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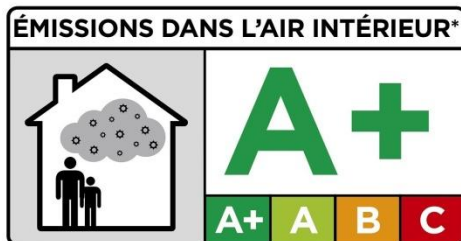
# VOC Emissions Test report

## 1. Sample Information

Sample identification	VMU plus Polar
Product type	Construction Adhesive
Batch no.	BNG 303
Production date	30/10/2013
Date when sample was received	14/11/2013
Testing (start - end)	18/11/2013 - 16/12/2013

## 2. Resulting VOC Emissions Class Label

This recommendation is based on French regulation of March 23, 2011 (décret DEVL1101903D) and of April 19, 2011 (arrêté DEVL1104875A). For details please see [www.eurofins.com/france-voc](http://www.eurofins.com/france-voc)



\*Information sur le niveau d'émission de substances volatiles dans l'air intérieur, présentant un risque de toxicité par inhalation, sur une échelle de classe allant de A+ (très faibles émissions) à C (fortes émissions).

The product was assigned a VOC emission class without taking into account the measurement uncertainty associated with the result. As specified in French Decree no. 2011-321 of March 23, 2011, correct assignment of the VOC emission class is the sole responsibility of the party responsible for distribution of the product in the French market.

### 3. Test Method

Method	Principle	Parameter	Quantification limit	Uncertainty	
ISO 16000 parts -3, -6, -9, -11 Internal method numbers: 9810, 9811, 9812, 2808, 8400	GC/MS HPLC/UV	VOC Volatile aldehydes	2 µg/m <sup>3</sup> 3 µg/m <sup>3</sup>	22% (RSD) Um = 2 x RSD = 45 %	
<b>Test chamber parameter</b>					
Chamber volume, l	119	Temperature, °C	23±1	Relative humidity, %	50±5
Air change rate, 1/h	0.5	Loading ratio, m <sup>2</sup> /m <sup>3</sup>	0.007		
<b>Test condition: Sample stayed in test chamber during the whole 28 days testing period.</b>					
<b>Sample preparation</b>					
Thickness, mm	3				

## 4. Results

	Concentration after 28 days $\mu\text{g}/\text{m}^3$	C	B	A	A+
TVOC	82	>2000	<2000	<1500	<1000
Formaldehyde	<3	>120	<120	<60	<10
Acetaldehyde	<3	>400	<400	<300	<200
Toluene	<2	>600	<600	<450	<300
Tetrachloroethylene	<2	>500	<500	<350	<250
Ethylbenzene	<2	>1500	<1500	<1000	<750
Xylene	<2	>400	<400	<300	<200
Styrene	<2	>500	<500	<350	<250
2-Butoxyethanol	<2	>2000	<2000	<1500	<1000
1,2,4- Trimethylbenzene	<2	>2000	<2000	<1500	<1000
1,4-Dichlorobenzene	<2	>120	<120	<90	<60

< Means less than  
> Means higher than



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