

No.: KA/2011/B1245 Date: 2011/12/01 Page: 1 of 15

TANAKA ELECTRONICS SINGAPORE PTE LTD. 29 PANDAN CRESCENT, SINGAPORE 128473.

The following sample(s) was/were submitted and identified by/on behalf of the client as:

Sample Description Au BONDING WIRE

Sample Receiving Date 2011/11/25

**Testing Period** 2011/11/25 TO 2011/12/01

Sample Submitted By TANAKA ELECTRONICS SINGAPORE PTE LTD.

Test Result(s) Please refer to next page(s).

Ray Chang / Asst. Manage Signed for and on behalf of **SGS Taiwan Limited** 

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company.除非另有說明,此報告結果僅對測試之樣品負責。本報告未經本公司書面許可,不可部分複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms">www.sgs.com/terms</a> and <a href="www.sgs.com/terms">conditions.htm</a> and, for



No.: KA/2011/B1245 Date: 2011/12/01 Page: 2 of 15

**GOLD AU BONDING WIRE** 

TANAKA ELECTRONICS SINGAPORE PTE LTD. 29 PANDAN CRESCENT, SINGAPORE 128473.

#### Test Result(s)

PART NAME NO.1

Test Item (s):	Unit	Method	MDL	Result
. ,				No.1
Cadmium (Cd)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
Lead (Pb)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
Mercury (Hg)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
Hexavalent Chromium Cr(VI) by boiling water extraction#	**	With reference to IEC 62321: 2008 and performed by boiling water extraction Method.	0.02mg/kg with 50 cm <sup>2</sup> surface area	Negative
Hexavalent Chromium Cr(VI) by alkaline extraction	mg/kg	With reference to IEC 62321: 2008 and performed by UV-VIS.	2	n.d.
Hexavalent Chromium Cr(VI)	μg/cm²	With reference to BS EN ISO 3613:2001 for Hexavalent Chromium. Analysis was performed by UV-VIS Spectrometry.	0.02	n.d.
Hexavalent Chromium Cr(VI)	mg/kg	With reference to US EPA Method 3060A & 7196A for Hexavalent Chromium. Analysis was performed by UV-Vis Spectrometry.	2	n.d.
Sum of PBBs			-	n.d.
Monobromobiphenyl			5	n.d.
Dibromobiphenyl		With reference to IEC 62321: 2008 and performed by GC/MS.	5	n.d.
Tribromobiphenyl			5	n.d.
Tetrabromobiphenyl	mg/kg		5	n.d.
Pentabromobiphenyl			5	n.d.
Hexabromobiphenyl			5	n.d.
Heptabromobiphenyl			5	n.d.
Octabromobiphenyl			5	n.d.
Nonabromobiphenyl			5	n.d.
Decabromobiphenyl			5	n.d.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company.除非另有說明,此報告結果僅對測試之樣品負責。本報告未經本公司書面許可,不可部分複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms">www.sgs.com/terms</a> and <a href="www.sgs.com/terms">conditions.htm</a> and, for

This document is issued by the Company Subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms</a> and conditions for Electronic Documents at <a href="https://www.sgs.com/terms</a> supported in the state of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Tawan Ltd.

6 \*\*Bobath #Bobath #Bobath

台灣檢驗科技股份有限公司 t + 886 (07)301 2121 f + 886 (07)3010867



No.: KA/2011/B1245 Date: 2011/12/01 Page: 3 of 15

TANAKA ELECTRONICS SINGAPORE PTE LTD. 29 PANDAN CRESCENT, SINGAPORE 128473.

Test Item (s):	Unit	Method	MDL	Result
Sum of PBDEs				No.1 n.d.
Monobromodiphenyl ether			5	n.d.
Dibromodiphenyl ether			<u>5</u>	n.d.
Tribromodiphenyl ether		With reference to IEC 62321: 2008 and performed by GC/MS.	<u>5</u>	n.d.
Tetrabromodiphenyl ether			<u>5</u>	n.d.
Pentabromodiphenyl ether	mg/kg		<u>5</u>	n.d.
Hexabromodiphenyl ether	ilig/kg		<u>5</u> 	
				n.d.
Heptabromodiphenyl ether			5	n.d.
Octabromodiphenyl ether			5	n.d.
Nonabromodiphenyl ether			5	n.d.
Decabromodiphenyl ether	,,	W. (	5	n.d.
Antimony (Sb)	mg/kg	With reference to US EPA Method 3052 for Antimony Content. Analysis was performed by ICP-AES.	2	n.d.
Phosphorus (P)	mg/kg	With reference to US EPA Method 3052 for Phosphorus Content. Analysis was performed by ICP-AES.	2	n.d.
Perfluorooctane sulfonates	mg/kg	With reference to US EPA 3540C: 1996	10	n.d.
(PFOS - Acid, Metal Salt, Amide)	3 3	method for PFOS Content. Analysis was performed by LC/MS.		
PFOA (CAS No.: 335-67-1)	mg/kg	With reference to US EPA 3540C: 1996 method for PFOA Content. Analysis was performed by LC/MS.	10	n.d.
Dimethyl Fumarate (CAS No.: 624-49-7)	mg/kg	With reference to US EPA 3550C method. Analysis was performed by GC/MS.	0.1	n.d.
Hexabromocyclododecane (HBCDD) (CAS No.: 25637-99-4)	mg/kg	With reference to US EPA 3540C: 1996 method. Analysis was performed by GC/MS.	5	n.d.
PVC	**	Analysis was performed by FTIR and FLAME Test.	-	Negative

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company.除非另有說明,此報告結果僅對測試之樣品負責。本報告未經本公司書面許可,不可部分複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written permission of the Company. Any unauthorized alteration, forger or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Talwan Ltd.

6.86. Talwan Ltd.

No. 61, Kai-Fa Road, Nanzih Export Processing Zone, Kaohsiung, Taiwan |

SGS Talwan Ltd.

1.00. Elicitation of the Company and the com

台灣檢驗科技股份有限公司 t + 886 (07)301 2121 f + 886 (07)3010867



No.: KA/2011/B1245 Date: 2011/12/01 Page: 4 of 15

TANAKA ELECTRONICS SINGAPORE PTE LTD. 29 PANDAN CRESCENT, SINGAPORE 128473.

Test Item (s):	Unit	Method	MDL	Result
				No.1
Halogen Halogen-Fluorine (F) (CAS No.: 14762-94-8)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
Halogen-Chlorine (CI) (CAS No.: 22537-15-1)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
Halogen-Bromine (Br) (CAS No.: 10097-32-2)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
Halogen-lodine (I) (CAS No.: 14362-44-8)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
Phthalates				
BBP (Benzyl butyl phthalate) (CAS No.: 85-68-7)	%	With reference to EN 14372. Analysis was performed by GC/MS.	0.003	n.d.
DBP (Dibutyl phthalate) (CAS No.: 84-74-2)	%	With reference to EN 14372. Analysis was performed by GC/MS.	0.003	n.d.
DEHP (Di- (2-ethylhexyl) phthalate) (CAS No.: 117-81-7)	%	With reference to EN 14372. Analysis was performed by GC/MS.	0.003	n.d.
DIDP (Di-isodecyl phthalate) (CAS No.: 26761-40-0)	%	With reference to EN 14372. Analysis was performed by GC/MS.	0.01	n.d.
DINP (Di-isononyl phthalate) (CAS No.: 28553-12-0)	%	With reference to EN 14372. Analysis was performed by GC/MS.	0.01	n.d.
DNOP (Di-n-octyl phthalate) (CAS No.: 117-84-0)	%	With reference to EN 14372. Analysis was performed by GC/MS.	0.003	n.d.
DNHP (Di-n-hexyl phthalate) (CAS No.: 84-75-3)	%	With reference to EN 14372. Analysis was performed by GC/MS.	0.003	n.d.
DMEP (Bis (2-methoxyethyl) phthalate) (CAS No.: 117-82-8)	%	With reference to EN 14372. Analysis was performed by GC/MS.	0.003	n.d.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company.除非另有說明,此報告結果僅對測試之樣品負責。本報告未經本公司書面許可,不可部分複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written permission of the Company. Any unauthorized alteration, forger or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Talwan Ltd.

6.86. Talwan Ltd.

No. 61, Kai-Fa Road, Nanzih Export Processing Zone, Kaohsiung, Taiwan |

SGS Talwan Ltd.

1.00. Elicitation of the Company and the com

台灣檢驗科技股份有限公司 t + 886 (07)301 2121 f + 886 (07)3010867



No.: KA/2011/B1245 Date: 2011/12/01 Page: 5 of 15

TANAKA ELECTRONICS SINGAPORE PTE LTD. 29 PANDAN CRESCENT, SINGAPORE 128473.

Note : 1. mg/kg = ppm ; 0.1wt% = 1000ppm

2. n.d. = Not Detected

3. MDL = Method Detection Limit

4. " - " = Not Regulated

5. Method Detection Limit =  $0.02 \,\mu g/cm^2$ .

6. # = a. Positive means the presence of CrVI on the tested areas

b. Negative means the absence of CrVI on the tested areas

The detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm2 tested areas.

7. \*\* = Qualitative analysis (No Unit)

8. PVC:Negative = Undetectable / Positive = Detectable

9. The PVC test was subcontracted to other SGS Laboratory.

#### PFOS Reference Information: Directive 2006/122/EC

- (1) May not be placed on the market or used as a substance or constituent of preparations in a concentration equal to or higher than 0.005 % by mass.
- (2) 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 1µg/m<sup>2</sup> of the coated material.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company.除非另有說明,此報告結果僅對測試之樣品負責。本報告未經本公司書面許可,不可部分複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms">www.sgs.com/terms</a> and <a href="conditions.htm">conditions.htm</a> and, for

rins obcurrient is sisted by the Collipany subject to Its General Conditions of Service prime deterronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No. 61, Kai-Fa Road, Nanzih Export Processing Zone, Kaohsiung, Taiwan / Sda #héh#m Ltd □ 医 開發路61號

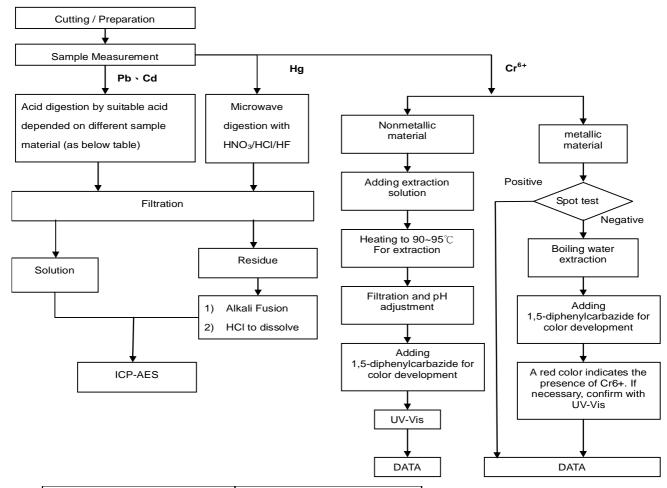
台灣檢驗科技股份有限公司 f + 886 (07)3010867 t + 886 (07)301 2121



No.: KA/2011/B1245 Date: 2011/12/01 Page: 6 of 15

TANAKA ELECTRONICS SINGAPORE PTE LTD. 29 PANDAN CRESCENT, SINGAPORE 128473.

- 1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr6+ test method excluded)
- Name of the person who made measurement: Alex Chang
- 3) Name of the person in charge of measurement: Ray Chang



Sample Material	Digestion Acid
Steel, copper, aluminum, solder	Aqua regia, HNO <sub>3</sub> , HCI, HF, H <sub>2</sub> O <sub>2</sub>
Glass	HNO₃/HF
Gold, platinum, palladium, ceramic	Aqua regia
Silver	HNO <sub>3</sub>
Plastic	H <sub>2</sub> SO <sub>4</sub> , H <sub>2</sub> O <sub>2</sub> , HNO <sub>3</sub> , HCI
Others	Any acid to total digestion

台灣檢驗科技股份有限公司

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company.除非另有說明,此報告結果僅對測試之樣品負責。本報告未經本公司書面許可,不可部分複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms">www.sgs.com/terms</a> and <a href="www.sgs.com/terms">conditions.htm</a> and, for

rins obcurrient is sisted by the Collipany subject to Its General Conditions of Service prime deterronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No. 61, Kai-Fa Road, Nanzih Export Processing Zone, Kaohsiung, Taiwan / Sda #héh#m Ltd □ 医 開發路61號



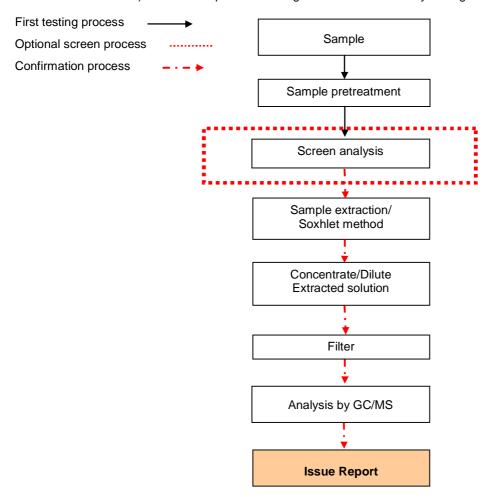
No.: KA/2011/B1245 Date: 2011/12/01 Page: 7 of 15

TANAKA ELECTRONICS SINGAPORE PTE LTD. 29 PANDAN CRESCENT, SINGAPORE 128473.

#### **PBB/PBDE** analytical FLOW CHART

1) Name of the person who made measurement: Anson Tsao

2) Name of the person in charge of measurement: Ray Chang



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company.除非另有說明,此報告結果僅對測試之樣品負責。本報告未經本公司書面許可,不可部分複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms">www.sgs.com/terms</a> and <a href="www.sgs.com/terms">conditions.htm</a> and, for

rins obcurrient is sisted by the Collipany subject to Its General Conditions of Service prime deterronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No. 61, Kai-Fa Road, Nanzih Export Processing Zone, Kaohsiung, Taiwan / Sda #héh#m Ltd □ 医 開發路61號

台灣檢驗科技股份有限公司 t + 886 (07)301 2121 f + 886 (07)3010867

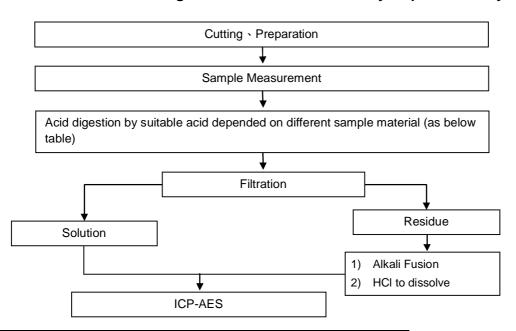


No.: KA/2011/B1245 Date: 2011/12/01 Page: 8 of 15

TANAKA ELECTRONICS SINGAPORE PTE LTD. 29 PANDAN CRESCENT, SINGAPORE 128473.

- 1) These samples were dissolved totally by pre-conditioning method according to below flow chart.
- 2) Name of the person who made measurement: Alex Chang
- 3) Name of the person in charge of measurement: Ray Chang

#### Flow Chart of digestion for the elements analysis performed by ICP-AES



Steel, copper, aluminum, solder	Aqua regia, HNO 3, HCl, HF, H2O2
Glass	HNO₃/HF
Gold, platinum, palladium, ceramic	Aqua regia
Silver	HNO <sub>3</sub>
Plastic	H <sub>2</sub> SO <sub>4</sub> , H <sub>2</sub> O <sub>2</sub> , HNO <sub>3</sub> , HCI
Others	Any acid to total digestion

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company.除非另有說明,此報告結果僅對測試之樣品負責。本報告未經本公司書面許可,不可部分複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms">www.sgs.com/terms</a> and <a href="www.sgs.com/terms">conditions.htm</a> and, for

rins obcurrient is sisted by the Collipany subject to Its General Conditions of Service prime deterronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No. 61, Kai-Fa Road, Nanzih Export Processing Zone, Kaohsiung, Taiwan / Sda #héh#m Ltd □ 医 開發路61號

台灣檢驗科技股份有限公司 t + 886 (07)301 2121 f + 886 (07)3010867

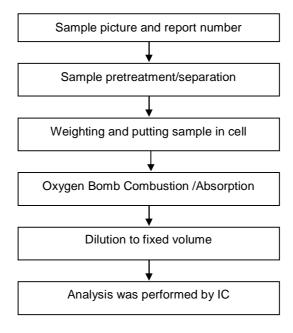


No.: KA/2011/B1245 Date: 2011/12/01 Page: 9 of 15

TANAKA ELECTRONICS SINGAPORE PTE LTD. 29 PANDAN CRESCENT, SINGAPORE 128473.

#### Analytical flow chart of halogen content

- 1) Name of the person who made measurement: Jean Hung
- 2) Name of the person in charge of measurement: Ray Chang



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company.除非另有說明,此報告結果僅對測試之樣品負責。本報告未經本公司書面許可,不可部分複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms">www.sgs.com/terms</a> and <a href="www.sgs.com/terms">conditions.htm</a> and, for

rins obcurrient is sisted by the Collipany subject to Its General Conditions of Service prime deterronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No. 61, Kai-Fa Road, Nanzih Export Processing Zone, Kaohsiung, Taiwan / Sda #héh#m Ltd □ 医 開發路61號

台灣檢驗科技股份有限公司 t + 886 (07)301 2121 f + 886 (07)3010867

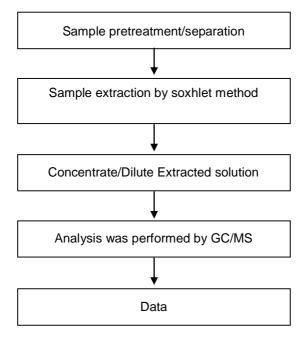


No.: KA/2011/B1245 Date: 2011/12/01 Page: 10 of 15

TANAKA ELECTRONICS SINGAPORE PTE LTD. 29 PANDAN CRESCENT, SINGAPORE 128473.

#### Analytical flow chart of phthalate content

- 1) Name of the person who made measurement: Anson Tsao
- 2) Name of the person in charge of measurement: Ray Chang



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company.除非另有說明,此報告結果僅對測試之樣品負責。本報告未經本公司書面許可,不可部分複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms">www.sgs.com/terms</a> and <a href="www.sgs.com/terms">conditions.htm</a> and, for

rins obcurrient is sisted by the Collipany subject to Its General Conditions of Service prime deterronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No. 61, Kai-Fa Road, Nanzih Export Processing Zone, Kaohsiung, Taiwan / Sda #héh#m Ltd □ 医 開發路61號

台灣檢驗科技股份有限公司 t + 886 (07)301 2121 f + 886 (07)3010867

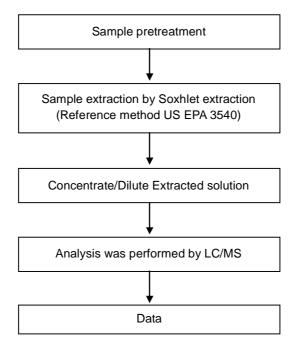


No.: KA/2011/B1245 Date: 2011/12/01 Page: 11 of 15

TANAKA ELECTRONICS SINGAPORE PTE LTD. 29 PANDAN CRESCENT, SINGAPORE 128473.

#### Analytical flow chart of PFOA/PFOS content

- 1) Name of the person who made measurement: Anson Tsao
- 2) Name of the person in charge of measurement: Ray Chang



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company.除非另有說明,此報告結果僅對測試之樣品負責。本報告未經本公司書面許可,不可部分複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms">www.sgs.com/terms</a> and <a href="www.sgs.com/terms">conditions.htm</a> and, for

rins obcurrient is sisted by the Collipany subject to Its General Conditions of Service prime deterronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No. 61, Kai-Fa Road, Nanzih Export Processing Zone, Kaohsiung, Taiwan / Sda #héh#m Ltd □ 医 開發路61號

台灣檢驗科技股份有限公司 t + 886 (07)301 2121 f + 886 (07)3010867

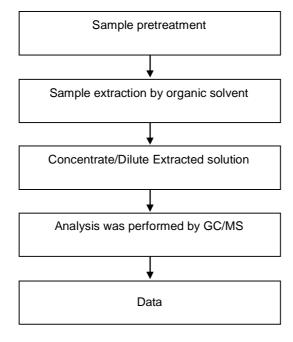


No.: KA/2011/B1245 Date: 2011/12/01 Page: 12 of 15

TANAKA ELECTRONICS SINGAPORE PTE LTD. 29 PANDAN CRESCENT, SINGAPORE 128473.

#### **Analytical flow chart of Dimethyl Fumarate content**

- Name of the person who made measurement: Anson Tsao
- Name of the person in charge of measurement: Ray Chang



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company.除非另有說明,此報告結果僅對測試之樣品負責。本報告未經本公司書面許可,不可部分複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms">www.sgs.com/terms</a> and <a href="www.sgs.com/terms">conditions.htm</a> and, for

rins obcurrient is sisted by the Collipany subject to Its General Conditions of Service prime deterronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No. 61, Kai-Fa Road, Nanzih Export Processing Zone, Kaohsiung, Taiwan / Sda #héh#m Ltd □ 医 開發路61號

台灣檢驗科技股份有限公司 t + 886 (07)301 2121 f + 886 (07)3010867

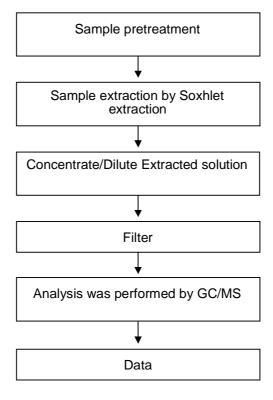


No.: KA/2011/B1245 Date: 2011/12/01 Page: 13 of 15

TANAKA ELECTRONICS SINGAPORE PTE LTD. 29 PANDAN CRESCENT, SINGAPORE 128473.

#### **HBCDD Analytical FLOW CHART**

- 1) Name of the person who made measurement: Anson Tsao
- 2) Name of the person in charge of measurement: Ray Chang



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company.除非另有說明,此報告結果僅對測試之樣品負責。本報告未經本公司書面許可,不可部分複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms">www.sgs.com/terms</a> and <a href="www.sgs.com/terms">conditions.htm</a> and, for

rins obcurrient is sisted by the Collipany subject to Its General Conditions of Service prime deterronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No. 61, Kai-Fa Road, Nanzih Export Processing Zone, Kaohsiung, Taiwan / Sda #héh#m Ltd □ 医 開發路61號

台灣檢驗科技股份有限公司 t + 886 (07)301 2121 f + 886 (07)3010867

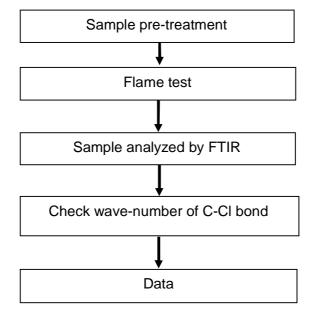


No.: KA/2011/B1245 Date: 2011/12/01 Page: 14 of 15

TANAKA ELECTRONICS SINGAPORE PTE LTD. 29 PANDAN CRESCENT, SINGAPORE 128473.

### Analysis flow chart for determination of **PVC** in polymer material

- 1) Name of the person who made measurement: Joyce Chiu
- 2) Name of the person in charge of measurement: Roger Lin



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company.除非另有說明,此報告結果僅對測試之樣品負責。本報告未經本公司書面許可,不可部分複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms">www.sgs.com/terms</a> and <a href="www.sgs.com/terms">conditions.htm</a> and, for

rins obcurrient is sisted by the Collipany subject to Its General Conditions of Service prime deterronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No. 61, Kai-Fa Road, Nanzih Export Processing Zone, Kaohsiung, Taiwan / Sda #héh#m Ltd □ 医 開發路61號



No.: KA/2011/B1245 Date: 2011/12/01 Page: 15 of 15

TANAKA ELECTRONICS SINGAPORE PTE LTD. 29 PANDAN CRESCENT, SINGAPORE 128473.

\* The tested sample / part is marked by an arrow if it's shown on the photo. \*





\*\* End of Report \*\*

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company.除非另有說明,此報告結果僅對測試之樣品負責。本報告未經本公司書面許可,不可部分複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms">www.sgs.com/terms</a> and <a href="www.sgs.com/terms">conditions.htm</a> and, for

This oocument is issued by the Company subject to its General Conditions or Service printed overlear, available on request or accessible at <a href="https://www.sus.com/retrins-ainc-conditions-in-ainc-c

台灣檢驗科技股份有限公司 t + 886 (07)301 2121