| | | | Fraunhofer |
|---|--|---------------------------|---|
| Fraunhofer WKI Bienroder Weg 54 E 381 | 08 Braunschweig Germany | | Fraunhofer Institute for Wood Research Wilhelm-Klauditz-Institut WKI |
| AGROP NOVA a.s. | | | Director (acting) Prof. Dr. Tunga Salthammer |
| Ptensky Dvorek 99 798 43 Pteni Czech Republic | | | DiplIng. Harald Schwab Head of the Testing, Supervision and Certifying Body |
| | | | Bienroder Weg 54 E 38108 Braunschweig |
| | | | Bettina Meyer Project manager formaldehyde analytics Quality Assessment QA Telefon + 49 531 2155-375 Fax + 49 531 2155-907 bettina.meyer@wki.fraunhofer.de www.wki.fraunhofer.de |
| Your reference Yo | ur message dated | Our reference Mey | Braunschweig, 15 June 2010 |
| | Test report | <u>No. QA-2010-162</u> | <u>21</u> |
| Customer: | AGROP NOVA Ptensky Dvore 798 43 Pteni Czech Republi | v a.s. k 99 ic | |
| Receipt of sample: | 12 May 2010 | | |
| WKI-ID-No.: | 560/10 | | |
| Date of test: | 14 June 2010 | | |
| Objective of the test: | Determination | n of formaldehyde re | elease |
| Content of the test report | 1. Task and te 2. Execution o | st material f the test | Page 2 Page 2 |

This test report comprises 2 pages and 1 table.

Prof. (Univ. Stellenbosch) Dr. rer. pol. Alfred Gossner

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.

3. Test results

| Durch die oberste Bauaufsichtsbehörde anerkannte | Akkreditierte Inspektionsstelle |
|--|---------------------------------|
| Prüf-, Überwachungs- und Zertifizierungsstelle | DAC-IS-0009-08 |
| CARB notified TPC 4 EC notified 0765 | Prüfstelle DAP-PL-2071.00 |

Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung e.V., München Executive Board Univ.-Prof. Dr.-Ing. habil. Prof. e.h. mult. Dr. h.c. mult. Hans-Jörg Bullinger, President Prof. Dr. rer. nat. Ulrich Buller Cheques and transfers payable to: Deutsche Bank, München Account 752193300 BLZ 700 700 10 IBAN DE86 7007 0010 0752 1933 00 BIC (SWIFT-Code) DEUTDEMM V.A.T. Ident No. DE129515865 Tax Number 143/215/20392

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- Page 2 - of 2 to test report No. QA-2010-1621 dated 15 June 2010



1. Task and test material

The Fraunhofer-Institut für Holzforschung, Wilhelm-Klauditz-Institut (WKI), was entrusted by Messrs. AGROP NOVA a.s. in 798 43 Pteni (Czech Republic) with the determination of the formaldehyde release, 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 test

The test material arrived at WKI packed in polyethylene foil on 12 May 2010, was marked with WKI-ID-No. "560/10" and stored under room conditions before starting the four-week conditioning period. The determination of the formaldehyde release was carried out after a four-week conditioning period of the samples according DIN 50 014 – 20/65- using the gas analysis method DIN EN 717-2:1995-01. 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.

3. Test results

The table enclosed to the test report shows the formaldehyde values of the tested sample(s). They are specified as individual values and as a mean value of repeated determinations.

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 "Bundesgesund-heitsblatt", issue October 1991 (p. 487 – 489), the limit value for uncoated plywood and blockboard samples after a four-week conditioning period is a gas analysis value of \leq 3.5 mg HCHO/(h·m²).

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

Bettina Meyer Official in charge

7 Schurah

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

Enclosure to test report No. QA-2010-1621 dated 15 June 2010



Table:Formaldehyde release of (a) sample(s) ordered byMessrs. AGROP NOVA a.s. in 798 43 Pteni (Czech Republic)

Date of receipt: 12 May 2010 Date of test: 14 June 2010

| WKI-ID- No. | Specimen | thick- ness | moisture content | gas analysis value* mg HCHO/(h∙m²) | |
|----------------|---|----------------|---------------------|---------------------------------------|------------------|
| | | | 70 | individual values | average value |
| 560/10 | "Agrop sample 1 Product code: 1216/2545/4490 Manufacturer: Agrop Nova a.s. Date stamp: 24.3.2010" - three layer board, uncoated | 19 | 10.9 | 0.4 0.3 | 0.4 |

* tested with sealed edges after 4 week preconditioning

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| Fraunhofer WKI Bienroder Weg 54 E 38 | 3108 Braunschweig Germany | | Fraunhofer Institute for Wood Research Wilhelm-Klauditz-Institut WKI |
| AGROP NOVA a.s. Ptensky Dyorek 99 | | | Director (acting) Prof. Dr. Tunga Salthammer |
| 798 43 Pteni Czech Republic | | | DiplIng. Harald Schwab Head of the Testing, Supervision and Certifying Body |
| | | | Bienroder Weg 54 E 38108 Braunschweig |
| | | | Bettina Meyer Project manager formaldehyde analytics Quality Assessment QA Telefon + 49 531 2155-375 Fax + 49 531 2155-907 bettina.meyer@wki.fraunhofer.de www.wki.fraunhofer.de |
| Your reference Y | our message dated | Our reference Mey | Braunschweig, 15 June 2010 |
| | Test report N | No. QA-2010-1622 | |
| Customer: | AGROP NOVA Ptensky Dvorek 798 43 Pteni Czech Republic | a.s. < 99 | |
| Receipt of sample: | 12 May 2010 | | |
| WKI-ID-No.: | 561/10 | | |
| Date of test: | 14 June 2010 | | |
| Objective of the test: | Determination | of formaldehyde relea | se |
| Content of the test repor | t: 1. Task and tes 2. Execution of | st material f the test | Page 2 Page 2 |

3. Test results

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| Durch die oberste Bauaufsichtsbehörde anerkannte | Akkreditierte Inspektionsstelle |
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| Prüf-, Überwachungs- und Zertifizierungsstelle | DAC-IS-0009-08 |
| CARB notified TPC 4 EC notified 0765 | Prüfstelle DAP-PL-2071.00 |

Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung e.V., München Executive Board Univ.-Prof. Dr.-Ing. habil. Prof. e.h. mult. Dr. h.c. mult. Hans-Jörg Bullinger, President Prof. Dr. rer. nat. Ulrich Buller

Prof. (Univ. Stellenbosch) Dr. rer. pol. Alfred Gossner



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Page 2

- Page 2 - of 2 to test report No. QA-2010-1622 dated 15 June 2010



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2. Execution of the test

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

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

Enclosure to test report No. QA-2010-1622 dated 15 June 2010



Table:Formaldehyde release of (a) sample(s) ordered byMessrs. AGROP NOVA a.s. in 798 43 Pteni (Czech Republic)

Date of receipt: 12 May 2010 Date of test: 14 June 2010

| WKI-ID- No. | Specimen | thick- ness mm | moisture content % | gas analysis value* mg HCHO/(h+m²) | |
|----------------|---|----------------------|--------------------------|---------------------------------------|------------------|
| | | | , | individual values | average value |
| 561/10 | "Agrop sample 2 Product code: 1216/2532/4490 Manufacturer: Agrop Nova a.s. Date stamp: 24.3.2010" - three layer board, uncoated | 19 | 11.3 | 0.2 0.4 | 0.3 |

* tested with sealed edges after 4 week preconditioning