

This test report comprises 3 pages and 1 table.

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.

Durch die oberste Bauaufsichtsbehörde anerkannte	Akkreditierte Inspektionsstelle
Prüf-, Überwachungs- und Zertifizierungsstelle	DAC-IS-0009-08
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## Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung e.V., München Executive Board

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## 1. Task and test material

The Fraunhofer-Institut für Holzforschung, Wilhelm-Klauditz-Institut (WKI), was entrusted by Messrs. Sauerländer Spanplatten GmbH & Co. KG in 59821 Arnsberg (Germany) with the determination of the formaldehyde release according to the Japanese standard JIS A 1460:2001, description of sample(s) see table(s) enclosed.

The test material was selected, marked by the client and delivered to the WKI for examination.

The test material arrived at WKI packed in polyethylene foil on 9 February 2010, was marked with WKI-ID-No. "156/10" and stored under room conditions(at 23°C / 50 % relative humidity). It was unpacked and cut off on 10 February 2010 and conditioned for seven days at a temperature of 20°C and a relative humidity of 65%. The JIS test started on 17 February 2010.

## 2 . Execution of the test

The determination of the formaldehyde release was made according to the Japanese test method called JIS A 1460:2001.

The sample was cut off into 7 pieces each with the dimension of 150 mm x 50 mm x thickness. They were placed on a grid made out of stainless steel by using metallic holders in a circle above a glass dish containing 300 ml distilled water.

This arrangement was kept for 24 hours at a temperature of 20°C in a desiccator (according to JIS R 3503; inner volume: 11 l). The formaldehyde content of the distilled water (having absorbed formaldehyde evaporated from the specimens) was determined by using the acetylaceton method. The tests were carried out after a prior conditioning of the samples for seven days at a temperature of 20°C and a relative humidity of 65%.

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## 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 a repeated determination as well.

Following limit values regarding formaldehyde release are fixed for uncoated and coated particleboards (JIS A 5908:2003) or MDF (JIS A 5905:2003) determined by using the desiccator method JIS A 1460:

formaldehyde grade	average value	single value	
	[mg HCHO/L]	[mg HCHO/L]	
F☆☆☆☆	mean 0.3 or under	maximum 0.4 or under	
Fxxx	mean 0.5 or under	maximum 0.7 or under	
F☆☆	mean 1.5 or under	maximum 2.1 or under	

According to IKEA Specification "IOS-MAT-0003" for  $F^{\pm\pm\pm\pm}$  particleboards and fiberboards tested by desiccator method JIS A 1460 a limit value of 0.3 mg/L has to be adhered to.

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-2010-0616 dated 3 March 2010



Table:Formaldehyde release of according to the Japanese standard JIS A 1460:2001of a sample ordered by Messrs. Sauerländer Spanplatten GmbH & Co. KG in<br/>59821 Arnsberg (Germany)

Date of receipt:	9 February 2010
Start of conditioning period:	10 February 2010
Conditioning period:	7 days
Start of test:	17 February 2010

WKI-ID- No.	Specimen	Thickness mm	Number of test pieces	Formaldehyde release mg / Liter *	
				individual values	average value
156/10	"Tubular board – type 30 NI" - tubular board, uncoated	30.0	7	< 0.01 0.01	0.01
	Blank value	-	-	0.01	-

\* Determination was carried out after a prior conditioning of the samples for seven days at a temperature of 20°C and a relative humidity of 65%