

## Uttrekk av emisjonsrapport for 101 AKRYL ECO

101 AKRYL ECO innehar sertifikatet for M1, EMISSION CLASSIFICATION OF BUILDINGS MATERIALES. Nedenfor følger utklipp fra selve testrapporten.



Product Testing



### 3 Applied Test Methods

#### 3.1 General Test References

Regulation, protocol or standard	Version	Reporting limit VOC [ $\mu\text{g}/\text{m}^3$ ]	Calculation of TVOC	Combined uncertainty* [RSD(%)]
EN 18516	October 2017	5	Toluene equivalents	22%
ISO 16000 -3 -8 -9 -11	2006-2011 depending on part	2	Toluene equivalents	22%
ASTM D5116-10	2010	-	-	-
M1	M1 Protocol of November 2017	5	Toluene equivalents	22%
EN 15251 appendix C*	2007	2	Toluene equivalents	22%

#### 3.2 Specific Laboratory Sampling and Analyses

Procedure	External Method	Internal SOP	Quantification limit / sampling volume	Analytical principle	Uncertainty* [RSD(%)]
Sample preparation	ISO 16000-11:2008, EN16402:2013, CDPH:2017, AgBB:2018, EMICODE:2018	71M548810	-	-	-
Emission chamber testing	ISO 16000-9:2008, EN 16518:2017	71M548811	-	Chamber and air control	-
Sampling of VOC	ISO 16000-8:2011, EN 16516:2017	71M548812	5 L	Tenax TA	-
Analysis of VOC	ISO 16000-8:2011, EN 16516:2017	71M542808B	1 $\mu\text{g}/\text{m}^3$	ATD-GC/MS	10%
Sampling of aldehydes	ISO 16000-3:2011, EN 16518:2017	71M548812	35 L	DNPH	-
Analysis of aldehydes	ISO 16000-3:2011, EN 717-1:2004, EN 16516:2017	71M548400	3-6 $\mu\text{g}/\text{m}^3$	HPLC-UV	10%
Sampling of Ammonia	NIOSH 6015:1994	71M548812	100 L	H <sub>2</sub> SO <sub>4</sub> coated Silicagel	-
Analysis of Ammonia	NIOSH 6015:1994	71M544430	10 $\mu\text{g}/\text{m}^3$	Spectrofluometry	10%
Odour/sensory testing	ISO 16000-28:2012	71M548821, 71M548822	-	Odour panel	10%

## 4 Test Parameters, Sample Preparation and Deviations

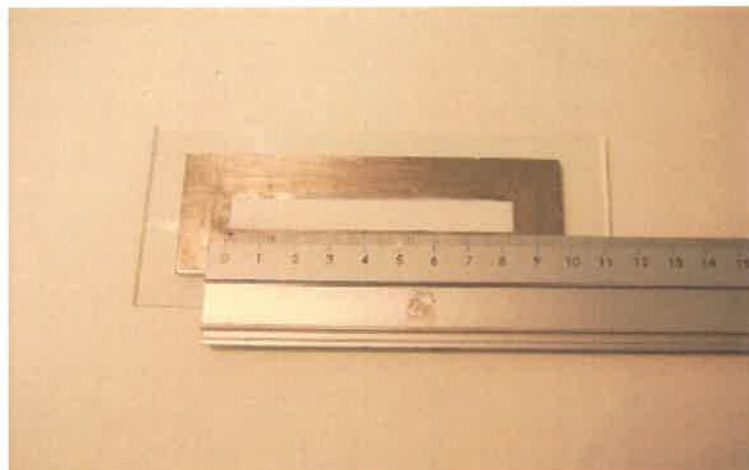
### 4.1 VOC Emission Chamber Test Parameters

Parameter	Value	Parameter	Value
Chamber volume, V[L]	119	Preconditioning period	-
Air Change rate, n(h <sup>-1</sup> )	0.5	Test period	05/03/2020 - 02/04/2020
Relative humidity of supply air, RH [%]	50 ± 3	Area specific ventilation rate, q [m/h or m <sup>3</sup> /m <sup>2</sup> /h]	71
Temperature of supply air, T [°C]	23 ± 1	Loading factor [m <sup>2</sup> /m <sup>2</sup> ]	0.007
		Test scenario	Very small area

### 4.2 Preparation of the Test Specimen

The sample was applied onto a glass plate and drawn off over a model giving a 3 mm thick and uniform layer with a broadness of 10 mm.

### 4.3 Picture of Sample



### 4.4 Deviations from Referenced Protocols and Regulations

No deviations from the referenced test methods were observed.

## 5 Results

### 5.1 VOC Emission Test Results after 28 Days

	CAS No.	Retention time [min]	ID-Cat	Specific Conc. [ $\mu\text{g}/\text{m}^3$ ]	Toluene eq. [ $\mu\text{g}/\text{m}^3$ ]	Toluene SER [ $\mu\text{g}/(\text{m}^2 \cdot \text{h})$ ]	SER [ $\mu\text{g}/(\text{m}^2 \cdot \text{h})$ ]	EU-LCI [ $\mu\text{g}/\text{m}^3$ ]
<b>VOC compounds</b>								
None determined								
<b>TVOC</b>				< 5	< 5	< 400		
<b>WVOC compounds</b>								
None determined								
<b>TVVOC</b>				< 5	< 5	< 400		
<b>SVOC compounds</b>								
None determined								
<b>TSVOC</b>				< 5	< 5	< 400		
<b>CMR substances</b>								
None determined								
<b>Total CMR</b>				< 1	< 1		< 80	
<b>Aldehydes</b>								
Formaldehyde	50-00-0		1	< 3			< 300	100
Acetaldehyde	75-07-0		1	< 3			< 300	1200
Propionaldehyde	123-38-6		1	< 3			< 300	
Butyraldehyde	123-72-8		1	< 3			< 300	650
Acrolein *	107-02-8		1	< 5			< 400	14
2-Butenal *	123-73-9		1	< 5			< 400	5
Glutaraldehyde *	111-30-8		1	< 5			< 400	
Octanal *	124-13-0		1	< 5			< 400	900
Nonanal *	124-19-6		1	< 5			< 400	900
Decanal *	112-31-2		1	< 5			< 400	900
<b>Add. compounds</b>								
Ammonia	7664-41-7		1	< 10			< 800	

**5.2 Sensory Testing**

	Acceptance		Acceptance
Participant 1	0.9	Participant 9	0.95
Participant 2	0.95	Participant 10	0.75
Participant 3	1	Participant 11	1
Participant 4	1	Participant 12	0.95
Participant 5	0.6	Participant 13	1
Participant 6	1	Participant 14	0.85
Participant 7	1	Participant 15	0.9
Participant 8	0.95		
<b>Final Results</b>			
Average assessment	0.9		
90% confidence interval	0.9 - 1		
Standard deviation	0.1		

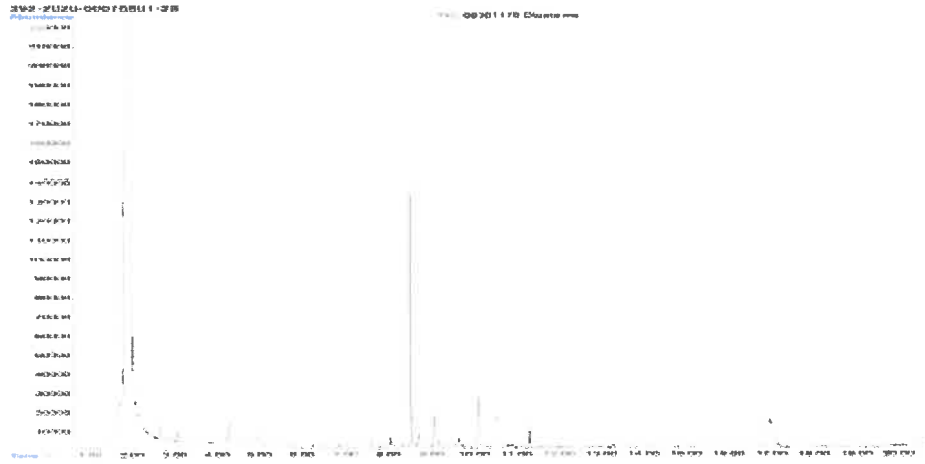
## 6 Summary and Evaluation of the Results

### 6.1 Comparison with M1 Limit Values

Parameter	Concentration mg/m <sup>3</sup>	Limit Value mg/m <sup>3</sup>
TVOC	< 0.005	≤ 0.02
Formaldehyde	< 0.003	≤ 0.01
Ammonia	< 0.01	≤ 0.01
Total CMR	< 0.001	≤ 0.001
Odour (dimensionless)	0.9	≥ 0.0
Single VOCs with EU-LCI	Complies	≤ EU-LCI

## 7 Appendices

### 7.1 Chromatogram of VOC Emissions after 28 Days



#### 7.4 Applied LCI and NIK Values

##### 7.4.1 LCI/NIK Values for Compounds found after 28 Day Measurements

Compound	CAS No.	EU-LCI [µg/m <sup>3</sup> ]
None determined	-	-

For Relekta AS, dato 04.12.2020.



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Produkt- og kategorisjef