

TEST REPORT: S08CHM02663-LCL

Date: 30 MAY 2008

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SUBJECT

Emission Rate Tests for Ceiling Board Sample

CLIENT

Framework Materials Pte Ltd
2 Aljunied Avenue 1
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Attn: Ms Cynthia Tan

DESCRIPTION OF SAMPLE

Two pieces of the board sample labelled as "BeiYang High Acoustical Ceiling Board" were received on 24 Apr 2008.

DATE OF ANALYSIS

20 May 2008 – 30 May 2008

METHOD OF TEST

The following emission tests were conducted according to ASTM D5116-06 – *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

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 : 0.4m²/m³ (total exposed surface area of the test specimen divided by the net air volume of the emission test chamber)
- 6) Air Velocity : 0.1m/s to 0.3m/s (over the surface of the test specimen)



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RESULTS

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

Sample	Test Result (After 24 hours)	Criteria for Singapore Green Label Product	Conclusion
BeiYang high Acoustical Ceiling Board	0.11 mg per m ³ per hour	0.25 mg per m ³ per hour or less	Pass

Table 2. Formaldehyde Emission Rate Test Result

Sample	Test Result (After 48 hours)	Criteria for Singapore Green Label Product	Conclusion
BeiYang high Acoustical Ceiling Board	<0.01 mg per m ³ per hour	0.02 mg per m ³ per hour or less	Pass

Table 3. 4-Phenylcyclohexene Emission Rate Test Result

Sample	Test Result (After 48 hours)	Criteria for Singapore Green Label Product	Conclusion
BeiYang high Acoustical Ceiling Board	Not Detected*	0.0065 mg per m ³ per hour or less	Pass

*The method detection limit was 0.002 mg per m³

Table 4. Total Phthalate Emission Test Result

Sample	Test Result	Criteria for Singapore Green Label Product	Conclusion
BeiYang high Acoustical Ceiling Board	< 0.003 mg per m ³	< 0.01 mg per m ³	Pass

Table 5. Total Particles Emission Test Result

Sample	Test Result	Criteria for Singapore Green Label Product	Conclusion
BeiYang high Acoustical Ceiling Board	0.01 mg per m ³	< 0.02 mg per m ³	Pass

MS LIM CHEN LOO
TECHNICAL EXECUTIVE

DR LIN JIANHUA
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30 MAY 2008



PSB Singapore

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