TECHNICKÝ A ZKUŠEBNÍ ÚSTAV STAVEBNÍ PRAHA, s.p.
Technical and Testing Institute for Construction Prague
Akreditovaná zkušební laboratoř, Autorizovaná osoba, Notifikovaná osoba, Oznámený subjekt, Subjekt pro technické posuzování, Certifikační orgán, Inspekční orgán / Accredited Testing Laboratory, Authorised Body, Notified Body, Technical Assessment Body, Certification Body, Inspection Body. Prosecká 811/76a, 190 00 Praha 9
Central laboratory
Testing department Praha, Prosecká 811/76a, 190 00 Praha 9
tel.: +420 286 019 435, e-mail: hotzel@tzus.cz, www.tzus.eu
L 1018.3

TEST REPORT

issued by Testing Laboratory No. 1018.3
accredited pursuant to ČSN EN ISO/IEC 17025:2005 by Czech Accreditation Institute

No. 010-036045

on settlement test of
dimensional tolerances, shape
shear load resistance of mechanical fastening systems
resistance to soft body impact
resistance to hard body impact
resistance to eccentric load
pull-through resistance of mechanical fasteners
perpendicular tensile strength
parallel tensile strength
compressive strength

Ordering Party:	Technický a zkušební ústav stavební Praha, s. p.
Address:	Prosecká 811/76a, 190 00 Praha 9 - Prosek
Company ID:	00015679
Manufacturer:	NEVPANEL YAPI MADEN ÜRETİM İTHALAT İHRACAT SANAYİ VE TİCARET LİMİTED ŞİRKETİ
Address:	Bağdat Caddesi Çolakoğlu İş Merkezi No:458 / 30 Maltepe - Istanbul, Turkey
Test sample:	Fire protective board NevPanel(DragonBoardTürkiye; MagnumBoard)
Order No.:	Z010150201

Number of pages of the Test Report incl. title page: 6 Pages of Annexes: 0

Prepared by:

Ing. Michal Vostrovský
specialist

Approved by:

RNDr. Vojtěch Hötzel
head of the testing department

Print No.: 1
Number of prints: 4

stamp of testing laboratory no. 1018.3

Prague, 06. 01. 2016

Declaration: **1) The test results in this Report relate only to the tested article and they do not substitute any other documents**
2) The Test Report must be copied as a whole only otherwise a written consent of the testing laboratory is needed.

1. Sample data

Evidence Number:	VZ010150383
Sample:	NevPanel DragonBoardTürkiye MagnumBoard
Order:	Z010150201
Date of sample delivery:	23. 9. 2015
Sampling place	storage of manufacturer
Sampling method	---
Method of the sample preparation:	---

Data of sampling conditions, plan and sampling procedure, if necessary, the name of the person performing the sampling are listed in the minutes of sampling, which is stored in the testing department

2. Test methods

ČSN EN 12467:2013	Fibre-cement flat sheets - Product specification and test methods *(this test method was included in the scope of accreditation under the standards review)*
ČSN EN 789:2005	Timber structures - Test methods - Determination of mechanical properties of wood based panels *(this test method is not included in the scope of accreditation).*
ČSN EN 319:1994	Particleboards and fibreboards. Determination of transverse tensile strength perpendicular to the plane of the board *(this test method is not included in the scope of accreditation).*
ISO/DIS 8413:1990	Performance standards in buildings – Partitions made from components test for ability to withstand suspended static loads *(this test method is not included in the scope of accreditation).*
EOTA TR001	Determination of impact resistance of panels and panels assemblies *(this test method is not included in the scope of accreditation).*
ETAG 018-4	Fire protective products - Part 4: fire protective board, slab and mat products and kits *(this test method is not included in the scope of accreditation).*
(EAD DP 14-35-0142-11.06)	Fire Protective Products - Part 3: fire protective board, slab and mat products and kits *(this test method is not included in the scope of accreditation).*

Deviations from a standard procedure or the use of non-standardized methods: were not applied.

3. Test results

The tests were carried out on: 06. 10. - 08. 12. 2015
The tests were performed by: Ing. Jan Appl

Date about person performing the test, testing equipment and about test conditions are listed in test minutes. All measurement and test equipment are calibrated according to valid plan of the testing department.

3.1 Determination of length, width, thickness, dimensional tolerances, shape acc. to ČSN EN 12467

Table 1: board of thickness 4 mm (06. 10. 2015)

# of measuring	width (mm)	length (mm)	thickness (mm)	right-angle (2 mm/m)	straightness of edges (0,1 %)
1 (board 1)	1220	2440	4,1	0,0	1,1
2 (board 1)	1221	2440	4,0		
3 (board 1)	1220	2441	4,1		
1 (board 2)	1220	2440	4,1	1,0	1,0
2 (board 2)	1220	2441	4,1		
3 (board 2)	1221	2440	4,0		
1 (board 3)	1220	2440	4,1	0,5	0,7
2 (board 3)	1220	2441	4,0		
3 (board 3)	1220	2440	4,1		
arithmetic mean	**1220,22**	**2440,33**	**4,07**	**0,50**	**0,93**

Table 2: board of thickness 9 mm (06. 10. 2015)

# of measuring	width (mm)	length (mm)	thickness (mm)	right-angle (2 mm/m)	straightness of edges (0,1 %)
1 (board 1)	1219	2439	9,1	1,0	0,5
2 (board 1)	1220	2439	9,1		
3 (board 1)	1220	2439	9,0		
1 (board 2)	1219	2439	9,0	0,0	0,8
2 (board 2)	1219	2440	9,0		
3 (board 2)	1219	2439	9,0		
1 (board 3)	1219	2439	9,1	0,5	0,5
2 (board 3)	1219	2439	9,1		
3 (board 3)	1220	2439	9,0		
arithmetic mean	**1219,33**	**2439,11**	**9,04**	**0,83**	**0,73**

Table 3: board of thickness 18 mm (06. 10. 2015)

# of measuring	width (mm)	length (mm)	thickness (mm)	right-angle (2 mm/m)	straightness of edges (0,1 %)
1 (board 1)	1220	2440	18,2	1,2	1,4
2 (board 1)	1220	2440	18,1		
3 (board 1)	1220	2440	18,0		
1 (board 2)	1220	2440	18,1	0,7	1,1
2 (board 2)	1220	2441	18,0		
3 (board 2)	1220	2440	18,1		
1 (board 3)	1220	2440	18,0	0,5	1,0
2 (board 3)	1221	2439	18,1		
3 (board 3)	1220	2440	18,2		
arithmetic mean	**1220,11**	**2440,00**	**18,09**	**0,80**	**1,17**

3.2 Determination of shear load resistance of mechanical fastening systems acc. to ETAG 018-4 art. 5.1.4.1.2

Table 4: board of thickness 12 mm (06. 11. 2015)

# of measuring	F_{max} (N)
1	1202
2	1309
3	1192
4	1090
5	1410
arithmetic mean	**1240,6**

3.3 Determination of resistance to soft body impact acc. to article 2 of EOTA TR001

Table 5: board of thickness 15 mm (23. 11. 2015)
Impactor - weight = 50 kg
Surface structure of board: smooth

# of measuring	height of impact (mm)	energy (Nm)	damage
1	122	60	without damage
2	200	100	without damage
3	245	120	without damage
4	265	130	without damage
5	**408**	**200**	**without damage***
6	490	240	damage - burst

* no collapse, no penetration, no degradation, no projection

3.4 Determination of resistance to hard body impact acc. to article 3 of EOTA TR001

board of thickness 15 mm (23. 11. 2015)
testing sphere - weight = 0,5 kg
height of falling = 1200 mm
energy = 6 Nm
result: without damage*
* no collapse, no penetration, no degradation, no projection

3.5 Determination of resistance to eccentric load acc. to ISO/DIS 8413 (EAD DP 14-35-0142-11.06 article 2.2.1.5)

Table 6: board of thickness 15 mm (01 - 02. 12. 2015)

# of measuring	testing weight (kg)	time (h)	damage
1	**35**	**24**	**without damage**
2	40	< 24	extraction between board and eccentric construction

3.6 Determination of pull-through resistance of mechanical fasteners acc. to ETAG 018-4 chapter 5.1.4.1.1

Table 7: board of thickness 12 mm - dry board (11. 11. 2015)

# of measuring	F_{max} (N)
1	1139
2	974
3	956
4	1056
5	1163
arithmetic mean	**1057,6**

Table 8: board of thickness 12 mm - wet board (11. 11. 2015)

# of measuring	F_{max} (N)
1	890
2	853
3	671
4	713
5	718
arithmetic mean	**769,0**

3.7 Determination of perpendicular tensile strength acc. to EN 319

Table 9: board of thickness 15 mm (11. 11. 2015)

# of measuring	F_{max} (N)	cross-section 50×50 mm (mm^2)	$f_{1\perp}$ (N/mm^2)
1	4204	2500	1,68
2	5592		2,24
3	4757		1,90
4	5478		2,19
5	4760		1,90
arithmetic mean	**4958,2**	-	**1,98**

3.8 Determination of parallel tensile strength acc. to article 9 of EN 789

Table 10: board of thickness 15 mm (01. 12. 2015)

# of measuring	width of sample (mm)	cross-section (mm^2)	F_{max} (N)	f_t (kPa)
1	155	2325	7498,0	3224,9
2	154	2310	7658,6	3315,4
3	154	2310	7520,0	3255,4
arithmetic mean	-	-	-	**3265,3**

Table 11: board of thickness 18 mm (07. 12. 2015)

# of measuring	width of sample (mm)	cross-section (mm^2)	F_{max} (N)	f_t (kPa)
1	151	2718	9560,0	3517,3
2	152	2736	10150,0	3709,8
3	151	2718	10428,0	3836,6
arithmetic mean	-	-	-	**3687,9**

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3.9 Determination of compressive strength acc. to article 8 of EN 789

Table 12: board of thickness 15 mm - perpendicular to board (08. 12. 2015)

# of measuring	dimensions of sample (mm)	cross-section (mm^2)	F_{max} (kN)	f_c (MPa)
1	45×70	3150	43,0	13,65
2	45×70	3150	43,5	13,81
3	45×70	3150	44,0	13,97
arithmetic mean	-	-	-	**13,81**

Table 13: board of thickness 15 mm - parallel to board (08. 12. 2015)

# of measuring	dimensions of sample (mm)	cross-section (mm^2)	F_{max} (kN)	f_c (MPa)
1	45×70	3150	39,0	12,38
2	45×70	3150	37,5	11,90
3	45×70	3150	40,0	12,70
arithmetic mean	-	-	-	**12,33**

END OF THE TEST REPORT

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