

Test Report

No. SHAEC1514412103

Date: 31 Jul 2015

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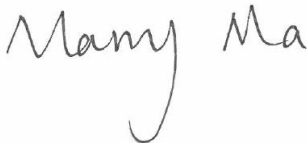
WENZHOU SHUGUANG FUSE CO., LTD

DAXING WEST ROAD, LIUSHI TOWN, YUEQING CITY, ZHEJIANG PROVINCE P.R.CHINA

The following sample(s) was/were submitted and identified on behalf of the clients as : J type Fuse base

SGS Job No. : SP15-024479 - SH
Date of Sample Received : 21 Jul 2015
Testing Period : 21 Jul 2015 - 24 Jul 2015
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 Standards Technical Services (Shanghai) Co., Ltd.



Marry Ma
Approved Signatory



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Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	SHA15-144121.007	Gray solid
SN2	SHA15-144121.008	Silvery metal
SN3	SHA15-144121.009	Black solid
SN4	SHA15-144121.010	Black rubber

Remarks :

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

RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU

- Test Method :
- (1) With reference to IEC 62321-5:2013, determination of Cadmium by ICP-OES.
 - (2) With reference to IEC 62321-5:2013, determination of Lead by ICP-OES.
 - (3) With reference to IEC 62321-4:2013, determination of Mercury by ICP-OES.
 - (4) With reference to IEC 62321:2008, determination of Hexavalent Chromium by Colorimetric Method using UV-Vis.
 - (5) With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.

<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>007</u>	<u>009</u>	<u>010</u>
Cadmium (Cd)	100	mg/kg	2	ND	ND	ND
Lead (Pb)	1000	mg/kg	2	3	3	37
Mercury (Hg)	1000	mg/kg	2	ND	ND	ND
Hexavalent Chromium (Cr(VI))	1000	mg/kg	2	ND	ND	ND
Sum of PBBs	1000	mg/kg	-	ND		ND
Monobromobiphenyl	-	mg/kg	5	ND		ND
Dibromobiphenyl	-	mg/kg	5	ND		ND
Tribromobiphenyl	-	mg/kg	5	ND		ND
Tetrabromobiphenyl	-	mg/kg	5	ND		ND
Pentabromobiphenyl	-	mg/kg	5	ND		ND
Hexabromobiphenyl	-	mg/kg	5	ND		ND
Heptabromobiphenyl	-	mg/kg	5	ND		ND
Octabromobiphenyl	-	mg/kg	5	ND		ND
Nonabromobiphenyl	-	mg/kg	5	ND		ND



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Test Item(s)	Limit	Unit	MDL	007	009	010
Decabromobiphenyl	-	mg/kg	5	ND		ND
Sum of PBDEs	1000	mg/kg	-	ND		ND
Monobromodiphenyl ether	-	mg/kg	5	ND		ND
Dibromodiphenyl ether	-	mg/kg	5	ND		ND
Tribromodiphenyl ether	-	mg/kg	5	ND		ND
Tetrabromodiphenyl ether	-	mg/kg	5	ND		ND
Pentabromodiphenyl ether	-	mg/kg	5	ND		ND
Hexabromodiphenyl ether	-	mg/kg	5	ND		ND
Heptabromodiphenyl ether	-	mg/kg	5	ND		ND
Octabromodiphenyl ether	-	mg/kg	5	ND		ND
Nonabromodiphenyl ether	-	mg/kg	5	ND		ND
Decabromodiphenyl ether	-	mg/kg	5	ND		ND

Notes :

(1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.

RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU

Test Method : (1) With reference to IEC 62321-5:2013, determination of Cadmium by ICP-OES.
 (2) With reference to IEC 62321-5:2013, determination of Lead by ICP-OES.
 (3) With reference to IEC 62321-4:2013, determination of Mercury by ICP-OES.
 (4) With reference to IEC 62321:2008, determination of Hexavalent Chromium by spot test / Colorimetric Method using UV-Vis.

Test Item(s)	Limit	Unit	MDL	008
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1000	mg/kg	2	50
Mercury (Hg)	1000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))	-	-	◇	Negative

Notes :

(1)The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.
 (2) ◇Spot-test:
 Negative = Absence of Cr(VI) coating, Positive = Presence of Cr(VI) 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 Cr(VI) coating
 Positive = Presence of Cr(VI) 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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Information on storage conditions and production date of the tested sample is unavailable and thus Cr(VI) results represent status of the sample at the time of testing.



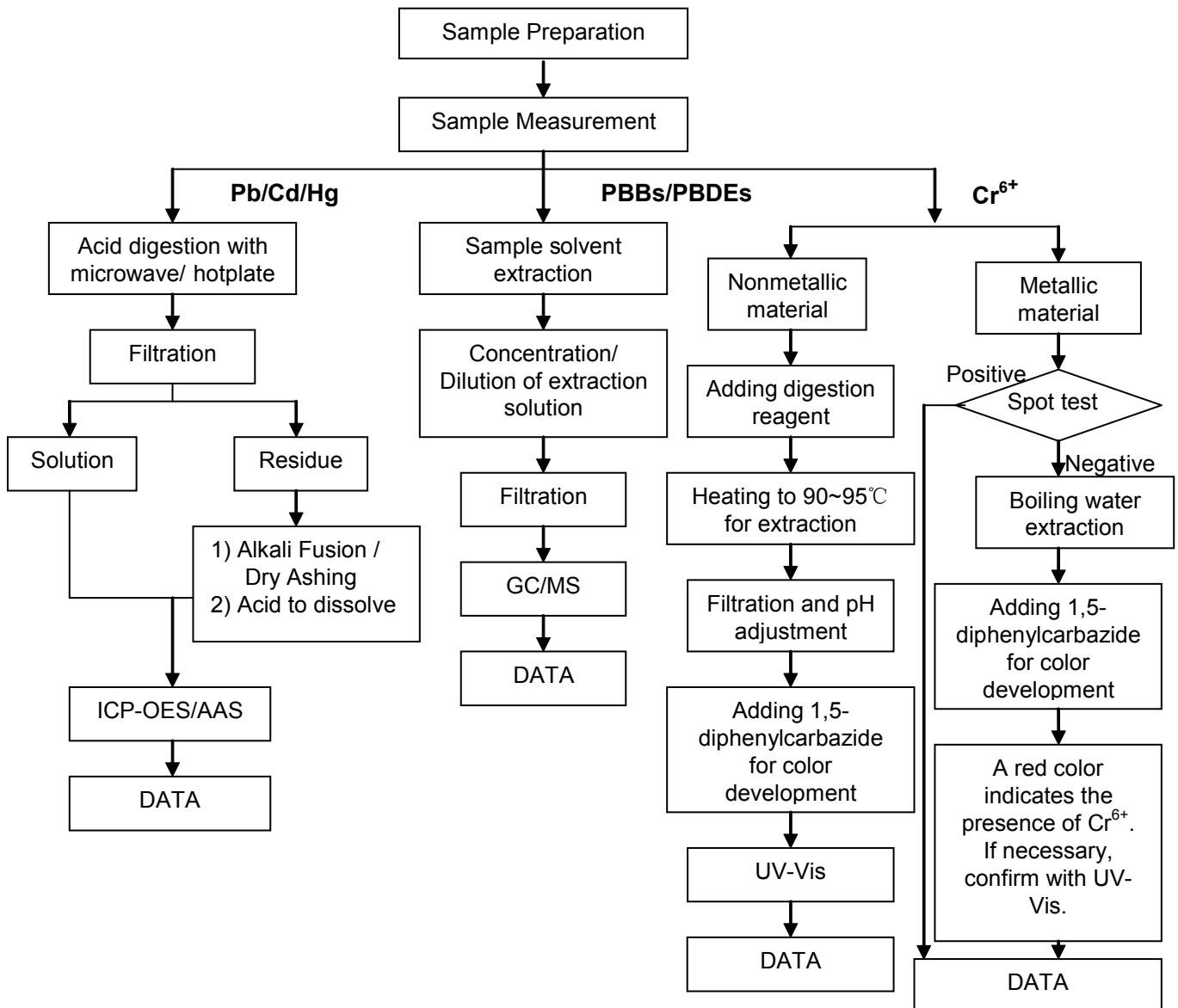
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ATTACHMENTS

RoHS Testing Flow Chart

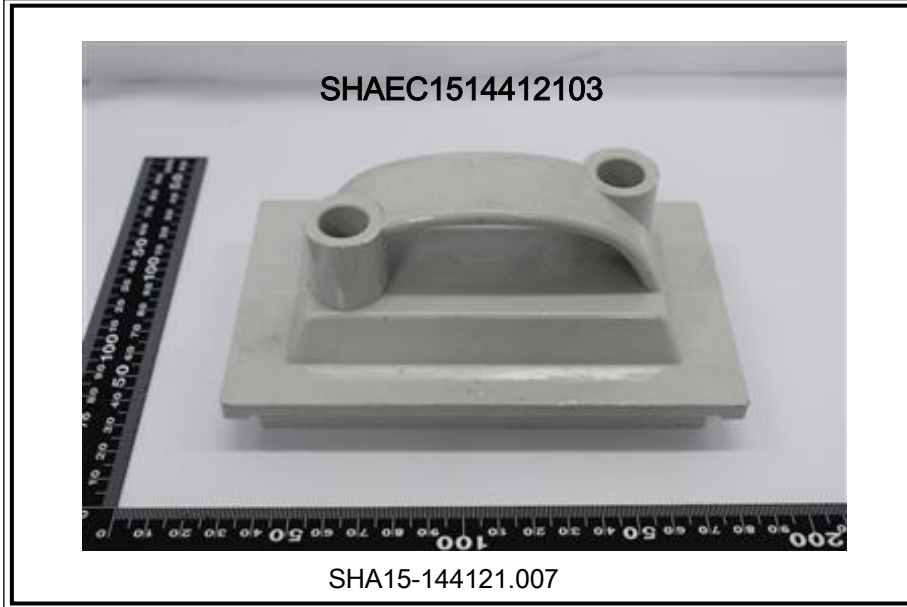
- 1) Name of the person who made testing: Bob Zhang/Gary Xu/Zengzhen Zhu/Sunny Qin
- 2) Name of the person in charge of testing: Jan Shi/Summer Jin/Jessy Huang/Stone Chen
- 3) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ and PBBs/PBDEs test method excluded)



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Sample photo:



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