

No. CANEC1300498707

Date: 16 Jan 2013

Page 1 of 7

SHENZHEN KAWADA METAL TECHNOLOGY CO., LTD

LONGHUA TOWN, SHENZHEN CITY, GUANGDONG PROVINCE SCIENCE AND TECHNOLOGY ROAD HEPING INDUSTRIAL PARK, BUILDING A, 3RD FLOOR

The following sample(s) was/were submitted and identified on behalf of the clients as : Environmentally friendly lead-free solder paste

SGS Job No. :	CP13-001332 - SZ
Tested Sample Info. :	KWD-LF9090-4A
Client Ref. Info. :	KWD-LF9090-3A&3AX&3B&3BX&3M&3MX&3R&3RX&3H-T
	4A&4AX&4BX&4M&4M&4MX&4R&4RX&4H-T
	5A&5AX&5B&5BX&5M&5MX&5R&5RX&5H-T
Main Substance :	Sn/Ag/Cu-X
Date of Sample Received :	10 Jan 2013
Testing Period :	10 Jan 2013 - 16 Jan 2013
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.

arco

Marco liang Approved Signatory

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/terms_and_conditions. Its indexention of the instruction 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 instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction for the responsibility is to its Client and this document does not exonerate parties to a transaction for the responsibility is to its Client and this document does not exonerate parties to a transaction of the company's 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.



 inces
 Co., Ltd.
 198 Kezhu Road,Scientech Park Guangzhou Economic & Technology Development District,Guangzhou,China 510663
 t (86-20) 82155555
 f (86-20) 82075113
 www.cn.sgs.com

 mical Jahoralmu
 中国・广州・经济技术开发区科学城科珠路198号
 邮编: 510663
 t (86-20) 82155555
 f (86-20) 82075113
 e sgs.china@sgs.com



No. CANEC1300498707

Page 2 of 7

Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description
1	CAN13-004987.007	Grey paste

Remarks :

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

RoHs Directve 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.

<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>007</u>
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1,000	mg/kg	2	25
Mercury (Hg)	1,000	mg/kg	2	ND
Hexavalent Chromium (CrVI)	1,000	mg/kg	2	ND
Sum of PBBs	1,000	mg/kg	-	ND
Monobromobiphenyl	-	mg/kg	5	ND
Dibromobiphenyl	-	mg/kg	5	ND
Tribromobiphenyl	-	mg/kg	5	ND
Tetrabromobiphenyl	-	mg/kg	5	ND
Pentabromobiphenyl	-	mg/kg	5	ND
Hexabromobiphenyl	-	mg/kg	5	ND
Heptabromobiphenyl	-	mg/kg	5	ND
Octabromobiphenyl	-	mg/kg	5	ND
Nonabromobiphenyl	-	mg/kg	5	ND
Decabromobiphenyl	-	mg/kg	5	ND
Sum of PBDEs	1,000	mg/kg	-	ND
Monobromodiphenyl ether	-	mg/kg	5	ND

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/terms_and_conditions.htm. Attention is drawn to the limitation of liability incommutation 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 incommutation and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any this document is unlawful and offenders may be prosecuted to the fullest extent of the law. This document is unlawful and offenders may be prosecuted to the fullest extent of the law.



 198 Kezhu Road,Scientech Park Guangzhou Economic & Technology Development District,Guangzhou,China 510663 t (86-20) 82155555 f (86-20) 82075113
 www.cn.sgs.com

 nicel Lahoratory
 中国・广州・经济技术开发区科学城科珠路198号
 邮编: 510663 t (86-20) 82155555 f (86-20) 82075113
 e sgs.china@sgs.com



Test Report	No. CANEC13004987	07	Date: 16	Jan 2013	Page 3 of 7
<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>007</u>	
Dibromodiphenyl ether	-	mg/kg	5	ND	
Tribromodiphenyl ether	-	mg/kg	5	ND	
Tetrabromodiphenyl ether	-	mg/kg	5	ND	
Pentabromodiphenyl ether	-	mg/kg	5	ND	
Hexabromodiphenyl ether	-	mg/kg	5	ND	
Heptabromodiphenyl ether	-	mg/kg	5	ND	
Octabromodiphenyl ether	-	mg/kg	5	ND	
Nonabromodiphenyl ether	-	mg/kg	5	ND	
Decabromodiphenyl ether	-	mg/kg	5	ND	

Notes :

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

Hexabromocyclododecane(HBDD)

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

Test Item(s)	<u>Unit</u>	MDL	<u>007</u>
Hexabromocyclododecane (HBCDD)	mg/kg	10	ND

Notes :

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

Phthalata

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

<u>Test Item(s)</u>	<u>Unit</u>	MDL	<u>007</u>
Dibutyl Phthalate (DBP)	% (w/w)	0.003	ND
Benzylbutyl Phthalate (BBP)	% (w/w)	0.003	ND
Bis-(2-ethylhexyl) Phthalate (DEHP)	% (w/w)	0.003	ND

Notes :

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

Remark: The result(s) shown is/are of the total weight of wet sample.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/terms_and_conditions.htm Is in the limitation of its increasention of the company's findings at the time of its increasention of the transaction documents. Subject to Terms and Conditions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction for the transaction document. This document cannot be responsibility is to its Client and this document does not exonerate parties to a transaction document. This document cannot be responsibility is to its Client and this document does not exonerate parties to a transaction for the transaction document. This document cannot be responsibility is to its Client and this document does not exonerate parties to a transaction document. This document cannot be responsibility is to its Client and this document does not exonerate parties to a transaction document. This document cannot be responsibility is to its Client and this document does not exonerate parties to a transaction document cannot be responsibility is to its Client and this document does not exonerate parties to a transaction document. This document cannot be response to the context of the Company. This document cannot be response to the fullest extent of the law. This document is unlawful and offenders may be prosecuted to the fullest extent of the law. The sample is stated the results shown in this test report refer only to the sample(s) tested .



No. CANEC1300498707

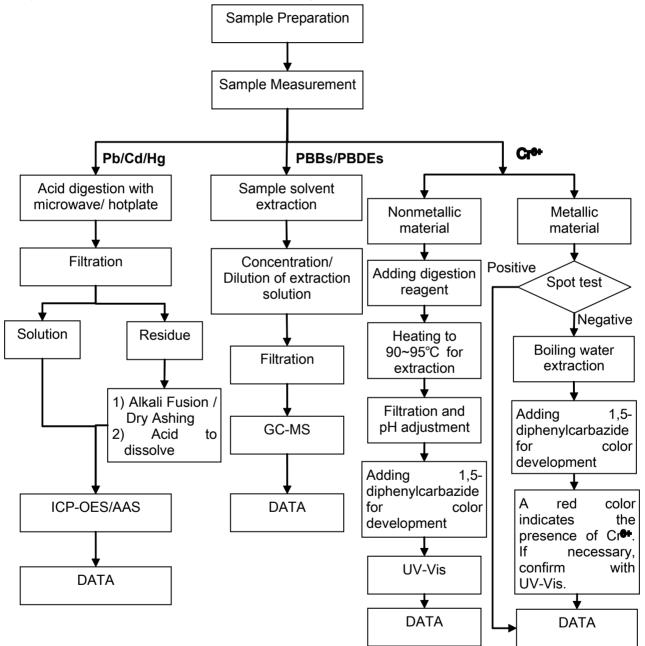
Date: 16 Jan 2013

Page 4 of 7

ATTACHMENTS

RoHS Testing Flow Chart

- 1) Name of the person who made testing: Michael Tso / Cutey Yu
- 2) Name of the person in charge of testing: Adams Yu / Yolanda Wei
- 3) These samples were dissolved totally by pre-conditioning method according to below flow chart (Cr⁶⁺ and PBBs/PBDEs test method excluded).



This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/terms_and_conditions. htm and for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, the terms and conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of its incommute interment of the terms and conditions of the document is advised that information contained hereon reflects the Company's findings at the time of its incommute interment of the terms 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. The sample is the time of the sample(s) tested .

ices Co., Ltd.

NGISER

 198 Kezhu Road,Scientech Park Guangzhou Economic & Technology Development District,Guangzhou,China 510663 t (86-20) 82155555 f (86-20) 82075113
 www.cn.s.gs.com

 中国<</td>
 广州
 经济技术开发区科学城科珠路198号
 邮编: 510663 t (86-20) 82155555 f (86-20) 82075113
 e sgs.china@sgs.com

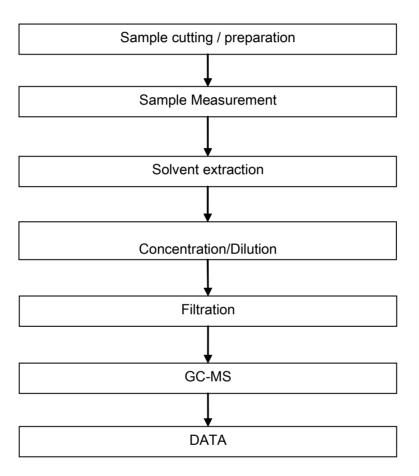


No. CANEC1300498707

ATTACHMENTS

Phthalates Testing Flow Chart

- 1) Name of the person who made testing: Liu Qiong
- 2) Name of the person in charge of testing: Yolanda Wei





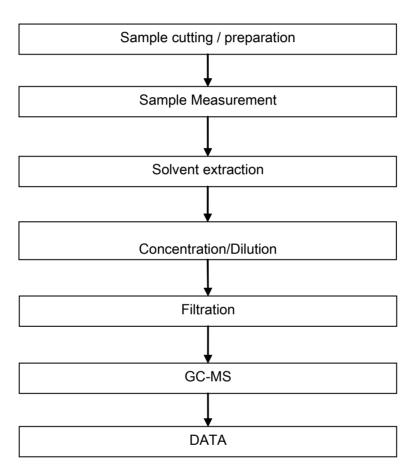
No. CANEC1300498707

ATTACHMENTS

NGTSER

HBCDD Testing Flow Chart

- 1) Name of the person who made testing: Cutey Yu
- 2) Name of the person in charge of testing: Yolanda Wei



This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/terms_and_conditions. htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>www.sgs.com/terms_e-document.htm</u>. Attention is drawn to the limitation of liability to the sample of this document is advised that information contained hereon reflects the Company's findings at the time of its information of the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exconerate parties to a transaction from exercising all the clients of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. 202 ices Co., Ltd. | 198 Kezhu Road, Scientech Park Guangzhou Economic & Technology Development District, Guangzhou, China 510663 t (86–20) 82155555 f (86–20) 82075113 www.cn.sas.com 邮编: 510663 t (86-20) 82155555 f (86-20) 82075113 e sgs.china@sgs.com 中国·广州·经济技术开发区科学城科珠路198号



No. CANEC1300498707

Sample photo:



SGS authenticate the photo on original report only

*** End of Report ***

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/terms_and_conditions. htm and for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability incompatibility incompatibility incompatibility incompatibility incompatibility is within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exconerate parties to a transaction from exercising all the within the limits of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Nices Co., Ltd. 198 Kezhu Road, Scientech Park Guangzhou Economic & Technology Development District, Guangzhou, China 510663 t (86–20) 82155555 f (86–20) 82075113 www.cn.sgs.com 邮编: 510663 t (86-20) 82155555 f (86-20) 82075113 e sgs.china@sgs.com 中国·广州·经济技术开发区科学城科珠路198号