Fraunhofer Wilhelm-Klauditz-Institut Holzforschung

Quality Assessment

WKI · FRAUNHOFER-INSTITUT · Bienroder Weg 54 E · D-38108 Braunschweig

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

Bienroder Weg 54 E
38108 Braunschweig, Germany
http://www.wki.fhg.de

Phone +49 (0) 531/2155-370
Telefax +49 (0) 531/2155-907
e-mail: harald.schwab@wki.fhg.de

Officer in charge: Bettina Meyer
Phone: +49 (0) 531/2155-375
e-mail: meyer@wki.fhg.de

Xella
Trockenbau-Systeme GmbH

Dammstraße 25

47119 Duisburg
Germany

Your reference	Your message dated	Our reference	Braunschweig,
		Mey	29 June 2005

Test report No. B1310A/05

Customer:	Xella Trockenbau-Systeme GmbH Dammstraße 25 47119 Duisburg (Germany)
Order of:	12 April 2005
Receipt of sample:	23 May 2005
WKI-ID-No.:	718/05
Start of test:	23 May 2005
Objective of the test:	Determination of formaldehyde release

Content of the test report:

This test report comprises 3 pages and 1 figure.

EC Notified 0765	Testing, Supervising and Certifying Body authorised by the Principal Authority for Supervision of Construction
Deutscher Akkreditierungs Rat DAP-PL-2071.00	Testing laboratory authorised by DAP Deutsches Akkreditierungssystem Prüfwesen GmbH according to DIN EN ISO/IEC 17025. The requirements of the DIN EN ISO 9001 : 1994 are fulfilled. The authorisation covers the test methods listed in the certificate.

Fraunhofer Wilhelm-Klauditz-Institut
Holzforschung

Quality Assessment

1. Task and test material

The Fraunhofer-Institut für Holzforschung, Wilhelm-Klauditz-Institut (WKI), was entrusted by Messrs. Xella Trockenbau-Systeme GmbH in 47119 Duisburg (Germany) with the determination of formaldehyde emission value of a Fermacell sample with thickness of 12,5 mm 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 „Bundesgesundheitsblatt", issue October 1991 (p. 487 – 489).

The test material has been chosen, marked with

„Fermacell GF 12,5
W1.2 H 19.05.05 00:18
CE 04 ETA-03/0050 EN 13501-1 A2
K 2103 UZ-9.1-434"

and sent for testing to the WKI by the customer.

2. Execution of the test

For the determination of formaldehyde release one sample with the dimensions of 100 cm x 50 cm x thickness with a total emission capacity of 1 m^2 was put into a 1 m^3 chamber. The edges were sealed with self-adhesive aluminium tape before testing to get a ratio U (unsealed edges) / A (surface area) of 1,5 m/m^2. During the test the temperature was kept at 23°C ± 0,5 K, the relative humidity of the air was kept at 45 ± 3 % and the air exchange rate was adjusted to 1 h^{-1}. Therefore, the relationship between air exchange level and room load was 1. The concentration of formaldehyde in the chamber was measured twice a day until steady state concentration was reached using the acetylacetone-method (VDI-guideline 3484-2: November 2001).

The test parameter above-mentioned correspond to EN 717-1:2005-01.

Fraunhofer Wilhelm-Klauditz-Institut Holzforschung

Quality Assessment

3. Test result

For the tested Fermacell sample with a thickness of 12,5 mm as tested as described in Ch. 2 a formaldehyde concentration of 0,01 ppm has been determined in the 1 m³ chamber (testing period: 243 hours – see picture – 1 ppm ≙ 1,2 mg HCHO/m³ air at 20°C and 1013 hPa).

This value is much lower than 0,1 ppm, showing that the tested sample of Messrs. Xella Trockenbausysteme GmbH in 47119 Duisburg (Germany) fulfils the requirements of the German Prohibition Regulation for Chemical Products - ChemVerbotsV - concerning wood based materials.

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
Officer in charge

Dipl.-Ing. Stephan Thiele
Deputy Head of Testing, Supervision and Certifying Body

Determination of formaldehyde release using a 1 m³ chamber
Fermacell sample, thickness: 12,5 mm, named
"Fermacell GF 12,5 - W1.2H 19.05.05 00:18 - CE 04 ETA-03/0050
EN 13501-1 A2 - K 2103 ZU-9.1"
of Messrs. Xella Trockenbau-Systeme GmbH in Duisburg

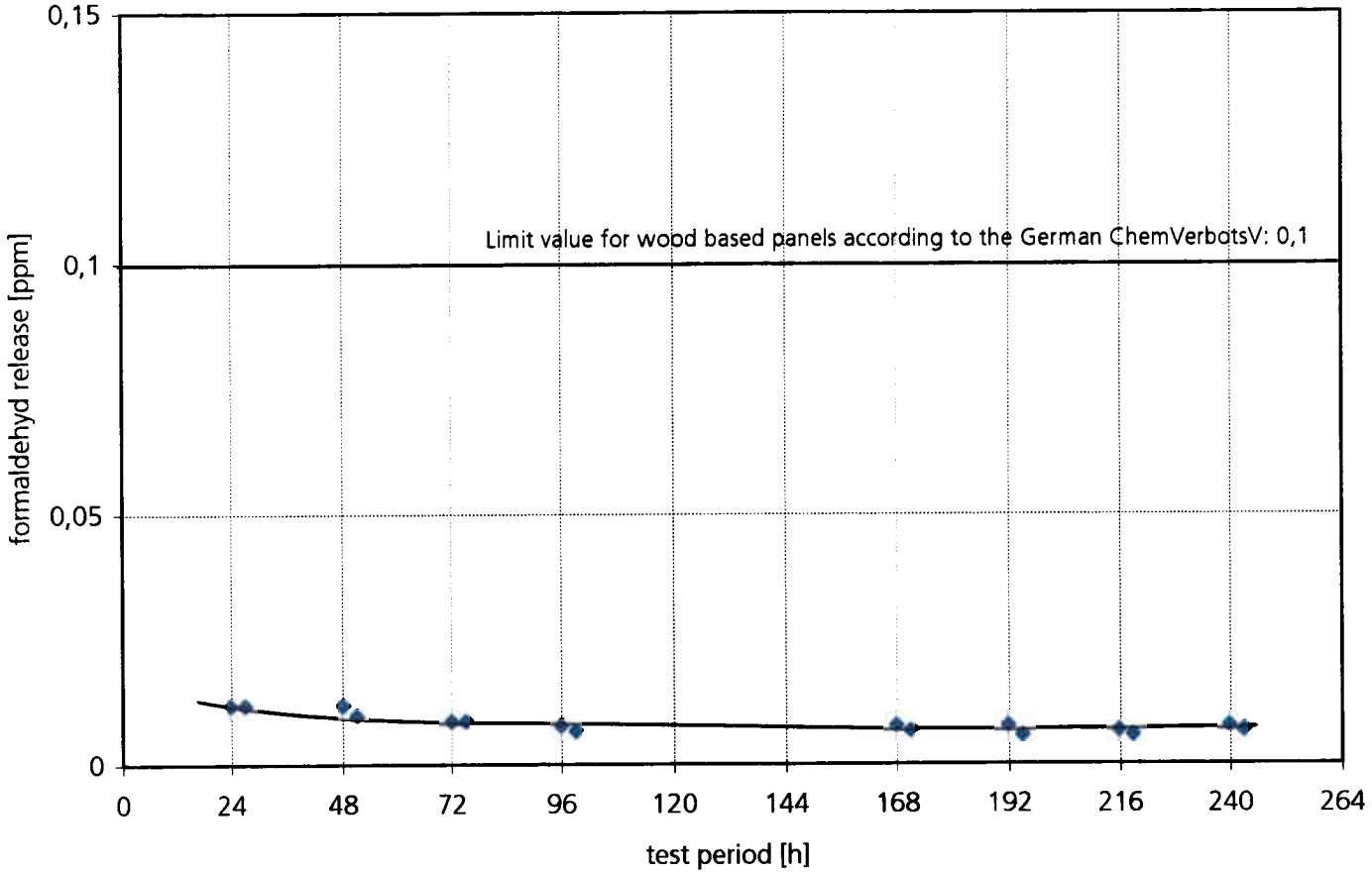

Figure to test report No. B1310A/05 dated 29 June 2005

Fraunhofer Wilhelm-Klauditz-Institut
Holzforschung
Quality Assessment