



Test Report No. F690501/LF-CTSAYA08-04337

Issued Date: February 25, 2008

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To: **SAMSUNG TECHWIN CO., LTD.**
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Sungju-dong,
Changwon,
KYOUNGNAM
KOREA

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

Product Name : Lead Frame
SGS File No. : AYA08-04337
Received Date : February 15, 2008
Test Performing Date : February 18, 2008
Test Performed : SGS Testing Korea tested the sample(s) selected by applicant with following results
Test Results : For further details, please refer to following page(s)
Comments : The sampling and testing was performed only for the part indicated in the photo without disassembly by the applicant's specific request

SGS Testing Korea Co. Ltd. / Ulsan Laboratory

Sharpless Park
Annie Lim
Helen Yeo /Testing Person

Thomas Hwang / Ulsan Lab. Mgr

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Sample No. : AYA08-04337.001
Sample Description : Lead Frame
Style/Item No. : C194-Ag
Comments : Material is Metal Alloy.
Order No. LF_RoHS-080214-E001.

Heavy Metals

Test Items	Unit	Test Method	MDL	Results
Cadmium (Cd)	mg/kg	US EPA 3052, ICP-AES	1	N.D.
Lead (Pb)	mg/kg	US EPA 3052, ICP-AES	5	16.0
Mercury (Hg)	mg/kg	US EPA 3052, ICP-AES	2	N.D.
Hexavalent Chromium (Cr VI)	mg/kg	US EPA 3060A, UV-vis	1	N.D.

Flame Retardants-PBBs/PBDEs

Test Items	Unit	Test Method	MDL	Results
Monobromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Dibromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Tribromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Tetrabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Pentabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Hexabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Heptabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Octabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Nonabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Decabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Monobromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Dibromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Tribromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Tetrabromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Pentabromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Hexabromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Heptabromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Octabromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Nonabromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Decabromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.

- 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) Negative = Undetectable / Positive = Detectable

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Sample No. : AYA08-04337.001
Sample Description : Lead Frame
Style/Item No. : C194-Ag
Comments : Material is Metal Alloy.
Order No. LF_RoHS-080214-E001.

Halogen Contents

Test Items	Unit	Test Method	MDL	Results
Bromine(Br)	mg/kg	EN 14582:2007 , IC	30	N.D.
Chlorine(Cl)	mg/kg	EN 14582:2007 , IC	30	N.D.

Other(s)

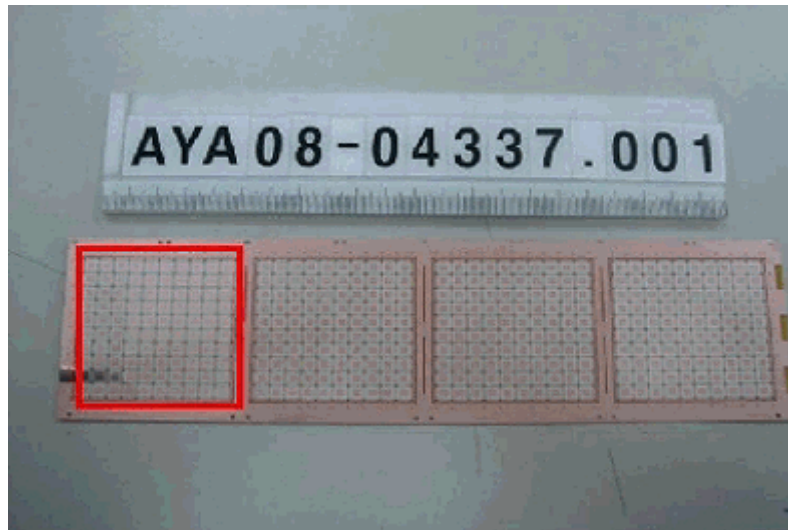
Test Items	Unit	Test Method	MDL	Results
PFOS(perfluorooctane sulfonates)	mg/kg	In-House, LC/MS	1	N.D.

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Picture of Sample as Received:

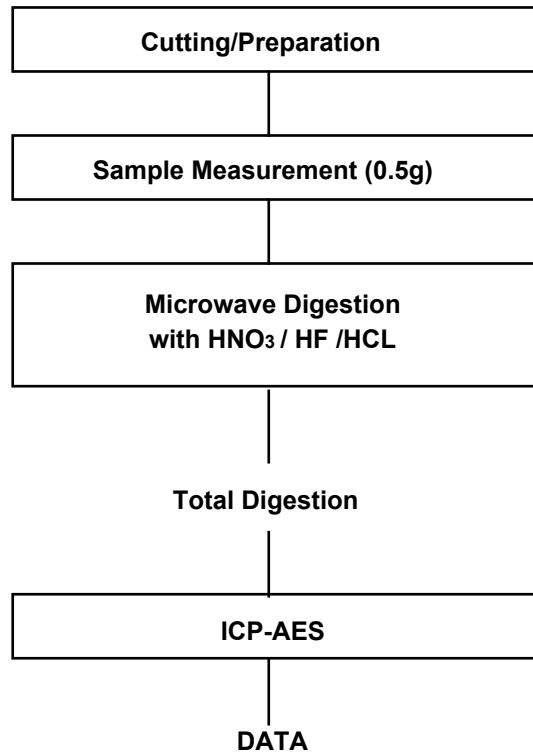
Sample Color : Bronze/Yellow/White



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Flow Chart of Digestion
(EPA 3052 for Cd, Pb)



The samples were dissolved totally by pre-conditioning method according to above flow chart.

Operator : Sharpless Park

Section Chief : Thomas Hwang

*** End ***

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