

**Test Report**

No. VNHL1707007603EE-01

Date: July 21, 2017

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This test report supersedes report number VNHL1707007603EE dated July 20, 2017

CONG TY CO PHAN GIAI PHAP KY THUAT C.E.S VIET NAM

QUOC LO 23B - XA ME LINH - HUYEN ME LINH - TP HA NOI, VIET NAM

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

SGS Job No. : VNHL1707007603EE-01
Sample Description : MAU EPDM
Color : BLACK
Manufacturer : MITSUI CHEMICALS, INC.
Characteristic/ Material Type : MITSUI EPT (EPDM TYPE) 3092M
Country of Origin : JAPAN
Country of Destination : VIETNAM, AUSTRALIA, JAPAN, KOREA, EU
Sample Receiving Date : July 19, 2017
Final confirmed Date : July 19, 2017
Testing Period : July 19, 2017 to July 20, 2017
Test Requested : Selected as client's requirement
Test Results : Please refer to next page(s).

Test Requested	Conclusion
RoHS Directive 2011/65/EU Annex II [amended by Directive (EU) 2015/863]	Pass/ See result

Signed for and on behalf of
SGS Vietnam LTD



Tran Thi Lien
Hardline and E&E Lab Manager

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Test results:

Sample Description: 1. BLACK EPDM

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

Test Item(s):	Unit	Test Method	Results	MDL	Limit	
			No.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)	5	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 62321:2008 (Determination of CrVI by UV-VIS)	ND	2	1000	
Sum of PBBs	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	-	
Sum of PBDEs	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 EN 14372:2004 (Determination of DEHP by GC-MS)	40.96	30	1000	
Butyl benzyl phthalate (BBP)	mg/kg	With reference to EN 14372:2004 (Determination of BBP by GC-MS)	ND	30	1000	
Dibutyl phthalate (DBP)	mg/kg	With reference to EN 14372:2004 (Determination of DBP by GC-MS)	ND	30	1000	
Diisobutyl phthalate (DIBP)	mg/kg	With reference to EN 14372:2004 (Determination of DIBP by GC-MS)	ND	30	1000	

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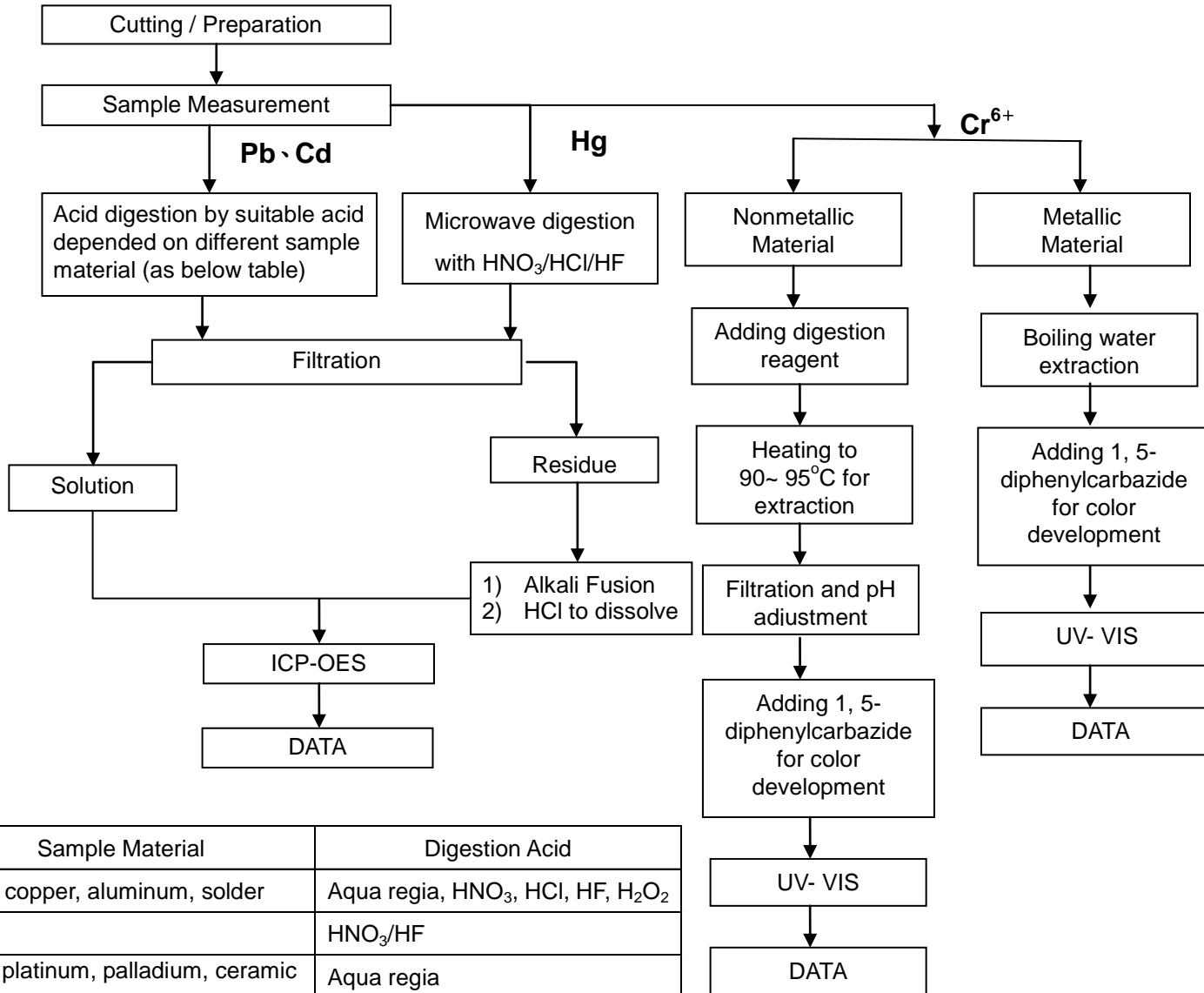
Note:

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.
6. The above test(s) was / were performed by SGS VN's Chemical lab.

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Flow Chart for RoHS: Pb/Cd/Hg/Cr⁶⁺ Testing

- 1) The samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ test method excluded)
- 2) Operator: Ms. Thu
- 3) Section Chief: Mr. Hoan



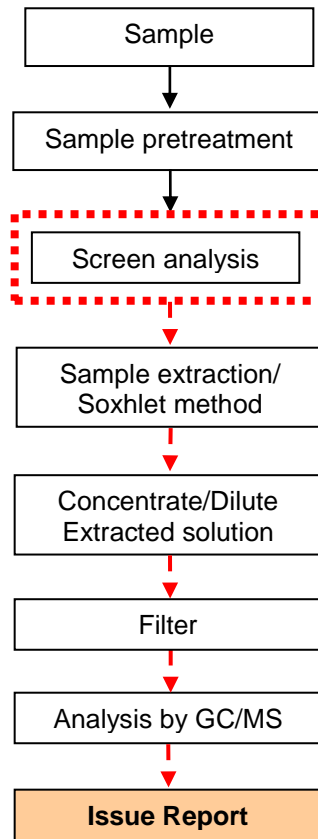
Sample Material	Digestion Acid
Steel, copper, aluminum, solder	Aqua regia, HNO ₃ , HCl, HF, H ₂ O ₂
Glass	HNO ₃ /HF
Gold, platinum, palladium, ceramic	Aqua regia
Silver	HNO ₃
Plastic	H ₂ SO ₄ , H ₂ O ₂ , HNO ₃ , HCl
Others	Any acid to total digestion

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PBB/PBDE analytical FLOW CHART

- 1) Name of the person who made measurement: Ms. Hoa
- 2) Name of the person in charge of measurement: Mr. Hoan

First testing process →
 Optional screen process - - - - -
 Confirmation process - - - - -▶



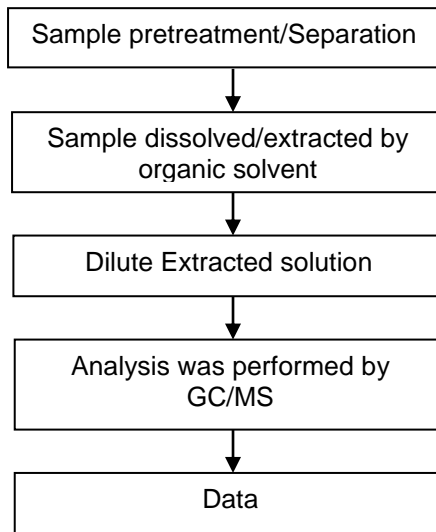
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Analytical flow chart of phthalate content

- 1) Name of the person who made measurement: Ms. Thu
- 2) Name of the person in charge of measurement: Mr. Hoan

Test method: EN 14372: 2004

First testing process →
 Optional screen process
 Confirmation process - -▶



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Photo appendix



REPORT RESULTS REFER TO SUBMITTED SAMPLE (S) ONLY
End of Report

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