Evaluation according to French VOC-REG 2011

A62510004

1. General Information

Testing laboratory	ALAB - Analyse Labor in Berlin GmbH
Responsible laboratory staff	Linn Fischer
Number of the test report	A62510004
Client/Applicant	IBO Innenraumanalystik OG
Name of the product and material number	D4131
Control type	Other
Date of batch production	
Date of receipt of the sample	2025-10-27
Storage of the sample until testing	normal room conditions
Product Group	Other Products

Description of the construction product:

Parameter	Manufacturer	Laboratory
General description of the product	wand panel	
Total thickness		
Area weight		
Additional information		

Comments

2. Test parameter

Date of the completion of the test specimen	2025-10-27
Preparation of the test specimen by	Linn Fischer, Kathleen Jauw
Used auxiliary materials	aluminum foil, aluminum adhesive tape
Start of preconditioning	
Placing of the test specimen into the test chamber and start of testing	2025-10-27
Arrangement of the test specimen in the test chamber	lying flat in metal stand
Covering of the edges? Ratio of covered edges to uncovered edges?	bottom and edges covered with aluminum tape
Use of the break-off criteria	No
Manufacturer/type of the test chamber	ALAB - Analyse Labor in Berlin GmbH
Material of the test chamber	stainless steel chamber with glass cover
Volume of the test chamber [m³]	0.11
Area of the test specimen [m²]	0.11
Air exchange rate [1/h]	0.5
Area specific air flow rate [m/h]	0.500
Temperature [°C]	23±1
Relative humidity [%]	50±5
Comments on testing	

3. Evaluation for French VOC-REG 2011

Parameter	Day 28					
			A+	A	B	C
	[µg/m³]	[µg/m³]	[µg/m³]	[µg/m³]	[µg/m³]	[µg/m³]
TVOC	173	**173**	<1000	<1500	<2000	2000
Formaldehyde	-	**-**	<10	<60	<120	120
Acetaldehyde	-	**-**	<200	<300	<400	400
Toluene	-	**-**	<300	<450	<600	600
Tetrachlorethene	-	**-**	<250	<350	<500	500
Xylene	-	**-**	<200	<300	<400	400
1,2,4-Trimethylbenzene	-	**-**	<1000	<1500	<2000	2000
1,4-Dichlorbenzene	-	**-**	<60	<90	<120	120
Ethylbenzene	-	**-**	<750	<1000	<1500	1500
2-Butoxyethanol	-	**-**	<1000	<1500	<2000	2000
Styrene	-	**-**	<250	<350	<500	500
Total			A+			

4. Measurement

4.1. Day 28

Date of measurement: 2025-11-24
TVOC ISO 16000-6: -

CAS-No.	Compound name	Ret. Range	RT [min]	C [µg/m³]	Quantification	C_tol [µg/m³]	Identification	Comment
71-36-3	1-Butanol	VOC	6.19	1	specific		I	
104-76-7	2-Ethyl-1-hexanol	VOC	17.48	3	specific		I	
98-01-1	Furfural	VOC	10.97	6	specific		I	
64-19-7	Acetic acid	VOC	5.6	155	specific		I	
79-09-4	Propionic acid	VOC	6.91	2	specific		I	
107-92-6	Butyric acid	VOC	9.34	1	specific		I	
142-62-1	n-Caproic acid	VOC	15.61	1	specific		I	
67-64-1	Acetone	VVOC	-(no RT)-	3	DNPH			
	sum of further voc	VOC	-(no RT)-		similar	4		
	Not identified SVOC	SVOC	26.76		similar	2		

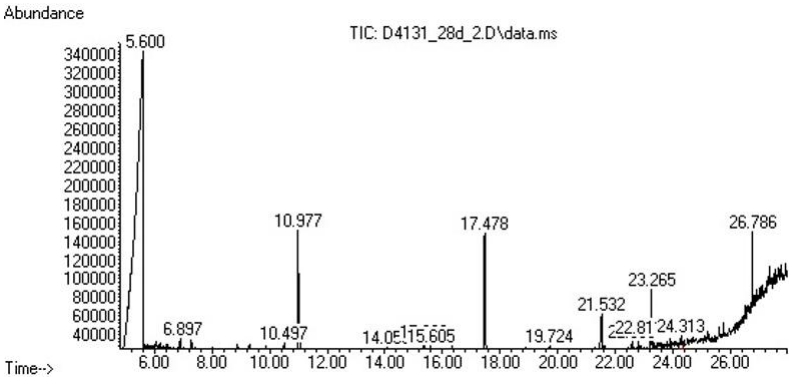
5. Images

5.1. Specimen image

5.2. Product image

6. Chromatograms

6.1. Day 28



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DAkkS Deutsche Akkreditierungsstelle D- PL-18883-01-00

Nach DIN EN ISO/IEC 17025:2005 durch die DAkkS akkreditiertes Prüflaboratorium. u. a. für die Prüfgebiete: **Innenraumschadstoffe** (Luft, Staub, Bau- und Ausstattungsmaterial einschließlich **Prüfkammer- bzw. Prüfzellenuntersuchungen**). Die Akkreditierung gilt für die in der Urkunde aufgeführten Prüfverfahren.

Berlin, 01.12.2025

Examination report no. **A 625 10 004**
Project: D4131

Customer: IBO Innenraumanalytik OG
Stutterheimstr.16-18/2
1150 Wien
Österreich

Contractor: ALAB GmbH
Wilsnacker Str. 15
10559 Berlin

Order receipt: 27.10.2025
Begin of examination: 27.10.2025
End of examination: 01.12.2025

This report contains 4 pages and annex of the French Décret no 2011-321.

1 Object of Examination

The object of examination is the wall panel "D4131", which was delivered carefully packaged on 27.10.2025. The date of sampling is unknown.

2 Extend of Examination

We tested the sample to search for volatile and media-volatile organic compounds (VVOC, VOC and SVOC). Analyses applied to the scheme of the AgBB for the evaluation of the emission of volatile organic compounds for products of the building industry. The French Décret no 2011-321 requires to take samples on Tenax and DNPH-cartridges after 28 days.

3 Method of examination

3.1 Completion of the test specimen

To complete the test specimen (0,332 m x 0,332 m), the bottom and the edges were covered with aluminum foil or aluminum tape. Following, the test specimen was transferred into the test chamber.

Figure 1: test specimen „D4131“ in the test chamber

3.2 Test Chamber

The analysis was performed in a stainless-steel test chamber with glass cover in accordance with DIN EN ISO 16000-9:2008-04 and DIN EN 16516:2020-10. The test chamber had a cubic content of 110 litres. Examination temperature within the chamber was 23°C ± 1°C. The relative humidity was adjusted to 50 % ± 5 % und the rate of air exchange to 0,5 h^{-1}. The flow velocity ranges between 0,1 and 0,3 m/s. The area specific flow rate (q=n/L) was 0,5 m^3/m^2h ± 3 %.

After defining the blank value of the air within the test chamber, the specimen was transferred into the test chamber on 27.10.2025. We took the samples on 24.11.2025 (28 days measurement).

3.3 Analysis of volatile organic compounds (VOC)

Within each sample drawing, we took two air samples via sampling automats (type "Gilian GilAir plus") on sorbent tubes filled with Tenax TA. The volume was between 2 and 4 litres air of the test chamber.

The substances to be analysed were thermically desorbed of the loaded tenax tubes. The quantitative Analysis was performed according to DIN ISO 16000-6:2022-03 with capillary gas chromatography coupled with mass spectrometry (GC/MS). The individual substances were analyzed according to the external standard method. For the evaluation of further substances, a full scan chromatogram was used.

3.4 Analysis of Aldehydes and Ketones

Within each sample drawing, we took one air sample via sampling automats (type "Gillian GilAir plus") on sorbent tubes "Supelco LPDNPH S10" for volatile Aldehydes. The volume was 60 litres air of the test chamber for each measurement.

The loaded DNPH-cartridges were desorbed with acetonitrile. The quantitative Analysis was performed according to DIN ISO 16000-3:2023-12 with high pressure liquid chromatography (HPLC) with UV-detector (VWD) according to the external standard method.

4 Results

The results are specified in the annex.

Parameter	D4131 after 28 days [µg/m³]	A+ [µg/m³]	A [µg/m³]	B [µg/m³]	C [µg/m³]
TVOC	173	< 1000	< 1500	< 2000	≥ 2000
Formaldehyde	< 3	< 10	< 60	< 120	≥120
Acetaldehyde	< 3	< 200	< 300	< 400	≥ 400
Toluene	< 1	< 300	< 450	< 600	≥ 600
Tetrachlorethene	< 1	< 250	< 350	< 500	≥ 500
Xylene	< 1	< 200	< 300	< 400	≥ 400
1,2,4-Trimethylbenzene	< 1	< 1000	< 1500	< 2000	≥ 2000
1,4-Dichlorbenzene	< 1	< 60	< 90	< 120	≥ 120
Ethylbenzene	< 1	< 750	< 1000	< 1500	≥ 1500
2-Butoxyethanol	< 1	< 1000	< 1500	< 2000	≥ 2000
Styrene	< 1	< 250	< 350	< 500	≥ 500
trichloroethylene, benzene, DEHP and DBP are not detectable (< 1 µg/m³)					

Table 1: evaluation of the test specimen „D4131“ (French VOC-REG 2011)

5 Results of examination

The examined product "D4131" can be classified by the actual French VOC regulation in the emissionclass A+.

6 Annotation

The results of examination only relate to the items of examination. Storable samples will be kept for 12 weeks, if no different agreement has been fixed.

This analysis report may only be published completely. Partial publication could falsify the content of the report and is therefore subject to prior authorisation.

Sincerely,

B. Kafadaroğlu

Barbara Kafadaroğlu
(QMB)

L. Fischer

Linn Fischer
(verantwortliche Prüferin)