

IEdiSa - GRAPHENSTONE
Calle Carpinteros, 25
41520 EL VISO DEL ALCOR (Sevilla)
SPAIN

Eurofins Product Testing A/S
Smedeskovvej 38
8464 Galten
Denmark

CustomerSupport@eurofins.com
www.eurofins.com/VOC-testing

VOC TEST REPORT

VOC Content

27 February 2018

1 Sample Information

Sample name	Graf Clean The tested sample Grafclean Premium RAL 1028 has been selected as being representative for the product of the type. This type includes all colored paints of the Grafclean Premium range, which according to the information of the manufacturer are based on the same recipe. The tested product Grafclean Premium RAL 1028 is considered as the "worst-case"-product
Sample no.	392-2018-00043701
Production date	18/01/2018
Batch No.	2823
Sample reception	30/01/2018

2 Brief Evaluation of the Results

Regulation or protocol	Conclusion	Version of regulation or protocol
Decopaint	Pass	Directive 2004/42/CE

Full details based on the testing and direct comparison with limit values are available in the following pages



Morten Sielemann
Analytical Chemist

3 Applied Test Methods

3.1 General Test References

Regulation, protocol or standard	Scope	Version
Decopaint	Paints and varnishes	Directive 2004/42/CE

3.2 Specific Laboratory Sampling and Analyses

Test	Regulation, protocol or standard	Version	Internal SOP	Limit of detection [g/L]	Uncertainty U _m
VOC	ISO 11890-2	2013	71 M 5446002	1	20

4 Results

4.1 VOC content

	Remarks on the test results	Results	Unit
Density	Supplied by the Customer	1.5	g/mL
VOC content (ISO 11890-2)	Calculated based on the results above	< 1	g/L

4.2 Comparison with Limit Values of VOC Content

Parameter	Results [g/L]	Product type	Regulation or protocol	VOC limit [g/L]
VOC content	< 1	Interior matt walls and ceilings	Decopaint	30

The results are only valid for the tested sample(s).

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5 Appendices

5.1 How to Understand the Results

5.1.1 Acronyms Used in the Report

- < Means less than
- > Means bigger than
- * Not a part of our accreditation
- ⌘ Please see section regarding uncertainty in the Appendices.
- 1 Analysed by another Eurofins laboratory

5.2 Description of VOC Content Test

5.2.1 Testing of VOC (ISO 11890-2)

Volatile Organic Compounds (VOC) include all organic compounds with an initial boiling point less than or equal to 250 °C measured at standard pressure of 101.3 kPa.

The determination is performed in conformity with ISO 11890-2 and the commission decision 2014/312/EU of 28 May 2014 establishing the ecological criteria for the award of the EU Ecolabel for indoor and outdoor paints and varnishes, with its most recent amendments and its most recent User Manual.

Analyses are performed with a slightly polar gas chromatographic column (HP-5). Mass spectrometric detection is used for identification and flame ionization detector is used for quantification. Identified compounds are quantified with their authentic response factors, or with their relative response factors using 1,2-diethoxyethane as internal standard. Remaining unknown peaks are quantified in diethyl adipate equivalents.

5.3 Uncertainty of the Test Method

The relative standard deviation of the overall analysis is 10%. The expanded uncertainty U_m equals 2 x RSD. For further information please visit www.eurofins.dk/uncertainty.