

## Test Report

No. SHAEC1112129102

Date: 03 Aug 2011

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WUXI CHINA RESOURCES MICRO-ASSEMBLY TECHNOLOGY CO.,LTD

NO.55 XIMEI ROAD,NEW DISTRICT SCIENCE&TECHNOLOGY PARK,WUXI,JIANGSU,P.R.CHINA

The following sample(s) was/were submitted and identified on behalf of the clients as : SOIC FCSOIC SOP SSOP QSOP OCSOP HSOP MSOP TSSOP TSOT FCTSOT IC PRODUCT

SGS Job No. : SP11-023788 - SUZ

Client Ref. Information : SOIC(M)/14/20/24/N16/N28/W16/EP16,SOIC14/20/24/8/8-7/N16/N28/W16/W28 /W8 /-EP8, FCSOIC8,FCSOIC(M)/N16LD,SOP14/16/18/20-2/24/28/32/8/M16, SSOP20/24/24-1/24-3/28/48,QSOP20/24/28,OCSOP6-1/14,HSOP28/28-1,MSO P8/10/EP8/EP10,TSSOP/14/16/20/24/28 /8/20/20-F, TSSOP/-EP8/14/16/20/24/28, TSOT23-5/23-6/23-8, FCTSOT23-5/23-6/23-8

Date of Sample Received : 29 Jul 2011

Testing Period : 29 Jul 2011 - 03 Aug 2011

Test Requested : Selected test(s) as requested by client.

Test Method : Please refer to next page(s).

Test Results : Please refer to next page(s).

Signed for and on behalf of  
SGS-CSTC Ltd.



Fan Jingjie, JJ  
Approved Signatory

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Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description
1	SHA11-121291.002	Black solid(mix all*)
2	SHA11-121291.003	Silver metal

Remarks :

- (1) 1 mg/kg = 1 ppm = 0.0001%
- (2) MDL = Method Detection Limit
- (3) ND = Not Detected ( < MDL )
- (4) "-" = Not Regulated

**RoHS Directive 2002/95/EC**

Test Method : With reference to IEC 62321:2008

- (1) Determination of Cadmium by ICP-OES.
- (2) Determination of Lead by ICP-OES.
- (3) Determination of Mercury by ICP-OES.
- (4) Determination of Hexavalent Chromium by Colorimetric Method using UV-Vis.
- (5) Determination of PBBs / PBDEs content by GC-MS.

<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>002</u>
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1,000	mg/kg	2	ND
Mercury (Hg)	1,000	mg/kg	2	ND
Hexavalent Chromium (CrVI)	1,000	mg/kg	2	ND
Sum of PBBs	1,000	mg/kg	-	ND
Monobromobiphenyl	-	mg/kg	5	ND
Dibromobiphenyl	-	mg/kg	5	ND
Tribromobiphenyl	-	mg/kg	5	ND
Tetrabromobiphenyl	-	mg/kg	5	ND
Pentabromobiphenyl	-	mg/kg	5	ND
Hexabromobiphenyl	-	mg/kg	5	ND
Heptabromobiphenyl	-	mg/kg	5	ND
Octabromobiphenyl	-	mg/kg	5	ND
Nonabromobiphenyl	-	mg/kg	5	ND
Decabromobiphenyl	-	mg/kg	5	ND
Sum of PBDEs	1,000	mg/kg	-	ND

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<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>002</u>
Monobromodiphenyl ether	-	mg/kg	5	ND
Dibromodiphenyl ether	-	mg/kg	5	ND
Tribromodiphenyl ether	-	mg/kg	5	ND
Tetrabromodiphenyl ether	-	mg/kg	5	ND
Pentabromodiphenyl ether	-	mg/kg	5	ND
Hexabromodiphenyl ether	-	mg/kg	5	ND
Heptabromodiphenyl ether	-	mg/kg	5	ND
Octabromodiphenyl ether	-	mg/kg	5	ND
Nonabromodiphenyl ether	-	mg/kg	5	ND
Decabromodiphenyl ether	-	mg/kg	5	ND

Notes :

- (1) The maximum permissible limit is quoted from the document 2005/618/EC amending RoHS directive 2002/95/EC
- (2) \*The sample(s) was/were analyzed on behalf of the applicant as mixing sample in one testing. The above result(s) was/were only given as the informality value and only for reference.

**RoHS Directive 2002/95/EC**

Test Method : With reference to IEC 62321:2008

- (1) Determination of Cadmium by ICP-OES.
- (2) Determination of Lead by ICP-OES.
- (3) Determination of Mercury by ICP-OES.
- (4) Determination of Hexavalent Chromium by Spot test / Colorimetric Method using UV-Vis.

<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>003</u>
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1,000	mg/kg	2	13
Mercury (Hg)	1,000	mg/kg	2	ND
Hexavalent Chromium (CrVI)	-	-	◇	Negative

Notes :

- (1) The maximum permissible limit is quoted from the document 2005/618/EC amending RoHS directive 2002/95/EC
- (2) ◇ Spot-test:  
 Negative = Absence of CrVI coating, Positive = Presence of CrVI coating;  
 The tested sample should be further verified by boiling-water-extraction method if the spot test result is Negative or cannot be confirmed.  
 ◇ Boiling-water-extraction:  
 Negative = Absence of CrVI coating; Positive = Presence of CrVI coating

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The detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm<sup>2</sup> sample surface area.

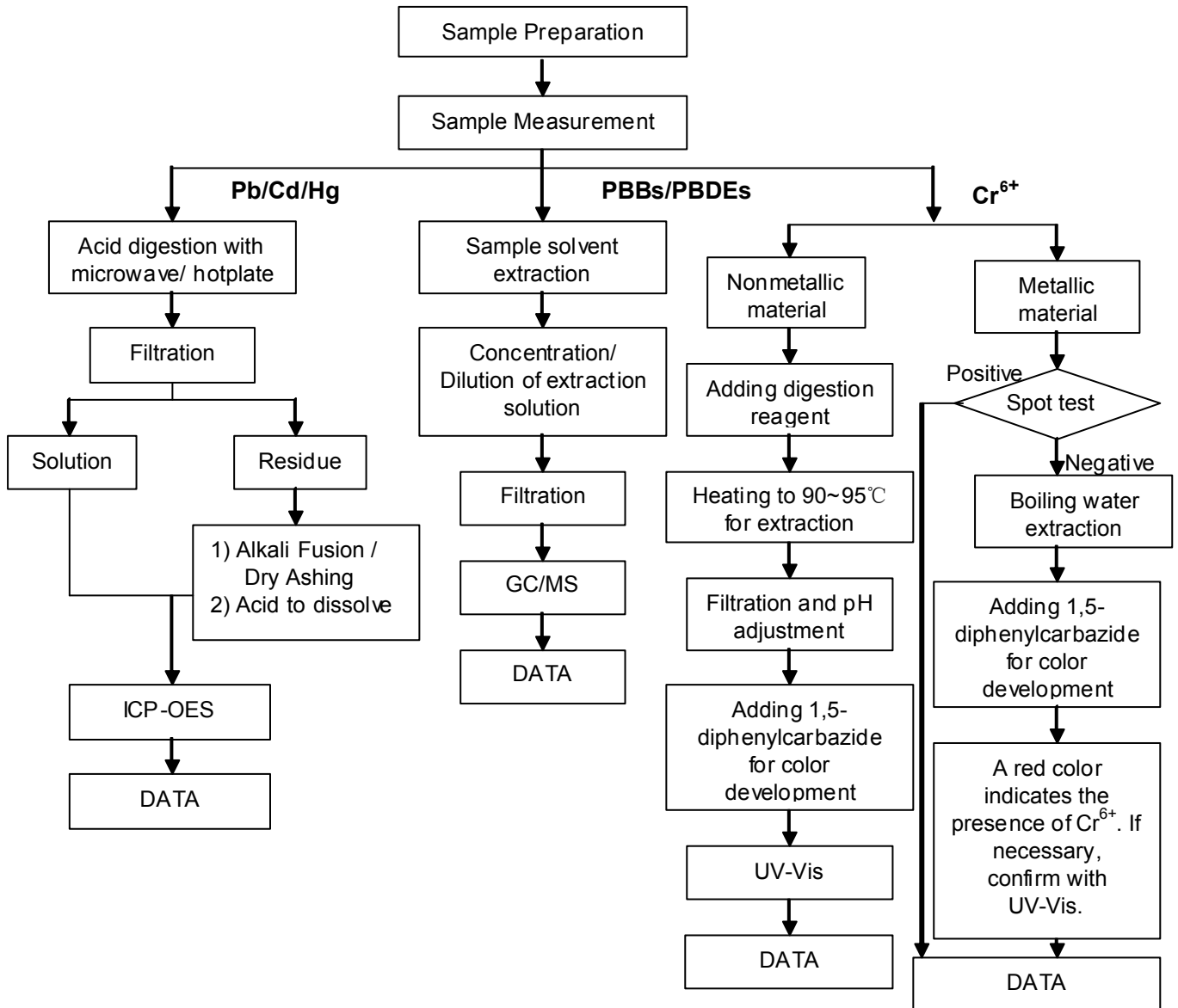
For corrosion protection coatings on metals: Information on storage conditions and production date of the tested sample is unavailable and thus results of Cr(VI) represent status of the sample at the time of testing.

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ATTACHMENT S

RoHS Testing Flow Chart

- 1) Name of the person who made testing: Jan Shi/Yoyo Wang/Allen Xiao/Gary Xu
- 2) Name of the person in charge of testing: Jeff Zhang/George Xu/ Elim Lin
- 3) These samples were dissolved totally by pre -conditioning method according to below flow chart. (Cr6+ and PBBs/PBDEs test method excluded)



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Sample photo:



SGS authenticate the photo on original report only

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

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