

TEST REPORT: 7191141955-CHM16-01-MA-CR1

Date: 12 JUL 2016

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SUBJECT

Evaluation of "Wood Plastic Composite" Sample

CLIENT

Latrade Pte Ltd
18 Mandai Road
#07-03
Singapore 729910

Attn : Mr. Zhang Dewei

DESCRIPTION OF SAMPLE

One box of sample labelled as "GRM Pellet" was received on 23 May 2016



Picture 1: Sample as received

DATE OF TEST

30 May 2016 – 12 Jul 2016



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1. Analysis of Hazardous Substances

1. Analysis of Halogenated Solvent and Aromatic Solvent

The sample was analysed by Headspace-Gas Chromatography with Mass Selective Detector (HS-GC-MSD).

2. Elemental Analysis of Mercury (Hg), Lead (Pb), Cadmium (Cd), Chromium (Cr)

The sample was digested by inorganic acid, followed by analysis using Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES).

3. Analysis of Hexavalent Chromium (Cr⁶⁺)

The sample was analysed by UV-Vis spectrometer using 1,5-Diphenylcarbohydrazide as derivatizing agent.

4. Analysis of Formaldehyde

The sample was analyzed by UV-vis spectrophotometer, after appropriate pretreatment of the sample.

5. Analysis of Tin (including organic Tin catalysts or stabilizers)

The sample was analyzed by Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES) and/or Gas Chromatograph with Mass Selective Detector (GC-MSD), after the appropriate pretreatment of the sample.

6. Analysis of Organotin

The sample was derivatized using sodium tetraethylborate and was analyzed with Gas Chromatograph with Mass Selective Detector (GC-MSD), after the appropriate pretreatment of the sample.

7. Analysis of Pentachlorophenol (PCP), Tar oils (benzo (a) pyrene), Aniline based amines, Phthalates DEHP, DBP, DAP, BBP, Aziridine or Polyaziridines, Polybrominated Diphenyl Ethers and Short-Chain Chlorinated Organic Flame Retardants

The sample was analyzed by Gas Chromatograph with Mass Selective Detector (GC-MSD) and/or High Performance Liquid Chromatography (HPLC), after the appropriate pretreatment of the sample.

RESULTS

Table 1. The analytical results of Halogenated Solvent and Aromatic Solvent for the sample

Test	Results
Halogenated Solvent	Not Detected ^a
Aromatic Solvent	Not Detected ^a

^a The method detection limit was 250 ppm.

RESULTS (cont'd)

Table 2. The elemental analytical results for the sample

Test	Result
Mercury, Hg	Not Detected ^b
Lead, Pb	Not Detected ^b
Cadmium, Cd	Not Detected ^b
Chromium, Cr	Not Detected ^b
Hexavalent Chromium, Cr ⁶⁺	Not Detected ^b

^b The method detection limit was 50 ppm.

Table 3. Tin (including organic Tin catalysts or stabilizers) analytical result for sample

Test	Results
Tin (including organic Tin catalysts or stabilizers)	Not Detected ^c

^c The method detection limit was 250 ppm.

Table 4. The analytical results for sample

Test	Result
Organotin	Not detected ^d
Pentachlorophenol (PCP)	Not detected ^d
Tar oils (benzo (a) pyrene)	Not detected ^d
Aniline based amines	Not detected ^e
Aziridine or polyaziridines	Not detected ^e

^d The method detection limit was 50 ppm.

^e The method detection limit was 250 ppm.

Table 5. The analytical results of Flame Retardants for the sample

Test	Result
Polybrominated Diphenyl Ethers (Mono – Deca)	Not Detected ^f
Extractable Monobromo Diphenyl Ether	Not Detected ^f
Extractable Dibromo Diphenyl Ethers	Not Detected ^f
Extractable Tribromo Diphenyl Ethers	Not Detected ^f
Extractable Tetrabromo Diphenyl Ethers	Not Detected ^f
Extractable Pentabromo Diphenyl Ethers	Not Detected ^f
Extractable Hexabromo Diphenyl Ethers	Not Detected ^f
Extractable Heptabromo Diphenyl Ethers	Not Detected ^f
Extractable Octabromo Diphenyl Ethers	Not Detected ^f
Extractable Nonabromo Diphenyl Ethers	Not Detected ^f
Extractable Decabromo Diphenyl Ether	Not Detected ^f
Short-chain chlorinated organic flame retardants	Not Detected ^f

^f The method detection limit was 250 ppm.

RESULTS (cont'd)

Table 6. The Phthalate analytical results for sample

Test	Result
Extractable Bis(2-ethylhexyl) phthalate (DEHP)	Not detected ^g
Extractable Dibutyl phthalate (DBP)	Not detected ^g
Extractable Diallyl phthalate (DAP)	Not detected ^g
Extractable Butyl benzyl phthalate (BBP)	Not detected ^g

^g The method detection limit was 50 ppm.

Table 7. Formaldehyde analytical result for sample

Test	Result
Formaldehyde	Not detected ^h

^h The method detection limit was 100 ppm.



MS MARIANA AHMAD
CHEMIST

DR XIAO ZHOU
PRODUCT MANAGER
MICROCONTAMINATION DIAGNOSIS
CHEMICAL & MATERIALS

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12 JUL 2016



PSB Singapore

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July 2011

