



## Test Report

No. VNHL1903004346EE-01

Date: April 08, 2019

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This report cancels and supersedes the report No. **VNHL1903004346EE** dated March 22, 2019 issued by SGS Vietnam.

### AN CUONG HIGH-TECH BUILDING MATERIALS JSC

ANPHAT HI-TECH INDUSTRIAL PARK, HAI DUONG CITY, VIETNAM

HANOI SHOWROOM: 3RD FLOOR, NO 285 NGO GIA TU STR., LONG BIEN DIST., HANOI, VIETNAM

The following sample was submitted and identified on behalf of the client as below:

SGS Job No. : VNHL1903004346EE-01  
Sample Description : ANPRO WALL BOARD (PVC WALL PANEL)  
Manufacturer : AN CUONG HIGH-TECH BUILDING MATERIALS JSC  
Sample Receiving Date : MARCH 18, 2019  
Final confirmed Date : MARCH 18, 2019  
Testing Period : MARCH 18, 2019 TO MARCH 22, 2019  
Test Requested : PLEASE REFER TO THE RESULT SUMMARY.  
Test Results : PLEASE REFER TO NEXT PAGE(S).  
Result Summary :

Test(s) Requested	Result(s)
RoHS Directive 2011/65/EU Annex II [amended by Directive (EU) 2015/863] (Cadmium, Lead, Mercury, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs) and Phthalates such as Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP))	Pass/ See results

Signed for and on behalf of  
**SGS Vietnam LTD**



**Wong Cho Wing**

Hardline and E&E Lab Manager

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**Test result(s):**

**Test Part Description: 1. WHITE & BROWN PLASTIC**

**1. RoHS Directive 2011/65/EU Annex II [amended by Directive (EU) 2015/863]**

Test Item(s):	Unit	Test Method	Results	MDL	Limit	
			1			
Cadmium(Cd)	mg/kg	With reference to IEC 62321-5:2013 (Determination of Cd by ICP-OES)	ND	2	100	
Lead (Pb)	mg/kg	With reference to IEC 62321-5:2013 (Determination of Pb by ICP-OES)	581	2	1000	
Mercury (Hg)	mg/kg	With reference to IEC 62321-4:2013 (Determination of Hg by ICP-OES)	ND	2	1000	
Hexavalent Chromium (CrVI)	mg/kg	With reference to IEC 62321-7-2:2017 (Determination of CrVI by UV-VIS)	ND	8	1000	
<b>Sum of PBBs</b>	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBB by GC-MS)	ND	-	1000	
Monobromobiphenyl	mg/kg		ND	5	-	
Dibromobiphenyl	mg/kg		ND	5	-	
Tribromobiphenyl	mg/kg		ND	5	-	
Tetrabromobiphenyl	mg/kg		ND	5	-	
Hexabromobiphenyl	mg/kg		ND	5	-	
Pentabromobiphenyl	mg/kg		ND	5	-	
Heptabromobiphenyl	mg/kg		ND	5	-	
Octabromobiphenyl	mg/kg		ND	5	-	
Nonabromobiphenyl	mg/kg		ND	5	-	
Decabromobiphenyl	mg/kg		ND	5	-	
<b>Sum of PBDEs</b>	mg/kg		With reference to IEC 62321-6:2015 (Determination of PBDE by GC-MS)	ND	-	1000
Monobromodiphenyl ether	mg/kg			ND	5	-
Dibromodiphenyl ether	mg/kg	ND		5	-	
Tribromodiphenyl ether	mg/kg	ND		5	-	
Tetrabromodiphenyl ether	mg/kg	ND		5	-	
Pentabromodiphenyl ether	mg/kg	ND		5	-	
Hexabromodiphenyl ether	mg/kg	ND		5	-	
Heptabromodiphenyl ether	mg/kg	ND		5	-	
Octabromodiphenyl ether	mg/kg	ND		5	-	
Nonabromodiphenyl ether	mg/kg	ND		5	-	
Decabromodiphenyl ether	mg/kg	ND		5	-	
Bis (2-ethylhexyl) phthalate (DEHP)	mg/kg	With reference to IEC 62321-8:2017 (Determination of DEHP by GC-MS)	596.42	50	1000	
Butyl benzyl phthalate (BBP)	mg/kg	With reference to IEC 62321-8:2017 (Determination of BBP by GC-MS)	ND	50	1000	
Dibutyl phthalate (DBP)	mg/kg	With reference to IEC 62321-8:2017 (Determination of DBP by GC-MS)	ND	50	1000	
Diisobutyl phthalate (DIBP)	mg/kg	With reference to IEC 62321-8:2017 (Determination of DIBP by GC-MS)	ND	50	1000	

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### Note:

1. mg/kg = ppm; 0.1wt% = 1000ppm
2. MDL = Method Detection Limit
3. ND = Not detected
4. - = not regulated
5. IEC 62321 is equivalent to EN 62321  
[http://www.cenelec.eu/dyn/www/f?p=104:110:721668440899381:::FSP\\_PROJECT,FSP\\_LANG\\_ID:20662,25](http://www.cenelec.eu/dyn/www/f?p=104:110:721668440899381:::FSP_PROJECT,FSP_LANG_ID:20662,25).
6. The above test(s) was / were accredited ISO 17025:2005 by VILAS  
The above test(s) was / were performed by SGS VN's Chemical lab.

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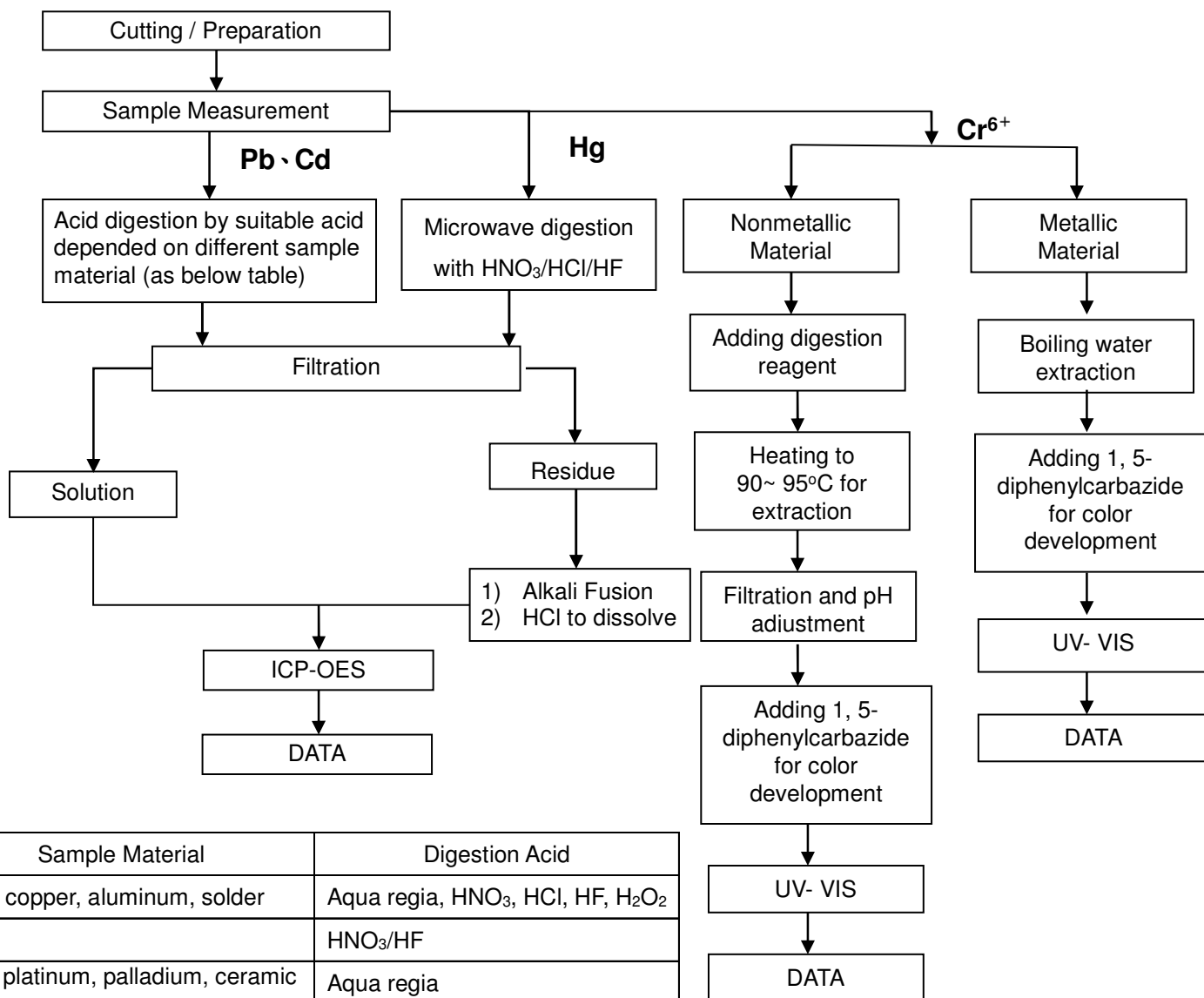
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**Flow Chart for RoHS: Pb/Cd/Hg/Cr<sup>6+</sup> Testing**

- 1) The samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr<sup>6+</sup> test method excluded)
- 2) Operator: Mr. Thu
- 3) Section Chief: Mr. Khanh



Sample Material	Digestion Acid
Steel, copper, aluminum, solder	Aqua regia, HNO <sub>3</sub> , HCl, HF, H <sub>2</sub> O <sub>2</sub>
Glass	HNO <sub>3</sub> /HF
Gold, platinum, palladium, ceramic	Aqua regia
Silver	HNO <sub>3</sub>
Plastic	H <sub>2</sub> SO <sub>4</sub> , H <sub>2</sub> O <sub>2</sub> , HNO <sub>3</sub> , HCl
Others	Any acid to total digestion

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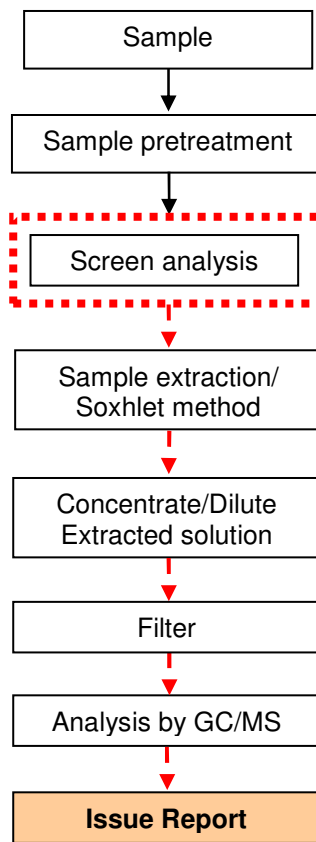
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**PBB/PBDE analytical FLOW CHART**

- 1) Name of the person who made measurement: Mr. Truong
- 2) Name of the person in charge of measurement: Mr. Khanh

First testing process →  
 Optional screen process .....  
 Confirmation process ->



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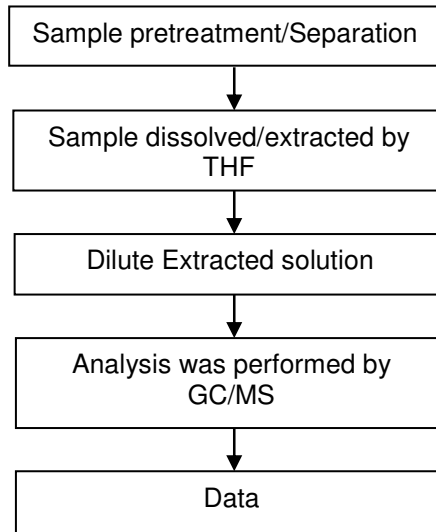
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**Analytical flow chart of phthalate content**

- 3) Name of the person who made measurement: Mr. Truong
- 4) Name of the person in charge of measurement: Mr. Khanh

**Test method: IEC 62321-8:2017**

First testing process →  
 Optional screen process .....  
 Confirmation process - ->



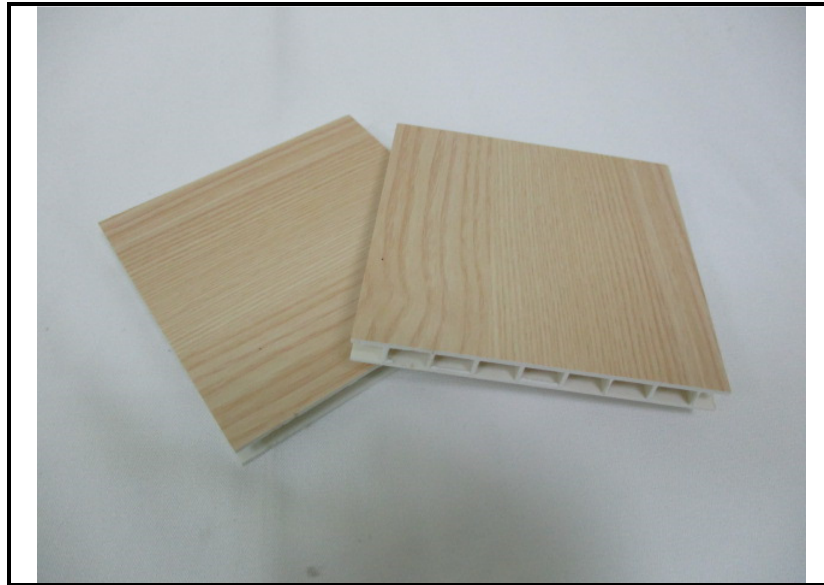
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**SAMPLE PHOTO:**



SGS authenticate the photo on original report only

**\*\*\*End of Report\*\*\***

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