

Report No.: 0154220452a 001

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Client: Fengjing(china)building Material Group Corporation
Madian Industrial Park, Jiaozhou Qingdao City Shandong Province

Test item(s): PU Foam

**Identification/
Model No(s):** N/A

Sample Receiving date: 2017-01-03

Testing Period: 2017-01-03 – 2017-02-17

Test specification:

Customer's requirement:
1. Volatile Organic Compounds (VOC)

Test result:

Please refer to page 3 - 4

Remark:

Country of Origin: QINGDAO CHINA
Sales Destination: France
Buyer: Surplus Dragon trading LTD

**For and on behalf of
TÜV Rheinland (Shanghai) Co., Ltd.**



2017-02-20

Jet Lee / Department Manager

Date

Name/Position

*Test result is drawn according to the kind and extent of tests performed.
This test report relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.*

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Material list:

Item: PU Foam

Material No.	Material	Color	Location
M001	Whole product	white	Refer to photo

Test method

- ISO 16000-3:2011 Indoor air – Part 3: Determination of formaldehyde and other carbonyl compounds in indoor air and test chamber air – Active sampling method
- ISO 16000-6:2004 Indoor air – Part 6: Determination of volatile organic compounds in indoor and test chamber air by active sampling on Tenax TA® sorbent, thermal desorption and gas chromatography using MS/FID
- ISO 16000-9:2006 Indoor air – Part 9: Determination of the emission of volatile organic compounds from building products and furnishing – Emission test chamber method

Test chamber conditions

- Test chamber: Corresponding to ISO 16000-9
- Test chamber volume: 1 m³
- Temperature of supply air: 23 °C ± 2 °C
- Relative humidity of supply air: 50 % ± 5 %
- Exchange of air: 0.5 h⁻¹
- Loading factor: 0.007 m²/m³
- Start of sampling: after 28 days balance in chamber

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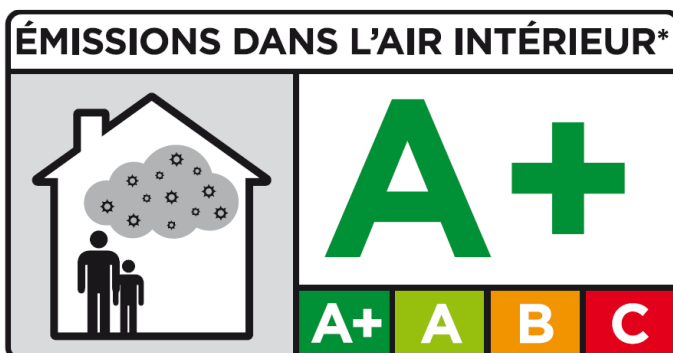
Results 1: Volatile organic compounds (VOC)¹⁾ emission

The emission of the substances are classified according to a scale with 4 classes ranging from A+ to C, A+ indicating a very low emission level and C a high level of emission. The emission level is indicated by the exposure concentration in $\mu\text{g}\cdot\text{m}^{-3}$. The results of the tested sample in 28 days are shown below in table 1.

Table 1. Results of 28 days:

Parameters	CAS No.	Limit values of emission classes ($\mu\text{g}/\text{m}^3$)				Concentrations after 28 days ($\mu\text{g}/\text{m}^3$)	Emission Classes
		A+	A	B	C		
Formaldehyde	50-00-0	< 10	< 60	< 120	> 120	3.5	A+
Acetaldehyde	75-07-0	< 200	< 300	< 400	> 400	2.3	A+
Toluol	108-88-3	< 300	< 450	< 600	> 600	n.d. ³⁾	A+
Tetrachlorethene	127-18-4	< 250	< 350	< 500	> 500	n.d. ³⁾	A+
Xylene	1330-20-7	< 200	< 300	< 400	> 400	n.d. ³⁾	A+
1,2,4-Trimethylbenzene	95-63-6	< 1000	< 1500	< 2000	> 2000	n.d. ³⁾	A+
1,4-Dichlorobenzene	106-46-7	< 60	< 90	< 120	> 120	n.d. ³⁾	A+
Ethylbenzene	100-41-4	< 750	< 1000	< 1500	> 1500	n.d. ³⁾	A+
2-Butoxyethanol	111-76-2	< 1000	< 1500	< 2000	> 2000	n.d. ³⁾	A+
Styrene	100-42-5	< 250	< 350	< 500	> 500	n.d. ³⁾	A+
TVOC ²⁾	--	< 1000	< 1500	< 2000	> 2000	19	A+

¹ VOC = Volatile organic compounds

² TVOC = Total volatile organic compounds (C₆ – C₁₆)


*Statement on level of emission of volatile substances in indoor air posing a toxic threat during inhaling – on a scale from A+ (very low-emission) to C (high-emission)

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Results 2: Emission of CMR substances

Only the concentration of the following CMR substances have been qualified :

Parameter	CAS No.	Legal limit ($\mu\text{g}/\text{m}^3$)	Concentration ($\mu\text{g}/\text{m}^3$)
Trichloroethylene	79-01-6	<1	n.d. ³⁾
Benzene	71-43-2	<1	n.d. ³⁾
Bis phtalate (2-ethylhexyl) (DEHP)	117-81-7	<1	n.d. ³⁾
Dibutyl phtalate (DBP)	84-74-2	<1	n.d. ³⁾

³n.d. = No detected. Limit of quantification 1 $\mu\text{g}/\text{m}^3$

Remarks:

The results are semiquantitative calculated with n-Hexadecane (5 $\mu\text{g}/\text{ml}$) for the calculation of the various VOC concentrations. No differences in response factors and desorption were considered. Only VOC compounds are included with a concentration of > 1 $\mu\text{g}/\text{m}^3$.

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Sample photos



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