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Kronospan Sebes SA
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Dresden, 1 April 2016

Report 01-2016
on the product testing, monitoring and evaluation of the FPC
according to the contracted supervision
Product type MDF E1
– chemical testing –
Order-No. 2306 020

Client: Kronospan Sebes SA
Str. Mihail Kogalniceau, 59
515800 Sebes Jud. Alba

Order: Regular (semi-annually) product testing, monitoring, evaluation of the
FPC concerning the agreed product characteristics under the
supervision contract QP-07-04-02 including addenda

Contractor: Entwicklungs- und Prüflabor Holztechnologie GmbH
Zellescher Weg 24, 01217 Dresden
Germany

Engineer in charge: Dipl.-Ing.(BA) Mäbert
(certification body)

This Surveillance Report contains 5 pages and 2 Annex with 1 page. Partial copying requires written approval by EPH. The test results exclusively refer to the tested materials.

1 Task:

Sampling for the determination of the agreed properties according to 2.3 at the EPH laboratory.

Monitoring of the FPC, especially for the product type named in 2.2.

Assessment of the test results of EPH.

Surveillance period: until 30 September 2016 and 31 March 2017

2 Procedure

2.1 Inspection of the manufacturing site

Date: 2 February 2016

Participants: Mr. Mäbert, Mr. Wünschmann –EPH
Mrs. Calin –Kronospan Sebes

Inspected facilities: Test laboratory, plant

Inspected documents: Documentation of internal control testing

2.2 Sampling

The sampling was taken from the client's stock of sanded dry process fibreboards (MDF) acc. to EN 622-5, which are produced within thickness ranges of >6 – 19 mm with a raw density of $750 \text{ kg/m}^3 \pm 7 \%$ and >19 – 30 mm with a raw density of $720 \text{ kg/m}^3 \pm 7 \%$.

The representative of EPH drew the panels on 2 February 2016 from a stack of the Client's stock. Supported by Client's employees, the following 20 cross-cut strips were cut from the panel type and then marked and sent to the test house:

Nominal thickness [mm]	Number of panels	Number of cross-cut strips	EPH specification	Production date
8	4	1	1184/1-4	20 January 2016
18	3	1	1222/1-3	6 March 2016
28	4	1	1186/1-4	12 January 2016
10	3	1	1187/1-3 covered	27 January 2016
16	3	1	1188/1-3 covered	5 January 2016
25	3	1	1189/1-3 covered	11 January 2016

2.3 Carrying out and results of the tests at EPH

Acc. to the requirements of EN 622-5, the following properties were established following valid test regulations:

Formaldehyde content	EN 120
Formaldehyde release (for covered materials)	EN 717-2
PCP	IHD-standard W 409
Lindane	IHD-standard W 410
Migration of Elements	EN 71-3 (2013)

The formaldehyde content acc. to DIN EN 120 was in each case carried out as twin determination; the values quoted relate to a material moisture of 6.5 %.

2.4 Results of the test reports at hand

The engineer in charge organized the cutting of the received samples and handed over to the EPH test laboratory for conditioning and testing.

The results gained from the panels tested are compared with the requirements of dry process fibreboards (MDF) acc. to EN 622-5, panel type MDF, nominal thickness range >6 – 30 mm.

Table 1 Properties of the tested sample material

Property			Variant					
			1184	1222	1186	1187	1188	1189
			Nominal thickness					
			8 mm	18 mm	28 mm	10 mm	16 mm	25 mm
Formaldehyde content [mg/100g]	\bar{x}		5.7	6.9	2.3	-	-	
	E1 limit acc. EN 120		≤ 8.0					
PCP [mg/kg]	\bar{x}		n. d.		n. d.	-	-	-
	ChemVerbotsV		≤ 5.0					
	IOS-MAT-0010		3.0					
Lindane [mg/kg]	\bar{x}		n. d.		n. d.	-	-	-
	RAL-GZ 430		≤ 0.5					
	IOS-MAT-0010		1.0					
Formaldehyde release [mg/m ² h]	\bar{x}		-	-	-	< 0.2	< 0.2	< 0.2
	E1 limit acc. EN 717-2		≤ 3.5					
Migration of Elements [mg/kg]	aluminium (Al)						71.9	
			70000					
	arsenic (As)	\bar{x}	-	-	-		n. d.	
		EN 71-3	47					
	barium (Ba)	\bar{x}	-	-	-		27.9	
		EN 71-3	18750					
	boron (B)						1.8	
			15000					
	cadmium (Cd)	\bar{x}	-	-	-		n. d.	
		EN 71-3	17					
	cobalt (Co)						n. d.	
			130					
	chromium (Cr)	\bar{x}	-	-	-		0.2	
		EN 71-3	460, 0.2 Cr VI					
	copper (Cu)						1.0	
			7700					
	mercury (Hg)	\bar{x}	-	-	-		n. d.	
		EN 71-3	94					
	manganese (Mn)	\bar{x}					66.9	
		EN 71-3	15000					
	nickel (Ni)	\bar{x}					0.5	
		EN 71-3	930					
	lead (Pb)	\bar{x}	-	-	-		0.4	
		EN 71-3	160					
	antimony (Sb)	\bar{x}	-	-	-		n. d.	
		EN 71-3	560					
	selenium (Se)	\bar{x}	-	-	-		n. d.	
		EN 71-3	460					
	tin (Sn)	\bar{x}					0.2	
		EN 71-3	180000, 12					
	strontium (Sr)	\bar{x}					6.7	
		EN 71-3	56000					
	zinc (Zn)	\bar{x}					4.8	
		EN 71-3	46000					

n. d. not detectable

3 Findings

3.1 Findings of the inspection of the manufacturing site

The laboratory facilities and equipment are available and in proper condition.

The inspection of the documentation of internal control testing resulted in no complaints regarding the tested chemical properties.

3.2 Evaluation of the test results

In accordance with the chemical prohibition regulation (ChemVerbotsV) §1 (3) in connection with the federal health sheet (10/91) (pages 488-489) about "test methods for wood based materials" for single values of an uncoated fibre boards a Perforator value of 8.0 mg HCHO/100 g at board may not be exceeded. The half yearly average value is 7.0 mg HCHO/100 g at board. The values are valid for a moisture content of 6.5 %.

Furthermore the limiting value for Pentachlorophenol is 5 mg/kg according to the ChemVerbotsV §1 (15). According to EN 13986, S. 27, Pkt. 5.18 the product has to be indicated at a content of PCP \geq 5 ppm.

In accordance with the chemical prohibition regulation (ChemVerbotsV) § 1 (3) in connection with the federal health sheet (10/91) (pages 487-489) about "test methods for wood based materials" for coated wood-based materials the limit value is a gas analysis value of 3.5 mg HCHO/hm².

According to EN 71-3 the following limits of the heavy metals aluminium (70000 mg/kg), arsenic (47 mg/kg), barium (18750 mg/kg), boron (15000 mg/kg), cadmium (17 mg/kg), cobalt (130 mg/kg), chromium (460 mg/kg, 0.2 Cr VI), copper (7700 mg/kg), mercury (94 mg/kg), manganese (15000 mg/kg), nickel (930 mg/kg), lead (160 mg/kg), antimony (560 mg/kg), selenium (460 mg/kg), tin (180000 mg/kg, 12 mg/kg), strontium (56000 mg/kg), zinc (46000 mg/kg) fixed.

The formaldehyde content of the tested MDF for internal use as a non-structural component in dry conditions according to EN 622-5 is in the range from 2.3 to 6.9 mg HCHO/100 g at board (B-value).

The value of the formaldehyde release of the tested MDF for internal use as a non-structural component in dry conditions according to EN 622-5 is < 0.2 mg HCHO/hm².

The tested MDF for internal use as a non-structural component in dry conditions meet the requirements on the material characteristic value of wood based materials regarding formaldehyde and fulfil the formaldehyde class E1 according to EN 13986, annex B, table B1.

The tested melamine faced MDF for internal use as a non-structural component in dry conditions meet the requirements on the material characteristic value of wood based materials regarding formaldehyde and fulfil the formaldehyde class E1 according to EN 13986, annex B, table B1.

The tested fibre boards / type MDF meet the requirements of the limiting and material characteristic value regarding PCP.

The fibre boards / type MDF have not to be indicated according to EN 13986 regarding the PCP content.

The tested MDF for internal use as a non-structural component in dry conditions correspond to the requirements of the EN 71-3.

4 Obligations

4.1 Completion of the obligations from the previous surveillance

Not applicable

4.2 New obligations

Obligations were not detected.

5 Summary of the evaluation of the surveillance

The inspection of the manufacturing site resulted in no complaints.

The tested MDF for internal use as a non-structural component in dry conditions meet the requirements on the material characteristic value of wood based materials regarding formaldehyde and PCP.

The tested melamine faced MDF for internal use as a non-structural component in dry conditions meet the requirements on the material characteristic value of wood based materials regarding formaldehyde and EN 71-3.

The products and the FPC meet the requirements of supervision contract QP-07-04-02, Reg.-No. : 2306020, including respective supplements.

The next external monitoring should be scheduled for (2nd half of 2016).

Dresden, 1 April 2016



Dipl.-Ing.(BA) Mäbert
Engineer in charge

6 Assessment and certification decision

The statements made in this report's findings, and thus the certification made under this voluntary monitoring, are hereby confirmed.

Dresden, 1 April 2016



Dr.-Ing. Rico Emmeler
Product certification body