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Alfa Wood Pindos S.A.
7th Km Grevena - Mavranei
51100 Grevena
Greece

Fraunhofer Institute for Wood Research
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Hus

Braunschweig, 6 April 2018

Test report No. QA-2018-0923

Client:	Alfa Wood Pindos S.A. 7 th Km Grevena - Mavranei 51100 Grevena Greece
Receipt of samples:	4 April 2018
WKI-ID-No.:	0108_2018
Date of test:	6 April 2018
Objective of the test:	Determination of formaldehyde content
Content of the test report:	1. Task and test material 2. Execution of the tests 3. Test results

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The test report comprises 2 pages and 2 tables.

This test report is not permitted to be published incompletely.

A publication in extracts is in any case subject to the previous consent of Fraunhofer-Institut für Holzforschung, Wilhelm-Klauditz-Institut (WKI), Bienroder Weg 54E in Braunschweig (Germany).

The test results exclusively refer to the objects of the test. The test material was used up.



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1. Task and test material

The Fraunhofer-Institut für Holzforschung, Wilhelm-Klauditz-Institut (WKI), was entrusted by Messrs. Alfa Wood Pindos S.A. in 51100 Grevana (Greece) with the determination of the formaldehyde content, description of sample(s) see table(s) enclosed. The test material was selected, marked by the client and delivered to the WKI for examination.

2. Execution of the tests

The test material arrived at WKI packed in polyethylene foil on 4 April 2018, was marked with WKI-ID-No. "0108_2018" and stored under room conditions. It was unpacked on 5 April 2018.

The determination of formaldehyde content was carried without a preconditioning of the samples according to the perforator method DIN EN ISO 12460-5 - "Wood-based panels - Determination of formaldehyde release - Part 5: Extraction method (called the perforator method)". Moisture content was determined according to ISO 16979, "Wood-based panels - Determination of moisture content".

3. Test results

The table 1 enclosed to the test report shows the formaldehyde value(s) of the tested sample(s), specified as individual values and as mean value(s) from repeat determination(s).

Table 2 shows the requirements of German Prohibition for Chemical Products – "Chemikalien-Verbotsverordnung" – annex § 1, para 3, in relation with the publication of the Federal Health Office in the journal "Bundesgesundheitsblatt", issue October 1991 (p. 487 – 489).

Requirement of limit value fulfilled?	Evaluation acc.	German ChemVerbotsV [BGA Blatt 34, 10/91]
Perforator method		<input checked="" type="checkbox"/> yes <input type="checkbox"/> no

We draw the attention to the fact that the effected test was made as a material parameter and not as a classifying test.



Kathrin Huslage
Official in charge



Dipl.-Ing. Harald Schwab
Head of Testing, Supervision and
Certifying Body

Table 1: Formaldehyde content of sample(s) ordered by
 Messrs. Alfa Wood Pindos S.A. in 51100 Grevana (Greece)

Date of receipt: 4 April 2018

Date of test: 6 April 2018

WKI-ID- No.	Sample name	Thickness [mm]	Moisture content [%]	Formaldehyde content*	
				Perforator method DIN EN ISO 12460-5 [mg HCHO/100 g oven dry board]	
				A	B
0108_ 2018	"Sample name: 16 mm MDF	16	4.2	2.2	2.9
	Product Code: 3MFS16				
	Manufacturer: Alfa Wood Pindos				
	Production date: 23/03/2018"				
	- MDF, uncoated				
Average value of repeat determination				2.2	2.9

* tested without a preconditioning

Individual test results and average value of the repeat determination:

A: determined perforator value

B: calculated perforator value at a moisture content of 6.5 %

Table 2: Limit values for wood based panels and their products according to the German Prohibition for Chemical Products – “Chemikalien-Verbotsverordnung” – annex § 1, para 3, in relation with the publication of the Federal Health Office in the journal “Bundesgesundheitsblatt”, issue October 1991 (p. 487 – 489)

Test method	used for	limit value
Chamber method EN 717-1	all kind of wood based panels and their products (e.g. furniture, floor covering and other)	≤ 0.1 ppm
Gas analysis method* DIN EN ISO 12460-3 (replaces EN 717-2)	- coated wood based panels - raw plywood (tested after four-week preconditioning)	≤ 3.5 mg HCHO/(h·m ²) ** ≤ 3.5 mg HCHO/(h·m ²) **
	- raw plywood (tested max. 3 days after production)	≤ 6.0 mg HCHO/(h·m ²).
Perforator method DIN EN ISO 12460-5 (replaces EN 120)	- uncoated particleboard - uncoated MDF	a) ≤ 8.0 mg HCHO/100 g dry board converted to a moisture content of 6.5 % b) Boards which undergo a further coating may have perforator values of up to 10 mg HCHO/100 g dry board. They have to carry extra marks.
	coated particleboards and MDF tested after removing the coating	c) perforator value may be 2 mg/100 g more than uncoated boards (max. 12 mg/100 g dry board)

* tested with sealed edges

** The used uncoated wood based panel has to fulfil the requirements as well (see: particleboard or MDF: perforator method, raw plywood: gas analysis method)