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Test Report No. QA-2013-2288

Client: EGGER Romania S.R.L.
Str. Austriei 2, cam. 2,
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Romania

Method and object of the test: External supervision of wood based materials regarding formaldehyde release

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The report comprises 3 pages and 1 appendix.

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The test material was used up.



1. Task

External supervision of wood based materials according to the "Regulation on the classification and external supervision of wood-based panels regarding formaldehyde emission (DIBt-Guideline 100)" version June 1994 resp. to the "Regulation on the Prohibition of Chemicals [Chemikalien-Verbotsverordnung (ChemVerbotsV)]" using the gas analyse method.

The supervision is done according to the contract 493 dated 20 December 2006 between the client and the WKI; corresponding to this contract the attestation no. 330 is valid for the supervision period mentioned.

2. Material

| | |
|----------------------------|-------------------------------------|
| Type of wood-based panels: | particleboard, recipe: 1, laminated |
| Technical type: | EN 312, P2; DIBt 100, E1 |
| Plant category: | EURODEKOR E1 P2 |
| Thickness [mm]: | 32 |
| Thickness range [mm]*: | ≤ 40 |
| Identity No.: | 3508 |

* Reference note:

According to the DIBt-Guideline 100 the manufacturer is allowed to differentiate between the following thickness ranges in order to enable him to restrict test and evaluation criteria: up to 12 mm, more than 12 mm up to 25 mm, more than 25 mm up to 40 mm, more than 40 mm up to 60 mm, more than 60 mm.

The boards were sampled on 4 September 2013 by a WKI's representative. Referring to the information given by the customer the samples were produced on 15 August 2013. The sampling was carried out in accordance with the DIBt-Guideline 100. The tests were carried out on 5 November 2013, 6 November 2013. The test material was used up.

3. Test methods

The determination of release was carried out according to gas analysis method DIN EN 717-2: 1995-01. Coated boards were tested without a prior conditioning. Uncoated plywood were tested after a four weeks storage in norm climate DIN 50 014 - 20/65-1. The sample size was 400 mm x 50 mm x thickness. The edges of the test pieces were coated with self-adhesive aluminium tape before testing. Moisture content was determined according to DIN EN 322:1993-08.

4. Test results

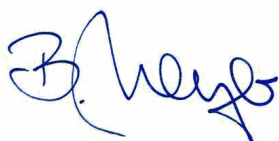
The test results are made up in following table. The gas analysis values are mean values of a double testing. The total mean value must be less or equal to the limit value of $\leq 3.5 \text{ HCHO}/(\text{h}\cdot\text{m}^2)$. Non of the three mean values of the boards may not exceed the limit value by more than 10 %. (General limit values see appendix)

| Identity-No. | Thickness [mm] | Moisture content [%] | Gas analysis value ^{*)**}) [mg HCHO/(h·m ²)] |
|--------------|----------------|----------------------|--|
| 3508/1 | 32 | 6.8 | < 0.1 |
| 3508/2 | 32 | 7.0 | 0.1 |
| 3508/3 | 32 | 6.8 | 0.1 |
| \bar{x} | | 6.9 | 0.1 |

*) tested with sealed edges

***) coated boards tested without a conditioning;

uncoated plywood tested after a four weeks storage in norm climate DIN 50 014 - 20/65-1



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Appendix (Assessment criterias)

According to the German Prohibition for Chemical Products – "Chemikalien Verbotverordnung" – annex § 1, para 3, in relation with the publication of the Federal Health Office in the journal "Bundesgesundheitsblatt", issue October 1991 (p. 487 – 489), the limit value are as follow:

Table 1: Gas analysis values for uncoated plywood

| | Gas analysis values ^{*)} [mg HCHO/(h·m ²)] | |
|---|--|--------------|
| | average value | single value |
| immediately testing (max. 3 days after production) | 5,0 | 6,0 |
| Testing after a four weeks storage in norm climate DIN 50 014 - 20/65-1 | 2,5 | 3,5 |

^{*)}the average value is defined as rolling half-years average value, the single value is defined as 95 % percentil

Table 2: Gas analysis values for coated boards. The used uncoated wood based panel (particleboard or MDF) has to fulfil the requirements as well.

| | single values [mg HCHO/(h·m ²)] | |
|----------------|--|--------------------|
| | coated boards | PF (of core board) |
| particleboards | ≤ 3,5 | ≤ 10 |
| fibreboards | ≤ 3,5 | ≤ 10 |
| plywood | ≤ 3,5 | ** |

** single values of core board look at table1