

Test Report n° TR 025320-01.2

Data di ricevimento:	07/05/2020	For the attention of Alfa Wood Group S.A. Industrial Zone Larisa 41500 GRECIA (EE)	
Inizio della prova:	08/06/2020		
Termine della prova:	02/07/2020		
Denominazione e identificazione del campione:		Solid HDF identified with code 025320-01-11, 12, 13, 14, 15, 16, 17, 18, 19 and 20	
Numero della norma:	UNI EN 321:2002	Titolo della norma:	Wood-based panels - Determination of moisture resistance under cyclic test conditions.

TEST RESULTS

After 3 test cycles:

- REINFORCEMENT OF THICKNESS ACCORDING TO UNI EN 317:1994

Average initial thickness (mm)	Average final thickness (mm)	Average Swelling (%)
12,10	12,17	0,6

- PERPENDICULAR TENSILE RESISTANCE ACCORDING TO UNI EN 319: 1994

	Tensile strength (N/mm ²)
Mean value (N/mm²):	1,02
Standard deviation (σ) (N/mm²):	0,33

END OF THE TEST REPORT N° 025320-01.2

The Chemical Area Manager
Dr. Christian Gabbani

The Director
Dr. Alessio Gnaccarini

Montelabbate: 06/07/2020.

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Test Report n° TR 025220-01.1

Date of receipt:	07/05/2020	For the attention of Alfa Wood Group S.A. Industrial Zone Larisa 41500 GRECIA (EE)	
Start of the test:	07/05/2020		
End of the test:	20/05/2020		
Sample identification:		Solid HDF identified with code 025220-01-01, 02, 03, 04 and 05	
Standard:	UNI EN ISO 12460-5:2016	Title:	Wood-based panels - Determination of formaldehyde release - Part 5: Extraction method (called the perforator method).

SAMPLE DESCRIPTION

Panel type:	High Density Fireboard (HDF)
Date of production:	18/03/2020
Thickness of the sample (mm):	12,1

TEST RESULTS

	Density according to UNI EN 323:1994 (kg/m³) **	Humidity according to ISO 16979:2003 (%) **	Test date	Perforator value (mg of formaldehyde / 100g of dry panel)	Perforator value corrected to 6.5% R.H.
Individual value (1st draw)	941,3	5,1	20/05/2020	0,4	0,5

**** These standards are not accredited by Accredia.**

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LOQ (quantification limit) = 0,8 mg/100g.

Particle panel: the extended measurement uncertainty $U(f)$ for the single test, corresponding to the measurement uncertainty σ for the coverage factor $t_p = 2,6$ corresponding to a confidence interval of 95%, is equal to $U(f) = \pm 0,6$ mg of formaldehyde / 100g of dry board.

MDF: the extended measurement uncertainty $U(f)$ for the single test, corresponding to the measurement uncertainty σ for the coverage factor $t_p = 2,6$ corresponding to a confidence interval of 95%, is equal to $U(f) = \pm 0,7$ mg of formaldehyde / 100g of dry board.

END OF THE TEST REPORT N° 025220-01.1

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Montelabbate: 29/05/2020.

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Date of receipt:	07/05/2020	For the attention of Alfa Wood Group S.A. Industrial Zone Larisa 41500 GRECIA (EE)	
Start of the test:	07/05/2020		
End of the test:	17/05/2020		
Sample identification:	Solid HDF identified with code 025220-01-06 and 07		
Standard:	UNI EN 717-1:2004	Title:	Wood based panels - Determination of formaldehyde release - Part 1: Formaldehyde emission by the chamber method.

TEST CONDITIONS

Volume of the chamber (m ³)	Rate of air exchanged (m ³ /h)	Load factor (m ² /m ³)	Temperature (°C)	R.H. (%)	Duration of the test (h)	Air velocity (m/s)	Overpressure (Pa)	Sampling flow (l/min)
0,225	0,225	1,0	23,1	45,0	236	0,2	46,5	2,0

DESCRIPTION OF SAMPLE SUBMITTED TO TEST

Type of sample	Type of support	Coating	Thickness (mm)	Emitting surface (m ²)	Photo
Board	HDF	-	12	0,224	
Board	HDF	-	12		

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TEST RESULTS

Analysis methodology	Thermostatic bath temperature (° C)	Spectrophotometer wave length (nm)	Steady-state formaldehyde concentration (mg/m ³)	Steady-state formaldehyde concentration (ppm)
Acetylacetone method	40 ± 1	412	≤LOQ (236 h)	≤LOQ (236 h)

The extended uncertainty of measurement $U(f)$ for the coverage factor $k = 2$ corresponding to a 95% confidence interval is equal to 26% of the equilibrium emission value which corresponds to an uncertainty $U(f) = \pm 0,01 \text{ mg/m}^3$ (0,01 ppm).

LOQ (limit of quantification) = 0,02 mg/m³

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Test Report n° TR 025320-01.1

Date of receipt:	07/05/2020	For the attention of Alfa Wood Group S.A. Industrial Zone Larisa 41500 GRECIA (EE)	
Start of the test:	15/06/2020		
End of the test:	16/06/2020		
Sample identification:	Solid HDF identified with code 025320-01-01, 02, 03, 04, 05, 06, 07 and 08		
Standard:	UNI EN 317:1994	Title:	Particleboards and fibreboards - Determination of swelling in thickness after immersion in water.

TEST RESULTS

Initial average thickness (mm)	Average thickness after 24 h (mm)	Medium swelling after 24 h (%)
12,1	12,6	4,1

END OF THE TEST REPORT N° 025320-01.1

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The Director
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Montelabbate: 26/06/2020.

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Test Report n° TR 025320-01.3

Date of receipt:	07/05/2020	For the attention of Alfa Wood Group S.A. Industrial Zone Larisa 41500 GRECIA (EE)	
Start of the test:	22/07/2020		
End of the test:	24/07/2020		
Sample identification:		Solid HDF identified with code 025320-01-21, 22, 23, 24, 25, 26, 27 e 28	
Standard:	UNI EN 1087-1:1997	Title:	Particleboards. Determination of moisture resistance. Boil test.

DESCRIPTION OF THE SAMPLE

Thickness of the sample: 12 mm

DESCRIPTION OF THE TEST

The specimens are glued to the test blocks and placed in boiling water for 120 min. Immediately after they are left in water at 20 ° C for a period of 1h. Excess water is eliminated and traction according to EN 319 is followed.

TEST RESULTS

	Tensile strength (N/mm²)
Mean value (N/mm²):	0,73
Standard deviation (σ) (N/mm²):	0,14

END OF THE TEST REPORT N° 025320-01.3

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Test Report n° TR 025720-01.1

Date of receipt:	18/05/2020	For the attention of Alfa Wood Group S.A. Industrial Zone Larisa 41500 GRECIA (EE)	
Start of the test:	23/06/2020		
End of the test:	30/06/2020		
Sample identification:		Prev cl. Num. 184/20 del 02/03/2020 identified with code 025720-01-01	
Standard:	UNI EN 14323:2017	Title:	Wood based panels. Melamine faced boards for interior uses. Test methods. Par. 5.11 Resistance to colour change in xenon arc light.

DESCRIPTION OF THE SAMPLE

Type of surface	One colour surface
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APPARATUS

A machine with humidity control was used	
Irradiation a 300-400 nm (W/m²):	50

TEST RESULTS

Time of exposure (h):	85
A blue wool scale with reference number 1 to 8 was used	

Test tube reference	Number of observers	Expression of results	
		Color variation expressed according to the grey scale	Resistance to the light
025720-01-01	3	4	6

END OF THE TEST REPORT N° 025720-01.1

The Chemical Area Manager
Dr. Christian Gabbani

The Director
Dr. Alessio Gnaccarini

Montelabbate: 30/06/2020.

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Test Report n° TR 025720-01.2

Date of receipt:	18/05/2020	For the attention of Alfa Wood Group S.A. Industrial Zone Larisa 41500 GRECIA (EE)	
Start of the test:	30/06/2020		
End of the test:	30/06/2020		
Sample identification:		Prev cl. Num. 184/20 del 02/03/2020 identified with code 025720-01-05, 06 and 07	
Standard:	UNI EN 14323:2017	Title:	Wood based panels. Melamine faced boards for interior uses. Test methods. Par. 5.9 Resistance to abrasion of decorative surface layer.

DESCRIPTION OF THE SAMPLE

Type of surface	One colour surface
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TEST RESULTS

Correction factor K	1,02
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Test sample	Initial wear point (IP), in revolutions
025720-01-05	> 1000
025720-01-06	> 1000
025720-01-07	> 1000
Average value in number of revolutions *	> 1000

* Rounded up to the nearest 50 revolutions, as indicated in the Standard.

Classification according to UNI EN 14322:2017	4
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END OF THE TEST REPORT N° 025720-01.2

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