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Client: ZHEJIANG KASARO NEW DECORATIVE MATERIAL CO LTD
Contact Information: Hangmu Road 777, Jinhua Village, Qianyuan Town, Deqing, Zhejaing Prov., China
**Identification/
Model No(s):** Acoustic Slat Panel
Condition at delivery: Test item complete and undamaged.
Sample Receiving date: 2024-03-05
Testing Period: 2024-03-05 – 2024-03-13
Place of testing: Chemical laboratory Shanghai

Test specification:

Test result:

Customer's requirement:

1. Emission test for VOC and formaldehyde based on standards ISO 16000-3, 6 & 9

Labelling of construction and decoration products with their volatile pollutant emissions (VOC and formaldehyde) – final classification

A

Legal requirements relating to the emission of CMR substances

Requirement met

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



2024-03-14

Eric Xu / Project Engineer

Date

Name/Position

Sample information is provided by customer. Test result is drawn according to the kind and extent of tests performed.

This test report relates to the above mentioned 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.

'Decision Rule' document announced in our website (<https://www.tuv.com/landingpage/en/qm-gcn/>) describes the statement of conformity and its rule of enforcement for test results are applicable throughout this test report.

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Material list:

Item: Acoustic Slat Panel

Material No.	Material	Color	Location
M001	Foam + wood	Black/natural	Refer to photo

Test method(s)

- 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 16000-6:2011 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 m ³
Temperature of supply air:	23 °C ± 2 °C
Relative humidity of supply air:	50 % ± 5 %
Exchange of air:	0.5 h ⁻¹ ± 0.1 h ⁻¹
Loading factor:	1.0 m ² /m ³
Inflow velocity:	0.2 m/s

1. Labelling of construction and decoration products with their volatile pollutant emissions (VOC and formaldehyde) – final classification

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 indicating a high level of emission. The emission level is indicated by the exposure concentration in $\mu\text{g}/\text{m}^3$. Result of the tested sample after 7 days is shown below in table 1.

Table 1. Result

Parameter	CAS no.	Limit values of emission classes ($\mu\text{g}/\text{m}^3$)				Concentration after 7 days ($\mu\text{g}/\text{m}^3$)	Emission Class
		A+	A	B	C		
Formaldehyde	50-00-0	< 10	< 60	< 120	> 120	20	A
Acetaldehyde	75-07-0	< 200	< 300	< 400	> 400	< 1	A+
Toluene	108-88-3	< 300	< 450	< 600	> 600	< 1	A+
Tetrachlorethylene	127-18-4	< 250	< 350	< 500	> 500	< 1	A+
Xylene	1330-20-7	< 200	< 300	< 400	> 400	< 1	A+
1,2,4- Trimethylbenzene	95-63-6	< 1000	< 1500	< 2000	> 2000	< 1	A+
1,4-Dichlorbenzene	106-46-7	< 60	< 90	< 120	> 120	< 1	A+
Ethylbenzene	100-41-4	< 750	< 1000	< 1500	> 1500	< 1	A+
2-Butoxyethanol	111-76-2	< 1000	< 1500	< 2000	> 2000	< 1	A+
Styrene	100-42-5	< 250	< 350	< 500	> 500	< 1	A+
Total VOC (TVOC) (C ₆ – C ₁₆)	--	< 1000	< 1500	< 2000	> 2000	8	A+

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2. Legal requirements relating to the emission of CMR substances

Only the concentrations 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	< 1
Benzene	71-43-2	< 1	< 1
Bis phthalate (2-ethylhexyl) (DEHP)	117-81-7	< 1	< 1
Dibutyl phthalate (DBP)	84-74-2	< 1	< 1

Abbreviation:

VOC = Volatile Organic Compound

TVOC = Total Volatile Organic Compound

n.d. = not detected

 $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter

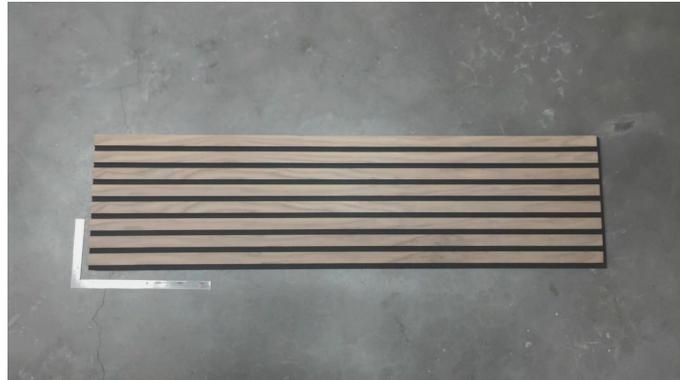
CMR = Carcinogenic; Mutagenic; Reprotoxic

n.d. = not detected (< 1 $\mu\text{g}/\text{m}^3$)

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Sample Photo(s)



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