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Test report 5741015
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Dresden, 04. April 2022

Emission test by means of test chamber method according to DIN EN 16516 (2018-01) for VOC and aldehydes - test according to the requirements AgBB scheme (2021-06)

Customer:	SGS Espanola de Control, S.A.
Your Reference/Order No.:	PIVEMA / VOC - AgBB
Contact person customer:	Íñigo Garcia Vázquez
Sample number:	220001233
Sample identification:	AQUAPOX, Base (container 900 gr) + Catalizador (container 200 gr), Pivema
Date of delivery:	28.01.2022
Test period:	18.02.2022 – 24.03.2022

Dieser Prüfbericht ersetzt unseren Prüfbericht 5727416 vom 25.03.2022.
- The name of the tested product was corrected -

SGS Institut Fresenius GmbH

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Geschäftsführerin: Alida Scholtz, Aufsichtsratsvorsitzender: Wim van Loon, Sitz der Gesellschaft: Taunusstein, HRB 21543 Amtsgericht Wiesbaden

1. Order content

The emission of volatile organic compounds (VOC) and formaldehyde shall be determined according to the requirements of AgBB scheme (2018-08).

The emission test is performed according to DIN EN 16561 (2018-01).

2. Product description

Sampling location:	unknown
Date of sampling:	unknown
Product name:	Aquapox (Base + Catalizador)
Sample type:	Epoxy Flooring
Item number:	LOTE 76604
Batch number:	unknown
Production date Batch:	unknown
Sample taken from:	unknown
Place of storage/packaging:	inventory level

Fig. 1 – Delivery condition



Fig. 2 - Delivery condition

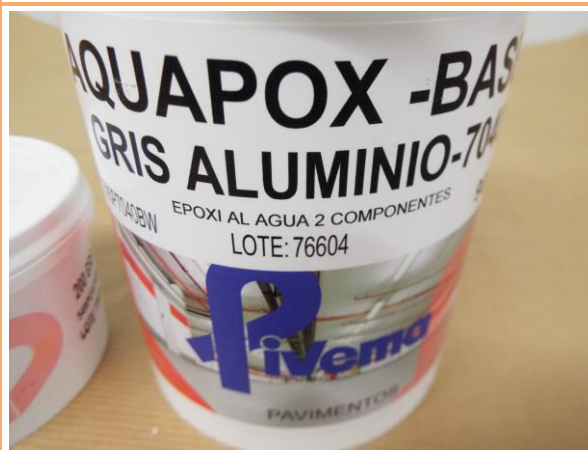


Fig. 3 - Prepared test piece

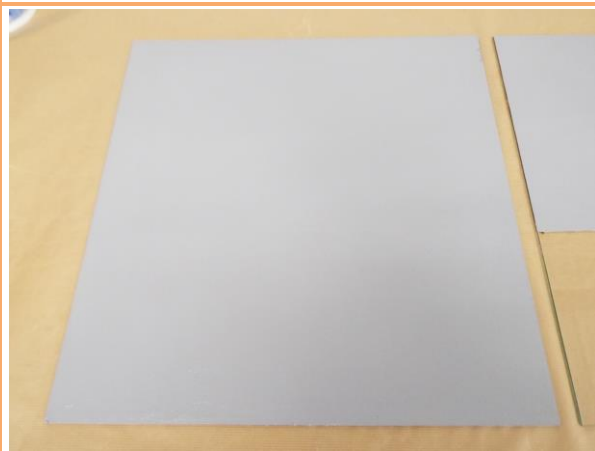


Fig. 4 – Placed in emission chamber



3. Sample preparation

Aquapox Base and the Catalyst were mixed in a ratio of 4.5:1. This mixture was applied to an inert material (glass) at a rate of 125g/m² for one layer. In total, 2 layers were applied.

4. Test conditions

The emission test was determined under the following defined conditions:

Temperature	(23 ± 1) °C
Relative humidity	(50 ± 5) %.
Exposure duration	28 days
Air exchange rate n	0.5 ± 0.025 [1/h].
Product area	0,4 [m ²]
Test chamber volume	1 [m ³]
Product loading factor L	0,4 [m ² /m ³]
specific air flow rate	1,25 [m ³ / m ² h]

The emission on volatile organic compounds VOC is carried out after sampling on Tenax TA with subsequent thermal desorption and measurement with GCMS/FID according to DIN EN 16156 (2018-01).

The calculation of the results of identified target compounds (NIK list) is performed by means of substance-specific response factor. Non-target compounds as well as unidentified compounds are quantified by the response factor of toluene.

The limit of quantification is 1 µg/m³ per compound.

The expanded measurement uncertainty is approx. 20 - 40 % per compound.

The determination of formaldehyde and acetaldehyde is carried out after enrichment on DNPH cartridges and analysis by HPLC and UV detection according to DIN ISO 16000-3 (2013-01). The limit of determination is in each case 2 µg/m³ per compound.

The expanded measurement uncertainty is approx. 20 - 25 % per compound.

Before starting the test, a blank value check is carried out for all compounds to be determined.

5. Results

The conformity assessment is based on the requirements of the AgBB assessment scheme (06-2021) without taking measurement uncertainties into account.

5.1 Emission values $\mu\text{g}/\text{m}^3$

	Substance	CAS	Conc. Ci 3 days	Conc. Ci 7 days	Conc. Ci 28 days	LCI
			$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$
VVOC	Formaldehyde ¹	50-00-0	<2	<2	<2	100
VVOC	Acetaldehyde	75-07-0	<2	<2	<2	300
VOC	probably dimethyl sulfoxide	67-68-5	15 (TE)	8 (TE)	3 (TE)	-
Sum TVOC (C6-C16)*			15	8	-*	
Sum TSVOC (>C6 - C22)**			n. d.	n. d.	n. d.	
Carcinogenic substances ²			n. d.	n. d.	n. d.	
Total VOC without LCI ***			15	8	3	
R-Value			-	-	-	

5.2 Comparison of the results with the requirements according to the AgBB scheme (mg/m^3)

Substance	Conc. Ci 28 days	Requirements AgBB scheme final value 28 days
	mg/m^3	mg/m^3
Sum TVOC (C6-C16)*	≤ 1	≤ 1
Sum TSVOC (>C6 - C22)**	$\leq 0,1$	$\leq 0,1$
Carcinogenic substances ²	$\leq 0,001$	$\leq 0,001$ per single substance
Non-evaluable substances (total VOC without LCI***)	0,003	$\leq 0,1$
Evaluable substances (R-value)	≤ 1	≤ 1 (dimensionless)
Formaldehyde ¹	<0,002	$\leq 0,1$ (LCI)

Ci concentration of individual substance (substance-specific quantified for target compounds (with LCI), quantified via toluene-response for non-target compounds (without LCI) and for unidentified compounds.

n. d. - not detected (limits of quantification see pt. 4)

* Sum calculated from the detected compounds (identified and not identified) with a concentration $\geq 5 \mu\text{g}/\text{m}^3$ in the range C6-C16 (without acetic acid), according to 8.2.6.1 method 2 of DIN EN 16516.

** Sum calculated from the detected compounds with a concentration $\geq 5 \mu\text{g}/\text{m}^3$ in the range >C16-C22.

*** including unidentified compounds, according to 8.2.6.1 procedure 2 of DIN EN 16516

¹ Carcinogen 1B (excluded from carcinogen substance consideration)

² Classification according to Regulation (EC) No. 1272/2008 Annex VI

LCI - lowest concentration of interest (AgBB scheme as of June 2021)

R = Sum of all Ri - Sum of all quotients Ci/LCI (concentrations from $5 \mu\text{g}/\text{m}^3$ are considered)

TE Toluene equivalent (related to response factor of toluene)

- End of the test report -

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