



**TECHNICKÝ A ZKUŠEBNÍ ÚSTAV STAVEBNÍ PRAHA, s.p.**  
**Technical and Test Institute for Construction Prague**

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**Central Laboratory - Testing Department Brno**

Hněvkovského 77, 617 00 Brno

tel.: +420 734 432 093, e-mail: zadelak@tzus.cz, www.tzus.eu

# TEST REPORT

Issued by Testing Laboratory

**No. 060-042719**

**on test of thickness, density, bending strength and bending modulus**

Ordering Party: Zhangjiagang Wellyoung Material Co., Ltd  
Address: DongFang Xintiandi D-2501, Zhangjiagang City, Jiangsu Province, China 215600

Company ID: 320582000262065

Manufacturer: Zhangjiagang Wellyoung Material Co., Ltd.  
Address: DongFang Xintiandi D-2501, Zhangjiagang City, Jiangsu Province, China 215600

Test sample: WellYoung MgO Board

Order No.: Z060160003

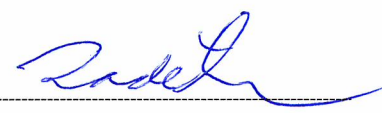
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Prepared by:

  
**Ing. Marek Sopko**  
test technician - specialist

Approved by:

  
**Ing. Martin Zaděláč**  
head of the Testing Department

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Brno, on 25. 02. 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.

Technical and Test Institute for Construction Prague, Central laboratory

Nemanická 441, 370 00 České Budějovice, Czech Republic

Bank: Komerční banka, Praha 1

Entered in the Commercial Register maintained by Municipal Court in Preque, Section ALX, Insert 711, Comp. ID: 00015679, VAT: CZ00015679

Phone.: +420 387 023 211

Account No.: 1501-931/0100

www.tzus.eu

e-mail: pilarova@tzus.cz

## 1. Sample data

Evidence Number: VZ060160098  
Sample: WellYoung MgO Board  
Sample delivery: 10.2.2016

## 2. Test methods

EN 12467:2012 Fibre-cement flat sheets – Product specification and test methods  
5.3.3 Thickness  
5.4.2 Density  
5.4.4 Bending strength, bending modulus

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

## 3. Test results

The tests were carried out on: 17. - 24.02.2016

The tests were performed by: Ing. Marek Sopko

Data on the person who performed the test, test conditions and equipment used are listed in the Test Minutes. Apparatuses and measuring instruments that used have been certified pursuant to a valid plan of the testing.

### 3.1 Thickness

| Sample No. | Thickness [mm]    |      |      |      |      |               |
|------------|-------------------|------|------|------|------|---------------|
|            | Individual values |      |      |      |      | Average value |
| 1          | 12,4              | 12,6 | 12,7 | 12,6 | 12,6 | 12,6          |
| 2          | 12,5              | 12,5 | 12,5 | 12,6 | 12,6 | 12,5          |
| 3          | 12,5              | 12,5 | 12,4 | 12,5 | 12,5 | 12,5          |
| 4          | 12,5              | 12,5 | 12,5 | 12,4 | 12,5 | 12,5          |
| 5          | 12,6              | 12,6 | 12,5 | 12,5 | 12,7 | 12,6          |

### 3.2 Density

| Sample No. | Volume [mm <sup>3</sup> ] | Weight [g] | Density [kg/m <sup>3</sup> ] | Average density [kg/m <sup>3</sup> ] |
|------------|---------------------------|------------|------------------------------|--------------------------------------|
| 1          | 216187                    | 216,17     | 1000                         | 1002                                 |
| 2          | 214506                    | 211,80     | 987                          |                                      |
| 3          | 219878                    | 220,99     | 1005                         |                                      |
| 4          | 219440                    | 222,83     | 1015                         |                                      |
| 5          | 220767                    | 221,72     | 1004                         |                                      |

### 3.3 Bending strength

| Sample No. | Width [mm] | Thickness [g] | F <sub>max</sub> [N] | Bending strength [N/mm <sup>2</sup> ] | Average bending strength [N/mm <sup>2</sup> ] |
|------------|------------|---------------|----------------------|---------------------------------------|-----------------------------------------------|
| 1↑         | 79,9       | 12,1          | 527                  | 17,0                                  | 16,5                                          |
| 2↑         | 79,2       | 12,2          | 508                  | 16,2                                  |                                               |
| 3↑         | 80,4       | 12,4          | 517                  | 15,7                                  |                                               |
| 4↑         | 80,7       | 12,1          | 513                  | 16,2                                  |                                               |
| 5↑         | 79,4       | 12,3          | 534                  | 16,6                                  |                                               |
| 6→         | 80,9       | 12,1          | 506                  | 16,1                                  |                                               |
| 7→         | 80,8       | 12,1          | 494                  | 15,6                                  |                                               |
| 8→         | 80,4       | 12,4          | 504                  | 15,4                                  |                                               |
| 9→         | 81,4       | 12,4          | 549                  | 16,6                                  |                                               |
| 10→        | 80,7       | 12,2          | 610                  | 19,1                                  |                                               |

Span between supports  $l_s = 250$  mm



### 3.4 Bending modulus

| Sample No. | $F_1$ [N] | $F_2$ [N] | $f_1$ [mm] | $f_2$ [mm] | Bending modulus [N/mm <sup>2</sup> ] | Average bending modulus [N/mm <sup>2</sup> ] |
|------------|-----------|-----------|------------|------------|--------------------------------------|----------------------------------------------|
| 1↑         | 100       | 240       | 0,94       | 1,83       | 4398                                 | 4392                                         |
| 2↑         |           |           | 0,51       | 1,40       | 4307                                 |                                              |
| 3↑         |           |           | 0,85       | 1,70       | 4214                                 |                                              |
| 4↑         |           |           | 0,60       | 1,46       | 4383                                 |                                              |
| 5↑         |           |           | 0,46       | 1,23       | 4772                                 |                                              |
| 6→         |           |           | 0,54       | 1,47       | 4143                                 |                                              |
| 7→         |           |           | 0,51       | 1,40       | 4243                                 |                                              |
| 8→         |           |           | 0,54       | 1,41       | 4131                                 |                                              |
| 9→         |           |           | 0,46       | 1,23       | 4657                                 |                                              |
| 10→        |           |           | 0,49       | 1,29       | 4675                                 |                                              |

Span between supports  $l_s = 250$  mm

$F_1, F_2$  – forces on the two points on the linear part of graph under elastic limit

$f_1, f_2$  – deflection of the sample below selected loading

END OF THE TEST REPORT

