

Confirmation

LEED

On 28 May 2014, Eurofins Product Testing A/S received a sample of an adhesive with the product name:

CHEMFIX STYREN FREE RESINS

supplied by

Chemfix Products Ltd

The sample was supplied as being representative of the manufactured product, and it has been tested as a multipurpose construction adhesive in accordance with the relevant ISO 11890-1, ASTM D2369 and EPA method 24 testing standards (See test report no. 392-2014-00095702A/Rev1).

The test results of the tested adhesive indicate that the product qualifies for LEED 2009 and/or LEED v4 specifications on VOC content by complying with:

VOC content specifications in LEED EQ credit "Low-emitting products":

- the requirements of SCAQMD rule 1168 (2005)

17 June 2014



Søren Ryom Villadsen
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Date
10 June 2014
Our ref.
392-2014-00095702A/Rev1

Test Report – LEED 2009 EQ c4.1, SCAQMD rule 1168 (2005)

Sample material

Sample identification	CHEMFIX STYREN FREE RESINS
Product type	Multipurpose construction adhesives
Product data, according to manufacturer	Density: 1.61 g/ml at 20 °C ** Water content: 0 g/l** Exempt compounds: none ***
Date received	28 May 2014
Analytical period	30 May 2014 – 10 June 2014

Methods applied

Method	Principle	Parameter	Detection limit	Uncertainty, U _m (%)
LEED 2009 EQ c4.1 (Modified)	Gravimetric	Total Volatiles, SCAQMD rule 304	1 g/l	10 %
20 cm sample was dispensed and discarded. Further sample was dispensed in a preweighed dish and allowed to sit for 1 hour (durometer reading > 80). Volatile content of the sample was determined gravimetrically by heating up to 110 °C for 60 minutes. The result is the average of double testing. The result is calculated as: $([g \text{ all volatiles}] - [g \text{ water}] - [g \text{ exempt compounds}]) / ([l \text{ material}] - [l \text{ water}] - [l \text{ exempt compounds}])$				

U_m (%): The expanded uncertainty U_m is equal to 2 x RSD%, see also www.eurofins.dk/uncertainty.

Analytical results

Solid content, % mass	Water content, % mass	Exempt compounds, % mass	VOC less water less exempt compounds, g/l	VOC limit g/l
99.6 %	0 % **	0 %***	6.8	70 *

* VOC limit for "Multipurpose construction adhesives"

** Given by the client

*** No information about exempt compounds. Set to zero.

Eurofins Product Testing A/S

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Date
17 July 2013

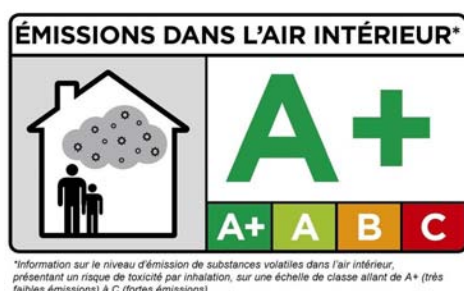
Testing Report emission rate of VOC (volatile organic compounds)

1. Information on the sample

Identification of the sample	Chemfix Styrene Free
Product type	Joint, adhesive
Number of the batch	-
Date of production	-
Date of receipt	22/05/2013
Testing period (start-end)	22/05/2013 - 19/06/2013

2. Conclusion regarding the classification of the labeling of emission rate of VOC

This recommendation is based on the French regulations of 23rd March 2011 (prescription DEVL1101903D) and of 19th April 2011 (regulation DEVL1104875A). For further information kindly visit our homepage www.eurofins.com/france-voc.



The classification of the emission rate of VOC of the product has been indicated without explicitly considering the uncertainty linked to the result. According to the regulation No. 2011-321 of 23rd March 2011, the indication of the classification of the emission rate of VOC is the sole responsibility of the person – natural person or juristic person – placing the product at the disposal of the French market.

3. Testing procedure

Procedure	Principle	Parameters	Quantification Limit	Incertitude	
ISO 16000 parts -3, -6, -9, -11 Internal procedures used: 9810, 9811, 9812, 2808, 8400	GC/MS HPLC/UV	VOC Aldehydes Volatiles	2 µg/m ³ 3 µg/m ³	22% (RSD) Um = 2 x RSD= 45 %	
Parameters of testing in the room of emission					
Volume of the room, L	119	Temperature, °C	23±1	Relative humidity, %	50±5
Rate of regeneration of the air, 1/h	0,5	Consumption factor, m ² /m ³	0,007		
Testing conditions: The sample remains in the emission room during the whole 28 days of the testing period.					
Preparation of the sample					
Thickness in mm:	3				

4. Results

	Concentration après 28 jours $\mu\text{g}/\text{m}^3$	C	B	A	A+
VOC rate	7,1	>2000	<2000	<1500	<1000
Formaldehyde	<3	>120	<120	<60	<10
Acetaldehyde	<3	>400	<400	<300	<200
Toluol	<2	>600	<600	<450	<300
Tetrachloroethylene	<2	>500	<500	<350	<250
Methylbenzene	<2	>1500	<1500	<1000	<750
Xylene	<2	>400	<400	<300	<200
Styrene	<2	>500	<500	<350	<250
2-Butoxyethanole	<2	>2000	<2000	<1500	<1000
1,2,4- Trimethylbenzene	<2	>2000	<2000	<1500	<1000
1,4-Dichlorobenzene	<2	>120	<120	<90	<60

< Means below ...

> Means above ...



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