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AB 088

**TESTING LABORATORY OF WOOD, WOOD-BASED MATERIALS, PACKAGING,
 FURNITURE, CONSTRUCTIONS AND WOODWORKING MACHINE**



AIR QUALITY TESTING SECTION

Poznań, 9.08.2019

TEST REPORT No. 1973/2019/S.F-3

Subject of the order Testing of formaldehyde emission according to EN 717-1:2006
 standard with the chamber method from MDF

Order No. A-1973- BOŚ/2019

**Name and address
 of the client/manufacturer /producer** KRONOSPAN Mielec Sp. z o.o.,
 ul. Wojska Polskiego 3, 39-300 Mielec

Performance date 19 – 08.08.2019

Operators

First name and surname	Signature
Magdalena Czajka PhD	
Mirosława Radlicka	

Laboratory stamp

Authorised representative

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Magdalena Czajka, PhD.

1. IDENTIFICATION (DESCRIPTION) OF TEST SAMPLES

The objects of testing was sample described by the producer:
MDF E-LE; thickness 16 mm;
Identification number: A-1973-BOŚ/2019-3

2. DELIVERY DATE OF TESTED OBJECTS

Samples taken by the customer were received for testing in ITD on 15.07.2019.

3. SYMBOLS AND NAMES OF THE TEST METHODS APPLIED

Tests were performed according to standards described in PN-EN 717-1:2006 entitled: "Wood-based panels – Determination of formaldehyde release – Part1: Formaldehyde emission by the chamber method".

4. LIST OF MEASURING AND TEST EQUIPMENT

The following equipment was used for the tests:

- chamber of the capacity of 0.225 m³; No. F6/13
- gas meter No. F6/22
- balances for mass determination No. F1/1, F1/2
- water bath No. F4/34
- spectrophotometer Aqua Mate Plus UV VIS No. F4/47

5. TEST RESULTS

Tests results are presented in protocols No. 1/1973/2019/S.F-3

6. STATEMENT

The test results presented in the protocols relate solely to the tested samples.
The test report cannot be copied in parts but only in its entirety.

Table MDF E-LE, range of thickness 12-25, thickness 16mm,

Specification	German ChemVerbotsV**	IOS-MAT-0003 IOS-MAT-0181*
Requirements	0.1 ppm	0.05 ppm
Result	0.078	0.039
Evaluation	YES	YES

* Requirements of IKEA Specification IOS-MAT-0003-14, dated: 2019-03-11 and IOS-MAT-0181 dated: 2019-05-29.

**German Chemical Prohibition Ordinance (ChemVerbotsV) §1(3) dated 2017-01-20 in connection with the Bekanntmachung analytischer Verfahren. published on 26 November 2018, BAnz AT 26.11.2018 B2. Formaldehyde limit value according to ChemVerbotsV = 0,1 ppm ($\leq 0,124$ mg/m³)

Starting from 1.1.2020, the chamber method EN 16516 is designated as the reference procedure.


Tests in accordance with the chamber method EN 717-1 can still be performed; however, the test results must be multiplied by a factor of 2; formaldehyde guideline value for test chamber method DIN EN 717-1 (01/2005) = 0,05 ppm ($\leq 0,062$ mg/m³). Concentration of EN 717-1 test was multiplied by factor 2.

PROTOCOL No. 1/1973/2019/S.F-3
DETERMINATION OF FORMALDEHYDE RELEASE BY THE CHAMBER METHOD
- acc. to PN-EN 717-1:2006

Type of material/product				MDF E-LE; thickness 16 mm		
Test date				19 - 08.08.2019		
Sample identification : A-1973-BOŚ/2019-3				Chamber 14 capacity 0.225 m ³		
Time of sample exposure in the chamber [24 h]	Date of the test	Climatic conditions in the chamber		Test number	Chamber concentration of formaldehyde	
		Temperature	Relative humidity		[mg/m ³]	[ppm]
1	19.07.2019	(23±0.5) °C	(45 ±3)%	1	0.077	0.062
				2	0.084	0.068
4	22.07.2019			1	0.078	0.063
				2	0.080	0.065
5	23.07.2019			1	0.070	0.056
				2	0.077	0.062
6	24.07.2019			1	0.079	0.064
				2	0.075	0.060
7	25.07.2019			1	0.068	0.055
				2	0.070	0.056
8	26.07.2019			1	0.079	0.063
				2	0.081	0.065
11	29.07.2019			1	0.054	0.044
				2	0.057	0.046
12	30.07.2019			1	0.060	0.048
				2	0.059	0.048
13	31.07.2019			1	0.050	0.041
				2	0.054	0.044
14	01.08.2019			1	0.048	0.039
				2	0.045	0.036
15	02.08.2019			1	0.053	0.042
		2	0.050	0.040		
18	05.08.2019	1	0.046	0.037		
		2	0.048	0.039		
19	06.08.2019	1	0.056	0.045		
		2	0.050	0.040		
20	07.08.2019	1	0.047	0.038		
		2	0.045	0.036		
21	08.08.2019	1	0.048	0.039		
		2	0.049	0.040		
Average equilibrium concentration of formaldehyde in the air of the chamber					0.048	0.039
Confidence interval of the actual formaldehyde concentration with probability of 95%:					(0.048 ± 0.002) mg/m ³ ; (0.039 ± 0.002) ppm	

Prepared by
Magdalena Czajka

Date
9.08.2019

Signature


end of report