

ICP Test Report Certification Packet

Company name:	Littelfuse, Inc.	
Product Series:	3AG Fuse	
Product #:	315xxxP Series	
Issue Date:	February 28, 2013	
recasting 2002/95/EC)-re for packing/packaging maln addition, it is hereby re for unit parts, the packing/	Littelfuse, Inc. that there is neither RoHS (EU Directive 2011/65/b stricted substance nor such use, for materials to be used for unit pa sterials, and for additives and the like in the manufacturing processes ported to you that the parts and sub-materials, the materials to be us packaging materials, and the additives and the like in the manufacturesed of the following components.	rts, s. sed
	Issued by: KRISTEEN BACILA <global ehs="" engineer=""></global>	
(1) Parts, sub-materials a This document cov Littelfuse, Inc.	and unit parts rers the 3AG Fuse RoHS-Compliant series products manufactured	l by
< Raw Materials L Please see Tab		
(2) The ICP data on all Please see app	measurable substances ropriate pages as identifed in Table 1	
Remarks :		



Table 1: List of Raw Materials covered by this report

Total Parts	Raw Material Part Number	Raw Material Description	Page(s)
1	910-005	Cap	3-6
2	909-002-002	Body – Soda Lime Glass Tubes	7-11
3	909-194-002	Body	12-19
4	082xxx	Wire - Cu Sn Plated	20-27
5	497xxx	Wire – 99% Ni	28-33
6	692475	Solder	34-39
7	692476	Solder	34-39
8	692477	Solder	34-39
9	692535-003	Solder	40-44
10	648102	Yarn	45-52
11	087244	HMA	53-65
12	899-40X-1	Resistor	66-75
13	912-228	Spring	76-79
14	934-086 / 934-087 / 934-088	Overcap (Cap Base & Plating)	80-83
15	934-086 / 934-087 / 934-088	Overcap (Wire Base & Plating)	80-83
16	692539-003	Solder	84-88
17	909-194-001	Borosilicate Glass tube	89-93
18	425902	Ink - Black	94-104
19	425906	Ink - Brown	105-115



NO.: A002R12050740-1R02 Date: May. 09, 2012 Page 1 of 4

Customer: SuZhou FuHong Electronic Industrial Co., Ltd.

Address: NO. 89 WEI DU ROAD, WANGTING TOWN, XIANGCHENG DISTRICT, SUZHOU, CHINA

Report on the submitted sample said to be

Sample name: Copper shell

Model: /

Item/Lot No.: / Material: / Buyer: / Supplier: /

Manufacturer: /

Sample received date: May. 07, 2012

Testing period: From May. 07, 2012 to May. 09, 2012

Testing Requested

As specified by client, to determine the Lead, Cadmium, Mercury & Hexavalent Chromium content in the submitted sample in accordance with Directive 2002/95/EC (RoHS).

Testing method:

Testing Item	Pretreatment method	Measuring instrument	MQL
Lead (Pb)	IEC 62321: 2008, section 9	ICP-OES	2mg/kg
Cadmium (Cd)	IEC 62321: 2008, section 9	ICP-OES	2 mg/kg
Mercury (Hg)	IEC 62321: 2008, section 7	ICP-OES	2 mg/kg
Chromium (Cr VI)	IEC 62321: 2008, Annex B	UV-VIS	0.02mg/kg*

Note:

Conclusion:

-When tested as specified the submitted sample complied with the requirements of commission Decision of 18 Aug 2005 amending Directive 2002/95/EC notified under document 2005/618/EC.

******FOR FURTHER DETAILS, PLEASE REFER TO THE FOLLOWING PAGE(S)******

Signed for and on behalf of Shenzhen AOV Testing Technology Co., Ltd, Kunshan Branch

Project Leader:

Li Tingting, Maggie

Chemical Test Director

Reviewed by: Weik

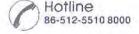
Wang Wexin, Weikin

Technical Director

Approved by:

Yuan Qi, Mickey

Lab Manager



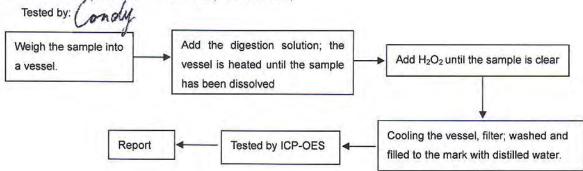
^{-* 0.02} mg/kg refers to the MQL of sample extraction liquid.



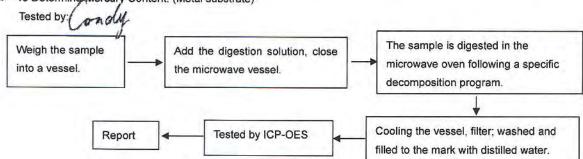
NO.: A002R12050740-1R02 Date: May. 09, 2012 Page 2 of 4

Test Flow:

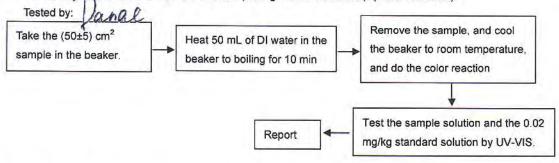
1. To Determine Lead, Cadmium Content: (Metal substrate)



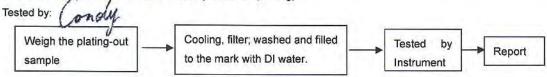
2. To Determine Mercury Content: (Metal substrate)



3. To Determine Hexavalent Chromium Content (boiling- water- extraction): (Metal substrate)



4. To Determine Lead, Cadmium and Mercury Content: (Plating)







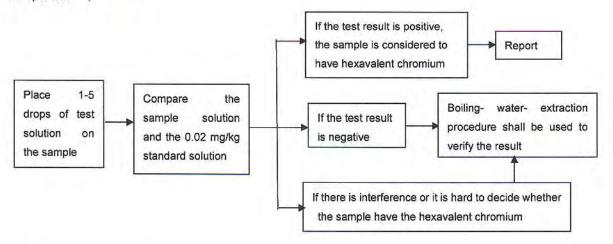
NO.: A002R12050740-1R02

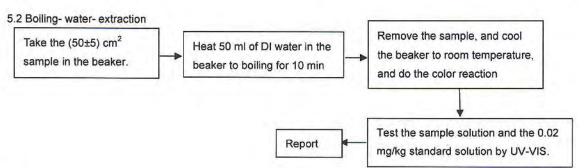
Date: May. 09, 2012

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To Determine Hexavalent Chromium Content in colorless and colored chromate coating on metals: (Plating)
 Tested by: 1







Sample Description:

Code	Sample Description	
1-1	Substrate	
1-2	Plating	

Test Results:

Item	Unit	RoHS Limit	Results		
_			1-1	1-2**	
Lead (Pb)	mg/kg	1000	N.D.	N.D.	
Cadmium (Cd)	mg/kg	100	N.D.	N.D.	
Mercury (Hg)	mg/kg	1000	N.D.	N.D.	
Chromium (CrVI)	mg/kg	1000	Negative	Negative	





NO.: A002R12050740-1R02 Date: May. 09, 2012

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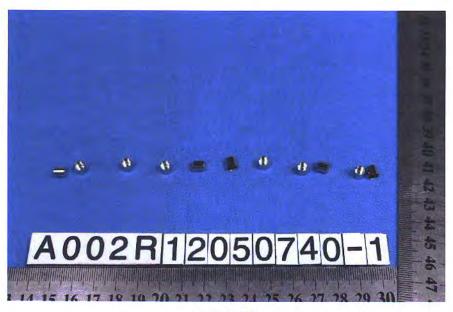
Note:

- -The new RoHS directive 2011/65/EU, on Jul. 21, 2011 come into force, on Jan. 03, 2013 the formal implementation, Directive 2002/95/EC shall be repealed simultaneously.
- -Specimens, which requested to determine Lead, Cadmium and Mercury Content, have been dissolved completely.
- -mg/kg=ppm
- -N.D.=not detected(<MQL)
- -MQL=Method Quantitation Limit
- -Negative=Absence of Cr (VI);
- -Positive=Presence of Cr (VI);

Uncertain= can not verify whether the sample have Hexavalent Chromium by spot-test.

- (The tested sample should be further verified by boiling-water-extraction method if the spot test result is uncertain or negative.)
- -**The test is based on the following assumption: The sample plating is a single layer and each part is uniform. The test result maybe cannot stand for the physical truth of sample plating.
- -Photo is included

Photograph of Sample



Copper shell

End of Report





Test Report

No. CANEC1207912201

Date: 26 Jun 2012

Page 1 of 5

XIAMEN LICHUN ELECTRONIC ELEMENT CO.,LTD 42-2XINGLIN WEST RD.,361022,JIMEI DISTRICT,XIAMEN,,FUJIAN,P.R.C

The following sample(s) was/were submitted and identified on behalf of the clients as : SODA LIME GLASS TUBE

SGS Job No.:

XM13901119EC - XM

Date of Sample Received:

18 Jun 2012

Testing Period:

18 Jun 2012 - 26 Jun 2012

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).

Conclusion:

Based on the performed tests on submitted samples, the results of Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBB),

Polybrominated diphenyl ethers (PBDE) comply with the limits as set by RoHS

Directive 2011/65/EU Annex II; recasting 2002/95/EC.

Signed for and on behalf of SGS-CSTC Ltd.

Lucy Wu

Approved Signatory

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Test Report

No. CANEC1207912201

Date: 26 Jun 2012

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Test Results:

Test Part Description:

Specimen No. SGS Sample ID Description

CAN12-079122.001 Trans

Transparent glass tube

Remarks:

1

(1) 1 mg/kg = 1 ppm = 0.0001%

(2) MDL = Method Detection Limit

(3) ND = Not Detected (< MDL)

(4) "-" = Not Regulated

RoHS Directive 2011/65/EU

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.

Test Item(s)	<u>Limit</u>	<u>Unit</u>	MDL	001
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1,000	mg/kg	2	229
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	4	mg/kg	5	ND
Tribromobiphenyl	-	mg/kg	5	ND
Tetrabromobiphenyl	0-1	mg/kg	5	ND
Pentabromobiphenyl	-	mg/kg	5	ND
Hexabromobiphenyl	2.1	mg/kg	5	ND
Heptabromobiphenyl	35	mg/kg	5	ND
Octabromobiphenyl	-	mg/kg	5	ND
Nonabromobiphenyl	r i je	mg/kg	5	ND
Decabromobiphenyl	Q.	mg/kg	5	ND
Sum of PBDEs	1,000	mg/kg	(-)	ND
Monobromodiphenyl ether	-	mg/kg	5	ND

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Test Report	No. CANEC12079122	01	Date: 26	Jun 2012	Page 3 of 5
Test Item(s)	Limit	<u>Unit</u>	MDL	<u>001</u>	
Dibromodiphenyl ether	4	mg/kg	5	ND	
Tribromodiphenyl ether	(a)	mg/kg	5	ND	
Tetrabromodiphenyl ether		mg/kg	5	ND	
Pentabromodiphenyl ether	2	mg/kg	5	ND	
Hexabromodiphenyl ether	2	mg/kg	5	ND	
Heptabromodiphenyl ether	77	mg/kg	5	ND	
Octabromodiphenyl ether	*	mg/kg	5	ND	
Nonabromodiphenyl ether	u ž o.	mg/kg	5	ND	
Decabromodiphenyl ether		mg/kg	5	ND	

Notes:

(1) The maximum permissible limit is quoted from the directive 2011/65/EU, Annex II

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Test Report

No. CANEC1207912201

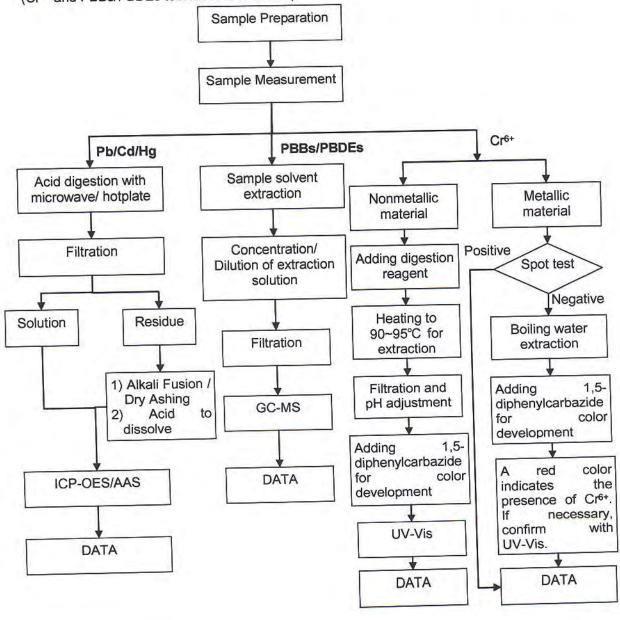
Date: 26 Jun 2012

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ATTACHMENTS

RoHS Testing Flow Chart

- 1) Name of the person who made testing: Bella Wang / Cutey Yu
- 2) Name of the person in charge of testing: Adams Yu / Ryan Yang
- 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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Test Report

No. CANEC1207912201

Date: 26 Jun 2012

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Sample photo:



SGS authenticate the photo on original report only

*** End of Report ***



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AUG 20, 2012

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DATE:

TEST REPORT NUMBER: SHAH00335582

APPLICANT: LITTELFUSE,INC.

800 E. NORTHWEST HWY

ATTN: A.DIVIETRO/D.UNTIEDT

SAMPLE DESCRIPTION:

ONE(1) SUBMITTED SAMPLE SAID TO BE **Transparent glass.**ITEM NAME : Glass body.
ITEM NO. : 909-194-002.

TESTS CONDUCTED:

AS REQUESTED BY THE APPLICANT, FOR DETAILS REFER TO ATTACHED PAGE(S)

TO BE CONTINUED

AUTHORIZED BY: FOR INTERTEK TESTING SERVICES LTD., SHANGHAI

JACOB LIN

GENERAL MANAGER



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TEST REPORT NUMBER: SHAH00335582

TESTS CONDUCTED

1 (I) Test Result Summary:

TESTING ITEM	RESULT (ppm)
HEAVY METAL	
CADMIUM (Cd) CONTENT	ND
LEAD (Pb) CONTENT	ND
MERCURY (Hg) CONTENT	ND
CHROMIUM VI (Cr ⁶⁺) CONTENT	ND
POLYBROMINATED BIPHENYLS (PBBs)	·
MONOBROMINATED BIPHENYLS (MonoBB)	ND
DIBROMINATED BIPHENYLS (DIBB)	ND
TRIBROMINATED BIPHENYLS (TriBB)	ND
TETRABROMINATED BIPHENYLS (TetraBB)	ND
PENTABROMINATED BIPHENYLS (PentaBB)	ND
HEXABROMINATED BIPHENYLS (HexaBB)	ND
HEPTABROMINATED BIPHENYLS (HeptaBB)	ND
OCTABROMINATED BIPHENYLS (OctaBB)	ND
NONABROMINATED BIPHENYLS (NonaBB)	ND
DECABROMINATED BIPHENYL (DecaBB)	ND
POLYBROMINATED DIPHENYL ETHERS (PBDEs)	
MONOBROMINATED DIPHENYL ETHERS (MonoBDE)	ND
DIBROMINATED DIPHENYL ETHERS (DIBDE)	ND
TRIBROMINATED DIPHENYL ETHERS (TriBDE)	ND
TETRABROMINATED DIPHENYL ETHERS (TetraBDE)	ND
PENTABROMINATED DIPHENYL ETHERS (PentaBDE)	ND
HEXABROMINATED DIPHENYL ETHERS (HexaBDE)	ND
HEPTABROMINATED DIPHENYL ETHERS (HeptaBDE)	ND
OCTABROMINATED DIPHENYL ETHERS (OctaBDE)	ND
NONABROMINATED DIPHENYL ETHERS (NonaBDE)	ND
DECABROMINATED DIPHENYL ETHER (DecaBDE)	ND
HALOGEN CONTENT	
FLUORINE (F)	ND
CHLORINE (CI)	ND
BROMINE (Br)	ND
IODINE (I)	ND

REMARKS: ppm = PARTS PER MILLION = mg/kg

ND = NOT DETECTED

RESPONSIBILITY OF CHEMIST: DENT FANG / KEN HE



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TEST REPORT NUMBER: SHAH00335582

TESTS CONDUCTED

(II) ROHS REQUIREMENT:

RESTRICTED SUBSTANCES	<u>LIMITS</u>
CADMIUM (Cd) CONTENT	0.01% (100ppm)
LEAD (Pb) CONTENT	0.1% (1000ppm)
MERCURY (Hg) CONTENT	0.1% (1000ppm)
CHROMIUM VI (Cr ⁶⁺) CONTENT	0.1% (1000ppm)
POLYBROMINATED BIPHENYLS (PBBs)	0.1% (1000ppm)
POLYBROMINATED DIPHENYL ETHERS (PBDEs)	0.1% (1000ppm)

THE ABOVE LIMITS WERE QUOTED FROM ROHS DIRECTIVE 2002/95/EC AND AMENDMENT 2005/618/EC FOR HOMOGENEOUS MATERIAL.

(III) TEST METHOD:

(III) TEOT METHOD.		
TESTING ITEM	TESTING METHOD	REPORTING LIMIT
CADMIUM (Cd) CONTENT	WITH REFERENCE TO IEC 62321 EDITION 1.0:2008 IN CLAUSE 8/9/10, BY MICROWAVE DIGESTION UNTIL THE TESTED SAMPLES ARE TOTALLY DISSOLVED AND DETERMINED BY ICP-OES.	2 ppm
LEAD (Pb) CONTENT	WITH REFERENCE TO IEC 62321 EDITION 1.0:2008 IN CLAUSE 8/9/10, BY MICROWAVE DIGESTION UNTIL THE TESTED SAMPLES ARE TOTALLY DISSOLVED AND DETERMINED BY ICP-OES.	2 ppm
MERCURY (Hg) CONTENT	WITH REFERENCE TO IEC 62321 EDITION 1.0:2008 IN CLAUSE 7, BY MICROWAVE DIGESTION UNTIL THE TESTED SAMPLES ARE TOTALLY DISSOLVED AND DETERMINED BY ICP-OES.	2 ppm
CHROMIUM VI (CR ⁶⁺) CONTENT	WITH REFERENCE TO IEC 62321 EDITION 1.0:2008 IN ANNEX C, BY ALKALINE DIGESTION AND DETERMINED BY UV-VIS SPECTROPHOTOMETER.	1 ppm
POLYBROMINATED BIPHENYLS (PBBs)	WITH REFERENCE TO IEC 62321 EDITION 1.0:2008 IN ANNEX A, BY SOLVENT EXTRACTION AND DETERMINED BY GC-MSD AND FURTHER HPLC CONFIRMATION WHEN NECESSARY.	5 ppm
POLYBROMINATED DIPHENYL ETHERS (PBDEs)	WITH REFERENCE TO IEC 62321 EDITION 1.0:2008 IN ANNEX A, BY SOLVENT EXTRACTION AND DETERMINED BY GC-MSD AND FURTHER HPLC CONFIRMATION WHEN NECESSARY.	5 ppm

REMARK: REPORTING LIMIT = QUANTITATION LIMIT OF ANALYZE IN SAMPLE



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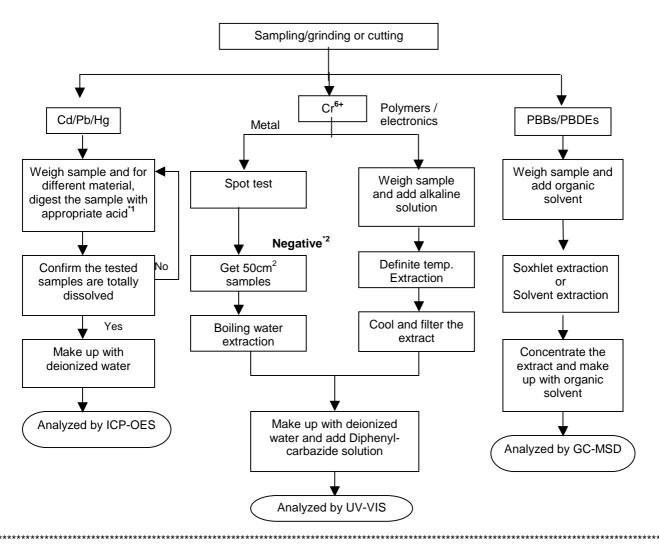
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TESTS CONDUCTED

(IV) MEASUREMENT FLOWCHART:

TEST FOR Cd/ Pb/ Hg/Cr (VI)/ PBBS/PBDES CONTENTS REFERENCE STANDARD: IEC 62321 EDITION 1.0:2008





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TEST REPORT NUMBER: SHAH00335582

TESTS CONDUCTED REMARKS:

*1: LIST OF APPROPRIATE ACID:

MATERIAL	ACID ADDED FOR DIGESTION
POLYMERS	HNO ₃ ,HCL,HF,H ₂ O ₂ ,H ₃ BO ₃
METALS	HNO ₃ ,HCL,HF
ELECTRONICS	HNO _{3,} HCL,H ₂ O _{2,} HBF ₄

*2: IF THE RESULT OF SPOT TEST IS POSITIVE, CHROMIUM (VI) WOULD BE DETERMINED AS DETECTED.



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TEST REPORT NUMBER: SHAH00335582

TESTS CONDUCTED

2 (I) Test Result Summary:

**		
	Testing Item	Result (ppm)
Halogen Content		
Fluorine (F)		ND
Chlorine (CI)		ND
Bromine (Br)		ND
lodine (I)		ND

Remarks: ppm = Parts per million = mg/kg

ND = Not detected

Responsibility Of Chemist : Ken He

(III) Test Method:

Testing Item Testing Method		Reporting Limit
Halogen Content	With reference to EN 14582:2007 by combustion flask with	50 ppm
rialogen Content	oxygen and determined by ion chromatography	30 ррш

Remark: Reporting limit = Quantitation limit of analyte in sample

Date Sample Received : Aug.16, 2012

Testing Period : Aug.16, 2012To Aug.20, 2012



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SHAH00335582

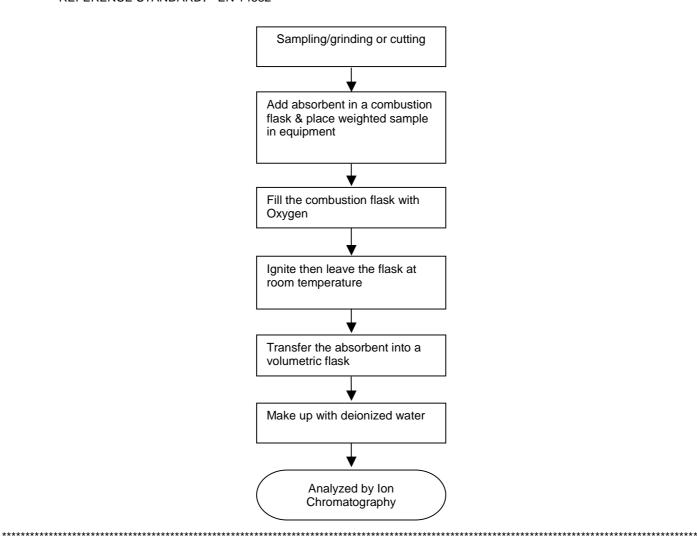
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TEST REPORT

TESTS CONDUCTED

(V) MEASUREMENT FLOWCHART:
TEST FOR HALOGEN CONTENT
REFERENCE STANDARD: EN 14582





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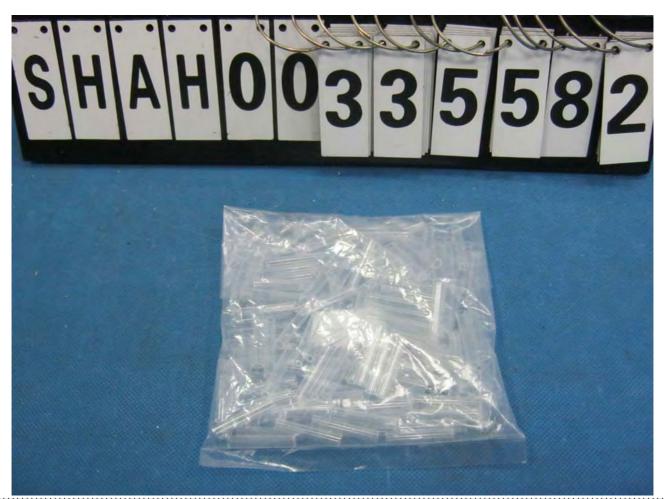
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NUMBER:

TEST REPORT

TESTS CONDUCTED



END OF REPORT

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Number: TWNC00296620 Test Report

Applicant: Elschukom Elektroschutzkomponentenbau

Gewerbestrasse 87, D-98669 Veilsdorf,

Germany

Sample Description:

One (1) group of submitted samples said to be :

Sample Description : Tin plated Wires

Style / Item No. :Please see page two to three.

Country of Origin :Germany Date Sample Received : Jan 23, 2013 Date Test Started :Jan 23, 2013

Test Conducted:

As requested by the applicant, for details please refer to attached pages.

Authorized by: On Behalf of Intertek Testing Services Taiwan Limited



K. Y. Liang Director



Date : Jan 30, 2013



Number: TWNC00296620 Test Report

```
Sample Description:
Style / Item No. : (A-1)101--271.0---
                   - tin plated copper wire - Cu, Sn--%
                   (A-2)101--283.0---
                   - tin plated, copper plated copper nickel alloy wire
                   - Elcon30, Sn--%
                   (A-3)101--272.0---
                   - tin plated, copper plated steel wire - ElconF, Sn--%
                   (A-4)101--281.0---
                   - tin plated, copper plated iron nickel alloy wire
                   - ElconD, Sn--%
                   (A-5)101--221.0---
                   - tin plated copper nickel alloy wire - CuNi44, Sn--%
                   (A-6)101--24-.0---
                   - tin plated, silver plated copper wire - Cu, Ag--%, Sn--%
                   (A-7)101--257.0---
                   - tin plated brass wire - Cu80Zn20, Sn--%
```

Authorized by: On Behalf of Intertek Testing Services Taiwan Limited



K. Y. Liang Director





Number: TWNC00296620 Test Report

```
Sample Description:
Style / Item No.
                  : (A-9)101--234.0---
                   - tin plated silver copper alloy wire
                   - AgCu90, Sn--% (ElCu90, Sn--%)
                   (A-10)101--255.----
                   - tin plated copper zinc alloy wire - Cu70Zn30, Sn--%
                   (A-11)101--229.---
                   - tin plated copper nickel alloy wire - CuNi12, Sn--%
                   (A-12)101--235.---
                   - tin plated silver copper alloy wire - Ag72Cu28, Sn--%
                   (A-13)101--231.----
                   - tin plated silver wire - Ag1000, Sn--%
                   (A-14)101--236.---
                   - tin plated silver copper alloy wire
                   - Ag45Cu55, Sn--%(AgCu55, Sn)
                   (A-15)101--266.----
                   - tin plated silver copper alloy wire
                   - AgCu70, Sn--%(ElCu70, Sn)
                   (A-16)101--238.----
                   - tin plated silver copper alloy wire
                   - AgCu80, Sn--%(Elcu80, Sn)
                   (A-17)101--228.0---
                   - tin plated tungsten wire - W, Sn
```

Authorized by: On Behalf of Intertek Testing Services Taiwan Limited



K. Y. Liang Director





Test Conducted

(I) Test Result Summary:

Test Item	<u>Unit</u>	Test Method	Result Mixed all kinds of metal wire	RL
Heavy Metal				
Cadmium (Cd) content	ppm	With reference to IEC 62321: 2008, by microwave digestion and determined by ICP-OES.	ND	2
Lead (Pb) content	ppm	With reference to IEC 62321: 2008, by microwave digestion and determined by ICP-OES.	37	2
Mercury (Hg) content	ppm	With reference to IEC 62321: 2008, by microwave digestion and determined by ICP-OES.	ND	2
Chromium VI (Cr ⁶⁺) content	mg/kg with 50 cm ²	With reference to IEC 62321: 2008, by boiling water extraction and determined by UV-Vis Spectrophotometer.	Negative (#)	0.02

ppm = parts per million based on weight of tested sample = mg/kg Remarks:

> = Not detected ND

= Reporting Limit, Quantitation limit of analyte in sample mg/kg with 50cm² = milligram per kilogram with 50 square centimeter

Negative = A negative test result indicated positive observation was not found at the time of Test. When the spot test showed a negative result, the boiling water extraction procedure shall be used to verify the result.

= Due to the insufficient sample area, reduced total sample surface of $10~{\rm cm}^2$ was used and the dilution factor was adjusted accordingly.

Responsibility of Chemist: Kevin Liu/ Irene Chiou

Date Sample Received : Jan 23, 2013

Test Period : Jan 23, 2013 To Jan 29, 2013





Test Conducted

(${\rm I\hspace{-.1em}I}$) RoHS Limits:

Restricted Substances	<u>Limits</u>
Cadmium (Cd) content	0.01% (100ppm)
Lead (Pb) content	0.1% (1000ppm)
Mercury (Hg) content	0.1% (1000ppm)
Chromium VI (Cr ⁶⁺) content	0.1% (1000ppm)

The above limits were quoted from Annex II of 2011/65/EU for homogeneous material.

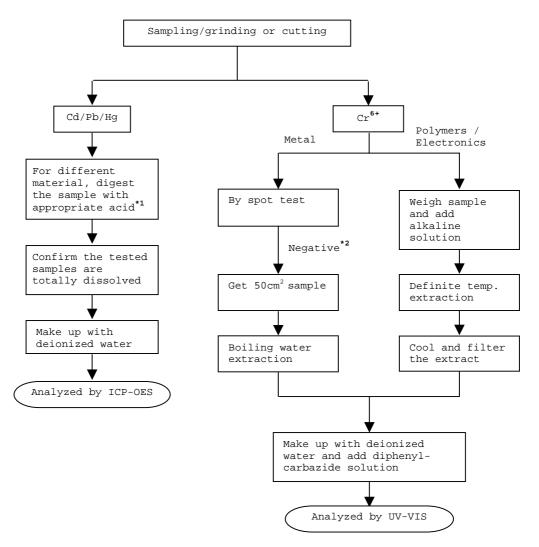




Test Conducted

Test for Cd/Pb/Hg/Chromium (VI)

Reference Standard: IEC 62321 edition 1.0:2008







Test Conducted

Remarks:

*1: List of Appropriate Acid:

<u>Material</u>	Acid Added for Digestion
Polymers HNO ₃ , HCl, HF, H ₂ O ₂ , H ₃ BO ₃	
Metals HNO ₃ , HCl, HF	
Electronics HNO ₃ , HCl, H ₂ O ₂ , HBF ₄	

*2: If the result of spot test is positive, Chromium VI would be determined as

End of Report

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Test Conducted

<u>Photo</u>









Intertek Consumer Goods GmbH · Würzburger Straße 152 · 90766 Fürth

Polyfil AG

Gina Gregorio Oberallmendstrasse 20A

6300 Zug / Switzerland

Fürth, 2012-12-19

Test report No. FUHL1236940

Testing of a material sample according to the RoHS directive 2011/65/EC

Sample description: Ni99.9 wire

Arrival in lab: 2012-012-04; Period of XRF analysis incl. sample preparation and photo documentation: 2012-12-07 - 2012-12-10 Head of Inorganic Lab: Claudia List

Copying this test report is permitted only in agreement with the contracted lab. The test results refer only to the tested item. This report consists of 6 page(s).

The test methods signed with * are not listed in the attachment of the accreditation certificate.

Conclusion based on tested item

Test order	Status
testing according to the RoHS directive 2011/65/EC	conform°

Please see overview of test results

- Test results see next pages -





Page 2 of 6 page(s) of our test report No. FUHL1236940 dated 2012-12-19

Sample description: Ni99.9 wire

nM = non Metal M = Metal cM = composite Material

List of component parts:

Sample No.	Part No.	Material	Description
236940	1	М	Ni99.9 wire

Tel.: +49 911 74075 0

Fax: +49 911 74075 30

cg.germany@intertek.com

Sitz Fürth

Amtsgericht Fürth, HRB 5756

Ust-IdNr. DE169317871

Geschäftsführer

Kay Grönhardt

Rainer Mast



Page 3 of 6 page(s) of our test report No. FUHL1236940 dated 2012-12-19

Sample description: Ni99.9 wire

Comment

LOD = Limit of Detection

BL = Below Limit
OL = Over Limit

X = Inconclusive, further test necessary

 σ = Standard deviation

CS = Composite sample

Remark:

Results were obtained by EDXRF for primary screening. Additional chemical testing using ICP (for Cd, Pb), AAS (for Hg), IC-UC/VIS (for CrVI) and GC/MS (for PBBs/PBDEs) are recommended, if the concentration exceeds the below warning value according to IEC 62321.

Element	Unit	non - metal	metal
Cd	mg / kg	$BL \le (70-3\sigma) < X < (130+3\sigma) \le OL$	$BL \le (70-3\sigma) < X < (130+3\sigma) \le OL$
Pb	mg / kg	$BL \le (700-3\sigma) < X < (1300+3\sigma) \le OL$	$BL \le (700-3\sigma) < X < (1300+3\sigma) \le OL$
Hg	mg / kg	$BL \le (700-3\sigma) < X < (1300+3\sigma) \le OL$	$BL \le (700-3\sigma) < X < (1300+3\sigma) \le OL$
Br	mg / kg	BL ≤ (300-3σ) < X	
Cr	mg / kg	BL ≤ (700-3σ) < X	BL ≤ (700-3σ) < X

Element	Unit	composite material
Cd	mg / kg	$LOD < X < (150+3\sigma) \le OL$
Pb	mg / kg	$BL \le (500-3\sigma) < X < (1500+3\sigma) \le OL$
Hg	mg / kg	$BL \le (500-3\sigma) < X < (1500+3\sigma) \le OL$
Br	mg / kg	BL ≤ (250-3σ) < X
Cr	mg / kg	BL ≤ (500-3σ) < X



Page 4 of 6 page(s) of our test report No. FUHL1236940 dated 2012-12-19

Sample description: Ni99.9 wire

1. XRF screening

Method: XRF according to IEC 62321:2008*

Sample No.	Part No.	Pb	Hg	Cd	Cr _{total}	Br	St
236940	1	BL	BL	BL	BL		cor

tatus onform

Comment:

Elements	RoHS-limit value
Lead (Pb)	1000 mg/kg
Mercury (Hg)	1000 mg/kg
Cadmium (Cd)	100 mg/kg
Chromium VI (Cr VI)	1000 mg/kg
Polybrominated Biphenyle (PBBs)	1000 mg/kg
Polybrominated Diphenyl ether (PBDEs)	1000 mg/kg

Intertek Consumer Goods GmbH

Prüfleitung / Lab Manager

□ A. Breunig, □ K. Grönhardt, □ Dr. K. Laue-Schuler,
□ R. Micolay, □ M. Neumeister, □ Dr. R. Rätze, □ K. Scharrer, □ M. Tutsch

- Flow charts see next page(s) -

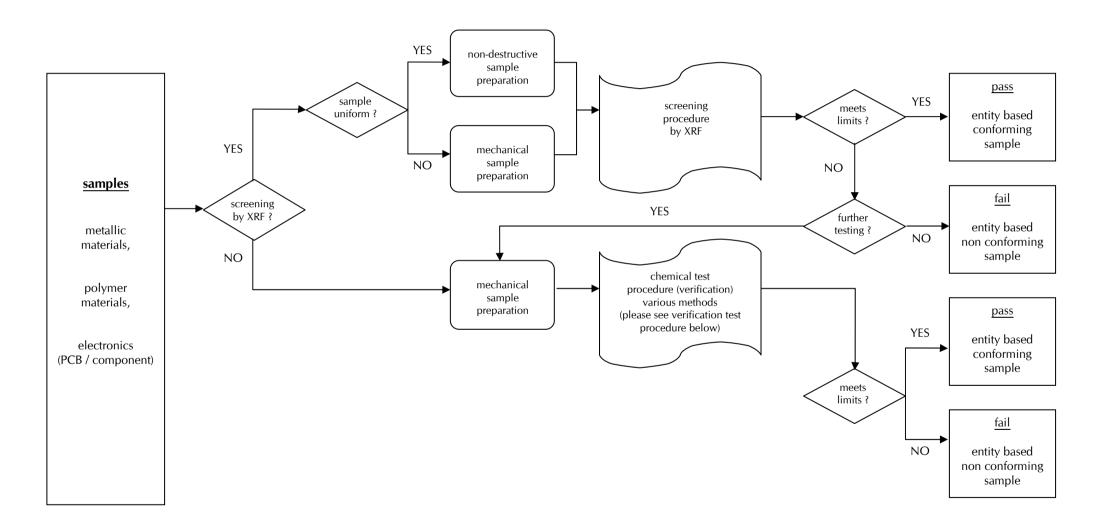
Sitz Fürth Amtsgericht Fürth, HRB 5756 Ust-IdNr. DE169317871

Geschäftsführer Kay Grönhardt Rainer Mast



Page 5 of 6 page(s)

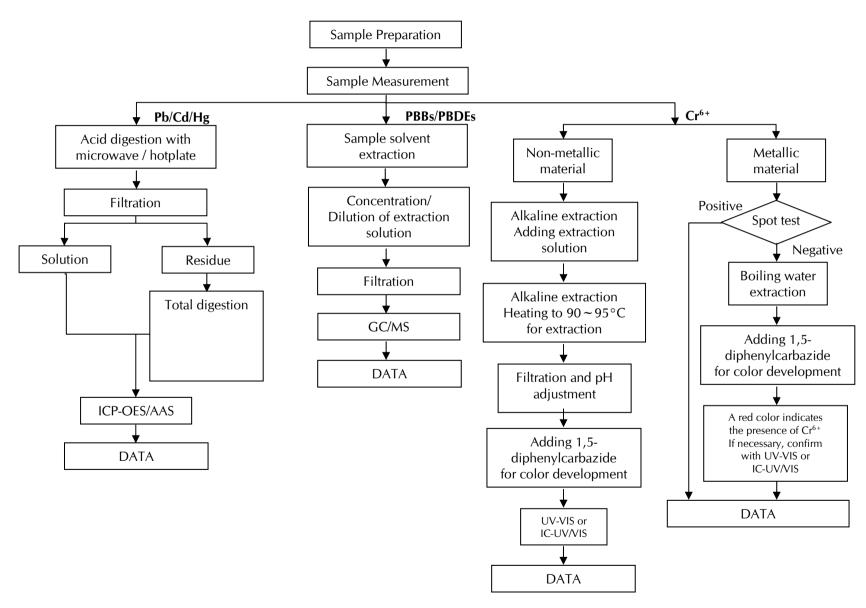
Test procedure





Page 6 of 6 page(s)

Verification test procedure



Sitz Fürth Amtsgericht Fürth, HRB 5756 Ust-IdNr. DE169317871 Geschäftsführer Kay Grönhardt Rainer Mast



Test Report Number: SHAH00366749

Date:

FEB 27, 2013

Applicant: LITTELFUSE,INC.

800 E. NORTHWEST HWY

A.DIVIETRO/D.UNTIEDT

Sample Description:

One(1) submitted sample said to be Silvery Metal.

Item Name : Solder(97%Sn3%Cu). Part No. : 692475/692476/692477.

Tests Conducted:

As requested by the applicant, for details refer to attached page(s).

To be continued

Authorized By:

For Intertek Testing Services Ltd., Shanghai

Jacob Lin

General Manager





Test Report Number: SHAH00366749

Tests Conducted

1. (I) Test Result Summary:

1. (1) Test Nesult Summary:	
Testing Item	Result (ppm)
Heavy Metal	
Cadmium (Cd) content	ND
Lead (Pb) content	142
Mercury (Hg) content	ND
Chromium VI (Cr ⁶⁺) content (mg/kg With 50cm ²)	Negative (< 0.02)(#)
Polybrominated Biphenyls (PBBs)	
Monobrominated Biphenyls (MonoBB)	ND
Dibrominated Biphenyls (DiBB)	ND
Tribrominated Biphenyls (TriBB)	ND
Tetrabrominated Biphenyls (TetraBB)	ND
Pentabrominated Biphenyls (PentaBB)	ND
Hexabrominated Biphenyls (HexaBB)	ND
Heptabrominated Biphenyls (HeptaBB)	ND
Octabrominated Biphenyls (OctaBB)	ND
Nonabrominated Biphenyls (NonaBB)	ND
Decabrominated Biphenyl (DecaBB)	ND
Polybrominated Diphenyl Ethers (PBDEs)	
Monobrominated Diphenyl Ethers (MonoBDE)	ND
Dibrominated Diphenyl Ethers (DiBDE)	ND
Tribrominated Diphenyl Ethers (TriBDE)	ND
Tetrabrominated Diphenyl Ethers (TetraBDE)	ND
Pentabrominated Diphenyl Ethers (PentaBDE)	ND
Hexabrominated Diphenyl Ethers (HexaBDE)	ND
Heptabrominated Diphenyl Ethers (HeptaBDE)	ND
Octabrominated Diphenyl Ethers (OctaBDE)	ND
Nonabrominated Diphenyl Ethers (NonaBDE)	ND
Decabrominated Diphenyl Ether (DecaBDE)	ND

Remarks: ppm = parts per million = mg/kg

ND = not detected

mg/kg with 50cm² = milligram per kilogram with 50 square centimetre

Responsibility of Chemist: Dent Fang / Leaf Liu

(II) RoHS Requirement:

(II) Ito io itoquioment.	
Restricted substances	<u>Limits</u>
Cadmium (Cd) Content	0.01% (100ppm)
Lead (Pb) Content	0.1% (1000ppm)
Mercury (Hg) Content	0.1% (1000ppm)
Chromium VI (Cr ⁶⁺) Content	0.1% (1000ppm)
Polybrominated Biphenyls (PBBs)	0.1% (1000ppm)
Polybrominated Diphenyl Ethers (PBDEs)	0.1% (1000ppm)

The above limits were quoted from RoHS Directive 2011/65/EU for homogeneous material.

To be continued



Test Report SHAH00366749 Number:

Tests Conducted

(III) Test Method:

Testing item	Testing method	Reporting limit
Cadmium (Cd) content	With reference to IEC 62321 edition 1.0:2008 in clause 8/9/10, by	2 ppm
Lead (Pb) content	With reference to IEC 62321 edition 1.0:2008 in clause 8/9/10, by microwave digestion until the tested samples are totally dissolved and determined by ICP-OES.	2 ppm
Mercury (Hg) content	With reference to IEC 62321 edition 1.0:2008 in clause 7, by microwave digestion until the tested samples are totally dissolved and determined by ICP-OES.	2 ppm
Chromium VI (Cr ⁶⁺) content	· · · · · · · · · · · · · · · · · · ·	0.02 mg/kg with 50cm ²
Polybrominated Biphenyls (PBBs)	With reference to IEC 62321 edition 1.0:2008 in Annex A, by solvent extraction and determined by GC-MSD and further HPLC confirmation when necessary.	5 ppm
Polybrominated Diphenyl Ethers (PBDEs)	With reference to IEC 62321 edition 1.0:2008 in Annex A, by solvent extraction and determined by GC-MSD and further HPLC confirmation when necessary.	5 ppm

Remark: Reporting limit = Quantitation limit of analyze in sample

2. Halogen content

(I) Test result summary:

(1) Total out many		
Testing item	Result (ppm)	
Fluorine (F)	ND	
Chlorine (CI)	ND	
Bromine (Br)	ND	
Iodine (I)	ND	

Remarks: ppm = parts per million = mg/kg

ND = Not detected

Responsibility of chemist: Grave Wang

(II) Test method:

Testing item	Testing method	Reporting limit
THAINNEN CONTENT	With reference to EN 14582: 2007 by combustion flask with oxygen and determined by ion chromatography	50 ppm

Remark: Reporting limit = quantitation limit of analyte in sample

Date sample received: Feb.21, 2013

Testing period: Feb.21, 2013 to Feb.26, 2013

To be continued

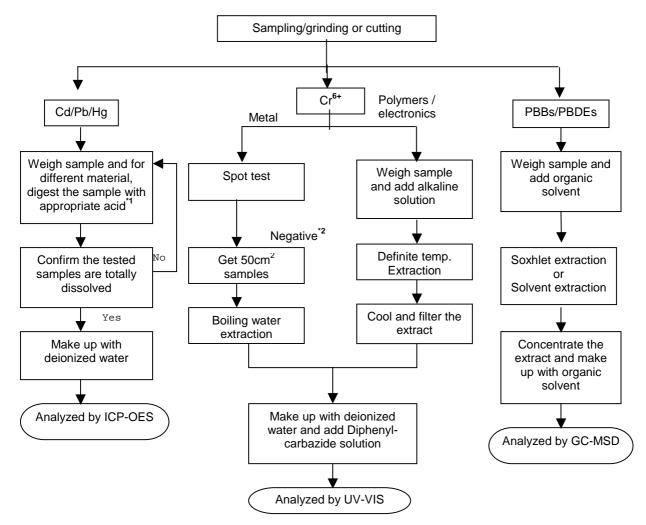


Test Report Number: SHAH00366749

Tests Conducted

(IV) MEASUREMENT FLOWCHART:

Test for Cd/ Pb/ Hg/Cr (VI)/ PBBs/PBDEs contents Reference standard: IEC 62321 edition 1.0:2008



REMARKS:

*1: LIST OF APPROPRIATE ACID:

MATERIAL	ACID ADDED FOR DIGESTION
Polymers	HNO ₃ ,HCI,HF,H ₂ O ₂ ,H ₃ BO ₃
Metals	HNO ₃ ,HCL,HF
Electronics	HNO ₃ ,HCL,H ₂ O ₂ ,HBF ₄

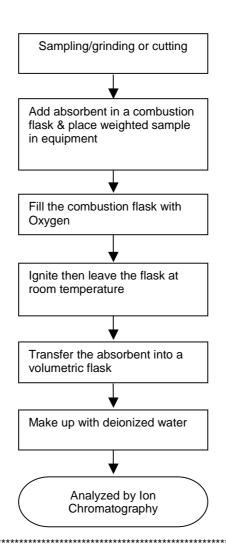
*2: IF THE RESULT OF SPOT TEST IS POSITIVE, CHROMIUM (VI) WOULD BE DETERMINED AS DETECTED.

To be continued



Test Report SHAH00366749 Number:

Tests Conducted (V) MEASUREMENT FLOWCHART: Test for Halogen content REFERENCE STANDARD: EN 14582



To be continued



Test Report SHAH00366749 Number:

Tests Conducted



End of report

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No. SHAEC1216714748

Date: 25 Sep 2012

Page 1 of 5

ZHEJIANG ASIA GENERAL SOLDERING&BRAZING MATERIAL CO., LTD
XIHU INDUSTRIAL PARK, SANDUN, HANGZHOU CITY, ZHEJIANG, PROVINCE, CHINA

The following sample(s) was/were submitted and identified on behalf of the clients as : LEAD-FREE SOLDER WIRE

SGS Job No. :

SP12-028285 - SH

Part No. (P/N):

YTW108 (692535-001、692535-003)

Composition:

Sn3.0CuRE

Date of Sample Received :

21 Sep 2012

Testing Period:

21 Sep 2012 - 25 Sep 2012

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).

Conclusion:

Based on the performed tests on submitted samples, the results of Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBB), Polybrominated diphenyl ethers (PBDE) comply with the limits as set by RoHS

Directive 2011/65/EU Annex II; recasting 2002/95/EC.

Signed for and on behalf of SGS-CSTC Ltd.

Fan Jingjie, JJ Approved Signatory

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No. SHAEC1216714748

Date: 25 Sep 2012

Page 2 of 5

Test Results:

Test Part Description:

Specimen No. SGS Sample ID

Description

1

SHA12-167147.041

Silvery wire

Remarks:

(1) 1 mg/kg = 1 ppm = 0.0001%

(2) MDL = Method Detection Limit

(3) ND = Not Detected (< MDL)

(4) "-" = Not Regulated

RoHS Directive 2011/65/EU

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.
- (5) Determination of PBBs / PBDEs by GC-MS.

Test Item(s)	<u>Limit</u>	<u>Unit</u>	MDL	041
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1000	mg/kg	2	55
Mercury (Hg)	1000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))		-	\Diamond	Negative
Sum of PBBs	1000	mg/kg	9.1	ND
Monobromobiphenyl	(4)	mg/kg	5	ND
Dibromobiphenyl	12	mg/kg	5	ND
Tribromobiphenyl	-	mg/kg	5	ND
Tetrabromobiphenyl	-	mg/kg	5	ND
Pentabromobiphenyl	0.00	mg/kg	5	ND
Hexabromobiphenyl	-	mg/kg	5	ND
Heptabromobiphenyl		mg/kg	5	ND
Octabromobiphenyl	4	mg/kg	5	ND
Nonabromobiphenyl	-	mg/kg	5	ND
	2.1	mg/kg	5	ND
Decabromobiphenyl	1000	mg/kg	1.4	ND
Sum of PBDEs Monobromodiphenyl ether	-	mg/kg	5	ND
Several de Augustin and Santan Santan				

3°Building,No.889 Yishan Road Xuhui District,Shanghai China 200233 中国 - 上海·徐汇区宜山路889号3号楼 邮網: 200233 

Test Report	No. SHAEC121671474	18	Date: 25	Sep 2012	Page 3 of 5
Test Item(s)	<u>Limit</u>	<u>Unit</u>	MDL	041	
Dibromodiphenyl ether	-	mg/kg	5	ND	
Tribromodiphenyl ether	-	mg/kg	5	ND	
Tetrabromodiphenyl ether	G-	mg/kg	5	ND	
Pentabromodiphenyl ether	-	mg/kg	5	ND	
Hexabromodiphenyl ether	C-	mg/kg	5	ND	
Heptabromodiphenyl ether	2	mg/kg	5	ND	
Octabromodiphenyl ether	D4	mg/kg	5	ND	
Nonabromodiphenyl ether	4	mg/kg	5	ND	
Decabromodiphenyl ether	-	mg/kg	5	ND	

Notes:

- (1) The maximum permissible limit is quoted from directive 2011/65/EU, Annex II
- (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.

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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No. SHAEC1216714748

Date: 25 Sep 2012

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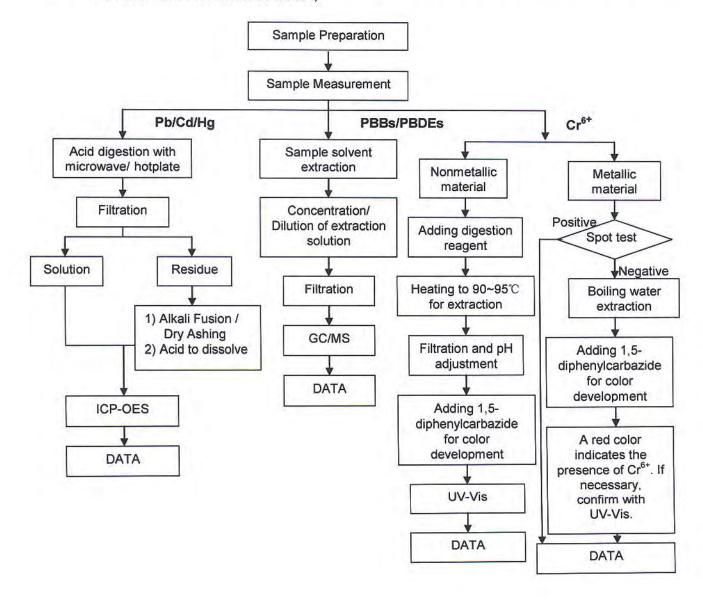
ATTACHMENTS

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/ Linda Li

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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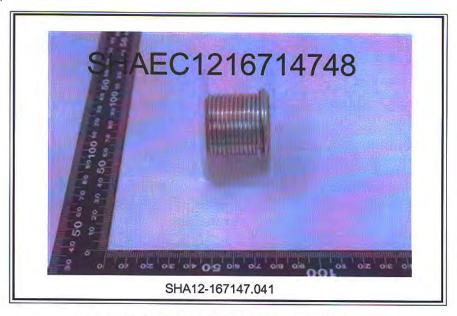
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No. SHAEC1216714748

Date: 25 Sep 2012

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Sample photo:



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AUG 15, 2012

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DATE:

TEST REPORT NUMBER: SHAH00334352

APPLICANT: LITTELFUSE,INC.

800 E. NORTHWEST HWY ATTN: A. CESISTA/ K. BACILA

SAMPLE DESCRIPTION:

One (1) submitted sample said to be **White Yarn.**Part Description : Yarn.
Part Number : 648102.

TESTS CONDUCTED:

AS REQUESTED BY THE APPLICANT, FOR DETAILS REFER TO ATTACHED PAGE(S)

TO BE CONTINUED

AUTHORIZED BY: FOR INTERTEK TESTING SERVICES LTD., SHANGHAI

JACOB LIN

GENERAL MANAGER



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TEST REPORT NUMBER: SHAH00334352

TESTS CONDUCTED

1 (I) Test Result Summary:

TESTING ITEM	RESULT (ppm)
HEAVY METAL	·
CADMIUM (Cd) CONTENT	ND
LEAD (Pb) CONTENT	ND
MERCURY (Hg) CONTENT	ND
CHROMIUM VI (Cr ⁶⁺) CONTENT	ND
POLYBROMINATED BIPHENYLS (PBBs)	
MONOBROMINATED BIPHENYLS (MonoBB)	ND
DIBROMINATED BIPHENYLS (DiBB)	ND
TRIBROMINATED BIPHENYLS (TriBB)	ND
TETRABROMINATED BIPHENYLS (TetraBB)	ND
PENTABROMINATED BIPHENYLS (PentaBB)	ND
HEXABROMINATED BIPHENYLS (HexaBB)	ND
HEPTABROMINATED BIPHENYLS (HeptaBB)	ND
OCTABROMINATED BIPHENYLS (OctaBB)	ND
NONABROMINATED BIPHENYLS (NonaBB)	ND
DECABROMINATED BIPHENYL (DecaBB)	ND
POLYBROMINATED DIPHENYL ETHERS (PBDEs)	
MONOBROMINATED DIPHENYL ETHERS (MonoBDE)	ND
DIBROMINATED DIPHENYL ETHERS (DIBDE)	ND
TRIBROMINATED DIPHENYL ETHERS (TriBDE)	ND
TETRABROMINATED DIPHENYL ETHERS (TetraBDE)	ND
PENTABROMINATED DIPHENYL ETHERS (PentaBDE)	ND
HEXABROMINATED DIPHENYL ETHERS (HexaBDE)	ND
HEPTABROMINATED DIPHENYL ETHERS (HeptaBDE)	ND
OCTABROMINATED DIPHENYL ETHERS (OctaBDE)	ND
NONABROMINATED DIPHENYL ETHERS (NonaBDE)	ND
DECABROMINATED DIPHENYL ETHER (DecaBDE)	ND
HALOGEN CONTENT	
FLUORINE (F)	ND
CHLORINE (CI)	ND
BROMINE (Br)	ND
IODINE (I)	ND

REMARKS: ppm = PARTS PER MILLION = mg/kg

ND = NOT DETECTED

RESPONSIBILITY OF CHEMIST: DENT FANG / KEN HE



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TEST REPORT NUMBER: SHAH00334352

TESTS CONDUCTED

(II) ROHS REQUIREMENT:

RESTRICTED SUBSTANCES	<u>LIMITS</u>
CADMIUM (Cd) CONTENT	0.01% (100ppm)
LEAD (Pb) CONTENT	0.1% (1000ppm)
MERCURY (Hg) CONTENT	0.1% (1000ppm)
CHROMIUM VI (Cr ⁶⁺) CONTENT	0.1% (1000ppm)
POLYBROMINATED BIPHENYLS (PBBs)	0.1% (1000ppm)
POLYBROMINATED DIPHENYL ETHERS (PBDEs)	0.1% (1000ppm)

THE ABOVE LIMITS WERE QUOTED FROM ROHS DIRECTIVE 2002/95/EC AND AMENDMENT 2005/618/EC FOR HOMOGENEOUS MATERIAL.

(III) TEST METHOD:

(III) ILSI WEITIOD:		
TESTING ITEM	TESTING METHOD	REPORTING <u>LIMIT</u>
CADMIUM (Cd) CONTENT	WITH REFERENCE TO IEC 62321 EDITION 1.0:2008 IN CLAUSE 8/9/10, BY MICROWAVE DIGESTION UNTIL THE TESTED SAMPLES ARE TOTALLY DISSOLVED AND DETERMINED BY ICP-OES.	2 ppm
LEAD (Pb) CONTENT	WITH REFERENCE TO IEC 62321 EDITION 1.0:2008 IN CLAUSE 8/9/10, BY MICROWAVE DIGESTION UNTIL THE TESTED SAMPLES ARE TOTALLY DISSOLVED AND DETERMINED BY ICP-OES.	2 ppm
MERCURY (Hg) CONTENT	WITH REFERENCE TO IEC 62321 EDITION 1.0:2008 IN CLAUSE 7, BY MICROWAVE DIGESTION UNTIL THE TESTED SAMPLES ARE TOTALLY DISSOLVED AND DETERMINED BY ICP-OES.	2 ppm
CHROMIUM VI (CR ⁶⁺) CONTENT	WITH REFERENCE TO IEC 62321 EDITION 1.0:2008 IN ANNEX C, BY ALKALINE DIGESTION AND DETERMINED BY UV-VIS SPECTROPHOTOMETER.	1 ppm
POLYBROMINATED BIPHENYLS (PBBs)	WITH REFERENCE TO IEC 62321 EDITION 1.0:2008 IN ANNEX A, BY SOLVENT EXTRACTION AND DETERMINED BY GC-MSD AND FURTHER HPLC CONFIRMATION WHEN NECESSARY.	5 ppm
POLYBROMINATED DIPHENYL ETHERS (PBDEs)	WITH REFERENCE TO IEC 62321 EDITION 1.0:2008 IN ANNEX A, BY SOLVENT EXTRACTION AND DETERMINED BY GC-MSD AND FURTHER HPLC CONFIRMATION WHEN NECESSARY.	5 ppm

REMARK: REPORTING LIMIT = QUANTITATION LIMIT OF ANALYZE IN SAMPLE

Date Sample Receive: AUG.9, 2012 Test Period: AUG.9, 2012 To AUG.15, 2012

RESPONSIBILITY OF CHEMIST: KEN HE



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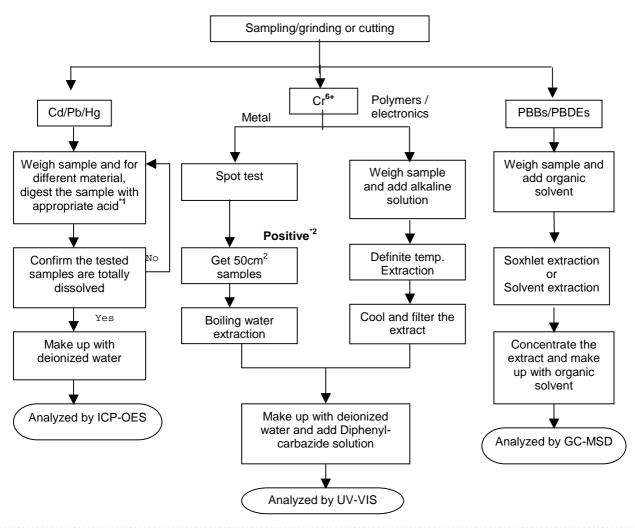
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TEST REPORT NUMBER: SHAH00334352

TESTS CONDUCTED

(IV) MEASUREMENT FLOWCHART:

TEST FOR Cd/ Pb/ Hg/Cr (VI)/ PBBS/PBDES CONTENTS REFERENCE STANDARD: IEC 62321 EDITION 1.0:2008





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REMARKS:

*1: LIST OF APPROPRIATE ACID:

MATERIAL	ACID ADDED FOR DIGESTION	
POLYMERS	HNO ₃ ,HCL,HF,H ₂ O ₂ ,H ₃ BO ₃	
METALS	HNO _{3,} HCL,HF	
ELECTRONICS	HNO ₃ ,HCL,H ₂ O ₂ ,HBF ₄	

*2: IF THE RESULT OF SPOT TEST IS POSITIVE, CHROMIUM (VI) WOULD BE DETERMINED AS DETECTED.



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TESTS CONDUCTED

2 (I) Test Result Summary:

	Testing Item	Result (ppm)
Halogen Content		
Fluorine (F)		ND
Chlorine (CI)		ND
Bromine (Br)		ND
lodine (I)		ND

Remarks: ppm = Parts per million = mg/kg

ND = Not detected

(III) Test Method:

Testing Item	Testing Method	Reporting Limit
inalogen Content	With reference to EN 14582:2007 by combustion flask with oxygen and determined by ion chromatography	50 ppm

Remark: Reporting limit = Quantitation limit of analyte in sample



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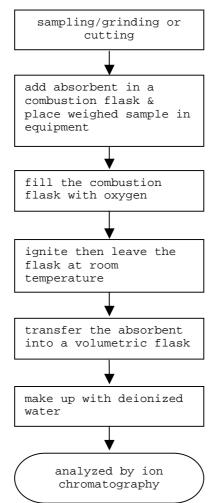
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(IV) Measurement Flowchart:

Test For Halogen Content Reference Standard: EN 14582





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END OF REPORT

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No. SHAEC1219975401

Date: 19 Nov 2012

Page 1 of 7

3M CHINA LIMITED 222# TIAN LIN ROAD, SHANGHAI (200233)

The following sample(s) was/were submitted and identified on behalf of the clients as: 3M 3779-PG

SGS Job No. : SP12-033081 - SH

Date of Sample Received: 14 Nov 2012

Testing Period : 14 Nov 2012 - 19 Nov 2012

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).

Conclusion: Based on the performed tests on submitted samples, the results of Lead,

Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBB), Polybrominated diphenyl ethers (PBDE) comply with the limits as set by RoHS

Directive 2011/65/EU Annex II; recasting 2002/95/EC.

Signed for and on behalf of SGS-CSTC Ltd.

JJ Fan

Approved Signatory

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No. SHAEC1219975401

Date: 19 Nov 2012

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Test Results:

Test Part Description:

Specimen No. SGS Sample ID Description
1 SHA12-199754.001 Brown solid

Remarks:

(1) 1 mg/kg = 1 ppm = 0.0001%

(2) MDL = Method Detection Limit

(3) ND = Not Detected (< MDL)

(4) "-" = Not Regulated

RoHS Directive 2011/65/EU

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.

Test Item(s)	<u>Limit</u>	<u>Unit</u>	MDL	001
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1000	mg/kg	2	ND
Mercury (Hg)	1000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))	1000	mg/kg	2	ND
Sum of PBBs	1000	mg/kg	+	ND
Monobromobiphenyl	19	mg/kg	5	ND
Dibromobiphenyl	4	mg/kg	5	ND
Tribromobiphenyl	1.4	mg/kg	5	ND
Tetrabromobiphenyl	(+)	mg/kg	5	ND
Pentabromobiphenyl		mg/kg	5	ND
Hexabromobiphenyl	-	mg/kg	5	ND
Heptabromobiphenyl	0.9	mg/kg	5	ND
Octabromobiphenyl	i i	mg/kg	5	ND
Nonabromobiphenyl	-	mg/kg	5	ND
Decabromobiphenyl		mg/kg	5	ND
Sum of PBDEs	1000	mg/kg	-	ND
Monobromodiphenyl ether		mg/kg	5	ND

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Test Report	No. SHAEC12199754	01	Date: 19	Nov 2012	Page 3 of 7
Test Item(s)	Limit	<u>Unit</u>	MDL	001	
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	9.0	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 directive 2011/65/EU, Annex II

Hexabromocyclododecane (HBCDD)

Test Method: Determination of HBCDD by GC-MS based on IEC 62321:2008.

Test Item(s)	<u>Unit</u>	MDL	001
Hexabromocyclododecane (HBCDD)	mg/kg	10	ND

Notes:

(1) Reference Information: Directive 2011/65/EU recasting RoHS directive 2002/95/EC: Hexabromocyclododecane (HBCDD) is considered as a priority for risk evaluation and substance restriction.

Phthalates

Test Method: Determination of phthalates by GC-MS based on EN 14372:2004.

Test Item(s)	<u>Unit</u>	MDL	001
Dibutyl Phthalate (DBP)	%	0.003	ND
Benzylbutyl Phthalate (BBP)	%	0.003	ND
Bis-(2-ethylhexyl) Phthalate (DEHP)	%	0.003	ND

Notes:

(1) Reference Information: Directive 2011/65/EU recasting RoHS directive 2002/95/EC: Bis (2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP) and Dibutyl phthalate (DBP) are considered as a priority for risk evaluation and substance restriction.

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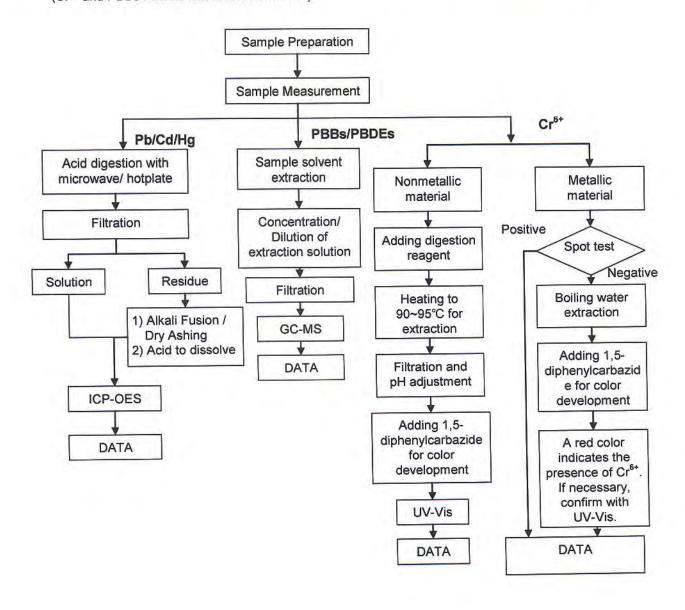
Date: 19 Nov 2012

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ATTACHMENTS

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/ Linda Li
- 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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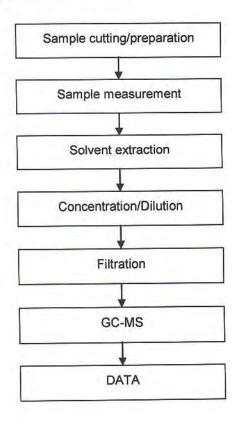
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Phthalates Testing Flow Chart

- 1) Name of the person who made testing: Elyn Yao
- 2) Name of the person in charge of testing: Rachel Zhang



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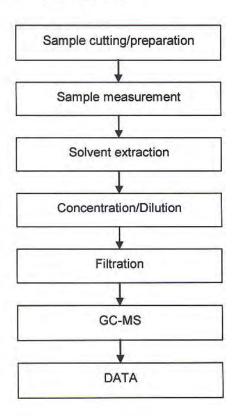
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HBCDD Testing Flow Chart

- 1) Name of the person who made testing: Gary Xu
- 2) Name of the person in charge of testing: Jessy Huang



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Sample photo:



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No. SHAEC1219975401

Date: 19 Nov 2012

Page 1 of 6

3M CHINA LIMITED 222# TIAN LIN ROAD, SHANGHAI (200233)

The following sample(s) was/were submitted and identified on behalf of the clients as: 3M 3779-PG

SGS Job No.: SP12-033081 - SH

Date of Sample Received: 14 Nov 2012

Testing Period: 14 Nov 2012 - 19 Nov 2012

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.

JJ Fan

Approved Signatory

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No. SHAEC1219975401

Date: 19 Nov 2012

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Test Results:

Test Part Description:

Specimen No. SGS Sample ID Description

1 SHA12-199754.001 Brown solid

Remarks:

(1) 1 mg/kg = 1 ppm = 0.0001%

(2) MDL = Method Detection Limit

(3) ND = Not Detected (< MDL)

(4) "-" = Not Regulated

Halogen

Test Method: With reference to EN 14582: 2007, analysis was performed by Ion Chromatograph (IC).

Test Item(s)	<u>Unit</u>	MDL	001
Fluorine (F)	mg/kg	50	ND
Chlorine (CI)	mg/kg	50	ND
Bromine (Br)	mg/kg	50	ND
lodine (I)	mg/kg	50	ND

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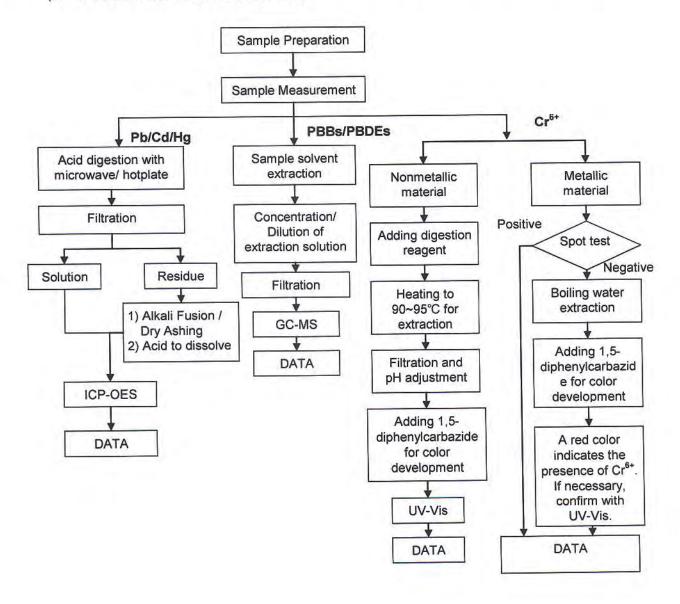
Date: 19 Nov 2012

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ATTACHMENTS

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/ Linda Li
- 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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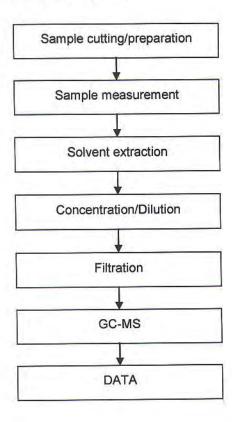
No. SHAEC1219975401

Date: 19 Nov 2012

Page 4 of 6

Phthalates Testing Flow Chart

- 1) Name of the person who made testing: Elyn Yao
- 2) Name of the person in charge of testing: Rachel Zhang



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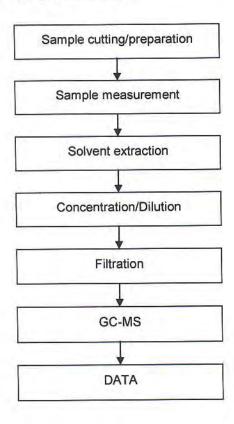
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HBCDD Testing Flow Chart

- 1) Name of the person who made testing: Gary Xu
- 2) Name of the person in charge of testing: Jessy Huang



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Sample photo:



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號碼(No.): CE/2012/41404

日期(Date): 2012/04/13

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幸亞電子工業股份有限公司

TY-OHM ELECTRONIC WORKS CO., LTD.

桃園縣龜山鄉頂湖一街49號

NO. 49, DINGFU 1st STREET, GUEISHAN TOWNSHIP, TAOYUAN COUNTY 333, TAIWAN

以下測試樣品係由客户送樣, 且由客户聲稱並經客户確認如下 (The following samples was/were submitted and identified by/on behalf of the client as):

樣品名稱(Sample Description) : CARBON FILM RESISTORS

樣品型號(Style/Item No.) : RD SERIES 收件日期(Sample Receiving Date) : 2012/04/07

測試期間(Testing Period) : 2012/04/07 TO 2012/04/13

測試結果(Test Results) : 請見下一頁 (Please refer to next pages).

Chenyu Kung / Signed for and on a SGS TAIWAN LTD. Chemical Laboratory - Taipei

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測試結果(Test Results)

測試部位(PART NAME)No.1 :

整體混測 (MIXED ALL PARTS)

測試項目 (Test Items)	單位 (Unit)	5.400 U	方法偵測 極限値	結果 (Result)
(lest liems)	(onit)		(MDL)	No.1
鎬 / Cadmium (Cd)	mg/kg	參考IEC 62321: 2008方法,以感應耦合電 漿原子發射光譜儀檢測. / With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
鉛 / Lead (Pb)	mg/kg		2	n.d.
汞 / Mercury (Hg)	mg/kg		2	n.d.
六價鉻 / Hexavalent Chromium Cr(VI)	mg/kg	参考IEC 62321: 2008方法,以UV-VIS檢測。 / With reference to IEC 62321: 2008 and performed by UV-VIS.	2	n.d.
多溴聯苯總和 / Sum of PBBs	mg/kg	参考IEC 62321: 2008方法, 以氣相層析/質 譜儀檢測. / With reference to IEC 62321: 2008 and performed by GC/MS.	-	n.d.
一溴聯苯 / Monobromobiphenyl	mg/kg		5	n.d.
二溴聯苯 / Dibromobiphenyl	mg/kg		5	n.d.
三溴聯苯 / Tribromobiphenyl	mg/kg		5	n.d.
四溴聯苯 / Tetrabromobiphenyl	mg/kg		5	n.d.
五溴聯苯 / Pentabromobiphenyl	mg/kg		5	n.d.
六溴聯苯 / Hexabromobiphenyl	mg/kg		5	n.d.
七溴聯苯 / Heptabromobiphenyl	mg/kg		5	n.d.
八溴聯苯 / Octabromobiphenyl	mg/kg		5	n.d.
九溴聯苯 / Nonabromobiphenyl	mg/kg		5	n.d.
十溴聯苯 / Decabromobiphenyl	mg/kg		5	n.d.

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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result) No.1
多溴聯苯醚總和 / Sum of PBDEs	mg/kg	參考IEC 62321: 2008方法,以氣相層析/質 譜儀檢測. / With reference to IEC 62321: 2008 and performed by GC/MS.	-	n.d.
一溴聯苯醚 / Monobromodiphenyl ether	mg/kg		5	n.d.
二溴聯苯醚 / Dibromodiphenyl ether	mg/kg		5	n.d.
三溴聯苯醚 / Tribromodiphenyl ether	mg/kg		5	n.d.
四溴聯苯醚 / Tetrabromodiphenyl ether	mg/kg		5	n.d.
五溴聯苯醚 / Pentabromodiphenyl ether	mg/kg		5	n.d.
六溴聯苯醚 / Hexabromodiphenyl ether	mg/kg		5	n.d.
七溴聯苯醚 / Heptabromodiphenyl ether	mg/kg		5	n.d.
八溴聯苯醚 / Octabromodiphenyl ether	mg/kg		5	n.d.
九溴聯苯醚 / Nonabromodiphenyl ether	mg/kg		5	n.d.
十溴聯苯醚 / Decabromodiphenyl ether	mg/kg		5	n.d.

備註(Note):

- 1. mg/kg = ppm ; 0.1wt% = 1000ppm
- 2. n.d. = Not Detected (未檢出)
- 3. MDL = Method Detection Limit (方法偵測極限值)
- 4. "-" = Not Regulated (無規格值)
- 5. 樣品的測試是基於申請人要求混合測試,報告中的混合測試結果不代表其中個别單一材質的含量. (The samples was/were analyzed on behalf of the applicant as mixing sample in one testing. The above results was/were only given as the informality value.)



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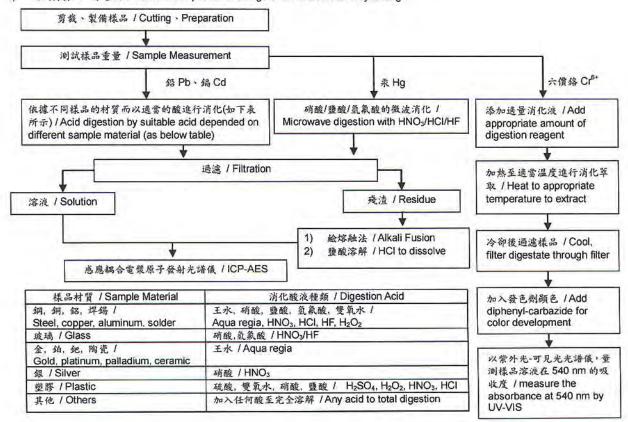
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- 根據以下的流程圖之條件,樣品已完全溶解。(六價鉻測試方法除外) / These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr6+ test method excluded)
- 測試人員: 楊登锋 / Name of the person who made measurement: Climbgreat Yang
- 測試負責人: 張啓興 / Name of the person in charge of measurement: Troy Chang





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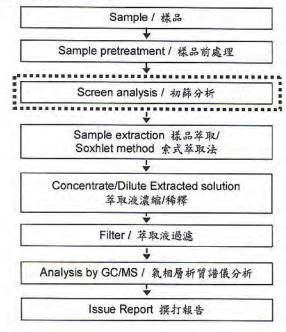
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多溴聯苯/多溴聯苯醚分析流程圖 / PBB/PBDE analytical FLOW CHART

- 測試人員: 翁賜彬 / Name of the person who made measurement: Roman Wong 測試負責人: 張啓興 / Name of the person in charge of measurement: Troy Chang 初次測試程序 / First testing process -選擇性篩檢程序 / Optional screen process ••••••

確認程序 / Confirmation process - · - ·▶





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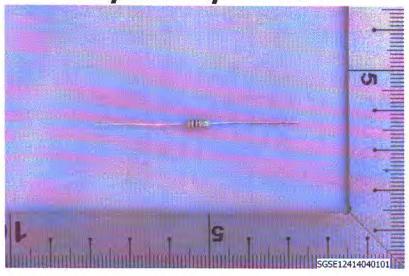
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測試報告 **Test Report**

號碼(No.): CE/2012/41405 日期(Date): 2012/04/13 頁數(Page): 1 of 4

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樣品名稱(Sample Description)

: CARBON FILM RESISTORS

樣品型號(Style/Item No.) 收件日期(Sample Receiving Date) RD SERIES 2012/04/07

測試期間(Testing Period)

2012/04/07 TO 2012/04/13

測試結果(Test Results)

; 請見下一頁 (Please refer to next pages).





測試報告

Test Report

號碼(No.): CE/2012/41405 日期(Date): 2012/04/13 頁数(Page): 2 of 4

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NO. 49, DINGFU 1st STREET, GUEISHAN TOWNSHIP, TAOYUAN COUNTY 333, TAIWAN

測試結果(Test Results)

測試部位(PART NAME) No.1

: 整體混測 (MIXED ALL PARTS)

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値	結果 (Result)
	(onit)	(method)	(MDL)	No.1
鹵素 / Halogen				
鹵素 (氣) / Halogen-Fluorine (F)			50	n.d.
(CAS No.: 14762-94-8)				
鹵素 (氣) / Halogen-Chlorine		参考BS EN 14582:2007, 以離子層	50	n.d.
(C1) (CAS No.: 22537-15-1)		析儀分析. / With reference to		
鹵素 (溴) / Halogen-Bromine (Br)	mg/kg	BS EN 14582:2007. Analysis was	50	n.d.
(CAS No.: 10097-32-2)		performed by IC.		
鹵素 (碘) / Halogen-Iodine (I)			50	n.d.
(CAS No.: 14362-44-8)				1,7 m

備註(Note):

- 1. mg/kg = ppm ; 0.1wt% = 1000ppm
- 2. n.d. = Not Detected (未檢出)
- 3. MDL = Method Detection Limit (方法偵測極限值)
- 4. 樣品的測試是基於申請人要求混合測試,報告中的混合測試結果不代表其中個别單一材質的含量。(The samples was/were analyzed on behalf of the applicant as mixing sample in one testing. The above results was/were only given as the informality value.)



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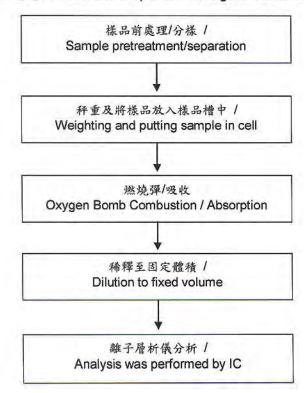
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鹵素分析流程圖 / Analytical flow chart of halogen content

- 測試人員: 陳思臻 / Name of the person who made measurement: Rita Chen
- 測試負責人:張啓興 / Name of the person in charge of measurement: Troy Chang



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No. CANEC 1002/03921 Date: 05 Jul 2012

SHENZHEN GUANGTONG CITY METAL MATERIAL UNITED COMPANY ALIAN INDUSTRIAL LONGGANG SHENZHEN BUANGDONG CHINA

The following sample(is) was were submitted and internal on behalf of the clients as I Capper-beryllum alloy root 致有错

12507527-52

Tested Sample Information SGB Internal Reference No.

Coppenbensium aloy no 被奏权 2.1 01 Jul 2012

Cate of Sample Received Testing Period

01-Jul 2012 - 01-Jul 2012

Test Requested

Selected test(s) as requested by citera.

Test Memod

Tent Reputs

Please refer to heet page(s). Please refer to most projects)

Concusion

Based on the performed tests on submitted sample(s), the results comply with the Roses Directive 2002/05/EC and its subpequent arriendments.

Signed for end on behalf of SGS-CSTC Ltd.

Silva Zhou Approved Signatury

SGS

SE TIME (SERVICE) (SERVICE) (SERVICE) Marine of the \$55 Street (\$55 \$4)

No CANECTODZBOSSOT

Date: 05 Jul 2012 Page 2 of 4

Test Results:

(D for specimen 1 Description for specimen 1

GAN10-028039-001 Copper-compact reptat can

FEMALE	PHARME	- 200	WOUNDER	me
CTRACTION.	Directiv	re zu	TAN MO	/EDS-J
		-		-

Test flem(s) Cadmum (Cd) Lined (Pb) Mercury (Hg)	Unit make make make	Test Method (Reference) 86 82221 2008 (CP-CES 86 80221 2008 (CP-CES 86 80221 2008 (CP-CES	Result N.D. 26 N.D.	MOL 2 2 2	Limit 1000 1000
Hisavitient Chromium (CrVI) by		TEC 82321 2006, UV-Vie	Negative		2

Note:

1. mg/kg = ppm

2 N.D. = Not Detected (< MDL) 3 MDL = Mothod Detection Limit

4. a = Spot-Test:

Negative = Absence of CrVI costing. Positive = Presente of CrVI costing.

(The tested sample should be further verified by boring-water extraction method if the spot test result.) is negative or cannot be confirmed.)

as regarder extraction.

Negative = Absence of CrVI costing.

Positive = Presence of CrVI costing the detected concentration in boiling-wese-extraction solution is equal or greater than 0.02 mg/kg with 50 cm² tample surface area.

Storage conditions and production date of the rested sample are unavaluable and thus results of CriVII recreases status of the sample at the time of testing.

5. # = Positive indicates the presence of CrVI on the tested areas.

Negative indicates the absence of GrVI on the tested areas.

6. ". " = Not regulated

SGS

4153162

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Personal Processing and Processing St.



No CANECTOCZBOSBO1 Date: 05 JUJ 2012 Page 3 cf 4

ATTACHMENTS

RollS Testing Flow Chart

1) Name of the person who made testing. Bets Wand / Pross Zhan.
2) Name of the person in charge of testing. Advise in.
3) These samples were distroyed totally by pre-conditioning medical according to below the chart. (Cr6+ test method excluded)



SGS

本語・アボー出送を本井京日本政府大学! m-4



No. CANEC1002803901

Date: 05 Jul 2012 Page 4 of 4

Sample photo



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Member of the SSS Group (SGS SA)



TEST REPORT

NO.: A002R121008024-2R02

Date: Oct.10, 2012

Page 1 of 4

Customer: SuZhou FuHong Electronic Industrial Co., Ltd.

Address: NO. 89 WEI DU ROAD, WANGTING TOWN, XIANGCHENG DISTRICT, SUZHOU, CHINA

Report on the submitted sample said to be

Sample name: Lead wire copper shell

Model: /

Item/Lot No.: /

Material: /

Buyer: /

Supplier: / Manufacturer: /

Comple resolved date.

Sample received date: Oct. 08, 2012

Testing period: From Oct. 08, 2012 to Oct. 10, 2012

Testing Requested

As specified by client, to determine the Lead, Cadmium, Mercury & Hexavalent Chromium content in the submitted sample in accordance with Directive 2002/95/EC (RoHS).

Testing method:

Testing Item	Pretreatment method	Measuring instrument	MQL
Lead (Pb)	IEC 62321: 2008, section 9	ICP-OES	2mg/kg
Cadmium (Cd)	IEC 62321: 2008, section 9	ICP-OES	2 mg/kg
Mercury (Hg)	IEC 62321: 2008, section 7	ICP-OES	2 mg/kg
Chromium (Cr VI)	IEC 62321: 2008, Annex B	UV-VIS	0.02mg/kg*

Note:

Conclusion:

-When tested as specified the submitted sample complied with the requirements of commission Decision of 18 Aug 2005 amending Directive 2002/95/EC notified under document 2005/618/EC.

******FOR FURTHER DETAILS, PLEASE REFER TO THE FOLLOWING PAGE(S)******

Signed for and on behalf of Shenzhen AOV Testing Technology Co., Ltd, Kunshan Branch

Project Leader:

Li Tingting, Maggie

Chemical Test Director

Reviewed by: WEIKIN

Wang Wexin, Weikin

Technical Director

Approved by:

Yuan Qi, Mickey

Lab Manager

^{-* 0.02} mg/kg refers to the MQL of sample extraction liquid.



out sample

TEST REPORT

NO.: A002R121008024-2R02 Date: Oct.10, 2012 Page 2 of 4 Test Flow: 1. To Determine Lead, Cadmium Content: (Metal substrate) Tested by: onoul Weigh the sample into Add the digestion solution; the Add H2O2 until the sample is clear vessel is heated until the sample a vessel. has been dissolved Cooling the vessel, filter; washed and Tested by ICP-OES Report filled to the mark with distilled water. 2. To Determine Mercury Content: (Metal substrate) Tested by: The sample is digested in the Weigh the sample Add the digestion solution, close microwave oven following a specific into a vessel. the microwave vessel. decomposition program. Cooling the vessel, filter; washed and Tested by ICP-OES Report filled to the mark with distilled water. 3. To Determine Hexavalent Chromium Content (boiling- water- extraction): (Metal substrate) Tested by: Remove the sample, and cool Take the (50±5) cm2 Heat 50 mL of DI water in the beaker to room temperature, sample in the beaker. the beaker to boiling for 10 and do the color reaction Test the sample solution and the 0.02 Report mg/kg standard solution by UV-VIS. 4. To Determine Lead, Cadmium and Mercury Content: (Plating) Tested by: now Cooling, filter; washed and Weigh the plating-Tested by Report filled to the mark with DI water.

Instrument



TEST REPORT

NO.: A002R121008024-2R02

Date: Oct.10, 2012

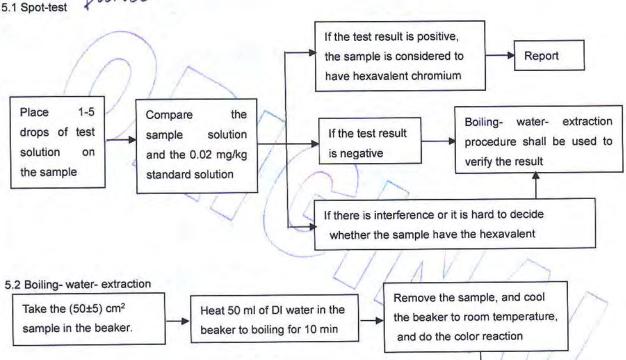
Page 3 of 4

Test the sample solution and the 0.02

mg/kg standard solution by UV-VIS.

5. To Determine Hexavalent Chromium Content in colorless and colored chromate coating on metals: (Plating)
Tested by:

E 1 Snot test



Report

Sample Description:

Code	Sample Description	Code	Sample Description
2-1	Lead wire substrate	2-3	Copper shell substrate
2-2	Lead wire Plating	2-4	Copper shell Plating

Test Results:

Item	Unit	Unit RoHS Limit		Result				
			2-1	2-2**	2-3	2-4**		
Lead (Pb)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.		
Cadmium (Cd)	mg/kg	100	N.D.	N.D.	N.D.	N.D.		
Mercury (Hg)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.		
Chromium (CrVI)	mg/kg	1000	Negative	Negative	Negative	Negative		





TEST REPORT

NO.: A002R121008024-2R02

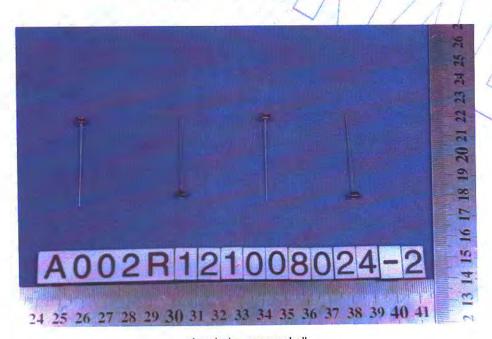
Date: Oct.10, 2012

Page 4 of 4

Note:

- -The new RoHS directive 2011/65/EU, on Jul. 21, 2011 come into force, on Jan. 03, 2013 the formal implementation, Directive 2002/95/EC shall be repealed simultaneously.
- -Specimens, which requested to determine Lead, Cadmium and Mercury Content, have been dissolved completely.
- -mg/kg=ppm
- -N.D.=not detected(<MQL)
- -MQL=Method Quantitation Limit
- -Negative=Absence of Cr (VI);
- -Positive=Presence of Cr (VI);
- Uncertain= can not verify whether the sample have Hexavalent Chromium by spot-test.
- (The tested sample should be further verified by boiling-water-extraction method if the spot test result is uncertain or negative.)
- -**The test is based on the following assumption: The sample plating is a single layer and each part is uniform. The test result maybe cannot stand for the physical truth of sample plating.
- -Photo is included

Photograph of Sample



Lead wire copper shell

End of Report





Test Report No. CANEC1208305601 Date: 02 Jul 2012 Page 1 of 5

AIM SOLDER (SHEN ZHEN) CO.,LTD.

BLOCK 69,THIRD INDUSTRIAL ZONE,LUOTIAN VILLAGE,SONGGANG TOWN,BAOAN DISTRICT,SZ CHINA

The following sample(s) was/were submitted and identified on behalf of the clients as: SOLDER WIRE AIM230 FAST CORE H RSA605

SGS Job No.: CP12-030363 - SZ

Date of Sample Received: 26 Jun 2012

Testing Period: 26 Jun 2012 - 02 Jul 2012

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).

Conclusion: Based on the performed tests on submitted samples, the results of Lead,

Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBB), Polybrominated diphenyl ethers (PBDE) comply with the limits as set by RoHS

Directive 2011/65/EU Annex II; recasting 2002/95/EC.

Signed for and on behalf of SGS-CSTC Ltd.

Kenny Wang Approved Signatory



No. CANEC1208305601

Date: 02 Jul 2012

Page 2 of 5

Test Results:

Test Part Description:

Specimen No. SGS Sample ID Description

1 CAN12-083056.001 Silvery metal wire

Remarks:

(1) 1 mg/kg = 1 ppm = 0.0001%

(2) MDL = Method Detection Limit

(3) ND = Not Detected (< MDL)

(4) "-" = Not Regulated

RoHS Directive 2011/65/EU

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.

(5) Determination of PBBs / PBDEs by GC-MS.

Test Item(s)	<u>Limit</u>	<u>Unit</u>	MDL	001
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1,000	mg/kg	2	78
Mercury (Hg)	1,000	mg/kg	2	ND
Hexavalent Chromium (CrVI)	-		\Diamond	Negative
Sum of PBBs	1,000	mg/kg	-	ND
Monobromobiphenyl	4	mg/kg	5	ND
Dibromobiphenyl		mg/kg	5	ND
Tribromobiphenyl	1.5	mg/kg	5	ND
Tetrabromobiphenyl	-	mg/kg	5	ND
Pentabromobiphenyl		mg/kg	5	ND
Hexabromobiphenyl	-	mg/kg	5	ND
Heptabromobiphenyl	- 2	mg/kg	5	ND
Octabromobiphenyl	-	mg/kg	5	ND
Nonabromobiphenyl	-	mg/kg	5	ND
Decabromobiphenyl	2	mg/kg	5	ND
Sum of PBDEs	1,000	mg/kg	-	ND
Monobromodiphenyl ether	-	mg/kg	5	ND

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Test Report	No. CANEC12083056	01	Date: 02	Jul 2012	Page 3 of 5
Test Item(s)	Limit	<u>Unit</u>	MDL	001	
Dibromodiphenyl ether		mg/kg	5	ND	
Tribromodiphenyl ether	1.4	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	4	mg/kg	5	ND	
Decabromodiphenyl ether	-	mg/kg	5	ND	

Notes:

(1) The maximum permissible limit is quoted from the directive 2011/65/EU, Annex II (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; the detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm2 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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No. CANEC1208305601

Date: 02 Jul 2012

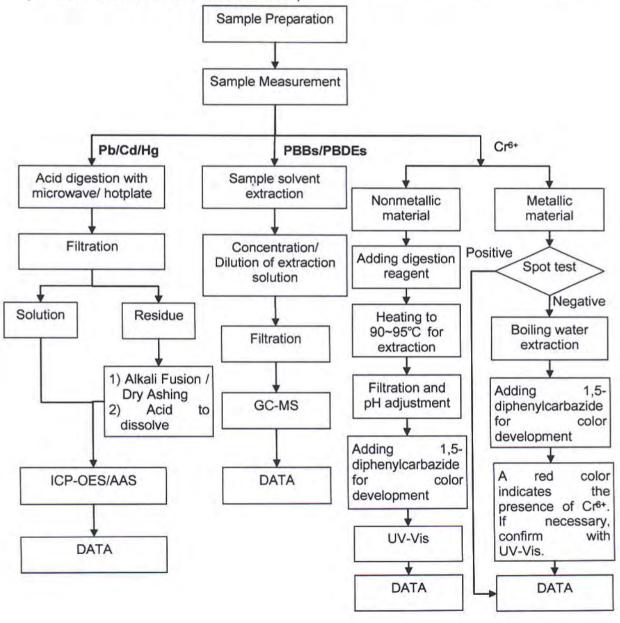
Page 4 of 5

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ATTACHMENTS

RoHS Testing Flow Chart

- 1) Name of the person who made testing: Bella Wang / Cutey Yu
- 2) Name of the person in charge of testing: Adams Yu / Ryan Yang
- 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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No. CANEC1208305601

Date: 02 Jul 2012

Page 5 of 5

Sample photo:



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*** End of Report ***



Test Report No. CANEC1207912202 Date: 26 Jun 2012 Page 1 of 5

XIAMEN LICHUN ELECTRONIC ELEMENT CO.,LTD 42-2XINGLIN WEST RD.,361022,JIMEI DISTRICT,XIAMEN,,FUJIAN,P.R.C

The following sample(s) was/were submitted and identified on behalf of the clients as : BOSI GLASS TUBE

SGS Job No.: XM13901119EC - XM

Date of Sample Received: 18 Jun 2012

Testing Period: 18 Jun 2012 - 26 Jun 2012

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).

Conclusion: Based on the performed tests on submitted samples, the results of Lead,

Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBB), Polybrominated diphenyl ethers (PBDE) comply with the limits as set by RoHS

Directive 2011/65/EU Annex II; recasting 2002/95/EC.

Signed for and on behalf of SGS-CSTC Ltd.

Lucy Wu

Approved Signatory

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No. CANEC1207912202

Date: 26 Jun 2012

Page 2 of 5

Test Results:

Test Part Description:

Specimen No. SGS Sample ID Description

CAN12-079122.002 Transparent glass tube

Remarks:

1

(1) 1 mg/kg = 1 ppm = 0.0001%

(2) MDL = Method Detection Limit

(3) ND = Not Detected (< MDL)

(4) "-" = Not Regulated

RoHS Directive 2011/65/EU

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.

Test Item(s)	<u>Limit</u>	Unit	MDL	002
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	2	mg/kg	5	ND
Tetrabromobiphenyl	-	mg/kg	5	ND
Pentabromobiphenyl	-	mg/kg	5	ND
Hexabromobiphenyl	126	mg/kg	5	ND
Heptabromobiphenyl		mg/kg	5	ND
Octabromobiphenyl	1.5	mg/kg	5	ND
Nonabromobiphenyl	1.00	mg/kg	5	ND
Decabromobiphenyl	-	mg/kg	5	ND
Sum of PBDEs	1,000	mg/kg	-	ND
Monobromodiphenyl ether	13	mg/kg	5	ND

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Test Report	No. CANEC12079122	02	Date: 26	Jun 2012	Page 3 of 5
Test Item(s)	Limit	<u>Unit</u>	MDL	<u>002</u>	
Dibromodiphenyl ether	2	mg/kg	5	ND	
Tribromodiphenyl ether		mg/kg	5	ND	
Tetrabromodiphenyl ether	10 2 0	mg/kg	5	ND	
Pentabromodiphenyl ether		mg/kg	5	ND	
Hexabromodiphenyl ether	14	mg/kg	5	ND	
Heptabromodiphenyl ether	0.40	mg/kg	5	ND	
Octabromodiphenyl ether	45	mg/kg	5	ND	
Nonabromodiphenyl ether	9	mg/kg	5	ND	
Decabromodiphenyl ether	9	mg/kg	5	ND	
- 10 10 Head Control of Control Contr					

Notes:

(1) The maximum permissible limit is quoted from the directive 2011/65/EU, Annex II

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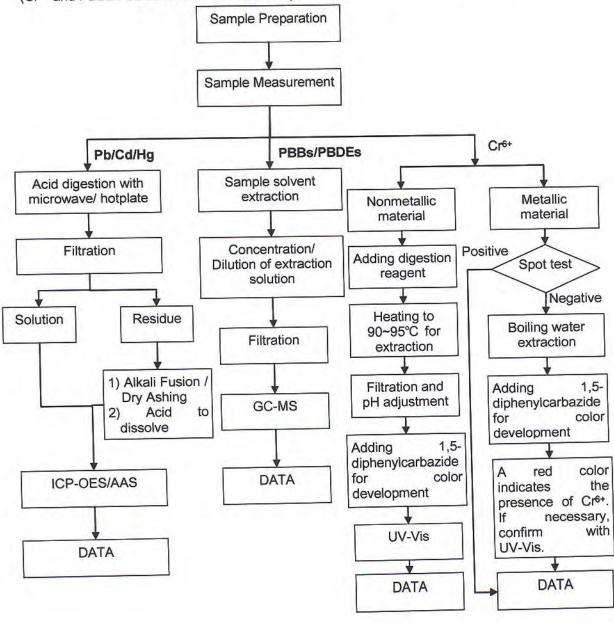
Date: 26 Jun 2012

Page 4 of 5

ATTACHMENTS

RoHS Testing Flow Chart

- 1) Name of the person who made testing: Bella Wang / Cutey Yu
- 2) Name of the person in charge of testing: Adams Yu / Ryan Yang
- 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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No. CANEC1207912202

Date: 26 Jun 2012

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Sample photo:



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DATE:

OCT 29, 2012

APPLICANT: LITTELFUSE,INC.

800 E. NORTHWEST HWY

ATTN: A.DIVIETRO/D.UNTIEDT

SAMPLE DESCRIPTION:

ONE (1) SUBMITTED SAMPLE SAID TO BE **BLACK INK.** PART DESCRIPTION INK-BLACK. PART NUMBER 425902.

DATE SAMPLE RECEIVED OCTOBER.15, 2012. DATE TEST STARTED OCTOBER.15, 2012.

TESTS CONDUCTED:

AS REQUESTED BY THE APPLICANT, FOR DETAILS REFER TO ATTACHED PAGE(S)

TO BE CONTINUED

AUTHORIZED BY: FOR INTERTEK TESTING SERVICES LTD., SHANGHAI

JACOB LIN

GENERAL MANAGER



TESTS CONDUCTED

(I) Test Result Summary:

Testing Item	Result (ppm)		
Heavy Metal	·		
Cadmium (Cd) content	ND		
Lead (Pb) content	ND		
Mercury (Hg) content	ND		
Chromium VI (Cr ⁶⁺) content	ND		
Polybrominated Biphenyls (PBBs)			
Monobrominated Biphenyls (MonoBB)	ND		
Dibrominated Biphenyls (DiBB)	ND		
Tribrominated Biphenyls (TriBB)	ND		
Tetrabrominated Biphenyls (TetraBB)	ND		
Pentabrominated Biphenyls (PentaBB)	ND		
Hexabrominated Biphenyls (HexaBB)	ND		
Heptabrominated Biphenyls (HeptaBB)	ND		
Octabrominated Biphenyls (OctaBB)	ND		
Nonabrominated Biphenyls (NonaBB)	ND		
Decabrominated Biphenyl (DecaBB)	ND		
Polybrominated Diphenyl Ethers (PBDEs)	·		
Monobrominated Diphenyl Ethers (MonoBDE)	ND		
Dibrominated Diphenyl Ethers (DiBDE)	ND		
Tribrominated Diphenyl Ethers (TriBDE)	ND		
Tetrabrominated Diphenyl Ethers (TetraBDE)	ND		
Pentabrominated Diphenyl Ethers (PentaBDE)	ND		
Hexabrominated Diphenyl Ethers (HexaBDE)	ND		
Heptabrominated Diphenyl Ethers (HeptaBDE)	ND		
Octabrominated Diphenyl Ethers (OctaBDE)	ND		
Nonabrominated Diphenyl Ethers (NonaBDE)	ND		
Decabrominated Diphenyl Ether (DecaBDE)	ND		

(III) Test Method:

(III) Test Method.		
Testing Item	Testing Method	Reporting Limit
Cadmium (Cd) content	With reference to IEC 62321 edition 1.0:2008 in clause 8/9/10, by microwave digestion until the tested samples are totally dissolved and determined by ICP-OES.	2 ppm
Lead (Pb) content	With reference to IEC 62321 edition 1.0:2008 in clause 8/9/10, by microwave digestion until the tested samples are totally dissolved and determined by ICP-OES.	2 ppm
Mercury (Hg) content	With reference to IEC 62321 edition 1.0:2008 in clause 7, by microwave digestion until the tested samples are totally dissolved and determined by ICP-OES.	2 ppm
Chromium VI (Cr ⁶⁺) content	With reference to IEC 62321 edition 1.0:2008 in annex C, by alkaline digestion and determined by UV-Vis spectrophotometer.	1 ppm
Polybrominated Biphenyls (PBBs)	With reference to IEC 62321 edition 1.0:2008 in annex A, by solvent extraction and determined by GC-MSD and further HPLC confirmation when necessary.	5 ppm
Polybrominated Diphenyl Ethers (PBDEs)	With reference to IEC 62321 edition 1.0:2008 in annex A, by solvent extraction and determined by GC-MSD and further HPLC confirmation when necessary.	5 ppm

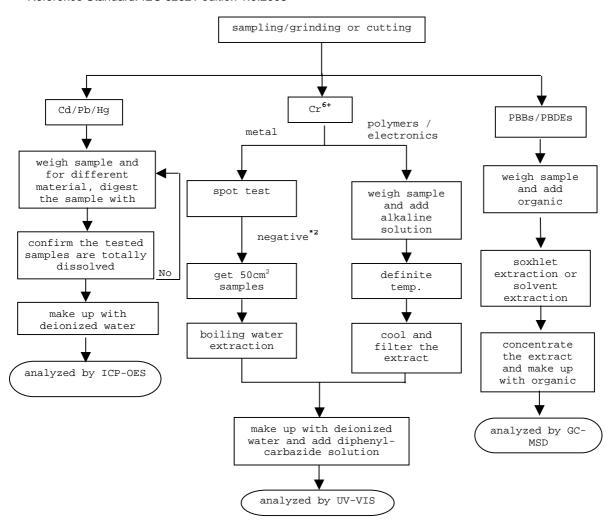
Reporting limit = Quantitation limit of analyte in sample Remark:



TESTS CONDUCTED

(IV) Measurement Flowchart:

Test For Cd/Pb/Hg/Chromium (VI)/PBBs/PBDEs Contents Reference Standard: IEC 62321 edition 1.0:2008



REMARKS:

*1: List of appropriate acid:

Material Acid added for digestion	
Polymers	HNO _{3,} HCI,HF,H ₂ O _{2,} H ₃ BO ₃
Metals	HNO _{3,} HCI,HF
Electronics	HNO _{3,} HCI,H ₂ O _{2,} HBF ₄

*2: If the result of spot test is positive, Chromium VI would be determined as detected.



TESTS CONDUCTED

2 (I) Test Result Summary:

Testing Item	Result (ppm)
Halogen Content	
Fluorine (F)	ND
Chlorine (CI)	150
Bromine (Br)	ND
lodine (I)	ND

ppm = Parts per million = mg/kg Remarks:

ND = Not detected

Responsibility Of Chemist : Leaf Liu

(III) Test Method:

Testing Item	Testing Method	Reporting Limit
	With reference to EN 14582:2007 by combustion flask with	50 ppm
	oxygen and determined by ion chromatography	

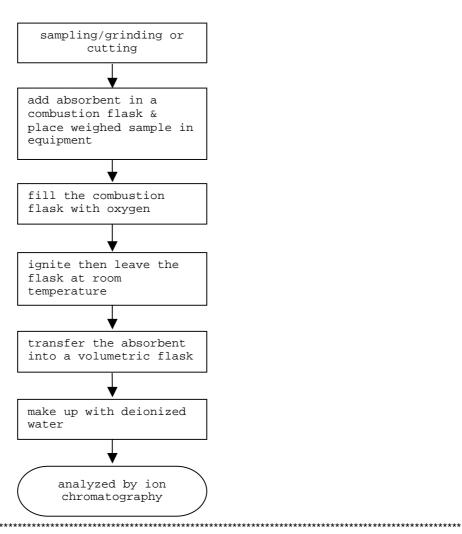
Reporting limit = Quantitation limit of analyte in sample Remark:



TESTS CONDUCTED

(IV) Measurement Flowchart:

Test For Halogen Content Reference Standard: EN 14582





TESTS CONDUCTED

3 (A) TEST RESULT SUMMARY:

TESTING ITEM	RESULT(ppm)
HBCD (HEXABROMOCYCLODODECANE)	ND

REMARKS:

ppm = PARTS PER MILLION = mg/kg ND = NOT DETECTED

(B) TEST METHOD:

TESTING ITEM	TESTING METHOD	REPORTING LIMIT
HBCD (HEXABROMOCYCLODODECANE)	WITH REFERENCE TO USEPA 3540C, BY SOLVENT EXTRACTION AND DETERMINED BY GC/MS	10 ppm



TEST REPORT

TESTS CONDUCTED

MEASUREMENT FLOWCHART:

TEST FOR HBCD (HEXABROMOCYCLODODECANE) CONTENT

WEIGH SAMPLE AND PLACE INTO A THIMBLE IJ SOXHLET EXTRACTION WITH ORGANIC SOLVENT CONCENTRATE THE EXTRACT TRANSFER THE EXTRACT INTO A VOLUMETRIC FLASK IJ MAKE UP WITH ORGANIC SOLVENT IJ ANALYZE BY GC-MSD

NUMBER:

SHAH00345635

TO BE CONTINUED



TESTS CONDUCTED

4 PHTHALATE CONTENT TEST

WITH REFERENCE TO EN14372, BY GAS CHROMATOGRAPHY-MASS SPECTROMETRY (GC-MS) ANALYSIS.

TESTED COMPOUND	RESULT (%,W/W)	LIMIT(%,W/W)
		<u>(MAX.)</u>
DIBUTYL PHTHALATE (DBP)	ND	
DI(2-ETHYL HEXYL) PHTHALATE(DEHP)	ND	
BENZYL BUTYL PHTHALATE (BBP)	ND	
SUM OF THREE PHTHALATES '	ND	0.1

REMARK: THE ABOVE LIMIT WAS QUOTED ACCORDING TO ANNEX XVII ITEMS 51 & 52 OF THE REACH

REGULATION (EC) NO. 1907/2006 & AMENDENT NO.552/2009 FOR PHTHALATE CONTENT IN TOYS

AND CHILDREN CARE ARTICLES.

DETECTION LIMIT = 0.01%(W/W)

ND = NOT DETECTED

5 PHTHALATE CONTENT TEST

WITH REFERENCE TO CPSC-CH-C1001-09.3, BY GAS CHROMATOGRAPHY-MASS SPECTROMETRY (GC-MS) ANALYSIS.

TESTED COMPOUND	RESULT (%,W/W)	LIMIT(%,W/W)
		(MAX.)
DI-BUTYL PHTHALATE (DBP)	ND	0.1
DI(2-ETHYL HEXYL) PHTHALATE(DEHP)	ND	0.1
BENZYL BUTYL PHTHALATE (BBP)	ND	0.1

REMARK: THE ABOVE LIMIT WAS QUOTED ACCORDING TO US CONSUMER PRODUCT SAFETY

IMPROVEMENT ACT 2008 & AMENDMENT H.R.2715 FOR PROHIBITION ON SALE OF CERTAIN

PRODUCTS CONTAINING SPECIFIED PHTHALATES.

DETECTION LIMIT = 0.01%(W/W)

ND = NOT DETECTED

DATE SAMPLE RECEIVED: OCT.15, 2012

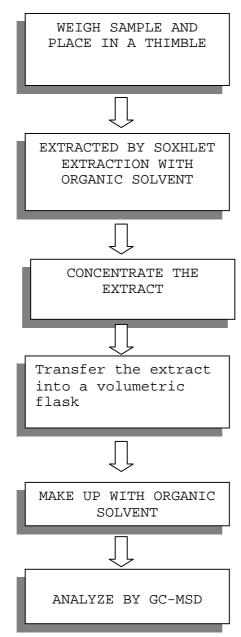
TESTING PERIOD : OCT.15, 2012 TO OCT.18, 2012



TESTS CONDUCTED

MEASUREMENT FLOWCHART:

TEST FOR PHTHALATES CONTENTS (EN14372)

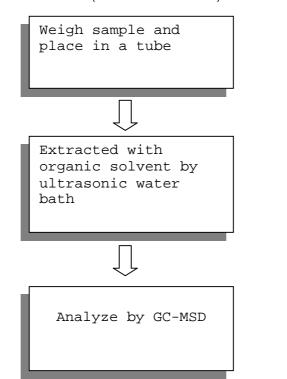




TESTS CONDUCTED

MEASUREMENT FLOWCHART:

TEST FOR PHTHALATES CONTENTS (CPSC-CH-C1001-09.3)





TESTS CONDUCTED

NUMBER: SHAH00345635



END OF REPORT

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DATE:

OCT 29, 2012

APPLICANT: LITTELFUSE,INC.

800 E. NORTHWEST HWY

ATTN: A.DIVIETRO/D.UNTIEDT

SAMPLE DESCRIPTION:

ONE (1) SUBMITTED SAMPLE SAID TO BE **BROWN INK.** PART DESCRIPTION INK-BROWN. PART NUMBER 425906.

DATE SAMPLE RECEIVED OCTOBER.15, 2012. DATE TEST STARTED OCTOBER.15, 2012.

TESTS CONDUCTED:

AS REQUESTED BY THE APPLICANT, FOR DETAILS REFER TO ATTACHED PAGE(S)

TO BE CONTINUED

AUTHORIZED BY: FOR INTERTEK TESTING SERVICES LTD., SHANGHAI

JACOB LIN

GENERAL MANAGER



TESTS CONDUCTED

1 (I) Test Result Summary:

Testing Item	Result (ppm)
Heavy Metal	•
Cadmium (Cd) content	ND
Lead (Pb) content	ND
Mercury (Hg) content	ND
Chromium VI (Cr ⁶⁺) content	ND
Polybrominated Biphenyls (PBBs)	
Monobrominated Biphenyls (MonoBB)	ND
Dibrominated Biphenyls (DiBB)	ND
Tribrominated Biphenyls (TriBB)	ND
Tetrabrominated Biphenyls (TetraBB)	ND
Pentabrominated Biphenyls (PentaBB)	ND
Hexabrominated Biphenyls (HexaBB)	ND
Heptabrominated Biphenyls (HeptaBB)	ND
Octabrominated Biphenyls (OctaBB)	ND
Nonabrominated Biphenyls (NonaBB)	ND
Decabrominated Biphenyl (DecaBB)	ND
Polybrominated Diphenyl Ethers (PBDEs)	•
Monobrominated Diphenyl Ethers (MonoBDE)	ND
Dibrominated Diphenyl Ethers (DiBDE)	ND
Tribrominated Diphenyl Ethers (TriBDE)	ND
Tetrabrominated Diphenyl Ethers (TetraBDE)	ND
Pentabrominated Diphenyl Ethers (PentaBDE)	ND
Hexabrominated Diphenyl Ethers (HexaBDE)	ND
Heptabrominated Diphenyl Ethers (HeptaBDE)	ND
Octabrominated Diphenyl Ethers (OctaBDE)	ND
Nonabrominated Diphenyl Ethers (NonaBDE)	ND
Decabrominated Diphenyl Ether (DecaBDE)	ND

(III) Test Method:

Testing Item	Testing Method	Reporting Limit
Cadmium (Cd) content	With reference to IEC 62321 edition 1.0:2008 in clause 8/9/10, by microwave digestion until the tested samples are totally dissolved and determined by ICP-OES.	2 ppm
Lead (Pb) content	With reference to IEC 62321 edition 1.0:2008 in clause 8/9/10, by microwave digestion until the tested samples are totally dissolved and determined by ICP-OES.	2 ppm
Mercury (Hg) content	With reference to IEC 62321 edition 1.0:2008 in clause 7, by microwave digestion until the tested samples are totally dissolved and determined by ICP-OES.	2 ppm
Chromium VI (Cr ⁶⁺) content	With reference to IEC 62321 edition 1.0:2008 in annex C, by alkaline digestion and determined by UV-Vis spectrophotometer.	1 ppm
Polybrominated Biphenyls (PBBs)	With reference to IEC 62321 edition 1.0:2008 in annex A, by solvent extraction and determined by GC-MSD and further HPLC confirmation when necessary.	5 ppm
Polybrominated Diphenyl Ethers (PBDEs)	With reference to IEC 62321 edition 1.0:2008 in annex A, by solvent extraction and determined by GC-MSD and further HPLC confirmation when necessary.	5 ppm

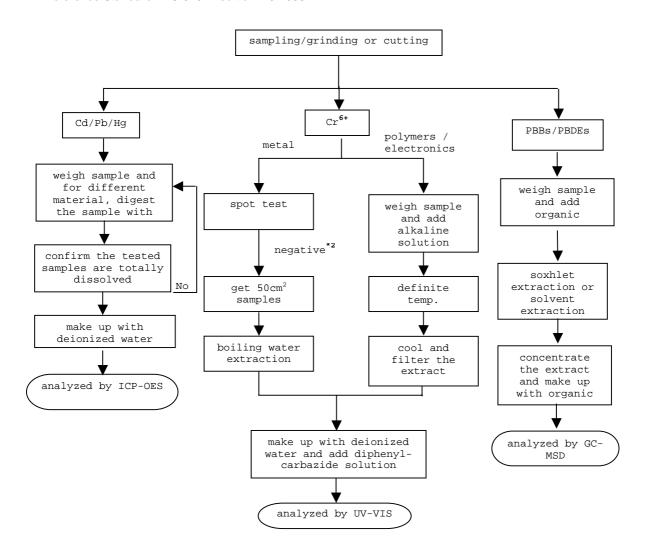
Reporting limit = Quantitation limit of analyte in sample Remark:



TESTS CONDUCTED

(IV) Measurement Flowchart:

Test For Cd/Pb/Hg/Chromium (VI)/PBBs/PBDEs Contents Reference Standard: IEC 62321 edition 1.0:2008



REMARKS:

*1: List of appropriate acid:

<u>Material</u>	Acid added for digestion
Polymers	HNO _{3,} HCI,HF,H ₂ O _{2,} H ₃ BO ₃
Metals	HNO _{3,} HCI,HF
Electronics	HNO _{3,} HCI,H ₂ O _{2,} HBF ₄

*2: If the result of spot test is positive, Chromium VI would be determined as detected.



TESTS CONDUCTED

2 (I) Test Result Summary:

	Testing Item	Result (ppm)
Halogen Content		
Fluorine (F)		ND
Chlorine (CI)		8600
Bromine (Br)		ND
lodine (I)		ND

Remarks: ppm = Parts per million = mg/kg

> ND = Not detected

Responsibility Of Chemist : Leaf Liu

(III) Test Method:

Testing Item	Testing Method	Reporting Limit
Hologon Contont	With reference to EN 14582:2007 by combustion flask with	50 nnm
Halogen Content	oxygen and determined by ion chromatography	50 ppm

Reporting limit = Quantitation limit of analyte in sample Remark:

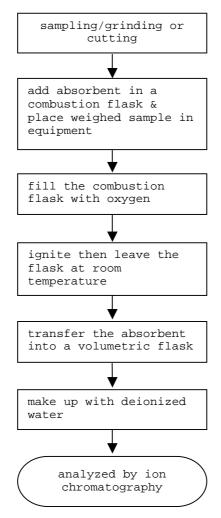


TEST REPORT

TESTS CONDUCTED

(IV) Measurement Flowchart:

Test For Halogen Content Reference Standard: EN 14582



NUMBER:

SHAH00345432



TESTS CONDUCTED

(A) TEST RESULT SUMMARY:

TESTING ITEM	RESULT(ppm)
HBCD (HEXABROMOCYCLODODECANE)	ND

REMARKS:

ppm = PARTS PER MILLION = mg/kg ND = NOT DETECTED

(B) TEST METHOD:

TESTING ITEI	M TES	STING METHOD E	REPORTING LIMIT
HBCD (HEXABROMOCYCLO		CE TO USEPA 3540C, BY CCTION AND DETERMINED	10 ppm



TESTS CONDUCTED

MEASUREMENT FLOWCHART:

TEST FOR HBCD (HEXABROMOCYCLODODECANE) CONTENT

WEIGH SAMPLE AND PLACE INTO A THIMBLE IJ SOXHLET EXTRACTION WITH ORGANIC SOLVENT CONCENTRATE THE EXTRACT TRANSFER THE EXTRACT INTO A VOLUMETRIC FLASK IJ MAKE UP WITH ORGANIC SOLVENT IJ ANALYZE BY GC-MSD



TESTS CONDUCTED

PHTHALATE CONTENT TEST

WITH REFERENCE TO EN14372, BY GAS CHROMATOGRAPHY-MASS SPECTROMETRY (GC-MS) ANALYSIS.

TESTED COMPOUND	RESULT (%,W/W)	LIMIT(%,W/W)
		<u>(MAX.)</u>
DIBUTYL PHTHALATE (DBP)	ND	
DI(2-ETHYL HEXYL) PHTHALATE(DEHP)	ND	
BENZYL BUTYL PHTHALATE (BBP)	ND	
SUM OF THREE PHTHALATES	ND	0.1

THE ABOVE LIMIT WAS QUOTED ACCORDING TO ANNEX XVII ITEMS 51 & 52 OF THE REACH REMARK:

REGULATION (EC) NO. 1907/2006 & AMENDENT NO.552/2009 (FORMERLY KNOWN AS

DIRECTIVE 2005/84/EC) FOR PHTHALATE CONTENT IN TOYS AND CHILDREN CARE ARTICLES.

DETECTION LIMIT = 0.01%(W/W)

ND = NOT DETECTED

5 PHTHALATE CONTENT TEST

WITH REFERENCE TO CPSC-CH-C1001-09.3, BY GAS CHROMATOGRAPHY-MASS SPECTROMETRY (GC-MS) ANALYSIS.

TESTED COMPOUND	RESULT (%,W/W)	LIMIT(%,W/W)
		(MAX.)
DI-BUTYL PHTHALATE (DBP)	ND	0.1
DI(2-ETHYL HEXYL) PHTHALATE(DEHP)	ND	0.1
BENZYL BUTYL PHTHALATE (BBP)	ND	0.1

REMARK: THE ABOVE LIMIT WAS QUOTED ACCORDING TO US CONSUMER PRODUCT SAFETY

IMPROVEMENT ACT 2008 FOR PROHIBITION ON SALE OF CERTAIN PRODUCTS CONTAINING

SPECIFIED PHTHALATES.

DETECTION LIMIT = 0.01%(W/W)

ND = NOT DETECTED

DATE SAMPLE RECEIVED: OCT.15, 2012

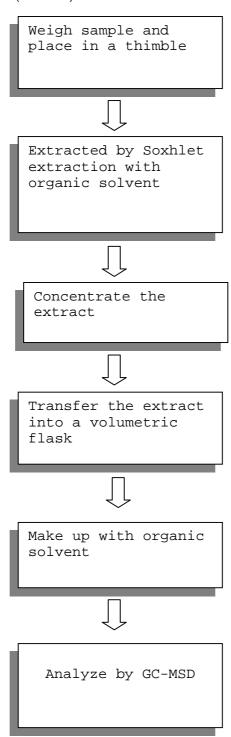
TESTING PERIOD: OCT.15, 2012 TO OCT.23, 2012



TEST REPORT

TESTS CONDUCTED MEASUREMENT FLOWCHART:

TEST FOR PHTHALATES CONTENTS (EN14372)



NUMBER:

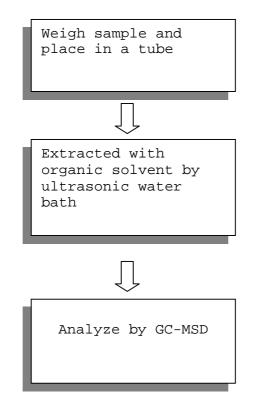
SHAH00345432



TEST REPORT

TESTS CONDUCTED MEASUREMENT FLOWCHART:

TEST FOR PHTHALATES CONTENTS (CPSC-CH-C1001-09.3)



NUMBER:

SHAH00345432



TESTS CONDUCTED



END OF REPORT

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