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## European Technical Assessment

**ETA 15/0430**  
of 01/03/2016

### I General Part

**Technical Assessment Body issuing the  
ETA and designated according to Article  
29 of the Regulation (EU) No 305/2011:**

Technical and Test Institute for Construction  
Prague

**Trade name of the construction product**

**NevPanel; DragonBoardTürkiye;  
MagnumBoard**

**Product family to which the construction  
product belongs**

**Fire protective boards**

**Holder of the assessment**

**NEVPANEL YAPI MADEN ÜRETİM  
İTHALAT İHRACAT SANAYİ VE TİCARET  
LİMİTED ŞİRKETİ  
BAĞDAT CADDESİ ÇOLAKOĞLU İŞ  
MERKEZİ NO:458/30 MALTEPE  
İSTANBUL**

**Manufacturing plant**

**NEVPANEL YAPI MADEN ÜRETİM  
İTHALAT İHRACAT SANAYİ VE TİCARET  
LİMİTED ŞİRKETİ  
ESKİŞEHİR ORGANİZE SANAYİ  
BÖLGESİ 28. CADDE NO:8 ESKİŞEHİR  
10 pages**

**This European Technical Assessment  
including 0 annexes contains**

Guideline for European Technical Approval  
used as European Assessment Document  
(EAD) No.: 018-1 and 018-4

**This European Technical Assessment is  
issued in accordance with regulation  
(EU) No 305/2011, on the basis of**



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## II Specific part

### 1 Technical description of the product (definition of the product)

This European technical assessment applies to the fire protective boards with designations **NevPanel; DragonBoardTürkiye; MagnumBoard**.

The fire protective boards are made of magnesium oxide and magnesium chloride and are reinforced by fiberglass fabric.

Colour: off-white

The top surface of the boards is smooth and the reverse side is sanded.

**Dimensions:** 1220 x 2440 mm

**Thickness:** 4 mm; 6 mm; 9 mm; 12 mm; 15 mm; 18 mm and up mms

Other dimensions and/or thicknesses may be produced on demand respecting the tolerances below.

**Tolerances on length:** declared length  $\pm 5$  mm

**Tolerances on width:** declared length  $\pm 0.3$  %

**Tolerances on thickness:** see Table No. 2 of the ETA

**Density:** 0.7-1.2 g/cm<sup>3</sup>

#### **Ancillary products**

##### **a)Mechanical fasteners:**

- NevPanel® Point Head Screw 39 x 25 mm
- NevPanel® Point Head Screw 39 x 32 mm
- NevPanel® Smart Screw 39 x 25 mm
- NevPanel® Smart Screw 39 x 32 mm

##### **b)Tapes:**

- NevPanel® Joint Tape (42 g/m<sup>2</sup>)

##### **c)Sealents:**

- NevPanel® N01 Joint Paste (water based)
- NevPanel® N01 Finishing Paste (water based)

##### **d)Insulation:**

- Wooler Rock wool (density 50 kg/m<sup>3</sup>)

##### **e)Profiles:**

- Profile anticorrosion box (1 mm)
- Profile anticorrosion C and U

***The above mentioned ancillary products referred to in this ETA as a part of installation provisions or in the framework of determining performances (e.g. fire resistance) are not covered by this ETA and may not be CE-marked separately on the basis of this ETA.***

All mounting and fixing details shall be executed according to the manufacturer's installation manual.

## 2 Specification of the intended use in accordance with the applicable European Assessment Document (hereinafter EAD)

### 2.1 Intended use

This ETA covers fire protective boards intended for the below mentioned use categories according to according to ETAG 018(used as EAD).

**Use category related to weather exposure according to ETAG 018-4::**

-Z<sub>2</sub> (intended for internal use only)

-Y (intended for internal and semi - exposed use)

**Use categories according to ETAG 018-1:**

Type 1 Fire protective products as a horizontal membrane protection

Type 2 Fire protective products as a vertical membrane protection

Type 7 Fire protective products to protect load-bearing timber elements,

Type 8 Fire protective products that contribute to the fire resistance of fire separating assemblies with no load bearing requirements

*Note: In the framework of this ETA there were carried out fire resistance assessments for use category Type 8. Details of the testing and assessments are deposited with the Technical Assessment Body - Technical and Test Institute for Construction Prague*

The ETA is issued for the above mentioned products on the basis of agreed data/information, deposited with the Technical Assessment Body - Technical and Test Institute for Construction Prague, which identifies the products that have been assessed.

### 2.2 Assumed working life

Provisions made in this European Technical Assessment are based on an assumed intended working life of 10 years, provided that the assembled product is subject to appropriate use and maintenance in accordance with this ETA.

Indications given regarding the working life cannot be interpreted as a guarantee given by the producer or the Technical and Test Institute for Construction Prague, but are to be regarded only as a mean for choosing the appropriate product(s) in relation to the expected economically reasonable working life of the construction works.

### 3 Performance of the products and references to the methods used for their assessment

The characteristics of product and methods of verification of the fire protective boards were carried out in compliance with the ETAG 018-1 and ETAG 018-4.

Table No. 1: Essential characteristics and identification tests

No	Essential characteristic and method of verification and assessment	Expression of product performance
<b>Essential Requirement 1: Mechanical resistance and stability*</b>		
Not relevant		
<b>Essential Requirement 2: Safety in case of fire</b>		
1	Reaction to fire (EN 13501-1)	Class A1
2	Resistance to fire (EN 13501-2)	<b>Thickness of the board</b>
		9 mm      12 mm      15 mm EI 45      EI 60, E120      EI 90, E 120
<b>Essential Requirement 3: Hygiene, health and environment</b>		
1	Air and/or water permeability (EN 12467)	No performance assessed
2	Content, emission and/or release of dangerous substances	Indication of no dangerous substances <sup>o)</sup>
<b>Essential Requirement 4: Safety in use</b>		
1	<b>Mechanical resistance and stability</b>	
1a	Flexural strength (EN 12467) Mean modulus of rupture(MOR)	Thickness 12 mm ≥ 9 MPa
		Thickness 18 mm
1b	Dimensional stability (EN 318) -relative change in length $\delta_{l, 65;85}$ -relative change in length $\delta_{l, 65;30}$ -relative change in thickness $\delta_{t, 65;85}$ -relative change in thickness $\delta_{t, 65;30}$	Thickness 12 mm      Thickness 18 mm ≤ 0.5 mm/m      ≤ 0.5 mm/m ≥ -1.0 mm/m      ≥ -1.0 mm/m ≤ 0.5 %      ≤ 0.5 % ≥ -1.2 %      ≥ -1.2 %
		Thickness 12 mm
		≥ 950 N
		≥ 650 N
1c	Pull-through resistance of mechanical fasteners (5.1.4.1.1. of ETAG 018-4) Maximum pull-through resistance - dry board - after immersion in water	Thickness 12 mm ≥ 950 N ≥ 650 N
1d	Shear load resistance of mechanical fastening systems (5.1.4.1.2. of ETAG 018-4)	Thickness 12 mm ≥ 1000 N
2	<b>Resistance to impact/movement</b>	
2a	Resistance to functional failure from soft body impact load – 50 kg bag (EOTA TR 001)	Thickness 15 mm 200 Nm
		Thickness 15 mm 6 Nm
2b	Resistance to functional failure from hard body impact load – 0.5 kg steel ball (EOTA TR 001)	Thickness 15 mm 6 Nm
2c	Resistance to functional failure from eccentric vertical load (ISO/DIS 8413)	Thickness 15 mm
		35 kg

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No	Essential characteristic and method of verification and assessment	Expression of product performance	
<b>Essential Requirement 5: Protection against noise</b>			
1	<b>Sound absorption</b> (EN ISO 354, EN ISO 11654) -acoustic absorption index $\alpha_w$	Thickness 12 mm	Thickness 18 mm
		0.10 (reflective)	0.10 (reflective)
2	<b>Airborne sound insulation</b> (EN ISO 10140-1,2,4; EN ISO 717-1) <b>Single number rating <math>R_w(C,C_{tr})</math></b>	38(-1; -4)dB	43(-1; -3)dB
3	<b>Impact sound insulation</b> (EN ISO 10140-1,3)  <b>Single number rating <math>\Delta L_w</math></b>	Thickness 12 mm	Thickness 18 mm
		18 dB	15 dB
<b>Essential Requirement 6: Energy economy and heat retention</b>			
1	<b>Thermal resistance:</b> (EN 12667, EN ISO 8990) $\lambda_{10(23,50)}$ a) without thermal insulation b) with ceramic wool c) with stone wool	Thickness 20 mm	
		0.163 W/m.K	
		0,060 W/m.K	
		0.052 W/m.K	
2	<b>Water vapour transmission coefficient <math>\mu</math></b> (EN ISO 12572)	40.8	
<b>Durability and serviceability</b>			
1	<b>Resistance to water deterioration</b> (EN 12467)	No performance assessed <i>Not relevant for intended uses Y and Z<sub>2</sub>.</i>	
2	<b>Resistance to soak/dry</b> (EN 12467)	No performance assessed <i>Not relevant for intended uses Y and Z<sub>2</sub>.</i>	
3	<b>Resistance to freeze/thaw</b> (art. 5.2.7.1.2.3 of ETAG 018-4; Annex D of ETAG 018-4; art. 7.3.2 of EN 12467) <b>Mean modulus of rupture(MOR)</b>	Thickness 12 mm	
		Resistant to freeze/thaw cycles  ≥ 9 MPa	
4	<b>Resistance to heat/rain</b> (EN 12467)	No performance assessed <i>Not relevant for intended uses Y and Z<sub>2</sub>.</i>	
5	<b>Biological attack</b> (art. 5.7.1 of ETAG 018-1) action of microorganism (EN ISO 846, method A)	Intensity of growth: 0 No growth apparent under the microscope	
<b>Identification tests of the boards</b>			
1	<b>Length</b> (EN 12467)	declared length ±5 mm	
2	<b>Width</b> (EN 12467)	declared width ± 0.3 %	
3	<b>Thickness – e</b> (EN 12467)	e ≤ 6mm → ±0.6 mm 6 mm ≤ e ≤ 20 mm → ±10%e e ≥ 20 mm → ±2 mm	
4	<b>Dimensional tolerances</b> (EN 12467)	See No. 1-3	
5	<b>Shape</b> (EN 12467) -straightness of the edges -squareness	Level I according to art. 5.3.5 of EN 12467	
6	<b>Apparent density</b> (EN 12467)	0.7-1.2 g/cm <sup>3</sup>	

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No	Essential characteristic and method of verification and assessment	Expression of product performance
7	Tensile strength perpendicular to the plane of the board (EN 319)	Thickness 15 mm ≥ 1,6 N/mm <sup>2</sup> (MPa)
8	Tensile strength parallel with the plane of the boards (EN 789)	Thickness 15 mm ≥ 3200 kPa
		Thickness 18 mm ≥ 3500 kPa
9	Compressive strength of the board (EN 789)	Thickness 15 mm ≥ 13,5 kPa
	-perpendicular to board	≥ 11,0 kPa
	-parallel to board	

\*) In addition to the specific clauses relating to dangerous substances contained in this European Technical Assessment, there may be other requirements applicable to the products falling within its scope (e.g. transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the Construction Products directive, these requirements need also to be complied with, when and where they apply.

Table No. 2: Essential characteristics of the mechanical fasteners

No	Essential characteristic and method of verification and assessment	Expression of product performance
<b>Basic Works Requirement 2: Safety in case of fire</b>		
1	Reaction to fire (EN 13501-1)	No performance assessed
<b>Basic Works Requirement 3: Hygiene, health and environment</b>		
1	Release of dangerous substances	No performance assessed
<b>Basic Works Requirement 4: Safety and accessibility in use</b>		
1	Pull-out resistance of mechanical fasteners (5.3.4.1.1 of ETAG 018-4)	NevPanel Smart Screw 39x32 mm Substrate: hot-dip zinc coated structural steel sheet, 1.00 mm thick, type S280 GD ≥1000 N Type of failure: pull-out
<b>Related aspects of durability, serviceability and identification</b>		
1		No performance assessed

Table No. 3: Essential characteristics of the jointing material

No	Essential characteristic and method of verification and assessment	Expression of product performance
<b>Basic Works Requirement 2: Safety in case of fire</b>		
1	Reaction to fire (EN 13501-1)	No performance assessed
<b>Basic Works Requirement 3: Hygiene, health and environment</b>		
1	Release of dangerous substances	No performance assessed
<b>Related aspects of durability, serviceability and identification</b>		
1		No performance assessed

**Table No. 4: Essential characteristics of the insulation products**

No	Essential characteristic and method of verification and assessment	Expression of product performance
<b>Basic Works Requirement 2: Safety in case of fire</b>		
1	Reaction to fire (EN 13501-1)	No performance assessed
<b>Basic Works Requirement 3: Hygiene, health and environment</b>		
2	Release of dangerous substances	No performance assessed
<b>Basic Works Requirement 6: Energy economy and heat retention</b>		
1	Water vapour transmission coefficient (EN 12086)	No performance assessed
2	Thermal resistance (EN 12667)	No performance assessed
<b>Related aspects of durability, serviceability and identification</b>		
1		No performance assessed

**Table No. 5: Essential characteristics of the profiles and framework**

No	Essential characteristic and method of verification and assessment	Expression of product performance
<b>Basic Works Requirement 2: Safety in case of fire</b>		
1	Reaction to fire (EN 13501-1)	No performance assessed
<b>Basic Works Requirement 3: Hygiene, health and environment</b>		
1	Release of dangerous substances	No performance assessed
<b>Basic Works Requirement 4: Safety and accessibility in use</b>		
1	Mechanical resistance and stability	No performance assessed
<b>Basic Works Requirement 6: Energy economy and heat retention</b>		
1	Thermal resistance	No performance assessed
<b>Related aspects of durability, serviceability and identification</b>		
1		No performance assessed

#### 4 Assessment and verification of constancy of performance (AVCP) system applied, with reference to its legal base

##### 4.1. System of attestation of conformity

In accordance with Regulation (EU) N° 305/2011, Article 65, Directive 89/106/EEC is repealed, but references to the repealed Directive shall be construed as references to the Regulation.



#### 4.1.1 For uses subject to reaction to fire regulations

The AVCP specified by the European Commission Decision 99/454/EC (as amended) depending on the classes claimed by the ETA-holder, in accordance with Table 6.

Table No. 6:

Systems of assessment and verification of constancy of performance for uses subject to fire regulations

Product(s)	Intended use(s)	Level(s) or class(es)	System(s) of assessment and verification of constancy of performance
Fire protective products (including coatings)	For uses subject to reaction to fire regulations	A1*, A2*, B* and C*	1
		A1**, A2**, B**, C**, D, E	3
		(A1 to E)*** and F	4
<sup>(1)</sup> Systems 1, 3 and 4: see Regulation (EU) N° 305/2011, Annex V			
* Products/materials for which a clearly identifiable stage in the production process results in an improvement of the reaction to fire classification (e.g. an addition of fire retardants or a limiting of organic material)			
** Products/materials not covered by footnote (*)			
*** Products/materials that do not require to be tested for reaction to fire (e.g. Products/materials of classes A1 according to Commission Decision 96/603/EC, as amended).			

**Note: According to the test results and declaration AVCP system 3 will be applied for the fire protective boards.**

#### 4.1.2 For uses for fire compartmentation and/or fire protection or fire performance

The system of assessment and verification of constancy of performance specified by the European Commission Decision 99/454/EC (as amended) is system 1, in accordance with Table No. 7.

Table No. 7 :

Systems of AVCP in accordance with EC Decision 99/454/EC

Product(s)	Intended use(s)	Level(s) or class(es) (resistance to fire)	Systems of assessment and verification of constancy of performance <sup>(1)</sup>
Fire protective products (including coatings)	For fire compartmentation and/or fire protection or fire performance	Any	1
<sup>(1)</sup> System 1: see Regulation (EU) N° 305/2011, Annex V			

## 5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD

In order to help the notified body to make an evaluation of conformity, the Technical Assessment Body issuing the ETA shall supply the information detailed below. This information shall initially be prepared or collected by the Technical Assessment Body and shall be agreed with the manufacturer. The following gives guidance on the type of information required:

### 1) The ETA

Where confidentiality of information is required, this ETA makes reference to the manufacturer's technical documentation which contains such information.

### 2) Basic manufacturing process

The basic manufacturing process is described in sufficient details to support the proposed FPC methods.

### 3) Product and materials specifications

The manufacturer's documentation includes:

- detailed description of the components of the kit,
- incoming (raw) materials specifications and declarations,
- references to European and/or international standards,
- technical and safety data sheets of the products.

### 4) Control Plan (as a part of FPC)

The manufacturer and the Technical and Test Institute for Construction Prague have agreed a Control Plan which is deposited with the Technical and Test Institute for Construction Prague in documentation which accompanies the ETA. The Control Plan specifies the type and frequency of checks/tests conducted during production and on the final product. This includes the checks conducted during manufacturing process on properties that cannot be inspected at a later stage and for checks on the final product.

It must be demonstrated to the notified body that the FPC system contains elements securing that the manufacturer of the final product use during the manufacturing process only products from his supplier(s) which conform to the Control Plan.

In cases where the provisions of the European Technical Assessment and its Control Plan are no longer fulfilled, the notified body shall withdraw the certificate and inform the Technical and Test Institute for Construction Prague without delay.

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