

This classification report defines classification for a single-leaf wooden door the named M BINALE, in accordance with the procedures described in БДС EN 13501-2: 2016.

2. Details of the classified product

2.1. General

A single-leaf door is defined/ classified as fire resistant.

2.2. Description

The single-leaf wooden door named 'M BINALE' is fully described below in support of the classification in item 4.2.

The tested door has overall dimensions overall dimensions (WxHxD) 960 mm 2090 mm x 62 mm and a leaf thickness 55 mm. The door consists of a wooden frame and a wooden leaf.

The door leaf has overall dimensions (HxW) 900 mm x 2070 mm and a thickness 55 mm. It is made of frame of solid wood with cross section 45/50 mm and bulk density 750 kg/m^3. The filling of the leaf has a total thickness of 45 mm. It consists of two layers of solid wood boards with thickness 45 mm and bulk density 350 kg/m^3. On both sides of thus formed structure are located two MDF boards with a thickness of 5 mm and a bulk density of 800 kg/m^3, manufactured by KASTMONU MDF. The boards are mounted on the frame with an adhesive named JOWACOLL 102.20, manufactured by JOWAT SE. The test applicant declares that the MDF boards are not veneered.

The door frame is without a threshold with dimensions of the light opening (WxH) 836 mm x 2028 mm. The dimensions of the frame are 62 mm x 100 mm. It consists of two vertical and one horizontal upper element. They are made of solid wood with dimensions 50 mm x 88 mm and a bulk density of 750 kg/m^3. The frame is covered on 4 sides with MDF with a thickness 6 mm and a bulk density of 800 kg/m^3, manufactured by KASTMONU MDF. The individual vertical and horizontal elements are connected with fixing screws for wood with dimensions Ø4.5x60 mm in the corners of the individual parts- 4 pcs. for each side.

Along the perimeter of the frame, in the place of contact with the leaf is placed a rubber seal type QL 3110 with dimensions 5.9 mm x 12.0 mm manufactured by Schlegl-Germany. An intumescent seal is additionally mounted along the perimeter of the frame. It is type RK20x2CDIS with a width 20 mm and a thickness 2.0 mm, production of Rover Plastic- Italy. The seals are mounted in specially prepared grooves.

The whole door, consisting of frame, leaf and decorative MDF boards are primed in two layers with fireproof primer type FP 460 FR, in amount of 150g/m^2 and lacquered with fireproof varnish named OP 461 FR in amount of 120 g/m^2, produced by ICA SpA, Italy.

The total weight of the door / leaf+frame/ is 75 kg.

The door is installed in a low density solid construction, made of aerated concrete blocks with a thickness 200 mm and a density 440 kg/m^3. The installation is carried out by means of 9 pcs. anchor screws for direct mounting Ø7.5x120 mm, manufactured by Würt-Austria. They are located at a distance 557 mm from each other and at 200 mm from the edges on the two vertical sides of the frame and one in the middle of the upper beam. The space between the frame and the wall is filled with cement-based adhesive Weber 100G, manufactured by Weber.

The doors are additionally equipped with:

Lock

The lock is metal model OPERA HOTEL SL, produced by AGB- Italy. It is mounted by milling the leaf and is fixing with steel screws ⍉3.9x16 mm. A steel adversary, manufactured by AGB- Italy, was used. It is mounted on the frame with screws ⍉3.9x16 mm.

The lock is equipped with a handle with metal core and PVC coating brand D100, produced by Ghidini- Italy. It is located at a height of 1050 mm from the lower edge of the door leaf. A secret cartridge brand OPERA, manufactured by AGB- Italy, was used.

Hinges

The door leaf is mounted to the frame by means of 3 pcs. hinges named Otlov with dimensions ø14x80 mm, manufactured by Otlov-Italy. The end hinges are mounted at a distance 200 mm from the lower end and 200 mm from the upper end of the leaf. The third hinge is mounted at a distance 400 mm from the upper end of the leaf. The hinges are installed by drilling the frame and the door leaf, and using self-tapping screws, according to the manufacturer's requirements.

A self-closing device

An upper self-closing device type TS 100 C, brand GEZE, manufactured by GEZE-Germany, is installed. The installation is carried out by means of a mounting plate and steel screws ø4 mm with a length of 40 mm. The manufacturer's instructions have been followed during installation.

Falling threshold

A falling threshold with a rubber seal brand WOLF-101SF, manufactured by SIPAM– Italy, is mounted In the lower horizontal part of the door leaf. The installation is carried out according to the manufacturer's instructions.

3. Test reports and test results in support of classification

3.1. Test reports

Includes test details for determining smoke leakage.

Name of the laboratory	Name of sponsor	Report ref. no.	Test method and date
Laboratory for testing and research "F plus", Bulgaria	**CONF BINALE IMPEX SRL,** Romania	Test report №TR-246-01/ 15.05.2020	БДС EN 1634-1: 2014+A1:2018

3.2. Results

Test method	Parameter	Results
Test method according to the requirements of БДС EN 1634-1: 2014+A1:2018 **Test report № TR-246-01/ 15.05.2020**	**Supporting construction**	According to the description in p 2.2.
	Integrity E	
	Cotton pad	34 min
	Gap gauge	34 min
	Sustained flaming	34 min
	Thermal Insulation I	-
	I_1	-
	I_2	33 min

4. Classification and field of application

4.1. Reference of classification

This classification has been carried out in accordance with p. 7 of БДС EN 13501-2: 2016.

4.2. Classification

The single-leaf door named M BINALE, is classified in accordance with the following combination of performance parameters and classes by fire impact applied on both sided:

R	E	I_1	I_2	W		t	t	M	S	C	IncSlow	sn	ef	r
-	X	-	-	-		3	4	-	-	-	-	-	-	-
-	X	-	X	`-		3	3	-	-	-	-	-	-	-
-	X	-	-	X		3	3	-	-	-	-	-	-	-

Fire resistance classification
E 30, EI_2 30, EW 30

The classification for this type of products also meets the requirements of БДС EN 1634: 2014.

4.3. Field of direct application

The field of direct application defines the allowable changes to the test specimen following a successful fire resistance test. These variations can be applied automatically without the need for the sponsor to seek additional evaluation, calculation or approval.

NOTE: When extended product size requirements are envisaged, the dimensions of certain components within the test specimen can be less than those intended to be used at full size in order to maximize the extrapolation of the test results by modelling the interaction between components at the same scale.

Unless otherwise stated in the following text, the materials and construction of the door set shall be the same as those tested. The number of leaves and the mode of operation (one leaf rotating on hinges) shall not be changed.

- **Wooden construction:**

The thickness of the door leaf should not be reduced, but may be increased.

The thickness of the door leaf and/or the density may be increased, provided that the total weight gain does not exceed 25%.

For flat products of the wood-based (for example, particle board, board of wood blocks, etc.) the composition (e.g. type of resin) must not be different from tested.

The dimensions of the cross-section and/or the density of the wooden frames (including the rebates) must not be smaller, but may be larger.

- **Decorative finishes**

= Where the paint finish is not expected to contribute to the fire resistance of the door, alternative paints are acceptable and may be added to door leaves or frames for which unfinished test specimens were tested.

= Decorative laminates and wood veneers applied to door leaves which do not satisfy the insulation criteria (normal or additional procedure) and/or those in excess of

1.5 mm thickness shall be tested as part of the test specimen. For all door sets tested with decorative laminated faces, the only variations possible shall be within similar types and thicknesses of material (for example for color, pattern, supplier).

- **Fasteners**

The number of fasteners per unit length used to attach door sets to supporting constructions may be increased, but shall not be reduced and the distance between the fasteners may be less, but should not be greater.

- **Building hardware**

The number of hinges and hinge bolts can be increased, but should not be reduced.

NOTE: The number of movement restrictors, such as locks and latches, is not covered by direct application.

- **Permissible size variations**

Based on the duration of the test, the door is classified in category "A" in the case of two-sided standard fire impact. In this connection, an unlimited reduction in size is permissible except insulated metal doors where a reduction to 50% width and 75% height of the tested specimen is the limit of variation.

- **For doors sets with smaller dimensions** the relative position of the movement restraints (e.g. hinges) shall remain the same as tested or any change to the distances between them will be limited to the same percentage reduction as the decrease of test specimen size.

- The following rules also apply:

(a) the height of the lock above floor level must be equal to the height tested;

(b)) the distance of the top hinge from the upper end of the door leaf must be equal to or less than the tested;

(c) the distance of the lowest hinge from the lower end of the door leaf must be equal to or less than the tested.

- **Wooden constructions**

The number, dimensions, location and orientation of any joints in the wooden frame must not be changed.

Where decorative veneers with a thickness of 1.5 mm or more or other linings which in themselves provide structural improvements are part of the test specimen, they shall not be replaced by alternatives of lesser thickness or strength.

- The maximum size of ***the main clearances (p)*** without mounted seal is as follows: threshold- 5.5 mm; upper side- 5.5 mm; on the hinge side- 4.5 mm and on the lock side- 4.0 mm.

- **Rigid standard supporting constructions (high or low density)**

The fire resistance of a door set tested in a high or low density rigid standard supporting construction as specified in EN 1363-1 can be applied to a door set mounted in the same manner in a wall provided that the density and the thickness of the wall are equal to or greater than that in which the door set was tested.

The fire resistance of the partition shall have been established separately in a previous test.

- **Specific rules for hinged or pivoted door sets**

For timber door leaves hung in timber frames, the result of a test in a rigid standard supporting construction is applicable to the same door set mounted in a flexible construction.

The rules above assume that the fixing methods used in each type of supporting construction are appropriate to that construction. Thus for example in a), the test on the timber door leaf in a timber frame will have been carried out with appropriate fixings for timber frames in rigid constructions. The result is applicable to a timber door leaf in a timber frame mounted into a flexible construction with appropriate fixings for timber frames in flexible constructions.

5. Limitations

This classification document does not substitute either type approval or the product certificate.

Classification undertaken by:

.....
/ Eng. Plamen Uzunov /

Director of BTR:

.....
/ Dr. Eng. Detelin Spassov /

This classification report was issued in Bulgarian and English languages. By established distinction between both reports the Bulgarian one is valid.