



Test Report No. F690501/LF-CTSAYAA11-13312

Issued Date: 2011. 04. 26 Page 1 of 3

To: **SHINWONTECH**
36BL 12LT,Namdong-Industrial Area, 610-11
Namchon-dong
Namdong-gu
Incheon 405-846
Korea

The following merchandise was submitted and identified by the client as :

SGS File No. : AYAA11-13312
Product Name : LEAD FRAME
Item No./Part No. : HCL-O2Z
Received Date : 2011. 04. 21
Test Period : 2011. 04. 22 to 2011. 04. 26
Test Results : For further details, please refer to following page(s)
Test Performed : SGS Korea tested the sample(s) selected by applicant with following results.
Test Comments : By the applicant's specific request, the sampling and testing was performed only for the part indicated in the photo without disassembly.

Timothy Jeon
Jinhee Kim
Cindy Park
Jerry Jung/ Testing Person

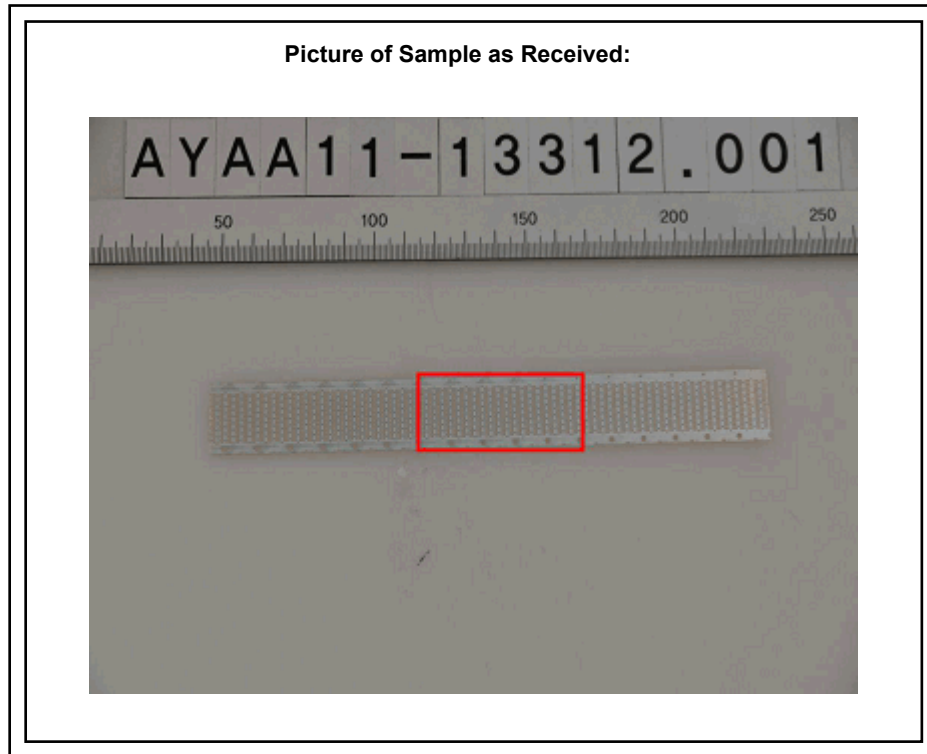
SGS Korea Co. Ltd.

Jeff Jang / Chemical Lab Mgr

Sample No. : AYAA11-13312.001
Sample Description : LEAD FRAME
Item No./Part No. : HCL-O2Z

Heavy Metals

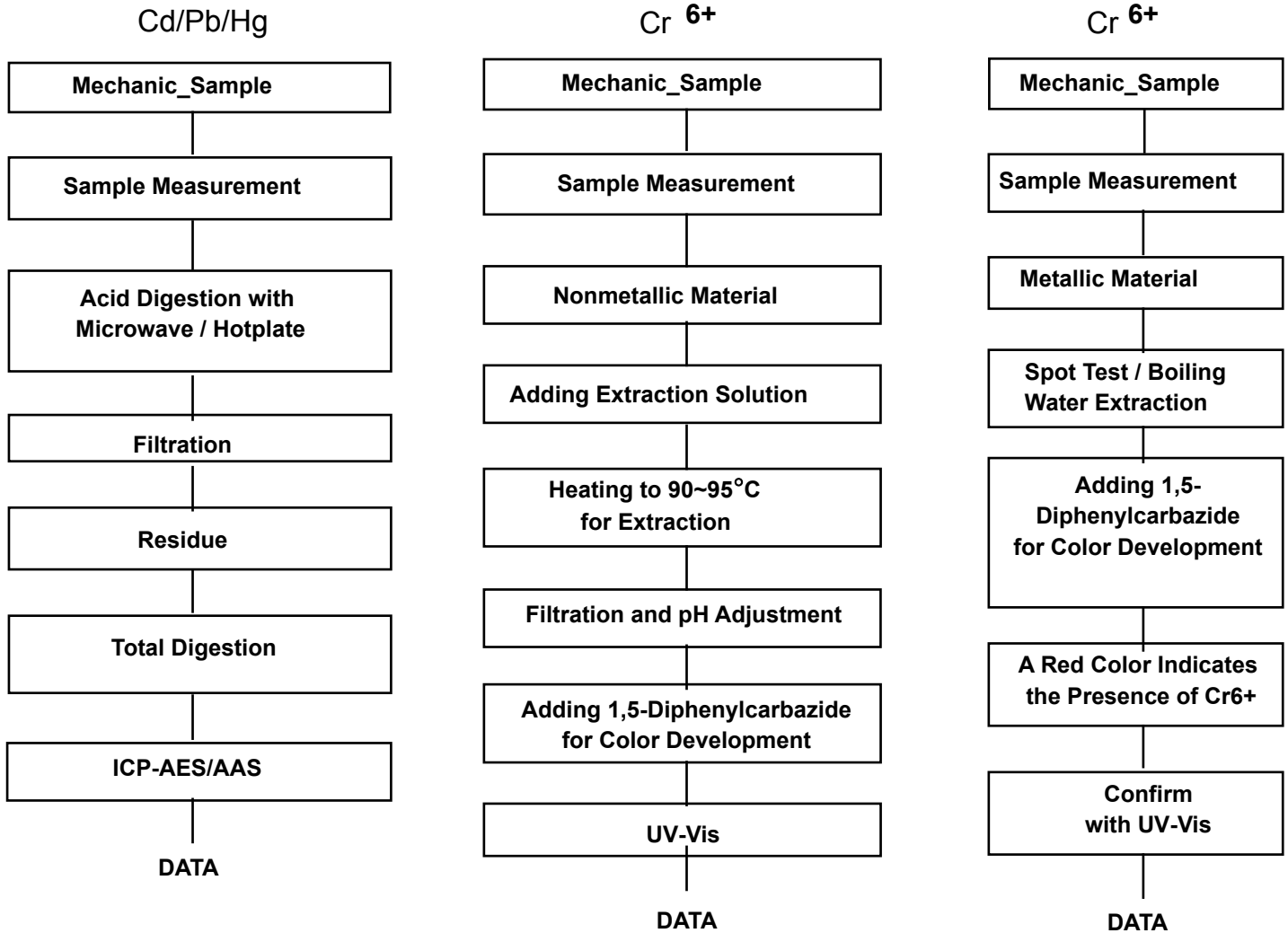
Test Items	Unit	Test Method	MDL	Results
Cadmium (Cd)	mg/kg	With reference to IEC 62321:2008, ICP	0.5	N.D.
Lead (Pb)	mg/kg	With reference to IEC 62321:2008, ICP	5	N.D.
Mercury (Hg)	mg/kg	With reference to IEC 62321:2008, ICP	2	N.D.
Hexavalent Chromium (Cr VI) By boiling water extraction*	**	With reference to IEC 62321:2008	-	Negative



- NOTE:**
- (1) N.D. = Not detected.(<MDL)
 - (2) mg/kg = ppm
 - (3) MDL = Method Detection Limit
 - (4) - = No regulation
 - (5) ** = Qualitative analysis (No Unit)
 - (6) * = Boiling-water-extraction:
 Negative = Absence of CrVI coating
 Positive = Presence of CrVI coating; the detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm2 sample surface area.

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



The samples were dissolved totally by pre-conditioning method according to above flow chart for Cd,Pb,Hg.

Section Chief : Gilsae Yi

*** End ***

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