

TEST REPORT: 7191095196-CHM14-MA

Date: 26 AUG 2014

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SUBJECT

Emission Rate Evaluation for Fiber Cement Board

CLIENT

Siam Fibre Cement Co., Ltd
1 Siam Cement Rd.,
Bangsue,
Bangkok 10800,
Thailand

Attn: Mr. Somsak Sukcheun

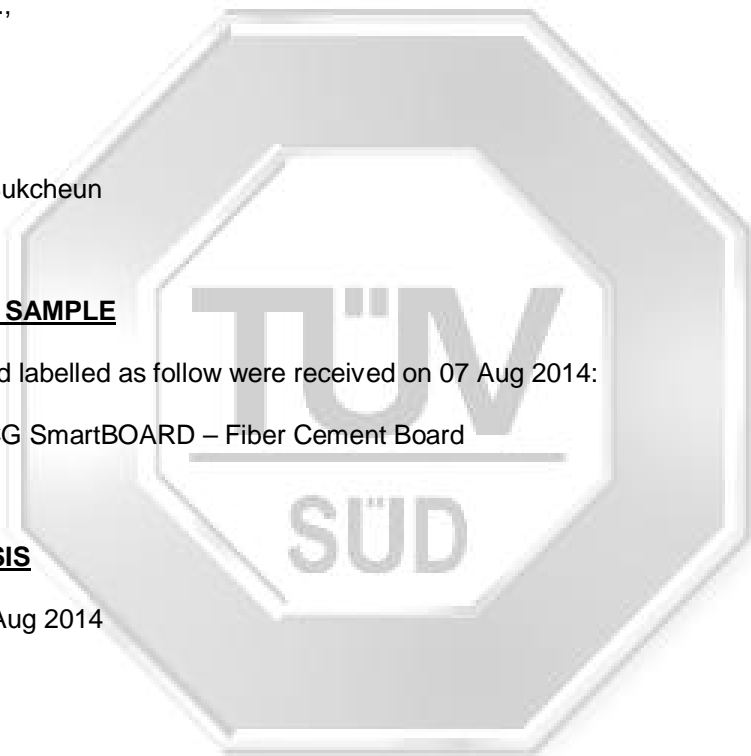
DESCRIPTION OF SAMPLE

Two pieces of board labelled as follow were received on 07 Aug 2014:

Product Name: SCG SmartBOARD – Fiber Cement Board

DATE OF ANALYSIS

18 Aug 2014 – 26 Aug 2014



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METHOD OF TEST

The following emission tests were conducted according to ASTM D5116-10 – *Standard Guide for Small-Scale Environmental Chamber Determinations of Organic Emissions From Indoor Materials/Products*, as reference.

A) Emission Test

- 1) Total Volatile Organic Compounds (TVOC) Emission Rate
- 2) Formaldehyde Emission Rate
- 3) 4-Phenylcyclohexene Emission Rate
- 4) Total Phthalates Emission
 - Dibutyl Phthalate (DBP)
 - Diethyl Phthalate (DEP)
 - Di-octyl Phthalate (DOP)
 - Diethylhexyl Phthalate (DEHP)
 - Butylbenzyl Phthalate (BBP)
 - Dimethyl Phthalate (DMP)
- 5) Total Particles Emission

REMARKS

Product Loading Ratio for the “SCG SmartBOARD – Fiber Cement Board” sample was 0.41.

B) Emission Test Condition

- 1) Chamber Volume: about 1m³
- 2) Temperature: 23°C
- 3) Relative Humidity: 50%
- 4) Air Exchange Rate: n=1 (air change rate per hour in the chamber)
- 5) Chamber Loading Ratio: 0.4-1.0 m²/m³ (total exposed surface area of the test specimen divided by the net air volume of the emission test chamber)
- 6) Air Velocity: 0.1 m/s to 0.3 m/s (over the surface of the test specimen)



RESULTS

Table 1. Total Volatile Organic Compounds (TVOC) Emission Rate Test Result

Sample	Test Result (After 24 hours)
"SCG SmartBOARD – Fiber Cement Board"	0.08 mg per m ³ per hour

Table 2. Formaldehyde Emission Rate Test Result

Sample	Test Result (After 48 hours)
"SCG SmartBOARD – Fiber Cement Board"	<0.01 mg per m ³ per hour

Table 3. 4-Phenylcyclohexene Emission Rate Test Result

Sample	Test Result (After 48 hours)
"SCG SmartBOARD – Fiber Cement Board"	Not Detected*

*The method detection limit was 0.002 mg per m³

Table 4. Total Phthalates Emission Test Result

Sample	Test Result
"SCG SmartBOARD – Fiber Cement Board"	<0.01 mg per m ³

Table 5. Total Particles Emission Test Result

Sample	Test Result
"SCG SmartBOARD – Fiber Cement Board"	<0.01 mg per m ³

MS MARIANA AHMAD
CHEMIST

DR XIAO ZHOU
PRODUCT MANAGER
MICROCONTAMINATION DIAGNOSIS
CHEMICAL & MATERIALS

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PSB Singapore

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July 2011

