

ICP Test Report Certification Packet

Company Name: Littelfuse, Inc.

Product Type: Metal Oxide Varistors

Product Series: LA Series RoHS Compliant models

Issue Date: May 9, 2012

It is hereby certified by Littelfuse, Inc. that there is neither

RoHS(2011/65/EU)-restricted substance nor such use, for materials to be used for unit parts, for packing/packaging materials, and for additives and the like in the manufacturing processes.

In addition, it is hereby reported to you that the parts and sub-materials, the materials to be used for unit parts, the packing/packaging materials, and the additives and the like in the manufacturing processes, are all composed of the following components.

Issued by: David Huang

< DGLF Environmental, Health & Safety Engineer >

(1) Parts, sub-materials and unit parts

This document covers Metal Oxide Varistors LA series RoHS-Compliant models manufactured by Littelfuse, Inc.

Please see Table 1 for raw materials used.

(2) The ICP data on all measurable substances

Please see appropriate pages as identified in Table 1

Remarks :



Total Parts	P/N	Raw Material Description	Page
1	N/A	Black disc, type including DD,DM,DP,DV,DH,HD,HH and HM	3-42
2	N/A	Silver Paste	43-54
3	N/A	Pb-free Solder Bar	55-63
4	N/A	Tinned Copper Wire or Nickel-plated Tin Copper Wire	64-78
5	N/A	Epoxy, Red	79-84

Table 1: List of Raw Materials covered by this report



Number: SZHH0059955103

Applicant: LITTELFUSE, INC 8755 WEST HIGGINS ROAD SUITE 500CHICAGO IL 60631 USA Date: Jun 17, 2011

Attn: KRISTEEN BACILA/ARSENIO CESISTA JR.

Sample Description:

One (1) submitted sample said to be **DD Black Disc.** Tested component: dark grey magnet.



Tests conducted:

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

Authorized by: For Intertek Testing Services Shenzhen Ltd.

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Ben N.L. Lin General Manager



Tests Conducted

RoHS Chemical Test

(A) Test Result Summary:

Testing Item	Result
Cadmium (Cd) Content (mg/kg)	ND(<2)
Lead (Pb) Content (mg/kg)	ND(<2)
Mercury (Hg) Content (mg/kg)	ND(<2)
Chromium (VI)(Cr ⁶⁺) Content (mg/kg)	18
Polybrominated Biphenyls (PBBs)(mg/kg)	
Monobromobiphenyl (MonoBB)	ND(<5)
Dibromobiphenyl (DiBB)	ND(<5)
Tribromobiphenyl (TriBB)	ND(<5)
Tetrabromobiphenyl (TetraBB)	ND(<5)
Pentabromobiphenyl (PentaBB)	ND(<5)
Hexabromobiphenyl (HexaBB)	ND(<5)
Heptabromobiphenyl (HeptaBB)	ND(<5)
Octabromobiphenyl (OctaBB)	ND(<5)
Nonabromobiphenyl (NonaBB)	ND(<5)
Decabromobiphenyl (DecaBB)	ND(<5)
Polybrominated Diphenyl Ethers (PBDEs)(mg/kg)	
Monobromodiphenyl Ether (MonoBDE)	ND(<5)
Dibromodiphenyl Ether (DiBDE)	ND(<5)
Tribromodiphenyl Ether (TriBDE)	ND(<5)
Tetrabromodiphenyl Ether (TetraBDE)	ND(<5)
Pentabromodiphenyl Ether (PentaBDE)	ND(<5)
Hexabromodiphenyl Ether (HexaBDE)	ND(<5)
Heptabromodiphenyl Ether (HeptaBDE)	ND(<5)
Octabromodiphenyl Ether (OctaBDE)	ND(<5)
Nonabromodiphenyl Ether (NonaBDE)	ND(<5)
Decabromodiphenyl Ether (DecaBDE)	ND(<5)

Chemist: Wang Haijun/Tang Wenming

mg/kg = milligram per kilogram = ppm < = Less than ND = Not detected Number: SZHH0059955103



Tests Conducted

(B) RoHS Requirement:

Restricted Substances	Limits
Cadmium (Cd)	0.01% (100 ppm)
Lead (Pb)	0.1% (1000 ppm)
Mercury (Hg)	0.1% (1000 ppm)
Chromium (VI) (Cr ⁶⁺)	0.1% (1000 ppm)
Polybrominated Biphenyls (PBBs)	0.1% (1000 ppm)
Polybrominated Diphenyl Ethers (PBDEs)	0.1% (1000 ppm)

The above limits were quoted from 2002/95/EC and amendment 2005/618/EC for homogeneous material.

(C) Test Method:

Testing Item	Testing Method	Reporting Limit
Cadmium (Cd) Content	With reference to IEC 62321 Edition 1.0:2008, by acid digestion and determined by ICP - OES	2 mg/kg
Lead (Pb) Content	With reference to IEC 62321 Edition 1.0:2008, by acid digestion and determined by ICP - OES	2 mg/kg
Mercury (Hg) Content	With reference to IEC 62321 Edition 1.0:2008, by acid digestion and determined by ICP - OES	2 mg/kg
Chromium (VI)(Cr ⁶⁺) Content	With reference to IEC 62321 Edition 1.0:2008, by alkaline digestion and determined by UV-VIS Spectrophotometer	1 mg/kg
(PBBs)& Polybrominated	With reference to IEC 62321 Edition 1.0:2008, by solvent extraction and determined by GC/MS and further HPLC confirmation when necessary	5 mg/kg

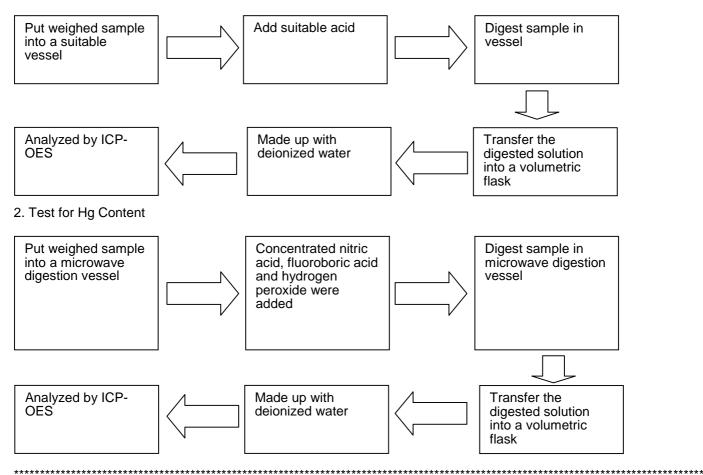
Date sample received: Jun 13, 2011 Testing period: Jun 13, 2011 to Jun 16, 2011



Tests Conducted

(D) Measurement Flowchart:

1. Test for Cd/Pb Contents

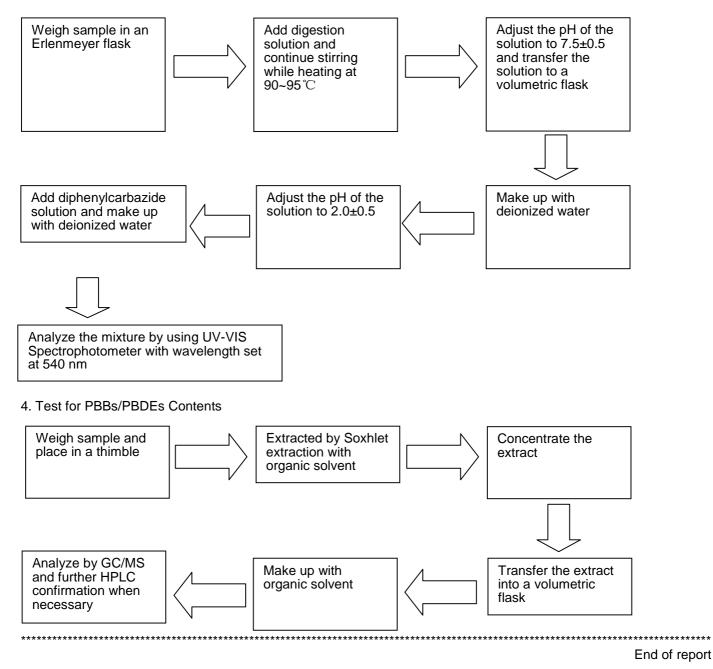




Number: SZHH0059955103

Tests Conducted

3. Test for Chromium (VI) (Cr⁶⁺) Content (Alkaline Digestion)





Number: SZHH0059955104

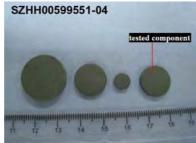
Applicant: LITTELFUSE, INC 8755 WEST HIGGINS ROAD SUITE 500CHICAGO IL 60631 USA Date: Jun 17, 2011

Attn: KRISTEEN BACILA/ARSENIO CESISTA JR.

Sample Description:

One (1) submitted sample said to be **DM Black Disc.**

Tested component: dark grey magnet.



Tests conducted:

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

Authorized by: For Intertek Testing Services Shenzhen Ltd.

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Ben N.L. Lin General Manager



Tests Conducted

RoHS Chemical Test

(A) Test Result Summary:

Testing Item	Result
Cadmium (Cd) Content (mg/kg)	ND(<2)
Lead (Pb) Content (mg/kg)	ND(<2)
Mercury (Hg) Content (mg/kg)	ND(<2)
Chromium (VI)(Cr ⁶⁺) Content (mg/kg)	9
Polybrominated Biphenyls (PBBs)(mg/kg)	
Monobromobiphenyl (MonoBB)	ND(<5)
Dibromobiphenyl (DiBB)	ND(<5)
Tribromobiphenyl (TriBB)	ND(<5)
Tetrabromobiphenyl (TetraBB)	ND(<5)
Pentabromobiphenyl (PentaBB)	ND(<5)
Hexabromobiphenyl (HexaBB)	ND(<5)
Heptabromobiphenyl (HeptaBB)	ND(<5)
Octabromobiphenyl (OctaBB)	ND(<5)
Nonabromobiphenyl (NonaBB)	ND(<5)
Decabromobiphenyl (DecaBB)	ND(<5)
Polybrominated Diphenyl Ethers (PBDEs)(mg/kg)	
Monobromodiphenyl Ether (MonoBDE)	ND(<5)
Dibromodiphenyl Ether (DiBDE)	ND(<5)
Tribromodiphenyl Ether (TriBDE)	ND(<5)
Tetrabromodiphenyl Ether (TetraBDE)	ND(<5)
Pentabromodiphenyl Ether (PentaBDE)	ND(<5)
Hexabromodiphenyl Ether (HexaBDE)	ND(<5)
Heptabromodiphenyl Ether (HeptaBDE)	ND(<5)
Octabromodiphenyl Ether (OctaBDE)	ND(<5)
Nonabromodiphenyl Ether (NonaBDE)	ND(<5)
Decabromodiphenyl Ether (DecaBDE)	ND(<5)

Chemist: Wang Haijun/Tang Wenming

mg/kg = milligram per kilogram = ppm < = Less than ND = Not detected Number: SZHH0059955104



Tests Conducted

(B) RoHS Requirement:

Restricted Substances	Limits
Cadmium (Cd)	0.01% (100 ppm)
Lead (Pb)	0.1% (1000 ppm)
Mercury (Hg)	0.1% (1000 ppm)
Chromium (VI) (Cr ⁶⁺)	0.1% (1000 ppm)
Polybrominated Biphenyls (PBBs)	0.1% (1000 ppm)
Polybrominated Diphenyl Ethers (PBDEs)	0.1% (1000 ppm)

The above limits were quoted from 2002/95/EC and amendment 2005/618/EC for homogeneous material.

(C) Test Method:

Testing Item	Testing Method	Reporting Limit
Cadmium (Cd) Content	With reference to IEC 62321 Edition 1.0:2008, by acid digestion and determined by ICP - OES	2 mg/kg
Lead (Pb) Content	With reference to IEC 62321 Edition 1.0:2008, by acid digestion and determined by ICP - OES	2 mg/kg
Mercury (Hg) Content	With reference to IEC 62321 Edition 1.0:2008, by acid digestion and determined by ICP - OES	2 mg/kg
Chromium (VI)(Cr ⁶⁺) Content	With reference to IEC 62321 Edition 1.0:2008, by alkaline digestion and determined by UV-VIS Spectrophotometer	1 mg/kg
(PBBs)& Polybrominated	With reference to IEC 62321 Edition 1.0:2008, by solvent extraction and determined by GC/MS and further HPLC confirmation when necessary	5 mg/kg

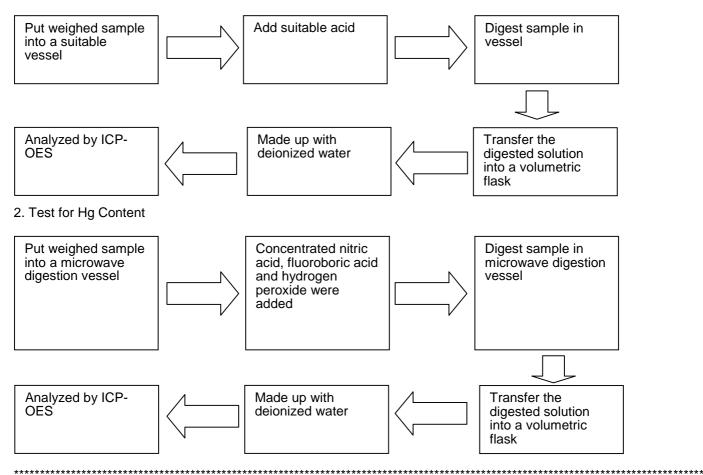
Date sample received: Jun 13, 2011 Testing period: Jun 13, 2011 to Jun 16, 2011



Tests Conducted

(D) Measurement Flowchart:

1. Test for Cd/Pb Contents

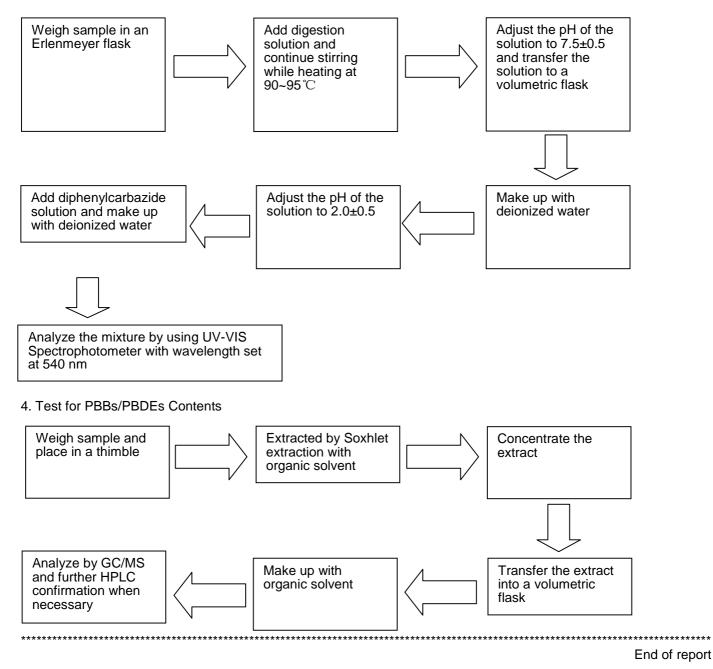




Number: SZHH0059955104

Tests Conducted

3. Test for Chromium (VI) (Cr⁶⁺) Content (Alkaline Digestion)





Number: SZHH0059955102

Applicant: LITTELFUSE, INC 8755 WEST HIGGINS ROAD SUITE 500CHICAGO IL 60631 USA Date: Jun 17, 2011

Attn: KRISTEEN BACILA/ARSENIO CESISTA JR.

Sample Description:

One (1) submitted sample said to be **DP Black Disc.** Tested component: dark grey magnet.



Tests conducted:

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

Authorized by: For Intertek Testing Services Shenzhen Ltd.

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Ben N.L. Lin General Manager



Tests Conducted

RoHS Chemical Test

(A) Test Result Summary:

Testing Item	Result
Cadmium (Cd) Content (mg/kg)	ND(<2)
Lead (Pb) Content (mg/kg)	ND(<2)
Mercury (Hg) Content (mg/kg)	ND(<2)
Chromium (VI)(Cr ⁶⁺) Content (mg/kg)	44
Polybrominated Biphenyls (PBBs)(mg/kg)	
Monobromobiphenyl (MonoBB)	ND(<5)
Dibromobiphenyl (DiBB)	ND(<5)
Tribromobiphenyl (TriBB)	ND(<5)
Tetrabromobiphenyl (TetraBB)	ND(<5)
Pentabromobiphenyl (PentaBB)	ND(<5)
Hexabromobiphenyl (HexaBB)	ND(<5)
Heptabromobiphenyl (HeptaBB)	ND(<5)
Octabromobiphenyl (OctaBB)	ND(<5)
Nonabromobiphenyl (NonaBB)	ND(<5)
Decabromobiphenyl (DecaBB)	ND(<5)
Polybrominated Diphenyl Ethers (PBDEs)(mg/kg)	
Monobromodiphenyl Ether (MonoBDE)	ND(<5)
Dibromodiphenyl Ether (DiBDE)	ND(<5)
Tribromodiphenyl Ether (TriBDE)	ND(<5)
Tetrabromodiphenyl Ether (TetraBDE)	ND(<5)
Pentabromodiphenyl Ether (PentaBDE)	ND(<5)
Hexabromodiphenyl Ether (HexaBDE)	ND(<5)
Heptabromodiphenyl Ether (HeptaBDE)	ND(<5)
Octabromodiphenyl Ether (OctaBDE)	ND(<5)
Nonabromodiphenyl Ether (NonaBDE)	ND(<5)
Decabromodiphenyl Ether (DecaBDE)	ND(<5)

Chemist: Wang Haijun/Tang Wenming

mg/kg = milligram per kilogram = ppm < = Less than ND = Not detected Number: SZHH0059955102



Tests Conducted

(B) RoHS Requirement:

Restricted Substances	Limits
Cadmium (Cd)	0.01% (100 ppm)
Lead (Pb)	0.1% (1000 ppm)
Mercury (Hg)	0.1% (1000 ppm)
Chromium (VI) (Cr ⁶⁺)	0.1% (1000 ppm)
Polybrominated Biphenyls (PBBs)	0.1% (1000 ppm)
Polybrominated Diphenyl Ethers (PBDEs)	0.1% (1000 ppm)

The above limits were quoted from 2002/95/EC and amendment 2005/618/EC for homogeneous material.

(C) Test Method:

Testing Item	Testing Method	Reporting Limit
Cadmium (Cd) Content	With reference to IEC 62321 Edition 1.0:2008, by acid digestion and determined by ICP - OES	2 mg/kg
Lead (Pb) Content	With reference to IEC 62321 Edition 1.0:2008, by acid digestion and determined by ICP - OES	2 mg/kg
Mercury (Hg) Content	With reference to IEC 62321 Edition 1.0:2008, by acid digestion and determined by ICP - OES	2 mg/kg
Chromium (VI)(Cr ⁶⁺) Content	With reference to IEC 62321 Edition 1.0:2008, by alkaline digestion and determined by UV-VIS Spectrophotometer	1 mg/kg
(PBBs)& Polybrominated	With reference to IEC 62321 Edition 1.0:2008, by solvent extraction and determined by GC/MS and further HPLC confirmation when necessary	5 mg/kg

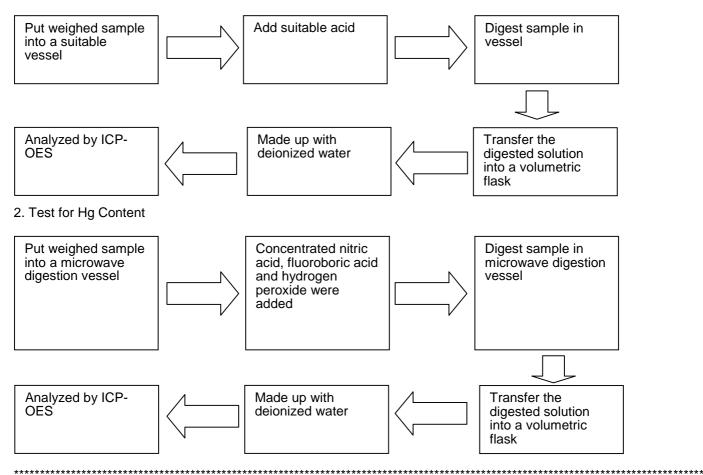
Date sample received: Jun 13, 2011 Testing period: Jun 13, 2011 to Jun 16, 2011



Tests Conducted

(D) Measurement Flowchart:

1. Test for Cd/Pb Contents

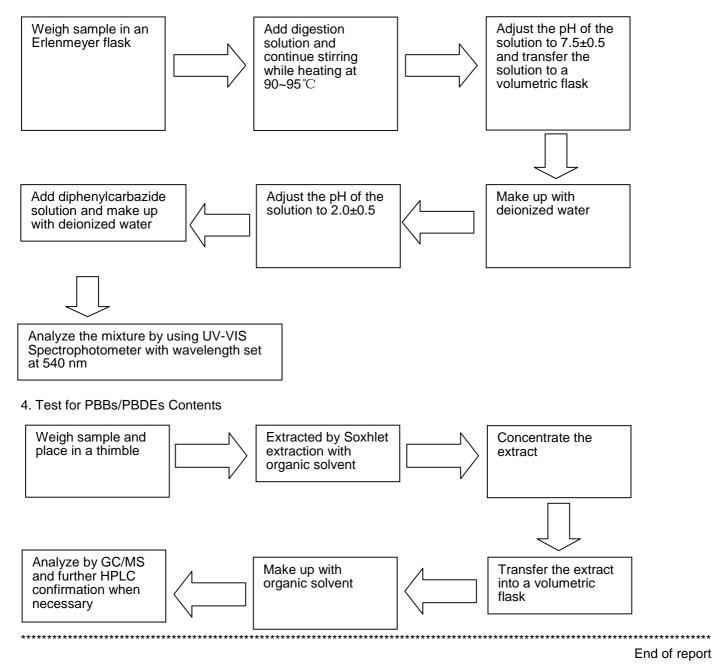




Number: SZHH0059955102

Tests Conducted

3. Test for Chromium (VI) (Cr⁶⁺) Content (Alkaline Digestion)





Number: SZHH0059955101

Applicant: LITTELFUSE, INC 8755 WEST HIGGINS ROAD SUITE 500CHICAGO IL 60631 USA Date: Jun 17, 2011

Attn: KRISTEEN BACILA/ARSENIO CESISTA JR.

Sample Description:

One (1) submitted sample said to be **DV Black Disc.** Tested component: dark grey magnet.

SZHH00599551-01

Tests conducted:

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

Authorized by: For Intertek Testing Services Shenzhen Ltd.

Ben N.L. Lin General Manager



Tests Conducted

RoHS Chemical Test

(A) Test Result Summary:

Testing Item	Result
Cadmium (Cd) Content (mg/kg)	ND(<2)
Lead (Pb) Content (mg/kg)	ND(<2)
Mercury (Hg) Content (mg/kg)	ND(<2)
Chromium (VI)(Cr ⁶⁺) Content (mg/kg)	ND(<1)
Polybrominated Biphenyls (PBBs)(mg/kg)	
Monobromobiphenyl (MonoBB)	ND(<5)
Dibromobiphenyl (DiBB)	ND(<5)
Tribromobiphenyl (TriBB)	ND(<5)
Tetrabromobiphenyl (TetraBB)	ND(<5)
Pentabromobiphenyl (PentaBB)	ND(<5)
Hexabromobiphenyl (HexaBB)	ND(<5)
Heptabromobiphenyl (HeptaBB)	ND(<5)
Octabromobiphenyl (OctaBB)	ND(<5)
Nonabromobiphenyl (NonaBB)	ND(<5)
Decabromobiphenyl (DecaBB)	ND(<5)
Polybrominated Diphenyl Ethers (PBDEs)(mg/kg)	
Monobromodiphenyl Ether (MonoBDE)	ND(<5)
Dibromodiphenyl Ether (DiBDE)	ND(<5)
Tribromodiphenyl Ether (TriBDE)	ND(<5)
Tetrabromodiphenyl Ether (TetraBDE)	ND(<5)
Pentabromodiphenyl Ether (PentaBDE)	ND(<5)
Hexabromodiphenyl Ether (HexaBDE)	ND(<5)
Heptabromodiphenyl Ether (HeptaBDE)	ND(<5)
Octabromodiphenyl Ether (OctaBDE)	ND(<5)
Nonabromodiphenyl Ether (NonaBDE)	ND(<5)
Decabromodiphenyl Ether (DecaBDE)	ND(<5)

Chemist: Wang Haijun/Tang Wenming

mg/kg = milligram per kilogram = ppm < = Less than ND = Not detected SZHH0059955101

Number:



Tests Conducted

(B) RoHS Requirement:

Restricted Substances	Limits
Cadmium (Cd)	0.01% (100 ppm)
Lead (Pb)	0.1% (1000 ppm)
Mercury (Hg)	0.1% (1000 ppm)
Chromium (VI) (Cr ⁶⁺)	0.1% (1000 ppm)
Polybrominated Biphenyls (PBBs)	0.1% (1000 ppm)
Polybrominated Diphenyl Ethers (PBDEs)	0.1% (1000 ppm)

The above limits were quoted from 2002/95/EC and amendment 2005/618/EC for homogeneous material.

(C) Test Method:

Testing Item	Testing Method	Reporting Limit
Cadmium (Cd) Content	With reference to IEC 62321 Edition 1.0:2008, by acid digestion and determined by ICP - OES	2 mg/kg
Lead (Pb) Content	With reference to IEC 62321 Edition 1.0:2008, by acid digestion and determined by ICP - OES	2 mg/kg
Mercury (Hg) Content	With reference to IEC 62321 Edition 1.0:2008, by acid digestion and determined by ICP - OES	2 mg/kg
Chromium (VI)(Cr ⁶⁺) Content	With reference to IEC 62321 Edition 1.0:2008, by alkaline digestion and determined by UV-VIS Spectrophotometer	1 mg/kg
(PBBs)& Polybrominated	With reference to IEC 62321 Edition 1.0:2008, by solvent extraction and determined by GC/MS and further HPLC confirmation when necessary	5 mg/kg

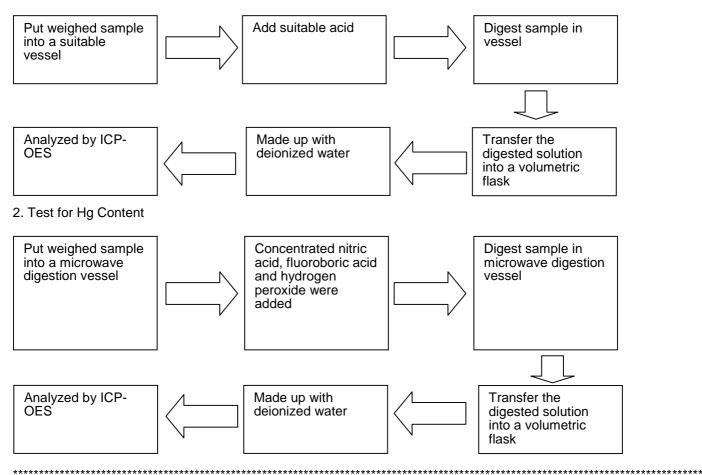
Date sample received: Jun 13, 2011 Testing period: Jun 13, 2011 to Jun 16, 2011



Tests Conducted

(D) Measurement Flowchart:

1. Test for Cd/Pb Contents

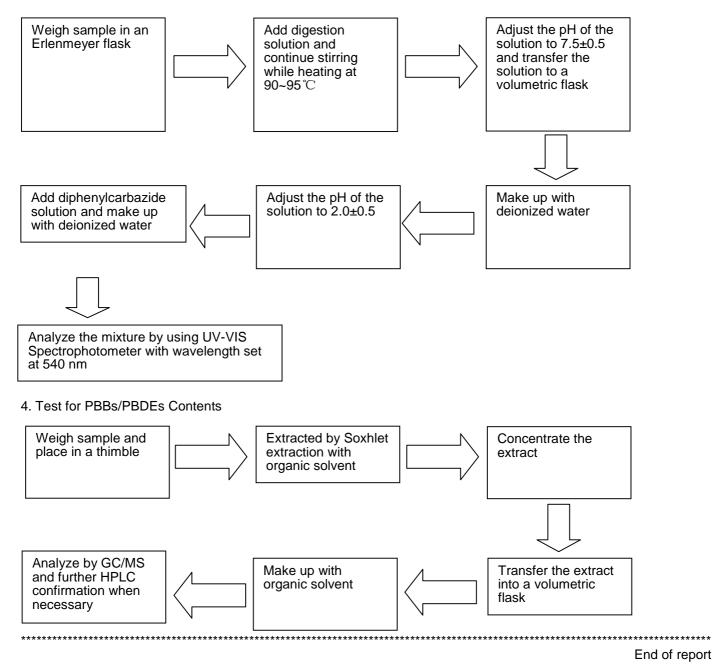




Number: SZHH0059955101

Tests Conducted

3. Test for Chromium (VI) (Cr⁶⁺) Content (Alkaline Digestion)





Number: SZHH0059955105

Applicant: LITTELFUSE, INC 8755 WEST HIGGINS ROAD SUITE 500CHICAGO IL 60631 USA Date: Jun 17, 2011

Attn: KRISTEEN BACILA/ARSENIO CESISTA JR.

Sample Description:

One (1) submitted sample said to be **DH Black Disc.** Tested component: dark grey magnet.



Tests conducted:

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

Authorized by: For Intertek Testing Services Shenzhen Ltd.

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Ben N.L. Lin General Manager



Tests Conducted

RoHS Chemical Test

(A) Test Result Summary:

Testing Item	Result
Cadmium (Cd) Content (mg/kg)	ND(<2)
Lead (Pb) Content (mg/kg)	ND(<2)
Mercury (Hg) Content (mg/kg)	ND(<2)
Chromium (VI)(Cr ⁶⁺) Content (mg/kg)	16
Polybrominated Biphenyls (PBBs)(mg/kg)	
Monobromobiphenyl (MonoBB)	ND(<5)
Dibromobiphenyl (DiBB)	ND(<5)
Tribromobiphenyl (TriBB)	ND(<5)
Tetrabromobiphenyl (TetraBB)	ND(<5)
Pentabromobiphenyl (PentaBB)	ND(<5)
Hexabromobiphenyl (HexaBB)	ND(<5)
Heptabromobiphenyl (HeptaBB)	ND(<5)
Octabromobiphenyl (OctaBB)	ND(<5)
Nonabromobiphenyl (NonaBB)	ND(<5)
Decabromobiphenyl (DecaBB)	ND(<5)
Polybrominated Diphenyl Ethers (PBDEs)(mg/kg)	
Monobromodiphenyl Ether (MonoBDE)	ND(<5)
Dibromodiphenyl Ether (DiBDE)	ND(<5)
Tribromodiphenyl Ether (TriBDE)	ND(<5)
Tetrabromodiphenyl Ether (TetraBDE)	ND(<5)
Pentabromodiphenyl Ether (PentaBDE)	ND(<5)
Hexabromodiphenyl Ether (HexaBDE)	ND(<5)
Heptabromodiphenyl Ether (HeptaBDE)	ND(<5)
Octabromodiphenyl Ether (OctaBDE)	ND(<5)
Nonabromodiphenyl Ether (NonaBDE)	ND(<5)
Decabromodiphenyl Ether (DecaBDE)	ND(<5)

Chemist: Wang Haijun/Tang Wenming

mg/kg = milligram per kilogram = ppm < = Less than ND = Not detected Number: SZHH0059955105



Tests Conducted

(B) RoHS Requirement:

Restricted Substances	Limits
Cadmium (Cd)	0.01% (100 ppm)
Lead (Pb)	0.1% (1000 ppm)
Mercury (Hg)	0.1% (1000 ppm)
Chromium (VI) (Cr ⁶⁺)	0.1% (1000 ppm)
Polybrominated Biphenyls (PBBs)	0.1% (1000 ppm)
Polybrominated Diphenyl Ethers (PBDEs)	0.1% (1000 ppm)

The above limits were quoted from 2002/95/EC and amendment 2005/618/EC for homogeneous material.

(C) Test Method:

Testing Item	Testing Method	Reporting Limit
Cadmium (Cd) Content	With reference to IEC 62321 Edition 1.0:2008, by acid digestion and determined by ICP - OES	2 mg/kg
Lead (Pb) Content	With reference to IEC 62321 Edition 1.0:2008, by acid digestion and determined by ICP - OES	2 mg/kg
Mercury (Hg) Content	With reference to IEC 62321 Edition 1.0:2008, by acid digestion and determined by ICP - OES	2 mg/kg
Chromium (VI)(Cr ⁶⁺) Content	With reference to IEC 62321 Edition 1.0:2008, by alkaline digestion and determined by UV-VIS Spectrophotometer	1 mg/kg
(PBBs)& Polybrominated	With reference to IEC 62321 Edition 1.0:2008, by solvent extraction and determined by GC/MS and further HPLC confirmation when necessary	5 mg/kg

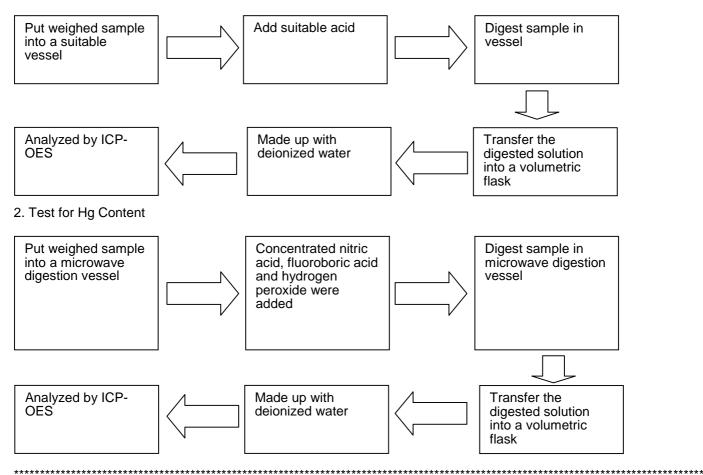
Date sample received: Jun 13, 2011 Testing period: Jun 13, 2011 to Jun 16, 2011



Tests Conducted

(D) Measurement Flowchart:

1. Test for Cd/Pb Contents

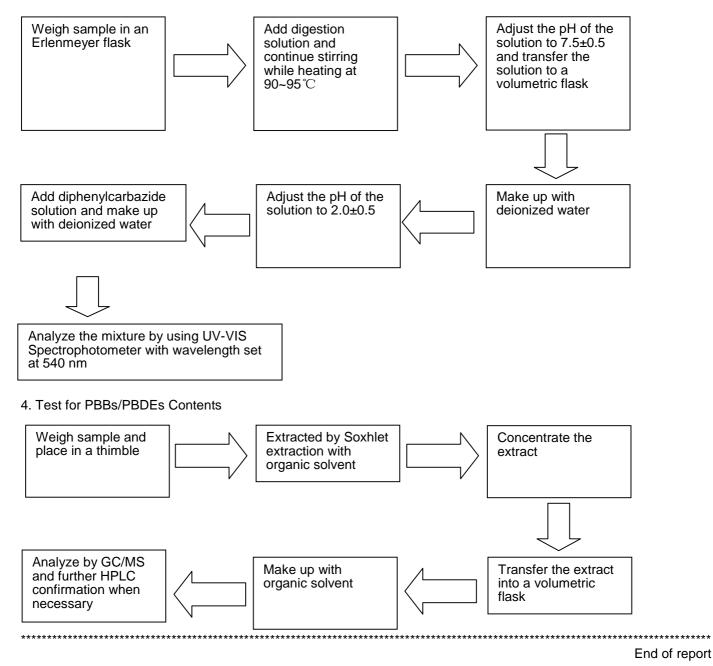




Number: SZHH0059955105

Tests Conducted

3. Test for Chromium (VI) (Cr⁶⁺) Content (Alkaline Digestion)





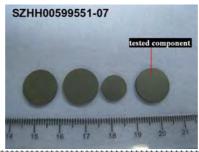
Number: SZHH0059955107

Applicant: LITTELFUSE, INC 8755 WEST HIGGINS ROAD SUITE 500CHICAGO IL 60631 USA Date: Jun 17, 2011

Attn: KRISTEEN BACILA/ARSENIO CESISTA JR.

Sample Description:

One (1) submitted sample said to be **HD Black Disc.** Tested component: dark grey magnet.



Tests conducted:

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

Authorized by: For Intertek Testing Services Shenzhen Ltd.

111

Ben N.L. Lin General Manager



Tests Conducted

RoHS Chemical Test

(A) Test Result Summary:

Testing Item	Result
Cadmium (Cd) Content (mg/kg)	ND(<2)
Lead (Pb) Content (mg/kg)	ND(<2)
Mercury (Hg) Content (mg/kg)	ND(<2)
Chromium (VI)(Cr ⁶⁺) Content (mg/kg)	20
Polybrominated Biphenyls (PBBs)(mg/kg)	
Monobromobiphenyl (MonoBB)	ND(<5)
Dibromobiphenyl (DiBB)	ND(<5)
Tribromobiphenyl (TriBB)	ND(<5)
Tetrabromobiphenyl (TetraBB)	ND(<5)
Pentabromobiphenyl (PentaBB)	ND(<5)
Hexabromobiphenyl (HexaBB)	ND(<5)
Heptabromobiphenyl (HeptaBB)	ND(<5)
Octabromobiphenyl (OctaBB)	ND(<5)
Nonabromobiphenyl (NonaBB)	ND(<5)
Decabromobiphenyl (DecaBB)	ND(<5)
Polybrominated Diphenyl Ethers (PBDEs)(mg/kg)	
Monobromodiphenyl Ether (MonoBDE)	ND(<5)
Dibromodiphenyl Ether (DiBDE)	ND(<5)
Tribromodiphenyl Ether (TriBDE)	ND(<5)
Tetrabromodiphenyl Ether (TetraBDE)	ND(<5)
Pentabromodiphenyl Ether (PentaBDE)	ND(<5)
Hexabromodiphenyl Ether (HexaBDE)	ND(<5)
Heptabromodiphenyl Ether (HeptaBDE)	ND(<5)
Octabromodiphenyl Ether (OctaBDE)	ND(<5)
Nonabromodiphenyl Ether (NonaBDE)	ND(<5)
Decabromodiphenyl Ether (DecaBDE)	ND(<5)

Chemist: Wang Haijun/Tang Wenming

mg/kg = milligram per kilogram = ppm < = Less than ND = Not detected

SZHH0059955107

Number:



Tests Conducted

(B) RoHS Requirement:

Restricted Substances	Limits
Cadmium (Cd)	0.01% (100 ppm)
Lead (Pb)	0.1% (1000 ppm)
Mercury (Hg)	0.1% (1000 ppm)
Chromium (VI) (Cr ⁶⁺)	0.1% (1000 ppm)
Polybrominated Biphenyls (PBBs)	0.1% (1000 ppm)
Polybrominated Diphenyl Ethers (PBDEs)	0.1% (1000 ppm)

The above limits were quoted from 2002/95/EC and amendment 2005/618/EC for homogeneous material.

(C) Test Method:

Testing Item	Testing Method	Reporting Limit
Cadmium (Cd) Content	With reference to IEC 62321 Edition 1.0:2008, by acid digestion and determined by ICP - OES	2 mg/kg
Lead (Pb) Content	With reference to IEC 62321 Edition 1.0:2008, by acid digestion and determined by ICP - OES	2 mg/kg
Mercury (Hg) Content	With reference to IEC 62321 Edition 1.0:2008, by acid digestion and determined by ICP - OES	2 mg/kg
Chromium (VI)(Cr ⁶⁺) Content	With reference to IEC 62321 Edition 1.0:2008, by alkaline digestion and determined by UV-VIS Spectrophotometer	1 mg/kg
(PBBs)& Polybrominated	With reference to IEC 62321 Edition 1.0:2008, by solvent extraction and determined by GC/MS and further HPLC confirmation when necessary	5 mg/kg

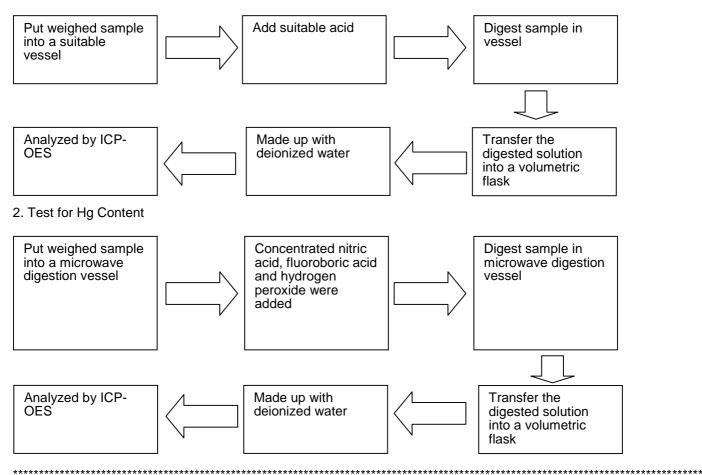
Date sample received: Jun 13, 2011 Testing period: Jun 13, 2011 to Jun 16, 2011



Tests Conducted

(D) Measurement Flowchart:

1. Test for Cd/Pb Contents

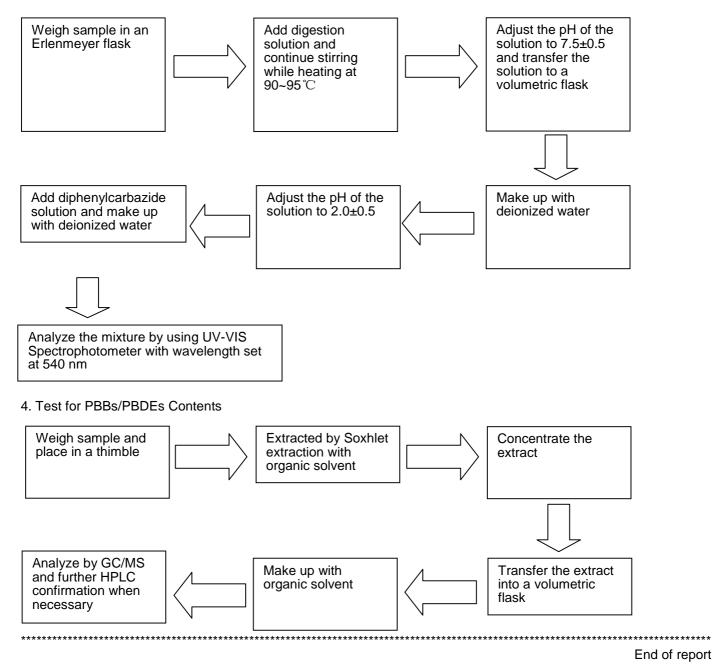




Number: SZHH0059955107

Tests Conducted

3. Test for Chromium (VI) (Cr⁶⁺) Content (Alkaline Digestion)





Number: SZHH0059955106

Applicant: LITTELFUSE, INC 8755 WEST HIGGINS ROAD SUITE 500CHICAGO IL 60631 USA Date: Jun 17, 2011

Attn: KRISTEEN BACILA/ARSENIO CESISTA JR.

Sample Description:

One (1) submitted sample said to be **HH Black Disc.** Tested component: dark grey magnet.



Tests conducted:

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

Authorized by: For Intertek Testing Services Shenzhen Ltd.

111

Ben N.L. Lin General Manager



Tests Conducted

RoHS Chemical Test

(A) Test Result Summary:

Testing Item	Result
Cadmium (Cd) Content (mg/kg)	ND(<2)
Lead (Pb) Content (mg/kg)	ND(<2)
Mercury (Hg) Content (mg/kg)	ND(<2)
Chromium (VI)(Cr ⁶⁺) Content (mg/kg)	16
Polybrominated Biphenyls (PBBs)(mg/kg)	
Monobromobiphenyl (MonoBB)	ND(<5)
Dibromobiphenyl (DiBB)	ND(<5)
Tribromobiphenyl (TriBB)	ND(<5)
Tetrabromobiphenyl (TetraBB)	ND(<5)
Pentabromobiphenyl (PentaBB)	ND(<5)
Hexabromobiphenyl (HexaBB)	ND(<5)
Heptabromobiphenyl (HeptaBB)	ND(<5)
Octabromobiphenyl (OctaBB)	ND(<5)
Nonabromobiphenyl (NonaBB)	ND(<5)
Decabromobiphenyl (DecaBB)	ND(<5)
Polybrominated Diphenyl Ethers (PBDEs)(mg/kg)	
Monobromodiphenyl Ether (MonoBDE)	ND(<5)
Dibromodiphenyl Ether (DiBDE)	ND(<5)
Tribromodiphenyl Ether (TriBDE)	ND(<5)
Tetrabromodiphenyl Ether (TetraBDE)	ND(<5)
Pentabromodiphenyl Ether (PentaBDE)	ND(<5)
Hexabromodiphenyl Ether (HexaBDE)	ND(<5)
Heptabromodiphenyl Ether (HeptaBDE)	ND(<5)
Octabromodiphenyl Ether (OctaBDE)	ND(<5)
Nonabromodiphenyl Ether (NonaBDE)	ND(<5)
Decabromodiphenyl Ether (DecaBDE)	ND(<5)

Chemist: Wang Haijun/Tang Wenming

mg/kg = milligram per kilogram = ppm < = Less than ND = Not detected



Tests Conducted

(B) RoHS Requirement:

Restricted Substances	Limits
Cadmium (Cd)	0.01% (100 ppm)
Lead (Pb)	0.1% (1000 ppm)
Mercury (Hg)	0.1% (1000 ppm)
Chromium (VI) (Cr ⁶⁺)	0.1% (1000 ppm)
Polybrominated Biphenyls (PBBs)	0.1% (1000 ppm)
Polybrominated Diphenyl Ethers (PBDEs)	0.1% (1000 ppm)

The above limits were quoted from 2002/95/EC and amendment 2005/618/EC for homogeneous material.

(C) Test Method:

Testing Item	Testing Method	Reporting Limit
Cadmium (Cd) Content	With reference to IEC 62321 Edition 1.0:2008, by acid digestion and determined by ICP - OES	2 mg/kg
Lead (Pb) Content	With reference to IEC 62321 Edition 1.0:2008, by acid digestion and determined by ICP - OES	2 mg/kg
Mercury (Hg) Content	With reference to IEC 62321 Edition 1.0:2008, by acid digestion and determined by ICP - OES	2 mg/kg
Chromium (VI)(Cr ⁶⁺) Content	With reference to IEC 62321 Edition 1.0:2008, by alkaline digestion and determined by UV-VIS Spectrophotometer	1 mg/kg
(PBBs)& Polybrominated	With reference to IEC 62321 Edition 1.0:2008, by solvent extraction and determined by GC/MS and further HPLC confirmation when necessary	5 mg/kg

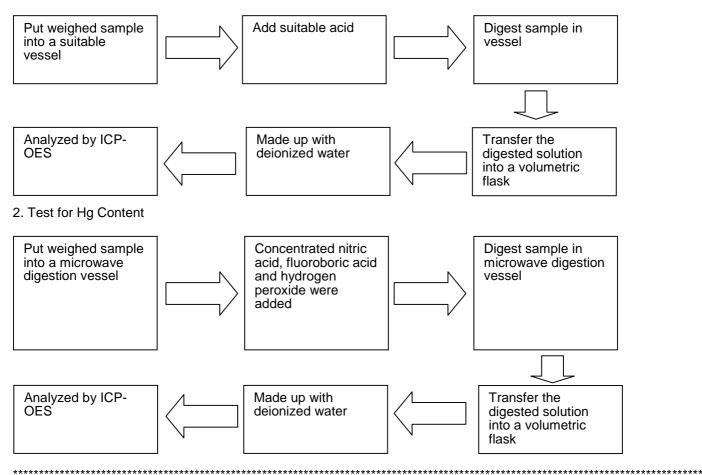
Date sample received: Jun 13, 2011 Testing period: Jun 13, 2011 to Jun 16, 2011



Tests Conducted

(D) Measurement Flowchart:

1. Test for Cd/Pb Contents

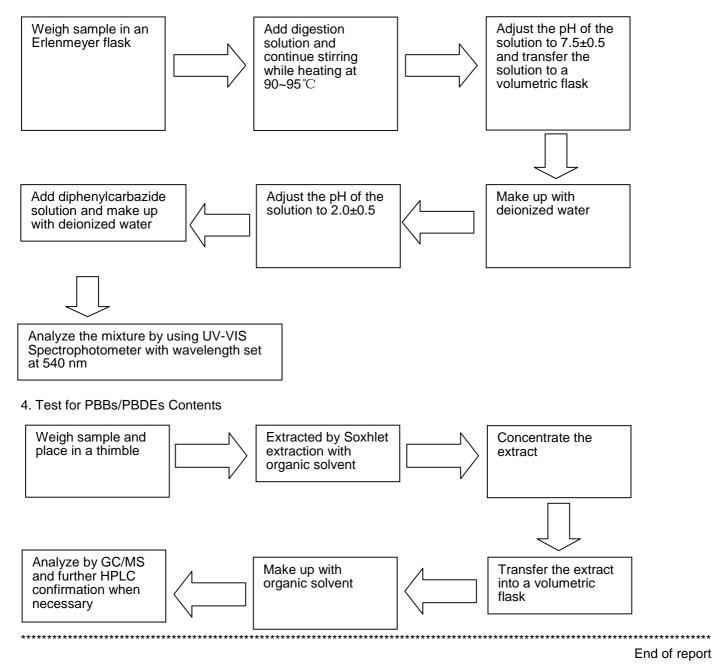




Number: SZHH0059955106

Tests Conducted

3. Test for Chromium (VI) (Cr⁶⁺) Content (Alkaline Digestion)





Number: SZHH0059955108

Applicant: LITTELFUSE, INC 8755 WEST HIGGINS ROAD SUITE 500CHICAGO IL 60631 USA

Date: Jun 17, 2011

KRISTEEN BACILA/ARSENIO CESISTA JR. Attn:

Sample Description:

One (1) submitted sample said to be HM Black Disc. Tested component: dark grey magnet.



Tests conducted:

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

Authorized by: For Intertek Testing Services Shenzhen Ltd.

IN

Ben N.L. Lin **General Manager**



Tests Conducted

RoHS Chemical Test

(A) Test Result Summary:

Testing Item	Result
Cadmium (Cd) Content (mg/kg)	ND(<2)
Lead (Pb) Content (mg/kg)	ND(<2)
Mercury (Hg) Content (mg/kg)	ND(<2)
Chromium (VI)(Cr ⁶⁺) Content (mg/kg)	15
Polybrominated Biphenyls (PBBs)(mg/kg)	
Monobromobiphenyl (MonoBB)	ND(<5)
Dibromobiphenyl (DiBB)	ND(<5)
Tribromobiphenyl (TriBB)	ND(<5)
Tetrabromobiphenyl (TetraBB)	ND(<5)
Pentabromobiphenyl (PentaBB)	ND(<5)
Hexabromobiphenyl (HexaBB)	ND(<5)
Heptabromobiphenyl (HeptaBB)	ND(<5)
Octabromobiphenyl (OctaBB)	ND(<5)
Nonabromobiphenyl (NonaBB)	ND(<5)
Decabromobiphenyl (DecaBB) ND(<5)	
Polybrominated Diphenyl Ethers (PBDEs)(mg/kg)	
Monobromodiphenyl Ether (MonoBDE)	ND(<5)
Dibromodiphenyl Ether (DiBDE)	ND(<5)
Tribromodiphenyl Ether (TriBDE)	ND(<5)
Tetrabromodiphenyl Ether (TetraBDE)	ND(<5)
Pentabromodiphenyl Ether (PentaBDE)	ND(<5)
Hexabromodiphenyl Ether (HexaBDE)	ND(<5)
Heptabromodiphenyl Ether (HeptaBDE)	ND(<5)
Octabromodiphenyl Ether (OctaBDE)	ND(<5)
Nonabromodiphenyl Ether (NonaBDE)	ND(<5)
Decabromodiphenyl Ether (DecaBDE)	ND(<5)

Chemist: Wang Haijun/Tang Wenming

mg/kg = milligram per kilogram = ppm < = Less than ND = Not detected Number: SZHH0059955108



Tests Conducted

(B) RoHS Requirement:

Restricted Substances	Limits
Cadmium (Cd)	0.01% (100 ppm)
Lead (Pb)	0.1% (1000 ppm)
Mercury (Hg)	0.1% (1000 ppm)
Chromium (VI) (Cr ⁶⁺)	0.1% (1000 ppm)
Polybrominated Biphenyls (PBBs)	0.1% (1000 ppm)
Polybrominated Diphenyl Ethers (PBDEs)	0.1% (1000 ppm)

The above limits were quoted from 2002/95/EC and amendment 2005/618/EC for homogeneous material.

(C) Test Method:

Testing Item	Testing Method	Reporting Limit
Cadmium (Cd) Content	With reference to IEC 62321 Edition 1.0:2008, by acid digestion and determined by ICP - OES	2 mg/kg
Lead (Pb) Content	With reference to IEC 62321 Edition 1.0:2008, by acid digestion and determined by ICP - OES	2 mg/kg
Mercury (Hg) Content	With reference to IEC 62321 Edition 1.0:2008, by acid digestion and determined by ICP - OES	2 mg/kg
Chromium (VI)(Cr ⁶⁺) Content	With reference to IEC 62321 Edition 1.0:2008, by alkaline digestion and determined by UV-VIS Spectrophotometer	1 mg/kg
(PBBs)& Polybrominated	With reference to IEC 62321 Edition 1.0:2008, by solvent extraction and determined by GC/MS and further HPLC confirmation when necessary	5 mg/kg

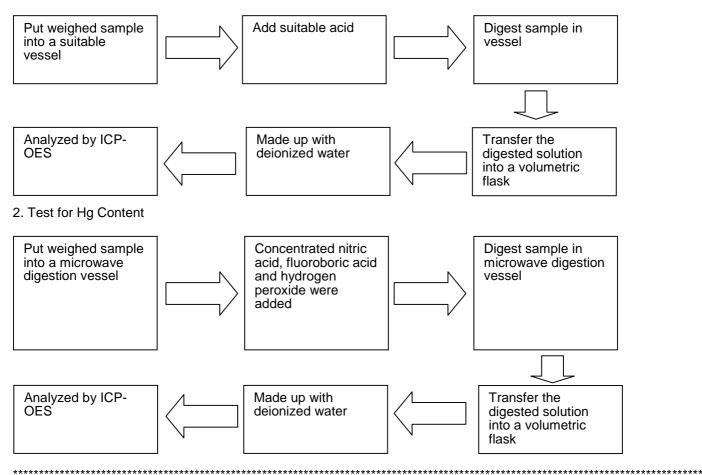
Date sample received: Jun 13, 2011 Testing period: Jun 13, 2011 to Jun 16, 2011



Tests Conducted

(D) Measurement Flowchart:

1. Test for Cd/Pb Contents

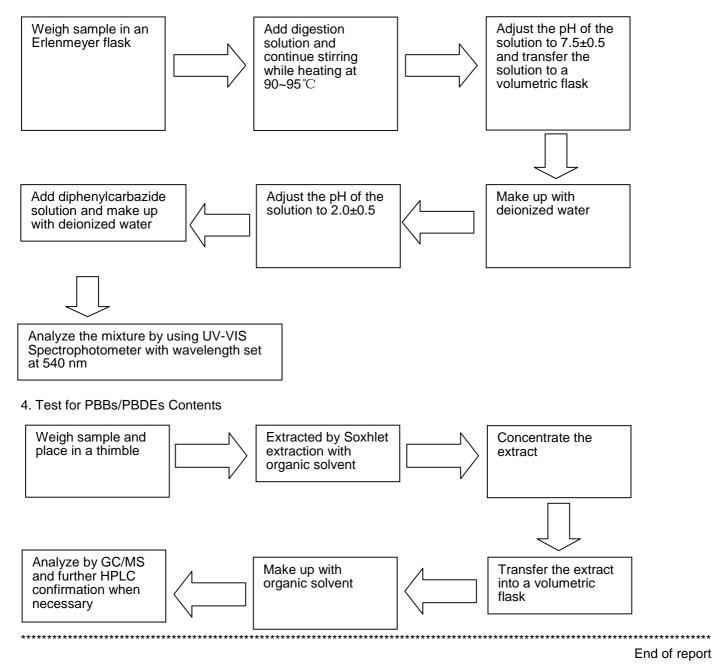




Number: SZHH0059955108

Tests Conducted

3. Test for Chromium (VI) (Cr⁶⁺) Content (Alkaline Digestion)





No. SHAEC1201680106

Date: 21 Feb 2012

Page 1 of 6

SHIN-NIHON KAKIN CO.,LTD 1-6,MIYAMOTO,ITABASHI,TOKYO.JAPAN

The following sample(s) was/were submitted and identified on behalf of the clients as : SILVER PASTE

SGS Job No. :	SP12-003156 - SH
Model No. :	SP-A6PL
Date of Sample Received :	17 Feb 2012
Testing Period :	17 Feb 2012 - 21 Feb 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. SHAEC1201680106

Date: 21 Feb 2012

Page 2 of 6

Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description
1	SHA12-016801.006	Green paste

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.

Limit	Unit	MDL	006
100	mg/kg	2	ND
1,000	mg/kg	2	ND
1,000	mg/kg	2	ND
1,000	mg/kg	2	ND
1,000	mg/kg		ND
	mg/kg	5	ND
9.1	mg/kg	5	ND
	mg/kg	5	ND
-	mg/kg	5	ND
	mg/kg	5	ND
-	mg/kg	5	ND
5 2 3	mg/kg	5	ND
	mg/kg	5	ND
	mg/kg	5	ND
÷	mg/kg	5	ND
1,000	mg/kg	-	ND
-	mg/kg	5	ND
	100 1,000 1,000 1,000 - - - - - - - - - - - - - - - - - -	100 mg/kg 1,000 mg/kg 1,000 mg/kg 1,000 mg/kg 1,000 mg/kg 1,000 mg/kg - mg/kg	100 mg/kg 2 1,000 mg/kg 5 - mg/kg 5

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Test Report	No. SHAEC120168010	06	Date: 21	Feb 2012	Page 3 of 6
Test Item(s)	Limit	<u>Unit</u>	MDL	006	
Dibromodiphenyl ether		mg/kg	5	ND	
Tribromodiphenyl ether	-	mg/kg	5	ND	
Tetrabromodiphenyl ether	ş.,	mg/kg	5	ND	
Pentabromodiphenyl ether	÷	mg/kg	5	ND	
Hexabromodiphenyl ether	-	mg/kg	5	ND	
Heptabromodiphenyl ether	-	mg/kg	5	ND	
Octabromodiphenyl ether	1. A A A A A A A A A A A A A A A A A A A	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 directive 2011/65/EU, Annex II

(2) Result shown is of the total weight of wet sample.

Halogen

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

Test Item(s)	Unit	MDL	006
Fluorine (F)	mg/kg	50	ND
Chlorine (Cl)	mg/kg	50	ND
Bromine (Br)	mg/kg	50	ND
lodine (I)	mg/kg	50	ND

Notes :

(1) Result shown is of the total weight of wet sample.

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No. SHAEC1201680106

Date: 21 Feb 2012

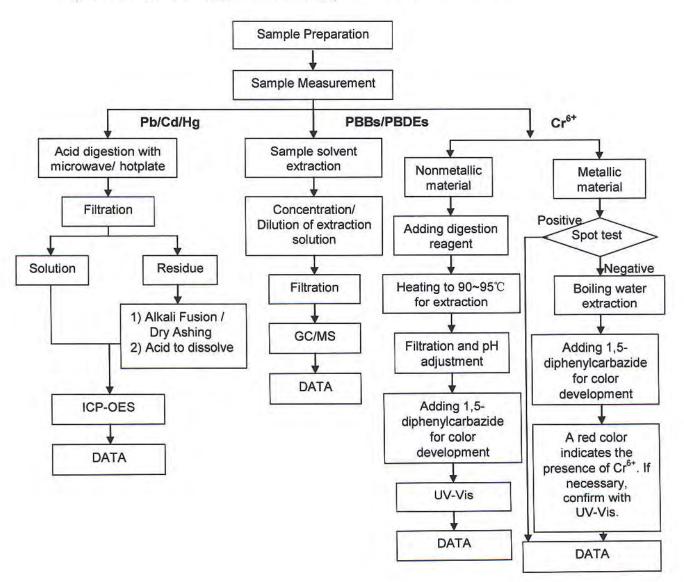
Page 4 of 6

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/ Elim Lin
- 3) These samples were dissolved totally by pre-conditioning method according to below flow chart.

(Cr6+ and PBBs/PBDEs test method excluded)



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No. SHAEC1201680106

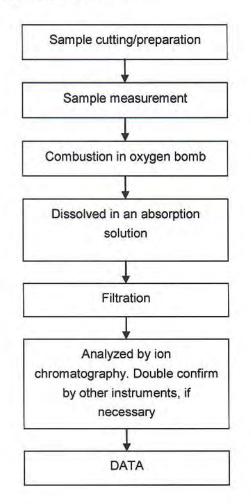
Date: 21 Feb 2012

Page 5 of 6

Halogen Testing Flow Chart

1) Name of the person who made testing: Sisily Yin

2) Name of the person in charge of testing: Daisy Gong



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No. SHAEC1201680106

Date: 21 Feb 2012

Page 6 of 6

Sample photo:



SGS authenticate the photo on original report only

*** End of Report ***

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No. SHAEC1203840702

Date: 09 Apr 2012

Page 1 of 6

SHIN-NIHON KAKIN CO., LTD. 1-6, MIYAMOTO, ITABASHI, TOKYO, JAPAN

The following sample(s) was/were submitted and identified on behalf of the clients as : SILVER PASTE

SP12-007978 - SH
SP-A6PL
05 Apr 2012
05 Apr 2012 - 09 Apr 2012
Selected test(s) as requested by client.
Please refer to next page(s).
Please refer to next page(s).

Signed for and on behalf of SGS-CSTC Ltd.

Fan Jingjie, JJ Approved Signatory

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No. SHAEC1203840702

Date: 09 Apr 2012

Page 2 of 6

Test Results ;

Test Part Description :

Specimen No.	SGS Sample ID	Description
1	SHA12-038407.002	Ink green mud

Remarks :

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

Phthalates

Test Method : With reference to EN14372: 2004, analysis was performed by GC-MS.

Test Item(s)	Unit	MDL	002
Bis-(2-ethylhexyl) Phthalate (DEHP)	%	0.003	ND
Benzylbutyl Phthalate (BBP)	%	0.003	ND
Dibutyl Phthalate (DBP)	%	0.003	ND

Notes !

- (1) DBP,BBP,DEHP Reference information: Entry 51 of Regulation (EC) No 552/2009 amending Annex XVII of REACH Regulation (EC) No 1907/2006 (previously restricted under Directive 2005/84/EC);
 i) Shall not be used as substances or in mixtures, in concentrations greater than 0,1 % by weight of the plasticised material, in toys and childcare articles.
 - ii) Toys and childcare articles containing these phthalates in a concentration greater than 0.1 % by weight of the plasticised material shall not be placed on the market.

Please refer to Regulation (EC) No 552/2009 to get more detail information

Hexabromocyclododecane (HBCDD)

Test Method : With reference to US EPA 3550C: 2007, analysis was performed by GC-MS.

Test Item(s)	Unit	MDL	002
Hexabromocyclododecane (HBCDD)	mg/kg	10	ND

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Remark: Result shown is of the total weight of wet sample.

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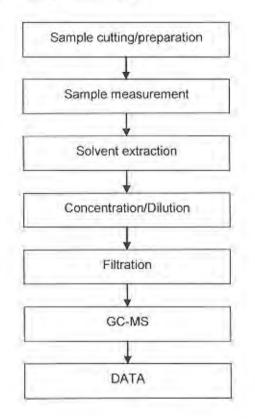
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ATTACHMENTS

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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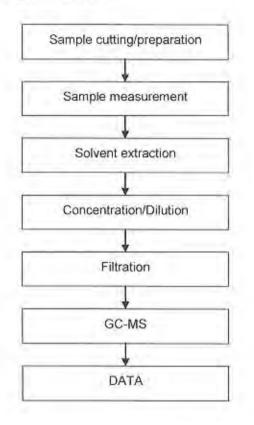
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HBCDD Testing Flow Chart

1) Name of the person who made testing: Gary Xu

2) Name of the person in charge of testing: Elim Lin



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Sample photo:



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Date: AUG 18, 2011 Pa

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ANSON SOLDER&TIN PRUDUCTS MADE LTD. CHANG HONG RIDGE INDUSTRIAL PARK DAIL,NANHAI,GUANGDONG

The following sample(s) was/were submitted and identified by/on behalf of the client as: LEAD-FREE SOLDER Sn Ag Cu

SGS Job No.	: GZ1108106095/CHEM	
Date of Sample Received	: AUG 12, 2011	
Testing Period	: AUG 12, 2011 TO AUG 17, 2011	
Test Requested :	A: As requested by client, SVHC screening is performed according Specified substances in the Candidate List of Substances of Very authorization published by European Chemicals Agency (ECHA 2011 regarding Regulation (EC) No 1907/2006 concerning the RE	High Concern (SVHC)) on and before Jun 2
	B~C: Selected test (s) as requested by client.	
Test Method :	Please refer to next page(s).	
Test Result(s) :	Please refer to next page(s).	
Summary :		
	A: According to the specified scope and analytical techniques, concentrations of tested SVHC are $\leq 0.1\%$ (w/w) in the submitted sample.	PASS
Conclusion :	B: Based on the performed tests on submitted samples, the result Mercury,Cadmium,Hexavalent chromium comply with the limits Directive 2011/65/EU Annex II; recasting 2002/95/EC.	

Signed for and on behalf of SGS-CSTC Co., Ltd.

7d de

Bob Chen Technical Support Manager





Date: AUG 18, 2011 Page 2 of 9

Test Sample :

Sample Description :

Specimen No. Description No.1 Silvery metal

A: SVHC

Remark :

- (1) The chemical analysis of specified SVHC is performed by means of currently available analytical techniques against the following SVHC related documents published by ECHA: <u>http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.asp</u> These lists are under evaluation by ECHA and may subject to change in the future.
- (2) In accordance with Regulation (EC) No 1907/2006, any EU producer or importer of articles shall notify ECHA, in accordance with paragraph 4 of Article 7, if a substance meets the criteria in Article 57 and is identified in accordance with Article 59(1) of the Regulation, if (a) the substance in the Candidate List is present in those articles in quantities totaling over one tonne per producer or importer per year; and (b) the substance in the Candidate List is present in those articles in the Candidate List is present in those articles above a concentration of 0.1% weight by weight (w/w).
- (3) Article 33 of Regulation (EC) No 1907/2006 requires supplier of an article containing a substance meeting the criteria in Article 57 and identified in accordance with Article 59(1) in a concentration above 0.1% weight by weight (w/w) shall provide the recipient of the article with sufficient information, available to the supplier, to allow safe use of the article including, as a minimum, the name of that substance in the Candidate List.
- (4) If a SVHC is found over the reporting limit, client is suggested to identify the component which contains the SVHC and the exact concentration of the SVHC by requesting further quantitative analysis from the laboratory.

Test Method :

SGS In-House method-GZTC CHEM-TOP-092-01, Analyzed by ICP-OES and UV-VIS.



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Test Result: (Substances in the Candidate List of SVHC)

Substance Name	CAS No.	50.11-	Concentration(%)	DI /0/1
Substance Name	CAS NO.	EC No.	No.1	RL(%)
Aluminosilicate Refractory Ceramic Fibres*	650-017-00-8 (Index no.)	•	N.D.	0.005
Ammonium dichromate*	7789-09-5	232-143-1	N.D.	0.005
Bo <mark>ric</mark> acid*	10043-35-3 11113-50-1	233-139-2 234-343-4	N.D.	0.005
Chromic acid, Oligomers of chromic acid and dichromic acid, Dichromic acid*	7738-94-5 - 13530-68-2	231-801-5 - 236-881-5	N.D.	0.005
Chromium trioxide*	1333-82-0	215-607-8	N.D.	0.005
Cobalt dichloride*	7646-79-9	231-589-4	N.D.	0.005
Cobalt(II) carbonate*	513-79-1	208-169-4	N.D.	0.005
Cobalt(II) diacetate*	71-48-7	200-755-8	N.D.	0.005
Cobalt(II) dinitrate*	10141-05-6	233-402-1	N.D.	0.005
Cobalt(II) sulphate*	10124-43-3	233-334-2	N.D.	0.005
Diarsenic pentaoxide*	130 <mark>3-2</mark> 8-2	215-116-9	N.D.	0.005
Diarsenic trioxide*	1327-53-3	215-481-4	N.D.	0.005
Disodium tetraborate, anhydrous*	1303-96-4 1330-43-4 12179-04-3	215-540-4	N.D.	0.005
Lead chromate*	7758-97-6	231-846-0	N.D.	0.005
Lead chromate molybdate sulphate red (C.I. Pigment Red 104)*	12656-85-8	235-759-9	N.D.	0.005
Lead hydrogen arsenate*	7784-40-9	232-064-2	N.D.	0.005
Lead sulfochromate yellow (C.I. Pigment Yellow 34)*	1344-37-2	215-693-7	N.D.	0.005
Potassium chromate*	7789-00-6	232-140-5	N.D.	0.005
Potassium dichromate*	7778-50-9	231-906-6	N.D.	0.005
Sodium chromate*	7775-11-3	231-889-5	N.D.	0.005
Sodium dichromate*	7789-12-0 and 10588-01-9	234-190-3	N.D.	0.005
Strontium chromate*	7789-06-2	232-142-6	N.D.	0.005
Tetraboron disodium heptaoxide, hydrate*	12267-73-1	235-541-3	N.D.	0.005
Zirconia Aluminosilicate Refractory Ceramic Fibres*	650-017-00-8 (Index no.)		N.D.	0.005

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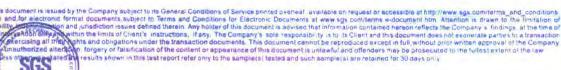
Date: AUG 18, 2011 Page 4 of 9

Notes:

- RL = Reporting Limit. All RL are based on homogenous material.
 N.D. = Not detected (lower than RL), N.D. is denoted on the target compound.
- (2). * The test result is based on the calculation of selected element(s) / marker(s) and to the worst-case scenario. For detail information, please refer to the SGS REACH website: <u>www.reach.sgs.com/substance-of-very-high-concern-analysis-information-page.htm</u>

Calculated concentration of boric acid, disodium tetraborate, anhydrous and tetraboron disodium heptaoxide, hydrate are based on the water extractive boron and sodium by ICP-OES.

RL = 0.005% is evaluated for element (i.e. cobalt, arsenic, lead, sodium, chromium, chromium (VI), silicon, aluminum, zirconium, boron, potassium and strontium respectively), except molybdenum RL=0.0005%



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B: RoHS Directive 2011/65/EU

Test Item(s)	Unit	Test Method (Reference)	Result	MDL	Limit
Cadmium (Cd)	mg/kg	IEC 62321: 2008, ICP-OES	N.D.	2	100
Lead (Pb)	mg/kg	IEC 62321: 2008, ICP-OES	155	2	1000
Mercury (Hg)	mg/kg	IEC 62321: 2008, ICP-OES	N.D.	2	1000
Hexavalent Chromium (CrVI) by boiling water extraction		IEC 62321: 2008, UV-Vis	Negative	\diamond	#

Note : 1. mg/kg = ppm

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

4. ⇔=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. Storage conditions and production date of the tested sample are unavailable and thus results of Cr(VI)

represent status of the sample at the time of testing.

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

Negative indicates the absence of CrVI on the tested area

6. "-" = Not regulated

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C: Elementary Analysis

Test Item(s)	Unit	Test Method (Reference)	No.1	MDL
Sum of PBBs	mg/kg	-	N.D.	
Monobromobiphenyl	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5
Dibromobiphenyl	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5
Tribromobiphenyl	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5
Tetrabromobiphenyl	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5 5
Pentabromobiphenyl	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5
Hexabromobiphenyl	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5
Heptabromobiphenyl	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5 5
Octabromobiphenyl	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5
Nonabromobiphenyl	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5 5
Decabromobiphenyl	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5
Sum of PBDEs	mg/kg		N.D.	-
Monobromodiphenyl ether	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5
Dibromodiphenyl ether	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5
Tribromodiphenyl ether	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5
Tetrabromodiphenyl ether	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5
Pentabromodiphenyl ether	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5 5 5 5
Hexabromodiphenyl ether	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5
Heptabromodiphenyl ether	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5 5
Octabromodiphenyl ether	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5
Nonabromodiphenyl ether	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5
Decabromodiphenyl ether	mg/kg	IEC 62321: 2008, GC-MS	N.D.	5

Note:

1. mg/kg = ppm 2. N.D. = Not Detected (< MDL)

3. MDL = Method Detection Limit

4. "-" = Not regulated

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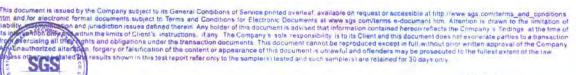
ATTACHMENTS

SVHC Testing Flow Chart

1) Name of the person who made testing: Bella Wang / Tina Zhao

2) Name of the person in charge of testing: Adams Yu / Ryan Yang

_	Sample cutting/preparation
	Sample measurement
	Sample Pretreatment
	Instrumental Analysis
	DATA



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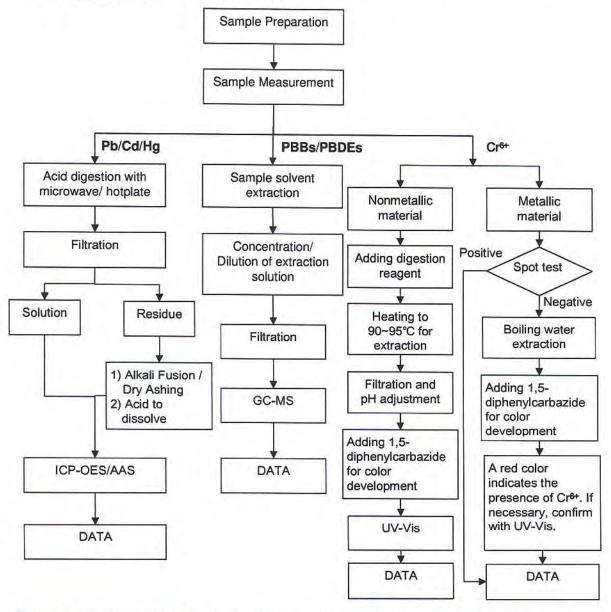
Date: AUG 18, 2011

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ATTACHMENTS

RoHS Testing Flow Chart

- 1) Name of the person who made testing: Bella Wang / Cutey Yu / Ross Zhan
- 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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Date: 19 Aug 2011 Page 1 of 7

DONGGUAN HANHUA METAL PRODUCTS CO., LTD. XINIUPO INDUSTRIAL AREA, DALANG TOWN, DONGGUAN CITY, P.R. CHINA

The following sample(s) was/were submitted and identified on behalf of the clients as : TINNED COPPER WIRE

SGS Job No.	:	13310707 - SZ
SGS Internal Reference No.		2.1
Date of Sample Received	3	16 Aug 2011
Testing Period	1	16 Aug 2011 - 19 Aug 2011
Test Requested	:	Selected test(s) as requested by client.
Test Method	:	Please refer to next page(s).
Test Results	:	Please refer to next page(s).
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.

rely

Almay Gao Approved Signatory



The TelStevent's Graph, ended an appendiate 1. Control to P10562, 1,05-30,89157 (d. 115-07,0712) (d.



No. CANEC1103184901

Test Results:	
ID for specimen 1	: CAN11-031849.001
Description for specimen 1	: Silvery plated metal

RoHS Directive 2011/65/EU

Test Item(s)	Unit	Test Method (Reference)	Result	MDL	Limit	
Cadmium (Cd)	mg/kg	IEC 62321:2008, ICP-OES	N.D.	2	100	
Lead (Pb)	mg/kg	IEC 62321:2008, ICP-OES	N.D.	2	1000	
Mercury (Hg)	mg/kg	IEC 62321:2008, ICP-OES	N.D.	2	1000	
Hexavalent Chromium (CrVI) by		IEC 62321:2008, UV-Vis	Negative	\diamond	#	
boiling water extraction						
Sum of PBBs	mg/kg		N.D.	-	1000	
Monobromobiphenyl	mg/kg	IEC 62321:2008, GC-MS	N.D.	5		
Dibromobiphenyl	mg/kg	IEC 62321:2008, GC-MS	N.D.	5		
Tribromobiphenyl	mg/kg	IEC 62321:2008, GC-MS	N.D.	5		
Tetrabromobiphenyl	mg/kg	IEC 62321:2008, GC-MS	N.D.	5		
Pentabromobiphenyl	mg/kg	IEC 62321:2008, GC-MS	N.D.	5		
Hexabromobiphenyl	mg/kg	IEC 62321:2008, GC-MS	N.D.	5		
Heptabromobiphenyl	mg/kg	IEC 62321:2008, GC-MS	N.D.	5		
Octabromobiphenyl	mg/kg	IEC 62321:2008, GC-MS	N.D.	5		
Nonabromobiphenyl	mg/kg	IEC 62321:2008, GC-MS	N.D.	5		
Decabromobiphenyl	mg/kg	IEC 62321:2008, GC-MS	N.D.	5		
Sum of PBDEs	mg/kg		N.D.	14	1000	
Monobromodiphenyl ether	mg/kg	IEC 62321:2008, GC-MS	N.D.	5		
Dibromodiphenyl ether	mg/kg	IEC 62321:2008, GC-MS	N.D.	5		
Tribromodiphenyl ether	mg/kg	IEC 62321:2008, GC-MS	N.D.	5		
Tetrabromodiphenyl ether	mg/kg	IEC 62321:2008, GC-MS	N.D.	5		
Pentabromodiphenyl ether	mg/kg	IEC 62321:2008, GC-MS	N.D.	5		
Hexabromodiphenyl ether	mg/kg	IEC 62321:2008, GC-MS	N.D.	5		
Heptabromodiphenyl ether	mg/kg	IEC 62321:2008, GC-MS	N.D.	5		
Octabromodiphenyl ether	mg/kg	IEC 62321:2008, GC-MS	N.D.	5		
Nonabromodiphenyl ether	mg/kg	IEC 62321:2008, GC-MS	N.D.	5		
Decabromodiphenyl ether	mg/kg	IEC 62321:2008, GC-MS	N.D.	5		

Note:

1. mg/kg = ppm

2. N.D. = Not Detected (< MDL)

3. MDL = Method Detection Limit

4. \diamond = 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:

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No. CANEC1103184901

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.

Storage conditions and production date of the tested sample are unavailable and thus results of Cr(VI) represent 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 CrVI on the tested areas.

6. "- " = Not regulated

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No. CANEC1103184901

: CAN11-031849.002

: Silvery plating on metal

Date: 19 Aug 2011 Page 4 of 7

ID for specimen 2 Description for specimen 2

RoHS Directive 2011/65/EU

Test Item(s)	Unit	Test Method (Reference)	Result	MDL	Limit
Cadmium (Cd)	mg/kg	IEC 62321:2008 application of modified digestion by surface etching, ICP OES	N.D.	10	100
Lead (Pb)	mg/kg	IEC 62321:2008 application of modified digestion by surface etching, ICP OES	114	10	1000
Mercury (Hg)	mg/kg	IEC 62321:2008 application of modified digestion by surface etching, ICP OES	N.D.	10	1000
Hexavalent Chromium (CrVI) by	-	IEC 62321:2008, UV-Vis	Negative	\diamond	#

boiling water extraction

Note:

1. mg/kg = ppm

2. N.D. = Not Detected (< MDL)

3. MDL = Method Detection Limit

4. \diamond = 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.

Storage conditions and production date of the tested sample are unavailable and thus results of Cr(VI) represent 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 CrVI on the tested areas.

6. "- " = Not regulated

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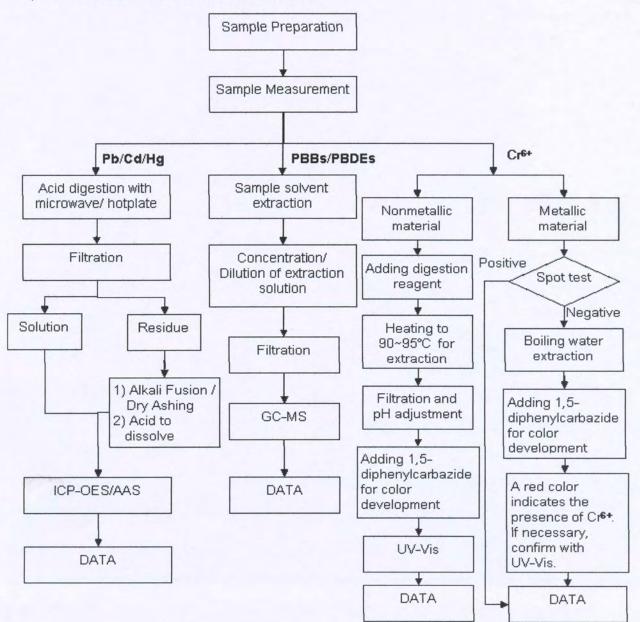
Date: 19 Aug 2011

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ATTACHMENTS

RoHS Testing Flow Chart

- 1) Name of the person who made testing: Bella Wang / Cutey Yu / Ross Zhan
- 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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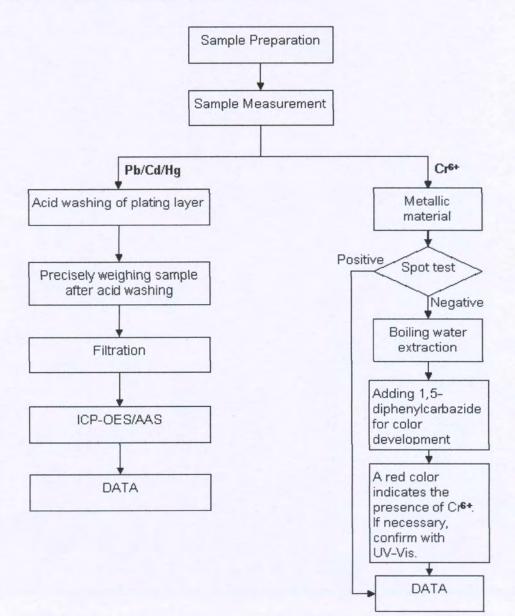
Date: 19 Aug 2011

1 Page 6 of 7

ATTACHMENTS

Plating Pb/Cd/Hg/Cr6+Testing Flow Chart

- 1) Name of the person who made testing: Bella Wang / Ross Zhan
- 2) Name of the person in charge of testing: Adams Yu



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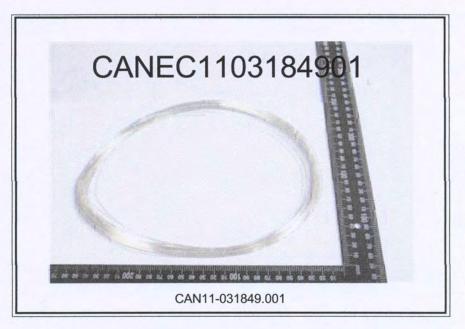


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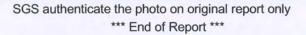
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Sample photo:







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測試報告 Test Report ^{號碼(No.): CE/2011/84720} 日期(Date): 2011/09/01 頁數(Page): 1 of 8

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樣品名稱(Sample Description)	: TIN PLATED NICKEL COVERED COPPER WIRE (電鍍純錫鎳底銅線)
樣品型號(Style/Item No.)	: STN-(0.43) (0.45) (0.454) (0.5) (0.511) (0.574) (0.58) (0.6) (0.63) (0.635) (0.643) (0.645) (0.65) (0.7) (0.724) (0.76) (0.8) (0.813) (1. (1.024) (1.2) (1.29) (mm)
收件日期(Sample Receiving Date)	: 2011/08/25
測試期間(Testing Period)	: 2011/08/25 TO 2011/09/01

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



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測試報告 號碼(No.): CE/2011/84720 日期(Date): 2011/09/01 頁數(Page): 2 of 8 **Test Report**

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測試結果(Test Results)

測試部位(PART NAME)No.1 : 銀色金屬線 (含鍍層) (22款) (SILVER COLORED METAL WIRE (INCLUDING THE PLATING LAYER) (TWENTY TWO TYPES))

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値	結果 (Result)
(Test Ttems)	(Unit)	(method)	(MDL)	No.1
鐍 / 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	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.
汞 / Mercury (Hg)	mg/kg	参考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.
六價鉻 / Hexavalent Chromium Cr(VI)	**	参考IEC 62321: 2008方法, 以沸水萃取法 檢測. / With reference to IEC 62321: 2008 and performed by Boiling water extraction Method.#	#	Negative
全氟辛烷磺酸 / Perfluorooctane sulfonates (PFOS-Acid, Metal Salt, Amide)	mg/kg	參考US EPA 3540C: 1996方法,以液相層析 /質譜儀檢測全氣辛烷磺酸含量. / With reference to US EPA 3540C: 1996 method for PFOS Content. Analysis was performed by LC/MS.	10	n.d.

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測試報告 Test Report ^{號碼(No.)}: CE/2011/84720 日期(Date): 2011/09/01 頁数(Page): 3 of 8

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测試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限值	結果 (Result)
			(MDL)	No.1
全氣辛酸(銨)/ PFOA (CAS No.: 335-67-1)	mg/kg	參考US EPA 3540C: 1996方法,以液相層析 /質譜儀檢測全氣辛酸(銨)含量. / With reference to US EPA 3540C: 1996 method for PFOA Content. Analysis was performed by LC/MS.	10	n.d.
鹵素 / Halogen				
鹵素 (氟) / Halogen-Fluorine (F) (CAS No.: 14762-94-8)	mg/kg		50	n.d.
鹵素 (氯) / Halogen-Chlorine (Cl) (CAS No.: 22537-15-1)	mg/kg	參考BS EN 14582:2007, 以離子層析儀分 析. / With reference to BS EN	50	n.d.
鹵素(溴)/ Halogen-Bromine (Br) (CAS No.: 10097-32-2)	mg/kg	14582:2007. Analysis was performed by IC.	50	n.d.
鹵素 (碘) / Halogen-Iodine (I) (CAS No.: 14362-44-8)	mg/kg		50	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. **= Qualitative analysis (No Unit) 定性分析(無單位)
- 5. # = a. Positive means the presence of CrVI on the tested areas
 - (Positive表示測試區域偵測到六價路)
 - b. Negative means the absence of CrVI on the tested areas
 - (Negative表示測試區域未偵測到六價路)
- 6. 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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(2) 該物質不可置於市場上的半成品或商品或其物件; 假若零件上明顯地具有PFOS並參照結構上及微細構造上計 算PFOS重量濃度等於或大於0.1%, 而紡織品或其他覆蓋物質,如果PFOS在覆蓋物質中含量等於或大於1µg/m².

(May not be placed on the market in semi-finished products or articles, or parts thereof, if the concentration of PFOS is equal to or higher than 0.1% by mass calculated with reference to the mass of structurally or microstructurally distinct parts that contain PFOS or, for textiles or other coated materials, if the amount of PFOS is equal to or higher than $1\mu g/m^2$ of the coated material.)

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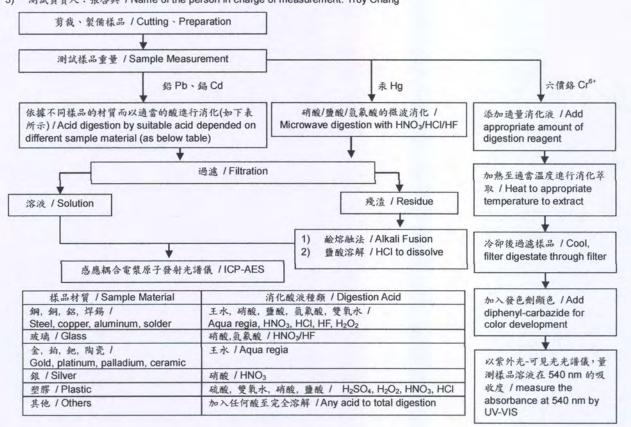


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> 根據以下的流程圖之條件,樣品已完全溶解。(六價鉻测試方法除外) / These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ test method excluded)
> 测试人員:楊登偉 / Name of the person who made measurement: Climbgreat Yang

測試負責人:張啓興 / Name of the person in charge of measurement: Troy Chang



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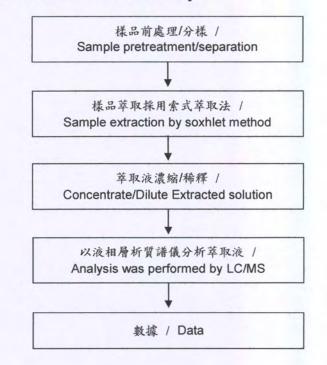
測試報告 號碼(No.): CE/2011/84720 日期(Date): 2011/09/01 頁數(Page): 6 of 8 **Test Report**

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索式萃取分析流程圖 / Analytical flow chart of Soxhlet extraction (LC/MS) procedure

- 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

【测試項目:全氟辛烷磺酸/全氟辛酸(銨)、苯並三唑類化合物 / Test Items: PFOS/PFOA . Benzotriazole]



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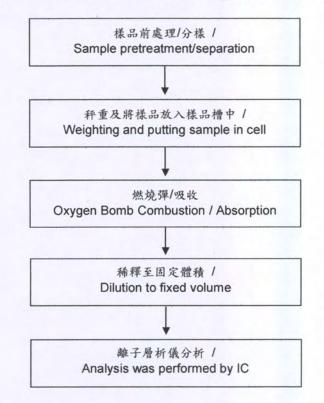
測試報告 號碼(No.): CE/2011/84720 日期(Date): 2011/09/01 頁數(Page): 7 of 8 **Test Report**

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

1) 測試人員:陳恩臻 / Name of the person who made measurement: Rita Chen

2) 測試負責人:張啓興 / Name of the person in charge of measurement: Troy Chang



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測試報告 Test Report ^{號碼(No.)}: CE/2011/84720 日期(Date): 2011/09/01 頁數(Page): 8 of 8

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** 報告結尾 (End of Report) **

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ApplicantDONGGUAN DAEJOO ELECTRONIC MATERIALS CO.,LTD.AddressXIANCONG INDUSTRIAL ZONE WANJIANG DIATRICT DONGGUAN
GUANGDONG CHINA

Report on the submitte	ed sample(s) said to be
Sample Name	CP-930-1 HF
Sample Description	Red solid
Sample Received Date	Mar. 9, 2012
Testing Period	Mar. 9, 2012 to Mar. 13, 2012
Test Requested	As specified by client, to test Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)), Polybrominated Biphenyls(PBBs), Polybrominated Diphenyl Ethers(PBDEs), Hexabromocyclododecane(HBCDD), Three Phthalates (DBP,BBP,DEHP), Fluorine(F), Chlorine(Cl), Bromine(Br), Iodine(I) in the submitted sample(s).
Test Method	Please refer to the following page(s).
Test Result(s)	Please refer to the following page(s).





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Test Method

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Test Item(s)	Test Method	Measured Equipment(s)	MDL
Hexabromocyclododecane(HBCDD)	Refer to US EPA 3540C:1996	6 GC-MS	5 mg/kg
Three Phthalates (DBP,BBP,DEHP)	Refer to EN 14372:2004	GC-MS	50 mg/kg
Lead(Pb)	IEC 62321:2008 Ed.1 Sec.10	ICP-OES	2 mg/kg
Cadmium(Cd)	IEC 62321:2008 Ed.1 Sec.10	ICP-OES	2 mg/kg
Mercury(Hg)	IEC 62321:2008 Ed.1 Sec.7	ICP-OES	2 mg/kg
Hexavalent Chromium(Cr(VI))	IEC 62321:2008 Ed.1 Annex (C UV-Vis	2 mg/kg
Polybrominated Biphenyls(PBBs)	IEC 62321:2008 Ed.1 Annex /	A GC-MS	5 mg/kg
Polybrominated Diphenyl Ethers(PBDEs)	IEC 62321:2008 Ed.1 Annex /	A GC-MS	5 mg/kg
Fluorine(F)	luorine(F) Refer to BS EN 14582:2007		10 mg/kg
Chlorine(Cl)	Chlorine(Cl) Refer to BS EN 14582:2007		10 mg/kg
Bromine(Br)	Bromine(Br) Refer to BS EN 14582:2007 IC		10 mg/kg
Iodine(I)	Refer to BS EN 14582:2007	IC	10 mg/kg
Test Result(s)			
Tested Item(s)		Content	

Tested Item(s)	Content
Hexabromocyclododecane (HBCDD)	N.D.
Tested Item(s)	Content
Lead(Pb)	N.D.
Cadmium (Cd)	N.D.
Mercury(Hg)	N.D.
Hexavalent Chromium(Cr(VI))	N.D.
Tested Item(s)	Content
Polybrominated Biphenyls(PBBs)	
Monobromobiphenyl	N.D.
Dibromobiphenyl	N.D.
Tribromobiphenyl	N.D.
Tetrabromobiphenyl	N.D.
Pentabromobiphenyl	N.D.
Hexabromobiphenyl	N.D.
Heptabromobiphenyl	N.D.
Octabromobiphenyl	N.D.
Nonabromobiphenyl	N.D.
Decabromobiphenyl	N.D.

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Tested Item(s)		Content		
Polybrominated Diphenyl Ethers(PBI	DEs)			
Monobromodiphenyl ether		N.D.		
Dibromodiphenyl ether		N.D.		
Tribromodiphenyl ether		N.D.		
Tetrabromodiphenyl ether		N.D.		
Pentabromodiphenyl ether		N.D.		
Hexabromodiphenyl ether		N.D.		
Heptabromodiphenyl ether		N.D.		
Octabromodiphenyl ether		N.D.		
Nonabromodiphenyl ether		N.D.		
Decabromodiphenyl ether		N.D.		
Tested Item(s)		Content		
Halogen(s)				
Fluorine (F)		N.D.		
Chlorine (Cl)		195 mg/kg		
Bromine (Br)		N.D.		
Iodine (I)		N.D.		
Tested Item(s)	CAS No.	EC No.	Content	
Three Phthalates				
Dibutyl phthalate(DBP)	84-74-2	201-557-4	N.D.	
Benzylbutyl phthalate(BBP)	85-68-7	201-622-7	N.D.	
Di-2-ethylhexyl phthalate(DEHP)	117-81-7	204-211-0	N.D.	

Note:

The sample had been dissolved totally tested for Lead, Cadmium, Mercury.

-MDL = Method Detection Limit -N.D. = Not Detected (<MDL)

-mg/kg = ppm = parts per million

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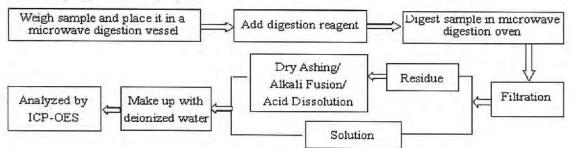


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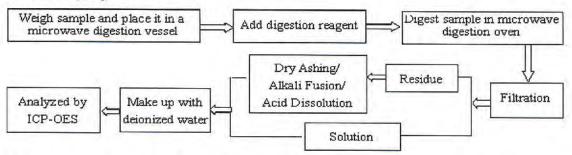
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Test Process

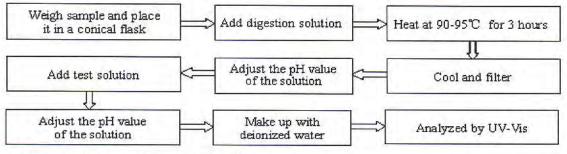
1. Lead(Pb), Cadmium(Cd)



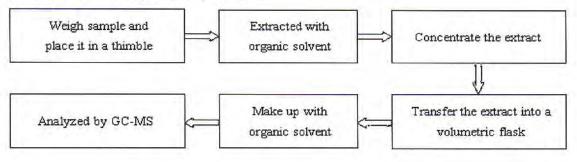
2. Mercury(Hg)



3. Hexavalent Chromium(Cr(VI))



4. Three Phthalates (DBP, BBP, DEHP)

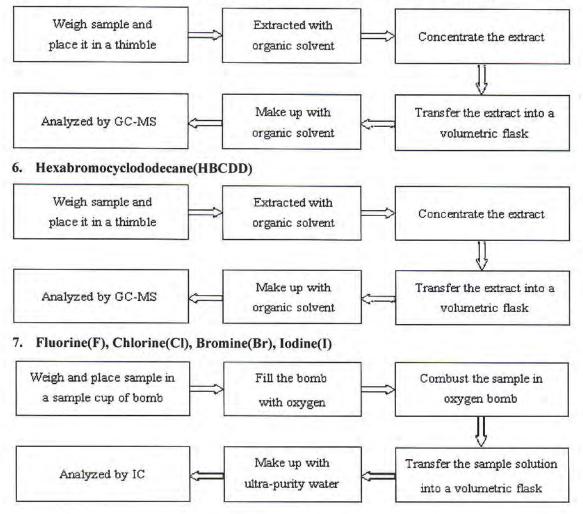




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5. Polybrominated Biphenyls(PBBs), Polybrominated Diphenyl Ethers(PBDEs)





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Photo(s) of the sample(s)



*** End of report ***

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