

东莞市天泰塑胶电业有限公司

材质证明

主成份	CAS 号	含 量 PBTGF30% V0 BK	备 注
PBT 树脂	26062-94-2	52%	
阻燃剂	68928-70-1	15% ± 2%	
无碱玻璃纤维	65997-17-3	30% ± 3%	
增韧剂	25085-82-9	5%	
黑种	1333-86-4	1%	
助剂包	—	1 份	

Test Report (SVHC)

No. CANEC1420547801

Date: 16 Dec 2014

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DONGGUAN TIANAI PLASTIC ELECTRICAL CO.,LTD.
MIAOQIAN INDUSTRIAL LUWU VILLAGE CHANGPING TOWN DONGGUAN CITY GUANGDONG
CHINA

The following sample(s) was/were submitted and identified on behalf of the clients as : PBT---LCP

SGS Job No. : CP14-064648 - GZ

Date of Sample Received : 10 Dec 2014

Testing Period : 10 Dec 2014 - 16 Dec 2014

Test Requested : As requested by client, SVHC screening is performed according to:
(i) One hundred and fifty five (155) substances in the Candidate List of Substances of Very High Concern (SVHC) for authorization published by European Chemicals Agency (ECHA) on and before Jun 16, 2014 regarding Regulation (EC) No 1907/2006 concerning the REACH.
(ii) Ten (10) substances in the Public Consultation List of potential Substances of Very High Concern (SVHC) published by European Chemicals Agency (ECHA) on September 1, 2014 regarding Regulation (EC) No 1907/2006 concerning the REACH.

Test Results : Please refer to next page(s).

Summary :

According to the specified scope and analytical techniques, concentrations of tested SVHC are $\leq 0.1\%$ (w/w) in the submitted sample.	PASS
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Signed for and on behalf of
SGS-CSTC Ltd.

Trophy

Trophy Zhang
Approved Signatory



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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:
<http://echa.europa.eu/web/guest/candidate-list-table>
 These lists are under evaluation by ECHA and may subject to change in the future.

(2) Concerning article(s):

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 above a concentration of 0.1% weight by weight (w/w).

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.

SGS adopts the interpretation of ECHA for SVHC in article unless indicated otherwise. Detail explanation is available at the following link:

http://webstage.contribute.sgs.net/corpreach/documents/SGS-CTS_SVHC-paper-EN-11.pdf

(3) Concerning material(s):

Test results in this report are based on the tested sample. This report refers to testing result of tested sample submitted as homogenous material(s). In case such material is being used to compose an article, the results indicated in this report may not represent SVHC concentration in such article. If this report refers to testing result of composite material group by equal weight proportion, the material in each composite test group may come from more than one article.

If the sample is a substance or mixture, and it directly exports to EU, client has the obligation to comply with the supply chain communication obligation under Article 31 of Regulation (EC) No. 1907/2006 and the conditions of Authorization of substance of very high concern included in the Annex XIV of the Regulation (EC) No. 1907/2006.

(4) Concerning substance and preparation:

If a SVHC is found over 0.1% (w/w) and/or the specific concentration limit which is set in Regulation (EC) No 1272/2008 and No 790/2009, client is suggested to prepare a Safety Data Sheet (SDS) against the SVHC to comply with the supply chain communication obligation under Regulation (EC) No 1907/2006, in which:

- a substance that is classified as hazardous under the CLP Regulation (EC) No 1272/2008.
- a mixture that is classified as dangerous according Dangerous Preparations Directive



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1999/45/EC or classified as hazardous under the CLP Regulation (EC) No 1272/2008, when their concentrations are equal to, or greater than, those defined in the Article 3(3) of 1999/45/EC or the lower values given in Part 3 of Annex VI of Regulation (EC) No. 1272/2008;

or

- a mixture is not classified as dangerous under Directive 1999/45/EC, but contains either:

- (a) a substance posing human health or environmental hazards in an individual concentration of ≥ 1 % by weight for mixtures that are solid or liquids (i.e., non-gaseous mixtures) or ≥ 0.2 % by volume for gaseous mixtures; or
- (b) a substance that is PBT, or vPvB in an individual concentration of ≥ 0.1 % by weight for mixtures that are solid or liquids (i.e., non-gaseous mixtures); or
- (c) a substance on the SVHC candidate list (for reasons other than those listed above), in an individual concentration of ≥ 0.1 % by weight for non-gaseous mixtures; or
- (d) a substance for which there are Europe-wide workplace exposure limits.

- (5) 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 Sample :

Sample Description :

Specimen No.	SGS Sample ID	Description
SN1	CAN14-205478.001	Black plastic grains

Test Method :

SGS In-House method- GZTC CHEM-TOP-092-01, GZTC CHEM-TOP-092-02, Analyzed by ICP-OES, UV-VIS, GC-MS, HPLC-DAD/MS and Colorimetric Method.



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Guangzhou Branch

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

Batch	Substance Name	CAS No.	001 Concentration (%)	RL (%)
III	Boric acid*	10043-35-3, 11113-50-1	0.040	0.005
III	Disodium tetraborate, anhydrous*	1303-96-4, 1330-43-4, 12179-04-3	0.033	0.005
III	Tetraboron disodium heptaoxide, hydrate*	12267-73-1	0.033	0.005
VII	Diboron trioxide*	1303-86-2	0.023	0.005
-	Other tested SVHC in candidate list	-	ND	-

Test Result: (Substances in the Consultation List of potential SVHC)

Batch	Substance Name	CAS No.	001 Concentration (%)	RL (%)
-	All tested SVHC in consultation list	-	ND	-

Notes :

1. The table above only shows detected SVHC, and SVHC that below RL are not reported. Please refer to Appendix for the full list of tested SVHC.
2. RL = Reporting Limit. All RL are based on homogenous material. ND = Not detected (lower than RL), ND is denoted on the SVHC substance.
3. *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: www.reach.sgs.com/substance-of-very-high-concern-analysis-information-page.htm.
4. RL = 0.005% is evaluated for element (i.e. cobalt, arsenic, lead, chromium (VI), aluminum, zirconium, boron, strontium, zinc, antimony, cadmium, titanium and barium respectively), except molybdenum RL=0.0005%, boron RL=0.0025% (only for Lead bis(tetrafluoroborate)).
5. Calculated concentration of boric compounds are based on the water extractive boron by ICP-OES.
6. Δ CAS No. of diastereoisomers identified (α-HBCDD, β-HBCDD, γ-HBCDD): 134237-50-6, 134237-51-7, 134237-52-8.
7. ☆ CAS No. of Hexahydromethylphthalic anhydride, Hexahydro-4-methylphthalic anhydride, Hexahydro-1-methylphthalic anhydride, Hexahydro-3-methylphthalic anhydride: 25550-51-0, 19438-60-9, 48122-14-1, 57110-29-9; EC No. of those: 247-094-1, 243-072-0, 256-356-4, 260-566-1.
8. § The substance is proposed for the identification as SVHC only where it contains Michler's ketone (CAS Number: 90-94-8) or Michler's base (CAS Number: 101-61-1) ≥0.1% (w/w).
9. / = Substances in the Consultation List of SVHC.



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Appendix

Full list of tested SVHC:

Batch	No.	Substance Name	CAS No.	RL (%)
I	1	4,4' -Diaminodiphenylmethane(MDA)	101-77-9	0.050
I	2	5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	81-15-2	0.050
I	3	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	85535-84-8	0.050
I	4	Anthracene	120-12-7	0.050
I	5	Benzyl butyl phthalate (BBP)	85-68-7	0.050
I	6	Bis (2-ethylhexyl)phthalate (DEHP)	117-81-7	0.050
I	7	Bis(tributyltin)oxide (TBTO)	56-35-9	0.050
I	8	Cobalt dichloride*	7646-79-9	0.005
I	9	Diarsenic pentaoxide*	1303-28-2	0.005
I	10	Diarsenic trioxide*	1327-53-3	0.005
I	11	Dibutyl phthalate (DBP)	84-74-2	0.050
I	12	Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified (α -HBCDD, β -HBCDD, γ -HBCDD) ^Δ	25637-99-4, 3194- 55-6	0.050
I	13	Lead hydrogen arsenate*	7784-40-9	0.005
I	14	Sodium dichromate*	7789-12-0, 10588-01-9	0.005
I	15	Triethyl arsenate*	15606-95-8	0.005
II	16	2,4-Dinitrotoluene	121-14-2	0.050
II	17	Acrylamide	79-06-1	0.050
II	18	Anthracene oil*	90640-80-5	0.050
II	19	Anthracene oil, anthracene paste*	90640-81-6	0.050
II	20	Anthracene oil, anthracene paste, anthracene fraction*	91995-15-2	0.050



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Full list of tested SVHC:

Batch	No.	Substance Name	CAS No.	RL (%)
II	21	Anthracene oil, anthracene paste, distn. lights*	91995-17-4	0.050
II	22	Anthracene oil, anthracene-low*	90640-82-7	0.050
II	23	Diisobutyl phthalate	84-69-5	0.050
II	24	Lead chromate*	7758-97-6	0.005
II	25	Lead chromate molybdate sulphate red (C.I. Pigment Red 104)*	12656-85-8	0.005
II	26	Lead sulfochromate yellow (C.I. Pigment Yellow 34)*	1344-37-2	0.005
II	27	Pitch, coal tar, high temp.*	65996-93-2	0.050
II	28	Tris(2-chloroethyl)phosphate	115-96-8	0.050
III	29	Ammonium dichromate*	7789-09-5	0.005
III	30	Boric acid*	10043-35-3, 11113-50-1	0.005
III	31	Disodium tetraborate, anhydrous*	1303-96-4, 1330-43-4, 12179-04-3	0.005
III	32	Potassium chromate*	7789-00-6	0.005
III	33	Potassium dichromate*	7778-50-9	0.005
III	34	Sodium chromate*	7775-11-3	0.005
III	35	Tetraboron disodium heptaoxide, hydrate*	12267-73-1	0.005
III	36	Trichloroethylene	79-01-6	0.050
IV	37	2-Ethoxyethanol	110-80-5	0.050
IV	38	2-Methoxyethanol	109-86-4	0.050
IV	39	Chromic acid, Oligomers of chromic acid and dichromic acid, Dichromic acid*	7738-94-5 - 13530-68-2	0.005

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Batch	No.	Substance Name	CAS No.	RL (%)
IV	40	Chromium trioxide*	1333-82-0	0.005
IV	41	Cobalt(II) carbonate*	513-79-1	0.005
IV	42	Cobalt(II) diacetate*	71-48-7	0.005
IV	43	Cobalt(II) dinitrate*	10141-05-6	0.005
IV	44	Cobalt(II) sulphate*	10124-43-3	0.005
V	45	1,2,3-trichloropropane	96-18-4	0.050
V	46	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	71888-89-6	0.050
V	47	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	68515-42-4	0.050
V	48	1-methyl-2-pyrrolidone	872-50-4	0.050
V	49	2-ethoxyethyl acetate	111-15-9	0.050
V	50	Hydrazine	7803-57-8, 302-01-2	0.050
V	51	Strontium chromate*	7789-06-2	0.005
VI	52	1,2-Dichloroethane	107-06-2	0.050
VI	53	2,2'-dichloro-4,4'-methylenedianiline	101-14-4	0.050
VI	54	2-Methoxyaniline; o-Anisidine	90-04-0	0.050
VI	55	4-(1,1,3,3-tetramethylbutyl)phenol	140-66-9	0.050
VI	56	Aluminosilicate Refractory Ceramic Fibres *	650-017-00-8 (Index no.)	0.005
VI	57	Arsenic acid*	7778-39-4	0.005
VI	58	Bis(2-methoxyethyl) ether	111-96-6	0.050
VI	59	Bis(2-methoxyethyl) phthalate	117-82-8	0.050



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Batch	No.	Substance Name	CAS No.	RL (%)
VI	60	Calcium arsenate*	7778-44-1	0.005
VI	61	Dichromium tris(chromate) *	24613-89-6	0.005
VI	62	Formaldehyde, oligomeric reaction products with aniline	25214-70-4	0.050
VI	63	Lead diazide, Lead azide*	13424-46-9	0.005
VI	64	Lead dipicrate*	6477-64-1	0.005
VI	65	Lead styphnate*	15245-44-0	0.005
VI	66	N,N-dimethylacetamide	127-19-5	0.050
VI	67	Pentazinc chromate octahydroxide*	49663-84-5	0.005
VI	68	Phenolphthalein	77-09-8	0.050
VI	69	Potassium hydroxyoctaoxodizincatedichromate*	11103-86-9	0.005
VI	70	Trilead diarsenate*	3687-31-8	0.005
VI	71	Zirconia Aluminosilicate Refractory Ceramic Fibres*	650-017-00-8 (Index no.)	0.005
VII	72	[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26)§	2580-56-5	0.050
VII	73	[4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylamm onium chloride (C.I. Basic Violet 3)§	548-62-9	0.050
VII	74	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	112-49-2	0.050
VII	75	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4	0.050
VII	76	4,4'-bis(dimethylamino) benzophenone (Michler's Ketone)	90-94-8	0.050
VII	77	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol§	561-41-1	0.050
VII	78	Diboron trioxide*	1303-86-2	0.005

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Batch	No.	Substance Name	CAS No.	RL (%)
VII	79	Formamide	75-12-7	0.050
VII	80	Lead(II) bis(methanesulfonate)*	17570-76-2	0.005
VII	81	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	101-61-1	0.050
VII	82	TGIC (1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione)	2451-62-9	0.050
VII	83	α,α -Bis[4-(dimethylamino)phenyl]-4(phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4) §	6786-83-0	0.050
VII	84	β -TGIC (1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione)	59653-74-6	0.050
VIII	85	[Phthalato(2-)]dioxotrilead*	69011-06-9	0.005
VIII	86	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	0.050
VIII	87	1,2-Diethoxyethane	629-14-1	0.050
VIII	88	1-Bromopropane	106-94-5	0.050
VIII	89	3-Ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2	0.050
VIII	90	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated	-	0.050
VIII	91	4,4'-Methylenedi-o-toluidine	838-88-0	0.050
VIII	92	4,4'-Oxydianiline and its salts	101-80-4	0.050
VIII	93	4-Aminoazobenzene	60-09-3	0.050
VIII	94	4-Methyl-m-phenylenediamine	95-80-7	0.050
VIII	95	4-Nonylphenol, branched and linear	-	0.050
VIII	96	6-Methoxy-m-toluidine	120-71-8	0.050
VIII	97	Acetic acid, lead salt, basic*	51404-69-4	0.005



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Test Report (SVHC)

No. CANEC1420547801

Date: 16 Dec 2014

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Appendix

Full list of tested SVHC:

Batch	No.	Substance Name	CAS No.	RL (%)
VIII	98	Biphenyl-4-ylamine	92-67-1	0.050
VIII	99	Bis(pentabromophenyl) ether (DecaBDE)	1163-19-5	0.050
VIII	100	Cyclohexane-1,2-dicarboxylic anhydride, cis-cyclohexane-1,2-dicarboxylic anhydride, trans-cyclohexane-1,2-dicarboxylic anhydride	85-42-7, 13149-00-3, 14166-21-3	0.050
VIII	101	Diazeno-1,2-dicarboxamide (C,C'-azodi(formamide))	123-77-3	0.050
VIII	102	Dibutyltin dichloride (DBTC)	683-18-1	0.050
VIII	103	Diethyl sulphate	64-67-5	0.050
VIII	104	Diisopentylphthalate	605-50-5	0.050
VIII	105	Dimethyl sulphate	77-78-1	0.050
VIII	106	Dinoseb	88-85-7	0.050
VIII	107	Dioxobis(stearato)trilead*	12578-12-0	0.005
VIII	108	Fatty acids, C16-18, lead salts*	91031-62-8	0.005
VIII	109	Furan	110-00-9	0.050
VIII	110	Henicosafuoroundecanoic acid	2058-94-8	0.050
VIII	111	Heptacosafuorotetradecanoic acid	376-06-7	0.050
VIII	112	Hexahydromethylphthalic anhydride, Hexahydro-4-methylphthalic anhydride, Hexahydro-1-methylphthalic anhydride, Hexahydro-3-methylphthalic anhydride	☆	0.050
VIII	113	Lead bis(tetrafluoroborate)*	13814-96-5	0.005
VIII	114	Lead cyanamidate*	20837-86-9	0.005
VIII	115	Lead dinitrate*	10099-74-8	0.005
VIII	116	Lead monoxide*	1317-36-8	0.005

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Appendix

Full list of tested SVHC:

Batch	No.	Substance Name	CAS No.	RL (%)
VIII	117	Lead oxide sulfate*	12036-76-9	0.005
VIII	118	Lead tetroxide (orange lead)*	1314-41-6	0.005
VIII	119	Lead titanium trioxide*	12060-00-3	0.005
VIII	120	Lead titanium zirconium oxide*	12626-81-2	0.005
VIII	121	Methoxyacetic acid	625-45-6	0.050
VIII	122	Methyloxirane (Propylene oxide)	75-56-9	0.050
VIII	123	N,N-dimethylformamide	68-12-2	0.050
VIII	124	N-Methylacetamide	79-16-3	0.050
VIII	125	N-Pentyl-isopentylphthalate	776297-69-9	0.050
VIII	126	o-Aminoazotoluene	97-56-3	0.050
VIII	127	o-Toluidine	95-53-4	0.050
VIII	128	Pentacosafuorotridecanoic acid	72629-94-8	0.050
VIII	129	Pentalead tetraoxide sulphate*	12065-90-6	0.005
VIII	130	Pyrochlore, antimony lead yellow*	8012-00-8	0.005
VIII	131	Silicic acid, barium salt, lead-doped*	68784-75-8	0.005
VIII	132	Silicic acid, lead salt*	11120-22-2	0.005
VIII	133	Sulfurous acid, lead salt, dibasic*	62229-08-7	0.005
VIII	134	Tetraethyllead*	78-00-2	0.005
VIII	135	Tetralead trioxide sulphate*	12202-17-4	0.005
VIII	136	Tricosafuorododecanoic acid	307-55-1	0.050
VIII	137	Trilead bis(carbonate)dihydroxide (basic lead carbonate)*	1319-46-6	0.005

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Appendix

Full list of tested SVHC:

Batch	No.	Substance Name	CAS No.	RL (%)
VIII	138	Trilead dioxide phosphonate*	12141-20-7	0.005
IX	139	4-Nonylphenol, branched and linear, ethoxylated	-	0.050
IX	140	Ammonium pentadecafluorooctanoate (APFO)	3825-26-1	0.050
IX	141	Cadmium oxide*	1306-19-0	0.005
IX	142	Cadmium*	7440-43-9	0.005
IX	143	Dipentyl phthalate (DPP)	131-18-0	0.050
IX	144	Pentadecafluorooctanoic acid (PFOA)	335-67-1	0.050
X	145	Cadmium sulphide*	1306-23-6	0.005
X	146	Diethyl phthalate	84-75-3	0.050
X	147	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	573-58-0	0.050
X	148	Disodium 4-amino-3'-[[4'-[(2,4-diaminophenyl)azo]-1,1'-biphenyl]-4-yl]azo]-5-hydroxy-6-(phenylazo)naphthalene-2,7-disulphonate (C.I. Direct Black 38)	1937-37-7	0.050
X	149	Imidazolidine-2-thione; (2-imidazoline-2-thiol)	96-45-7	0.050
X	150	Lead di(acetate)*	301-04-2	0.005
X	151	Triethyl phosphate	25155-23-1	0.050
XI	152	1,2-Benzenedicarboxylic acid, diethyl ester, branched and linear	68515-50-4	0.050
XI	153	Cadmium chloride*	10108-64-2	0.005
XI	154	Sodium perborate; perboric acid, sodium salt*	-	0.005
XI	155	Sodium peroxometaborate*	7632-04-4	0.005

Test Report (SVHC)

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Appendix

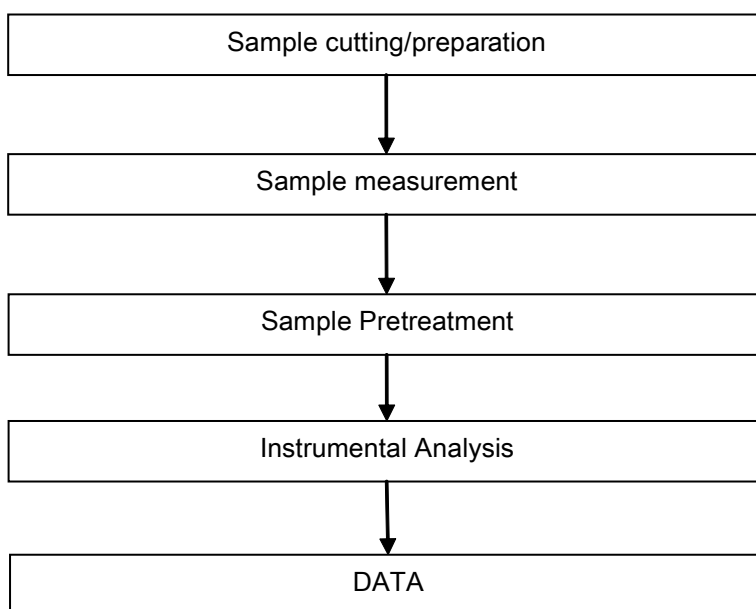
Full list of tested SVHC:

Batch	No.	Substance Name	CAS No.	RL (%)
/	156	2-(2H-Benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	0.050
/	157	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	0.050
/	158	2-Ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate; DOTE	15571-58-1	0.050
/	159	Benzyl butyl phthalate (BBP)	85-68-7	0.050
/	160	Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	0.050
/	161	Cadmium fluoride*	7790-79-6	0.005
/	162	Cadmium sulphate*	10124-36-4, 31119-53-6	0.005
/	163	Dibutyl phthalate (DBP)	84-74-2	0.050
/	164	Diisobutyl phthalate (DIBP)	84-69-5	0.050
/	165	Reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate & 2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio] -4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (reaction mass of DOTE & MOTE)	-	0.050

ATTACHMENTS

SVHC Testing Flow Chart

- 1) Name of the person who made testing: Martin He / Alison Zhang
- 2) Name of the person in charge of testing: Cutey Yu



Test Report (SVHC)

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Sample photo:



SGS authenticate the photo on original report only

*** End of Report ***

慈溪市玖发铜业有限公司

材料质量证明书

客户:

合力五金

证书号:

日期:

2014 3 25

合同号:

材 料 名 称 及 规 格										
牌 号	名 称	外 径		状 态		重 量		硬 度 (HV)		
C3604	铜线	Φ1.8		Y2		—		1020		
化学成分 (%)	铜 Cu	58.5	铅 Pb	28	锡 Sn	—	镍 Ni	—	铝 AL	
	铁 Fe	0.03	镉 Cd	0.0025	锌 Zn	余量	杂质总和			
机械性能		抗拉强度 N/mm ²				延伸率 (δ) %				制 造 方 法
—		380 — 420				12				热 处 理
产品技术条件		检验员: 陆								
✓		盖 章: 慈溪市玖发铜业有限公司 检验专用章								

注: 客户如对该批材料有异议, 请在十天内提出, 逾期责任自负。

测试报告

No. CANEC1404226403

日期: 2014年04月03日 第1页,共4页

慈溪市成瑞金属制品有限公司

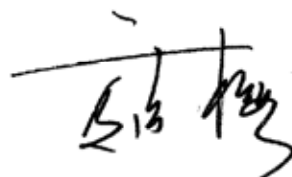
中国慈溪市掌起镇工业区北一环路24号

以下测试之样品是由申请者所提供及确认: C3604铜线

SGS工作编号: CP14-013488 - SZ
型号: ϕ 1.8铜线
供应商: 慈溪市玖发铜业有限公司
样品接收日期: 2014年03月31日
测试周期: 2014年03月31日 - 2014年04月03日
测试要求: 根据客户要求测试
测试方法: 请参见下一页
测试结果: 请参见下一页
结论: 基于所送样品进行的测试, 镉、铅、汞、六价格的测试结果符合欧盟RoHS指令2002/95/EC的重订指令2011/65/EU附录II的限值要求。

通标标准技术服务有限公司

授权签名



Almay Gao 高志梅

批准签署人

备注: 根据客户申请, SGS出具了此中文报告, 英文版本可根据客户要求提供. (The Chinese test report is issued according to the applicant's request. The English version is available from SGS if further needed)



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测试报告

No. CANEC1404226403

日期: 2014年04月03日 第2页,共4页

测试结果:

测试样品描述:

样品编号	SGS样品ID	描述
SN1	CAN14-042264.003	黄铜色金属

备注:

- (1) 1 mg/kg = 1 ppm = 0.0001%
- (2) MDL = 方法检测限
- (3) ND = 未检出 (< MDL)
- (4) "-" = 未规定

RoHS指令2011/65/EU

测试方法:

- (1)参考IEC 62321-5:2013, 用ICP-OES测定镉的含量
- (2)参考IEC 62321-5:2013, 用ICP-OES测定铅的含量
- (3)参考IEC 62321-4:2013, 用ICP-OES测定汞的含量
- (4)参考IEC 62321:2008, 用点测试法/紫外-可见分光光度计比色法测定六价格的含量

测试项目	限值	单位	MDL	003
镉 (Cd)	100	mg/kg	2	5
铅 (Pb)	1,000	mg/kg	2	21505 ^{<1>}
汞 (Hg)	1,000	mg/kg	2	ND
六价格(Cr(VI))	-	-	◇	阴性

备注:

- (1) 最大允许极限值引用自指令2011/65/EU 附录II.
- (2) ◇点测试法:
阴性= 未检测到六价格, 阳性= 检测到六价格;
(当点测试结果为阴性或无法确定时,将采用沸水萃取法作进一步的结果验证.)
◇沸水萃取法:
阴性= 未检测到六价格
阳性= 检测到六价格; 表明50 cm²表面积的被测试样品的沸水萃取液中六价格的浓度等于或大于0.02 mg/kg
由于未获知样品的存储条件和生产日期, 样品的六价格测试结果仅能代表测试时样品含六价格的状态。

备注<1>: 根据客户提供的声明, 样品中的铅(Pb)被欧盟RoHS指令2011/65/EU豁免, 相应豁免条文(请以英文原文为准): 铜合金中的铅含量不得超过4%。



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SGS Standards Technical Services Co., Ltd.
Guangzhou Scientific and Technical Laboratory

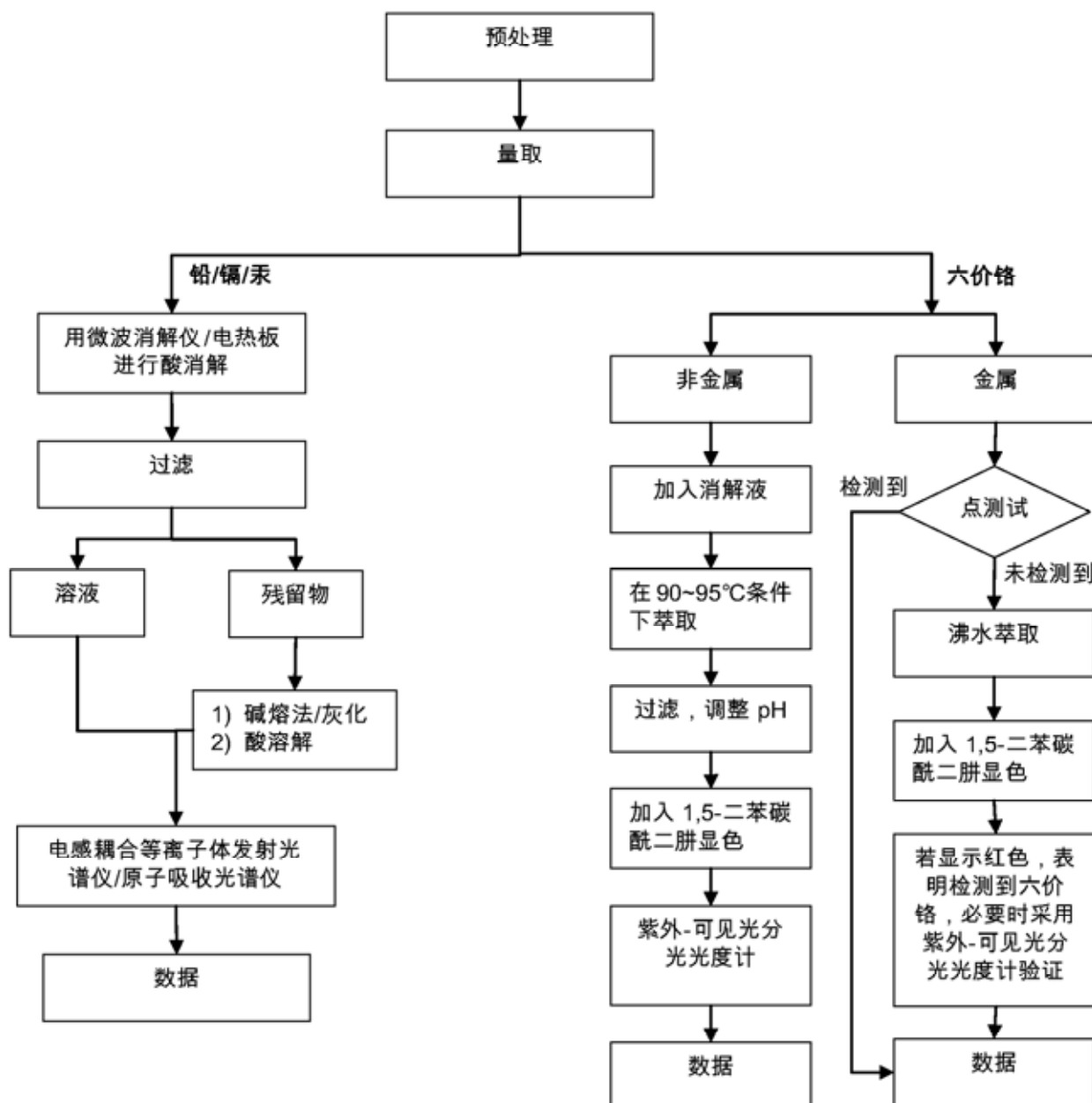
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Member of the SGS Group (SGS SA)

附件

RoHS 测试流程图

- 1) 分析人员：曹阳
- 2) 项目负责人：余奕东
- 3) 样品按照下述流程被完全消解（六价铬测试除外）。



测试报告

No. CANEC1404226403

日期: 2014年04月03日 第4页,共4页

样品照片:



此照片仅限于随SGS正本报告使用

*** 报告完 ***

ShenZhen Duoxin Industrial Co.,Ltd

Material Safety Data Sheet

一. Information of Goods and Manufacturer

Product name: gold salt

Company name: Yantai Zhaojinlifu precious metal Co., Ltd

Address: Gold industrial park,Economic development zone ,Zhaoyuan City, Shandong Province

TEL: 0535-8113116

FAX: 0535-8112277

Set Date 2011-07-15

Retention Period:5year

二. Chemical identification

English names: potassium auric cyanide/Gold (1) Potassium Cyanide $\text{KAu}(\text{CN})_2$

Main components: $\text{KAu}(\text{CN})_2$

Component: Au68.3% K(CN)31.7%

Synonymous name: —

Chemical Abstracts Service registration number (CAS NO.):
Au:14263-59-3 ,K(CN):151-50-8

Hazardous substances (component ratio): 68.3

三.Hazard identification

Most significant hazardous effect	Health hazard effect:
	Extremely poisonous; release toxious gas hydrogen cyanide (HCN) when contacting with acidic material materials. If contact with the eyes or skin, it will stimulate the contaminated parts. Fatal
	Environmental impact:
	Physical and chemical hazards:
	Special hazards: -

Cardinal symptoms: loss of consciousness, headache, nausea, vomiting, dizziness, weakness, unfavorable breathing.

ADR 6.1/41a:RID 6.1/41a Classification of article hazards: ADR 6.1/41a:RID 6.1/41a

四. First aid measures

Emergency measures for different exposures:

Inhaled: 1. Crush the amyl nitrite in cloth, and put in under the nose carefully for 15 seconds

2. Inhale every 15 seconds for 5 times

3. Once respiration ceases, artificial respiration must be performed

4. Oxygen therapy

Skin contact:

1. Flush for more than 15 minutes with a large quantity of water immediately, and take off the contaminated clothes and shoes during flushing

2. Clean the clothes thoroughly before wearing them again

In case of contact with eyes:rinse immediately with plenty of water for at least 15 minutes

Ingested: 1. Take some oxide antidote to see a doctor

2. If the patient has lost consciousness, crush some amyl nitrite, and put it carefully under his nose for 15 seconds

3. Oxygen therapy

4. When the patient regains consciousness, induce vomiting

The most significant symptoms and hazard effect: -

Protection for first-aid personnel: -

Prompt for doctors: -

五. Fire fighting measures

Applicable fire extinguishing agents. Use proper fire extinguishing agents against the surrounding fire, e.g. dry chemical powder, carbon dioxide, sprinkling

Equipment and ordinary foam

Special hazards may occur during extinguishment: —

Special fire extinguishing procedure:

1. Disperse the inflammable vapor since it may react with the air to create explosive mixture

2. When being heated, the closed vessel may explode

3. Transport the vessels away from fire areas under the circumstances under the precondition of personnel safety

Special protective equipments for fire personnel: -

六. Accidental release measures

Personal precautions: DO NOT contact or pass through the leaked, and try to stop the leakage while guaranteeing personnel safety

Matters concerned to environment: flush the leakage area with water

Cleaning method: carefully put the leakage with a clean scoop into a clean and dry container which will be then covered with a lid and removed away from the leakage area

七. Handling and sortage

Disposal:

Storage:

1. Prevent contact with eyes, skin and clothes
2. Avoid inhaling its fine dust
3. Avoid the contact with acids in order not to release poisonous gas that may cause death.
4. Store in airtight container and keep dry.
5. Store in toxic substance control area.
6. Isolate the incompatible articles
7. The containers filled shall be labeled

八. Exposure controls

Engineering control:

Control parameters:

1. Allowable average concentration for eight hours per day/short-time allowable average concentration/maximum allowable concentration:

5mg/m³(皮)/10mg/m³(皮)/- 5mg/m³ (skin)/10mg/m³ (skin)/ -

Biological index:

Personal protection equipment:

Eyes: safety goggles

Respiration type:

1. Not necessary in well-ventilated conditions.
2. If the concentration in the air exceeds the tolerance, a self-contained respiration type protective equipments shall be equipped.

Gloves: rubber gloves

Others: above-mentioned rubber materials, apron and work clothes

Hygienic measures:

1. Take off the contaminated clothes immediately after work, and wear or abandon them after washing while informing washing personnel with the hazards of contaminants

2. Smoking or drinking and dining is strictly forbidden at work place.
3. DO wash hands thoroughly with soap after disposing this article.
4. Maintain the cleanness of working environment.
5. See a doctor immediately after discomfort occurs.

九.Physical and Chemical Property

State of matter: solid	Shape:- powder
Color: white	Odor:
PH value: -	Boiling point/boiling range:
Decomposition temperature: -	Flash point: - Testing method: -
Self-ignition temperature: -	Explosion limit: -
Vapor pressure: - mmHg	Vapor density: -
Density:	Solubility:

十.Stability/ reactivity information

Stability: stable

Hazardous reaction that may occur in special conditions: -

Condition to be avoided: be heated

Substances to be avoided: 1. strong acid, 2. strong oxidizers, 3. ammonia, chlorine, hydrogen peroxide.

Hazardous decomposition product: hydrogen cyanide, nitrogen oxides.

十一.Toxicological information

Acute toxicity: -

Local effect: -

Sensitization: -

Slow toxicity or long term toxicity: -

Special effects: -

十二.Ecological data

Possible environmental impacts: -

十三.Disposal considerations:

Wastes disposal methods:

Conducted in accordance with relevant laws and regulations

十四. Transportation Information

International transportation regulations: -

UN NO 1558/6.1

Domestic transportation regulations:

Special transportation methods and matters needing attention:

十五. Laws and Regulations

Applicable codes:

Regulations on Occupational Safety and Health Facilities

Standard for the Allowable Concentration of Harmful Substances in the Air of Labor's Working Environment

Road Traffic Safety Rule

Standard for Storage and Proposal Methods and Facilities for Industrial Wastes

十六. Other Information

Reference
document

1. The "Toxicity List in Chinese" of Sino-US Cooperation Plan issued by Health Department of the Executive Yuan in March 1986

2. Toxicity Data Base in Chinese by Environmental Protection Administration of the Executive Yuan

3. Prevention and Control Manual for Toxic Chemicals Disaster issued by Environmental Protection Administration of the Executive Yuan in November 1989

4. Electronic edition of material safety data sheet of the industrial safety and sanitary technology development center under Industrial Technology Research Institute

5. Handbook of Toxic and Hazardous Chemicals and Carcinogens

6. Hazardous Substances Data Bank (HSDB) Data Base, Chemknowledge Disc, Volume 50, 2001

Test Report

No. CANML1403772501

Date: 28 Mar 2014

Page 1 of 7

SHENZHEN DUOXIN INDUSTRIAL CO., LTD

NO.3 INDUSTRIAL ZONE, SONGGANG RIVERSIDE, BAOAN DISTRICT, SHENZHEN CHINA

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

SGS Job No. : SZML140301857 - SZ

Date of Sample Received : 24 Mar 2014

Testing Period : 24 Mar 2014 - 28 Mar 2014

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 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.

Echo

Echo Yeung
Approved Signatory



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Test Report

No. CANML1403772501

Date: 28 Mar 2014

Page 2 of 7

Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	CAN14-037725.001	Silvery plated metal
SN2	CAN14-037725.002	Silvery plating on metal

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 : (1) Determination of Cadmium and Lead by ICP-OES after application of modified surface etching digestion based on IEC62321-5:2013
 (2) Determination of Mercury by ICP-OES after application of modified surface etching digestion based on IEC 62321-4:2013
 (3) Determination of Hexavalent Chromium by spot test/ UV-Vis with reference to IEC 62321:2008

Test Item(s)	Limit	Unit	MDL	002
Cadmium (Cd)	100	mg/kg	10	ND
Lead (Pb)	1,000	mg/kg	10	34
Mercury (Hg)	1,000	mg/kg	10	ND
Hexavalent Chromium (CrVI)	-	-	◇	Negative

Notes :

- (1) The maximum permissible limit is quoted from the directive 2011/65/EU, Annex II
- (2) ◇ Spot-test:
 Negative = Absence of CrVI coating, Positive = Presence of CrVI coating;
 (The tested sample should be further verified by boiling-water-extraction method if the spot test result is Negative or cannot be confirmed.)
- ◇ Boiling-water-extraction:
 Negative = Absence of CrVI coating
 Positive = Presence of CrVI coating; the detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm² sample surface area.
 Information on storage conditions and production date of the tested sample is unavailable and thus results of Cr(VI) represent status of the sample at the time of testing.



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SGS Standards Technical Services Co., Ltd.
Guangzhou

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Member of the SGS Group (SGS SA)

Halogen

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

Test Item(s)	Unit	MDL	001
Fluorine (F)	mg/kg	50	ND
Chlorine (Cl)	mg/kg	50	ND
Bromine (Br)	mg/kg	50	ND
Iodine (I)	mg/kg	50	ND

Perfluorooctane Sulfonates (PFOS) and Perfluorooctanoic Acid (PFOA)

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

Test Item(s)	Unit	MDL	001
Perfluorooctane Sulfonates (PFOS) and related Acid,Metal Salt and Amide	µg/m ²	1	ND
Perfluorooctanoic Acid (PFOA)	µg/m ²	1	ND

Notes :

- For reference: commission regulation (EU) No 757/2010 amending regulation (EC) No 850/2004:
- (1) For the purposes of this entry, Article 4(1) (b) shall apply to concentrations of PFOS equal to or below 10 mg/kg (0,001 % by weight) when it occurs in substances or in preparations.
 - (2) For the purposes of this entry, Article 4(1) (b) shall apply to concentrations of PFOS in semi-finished products or articles, or parts thereof, if the concentration of PFOS is lower than 0,1 % by weight calculated with reference to the mass of structurally or micro-structurally distinct parts that contain PFOS or, for textiles or other coated materials, if the amount of PFOS is lower than 1µg /m2 of the coated material.

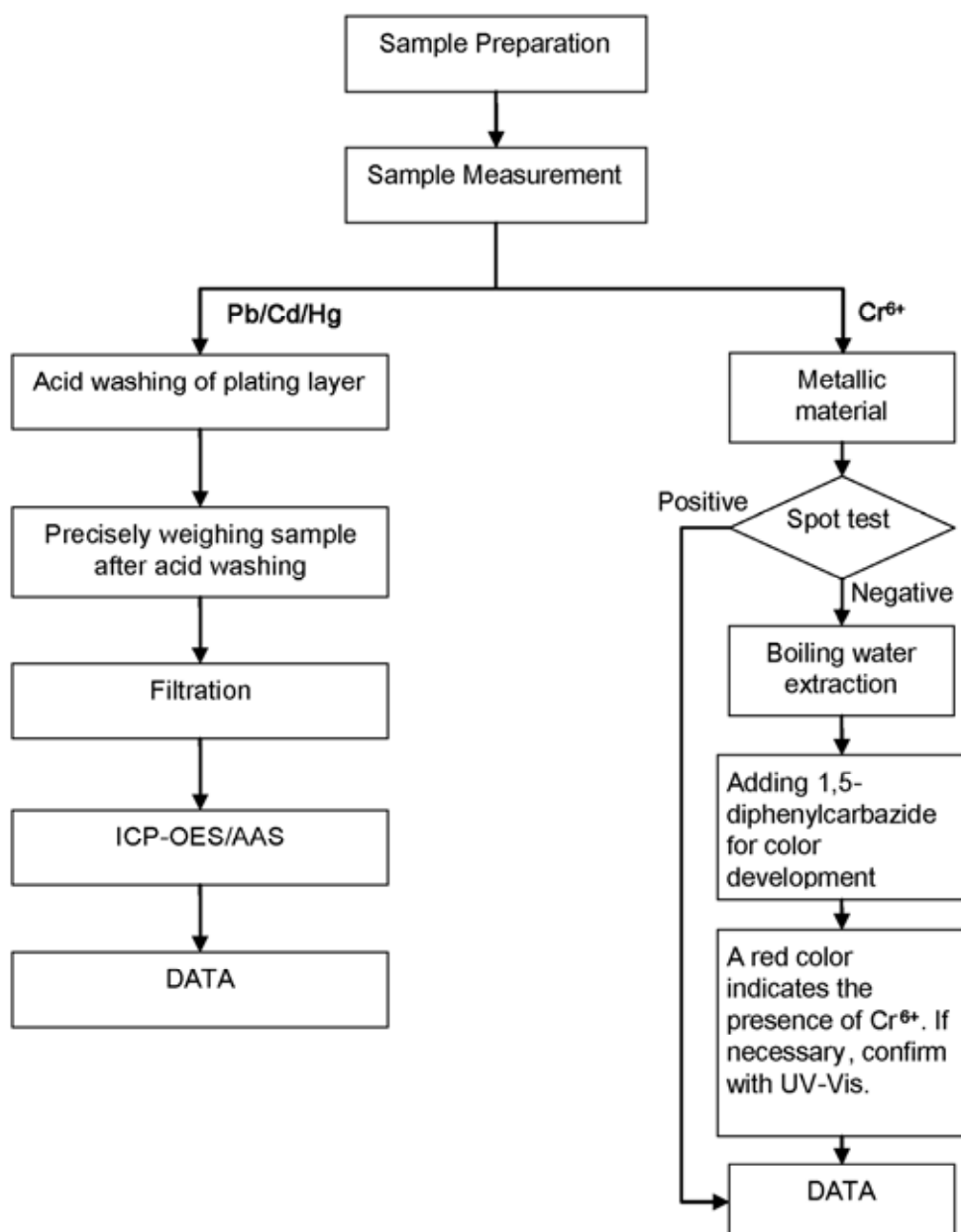


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ATTACHMENTS

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

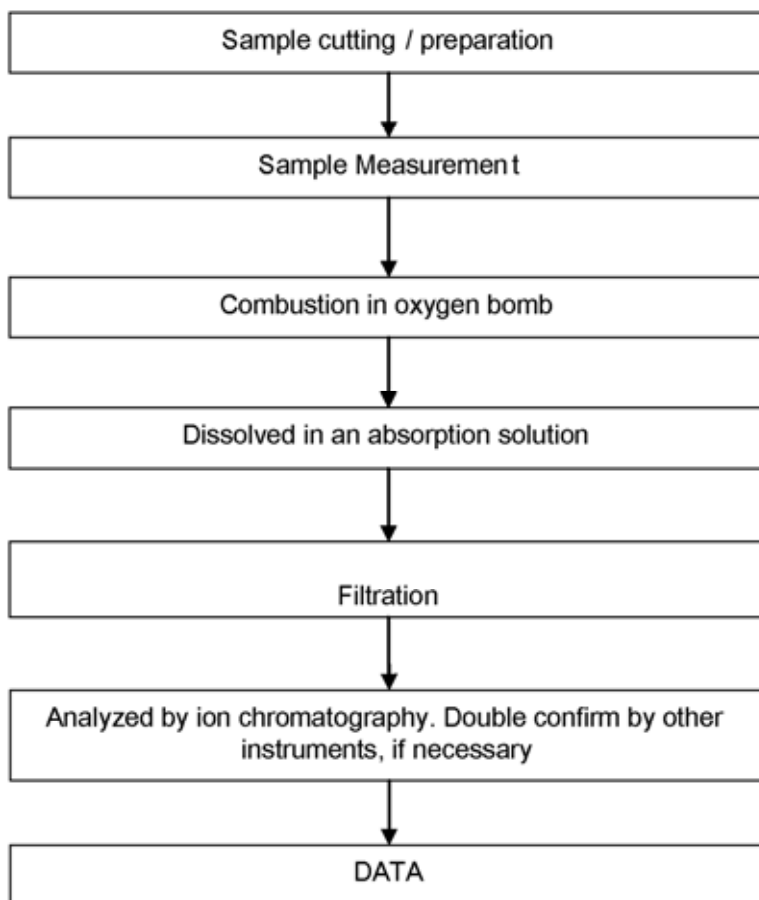
- 1) Name of the person who made testing: Michael Tso
- 2) Name of the person in charge of testing: Adams Yu



ATTACHMENTS

Halogen Testing Flow Chart

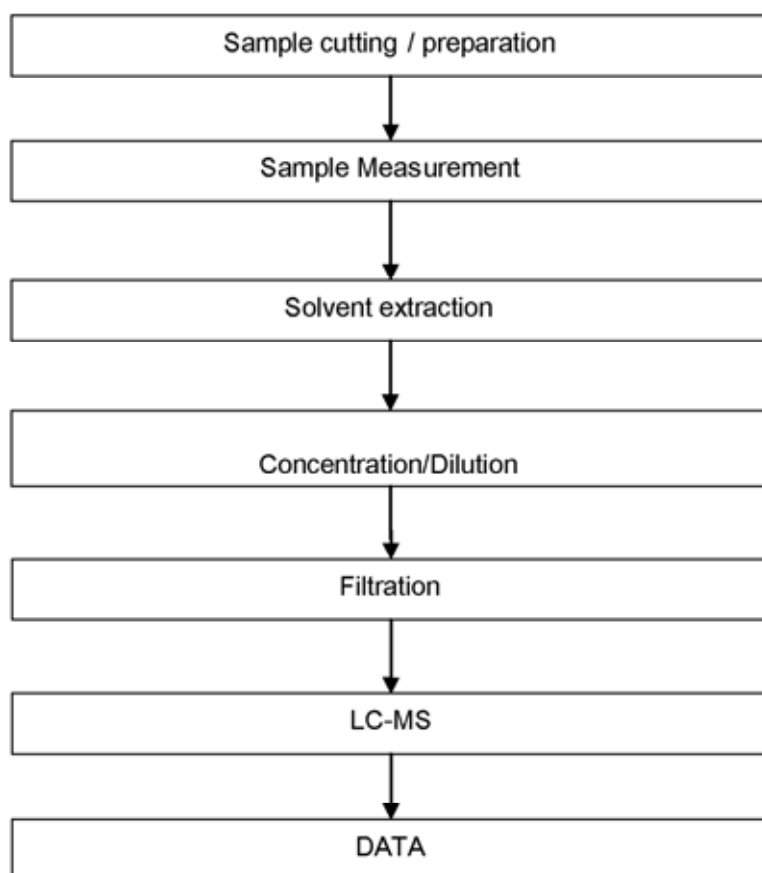
- 1) Name of the person who made testing: Bella Wang
- 2) Name of the person in charge of testing: Adams Yu



ATTACHMENTS

PFOA / PFOS Testing Flow Chart

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



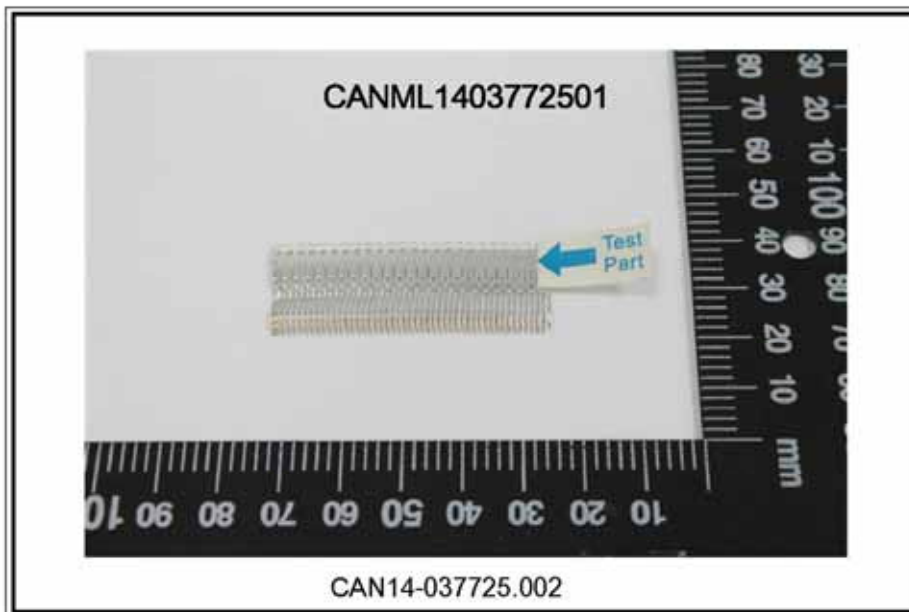
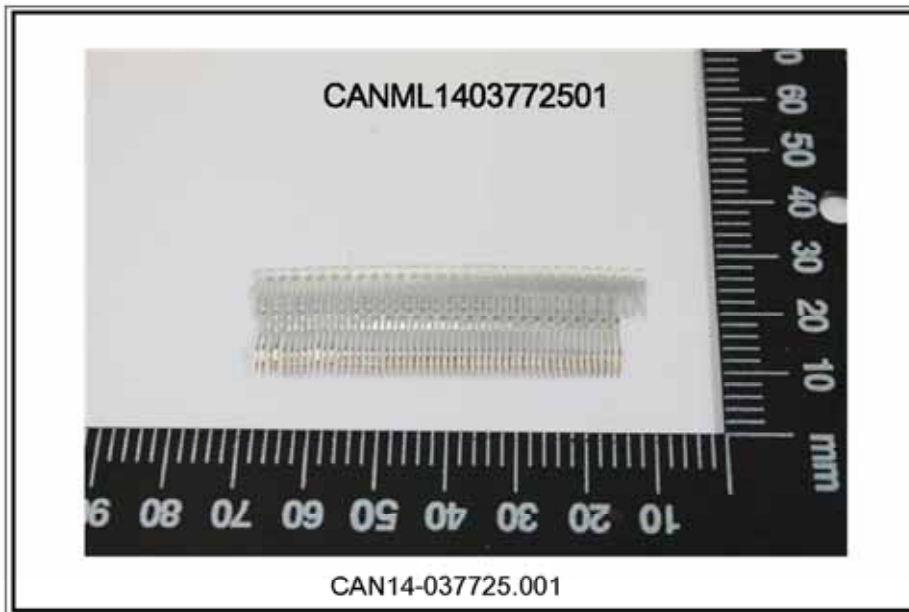
Test Report

No. CANML1403772501

Date: 28 Mar 2014

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Sample photo:



SGS authenticate the photo on original report only

*** End of Report ***

Test Report

No. CANML1415866501

Date: 29 Sep 2014

Page 1 of 6

SHENZHEN DUOXIN INDUSTRIAL CO, LTD .

NO.3 INDUSTRIAL ZONE,SONGGANG RIVERSIDE,BAOAN DISTRICT,SHENZHEN CHINA

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

SGS Job No. : SZIN1409000680PC - SZ

Date of Sample Received : 25 Sep 2014

Testing Period : 25 Sep 2014 - 29 Sep 2014

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 sample(s), the results of Lead, Mercury, Cadmium, Hexavalent chromium 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.



Almay Gao
Approved Signatory



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Test Report

No. CANML1415866501

Date: 29 Sep 2014

Page 2 of 6

Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	CAN14-158665.001	Golden plated metal

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

Test Item(s)	Limit	Unit	MDL	001
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1,000	mg/kg	2	18
Mercury (Hg)	1,000	mg/kg	2	ND
Hexavalent Chromium (CrVI)	-	-	◇	Negative

Notes :

- (1) The maximum permissible limit is quoted from the directive 2011/65/EU, Annex II
- (2)◇Spot-test:
 Negative = Absence of CrVI coating, Positive = Presence of CrVI coating;
 (The tested sample should be further verified by boiling-water-extraction method if the spot test result is Negative or cannot be confirmed.)
- ◇Boiling-water-extraction:
 Negative = Absence of CrVI coating
 Positive = Presence of CrVI coating; the detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm² sample surface area.
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Perfluorooctane Sulfonates (PFOS) and Perfluorooctanoic Acid (PFOA)

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

<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Perfluorooctane Sulfonates (PFOS) and related Acid,Metal Salt and Amide	µg/m ²	1.0	ND
Perfluorooctanoic Acid (PFOA)	µg/m ²	1.0	ND

Notes :

For reference: commission regulation (EU) No 757/2010 amending regulation (EC) No 850/2004:

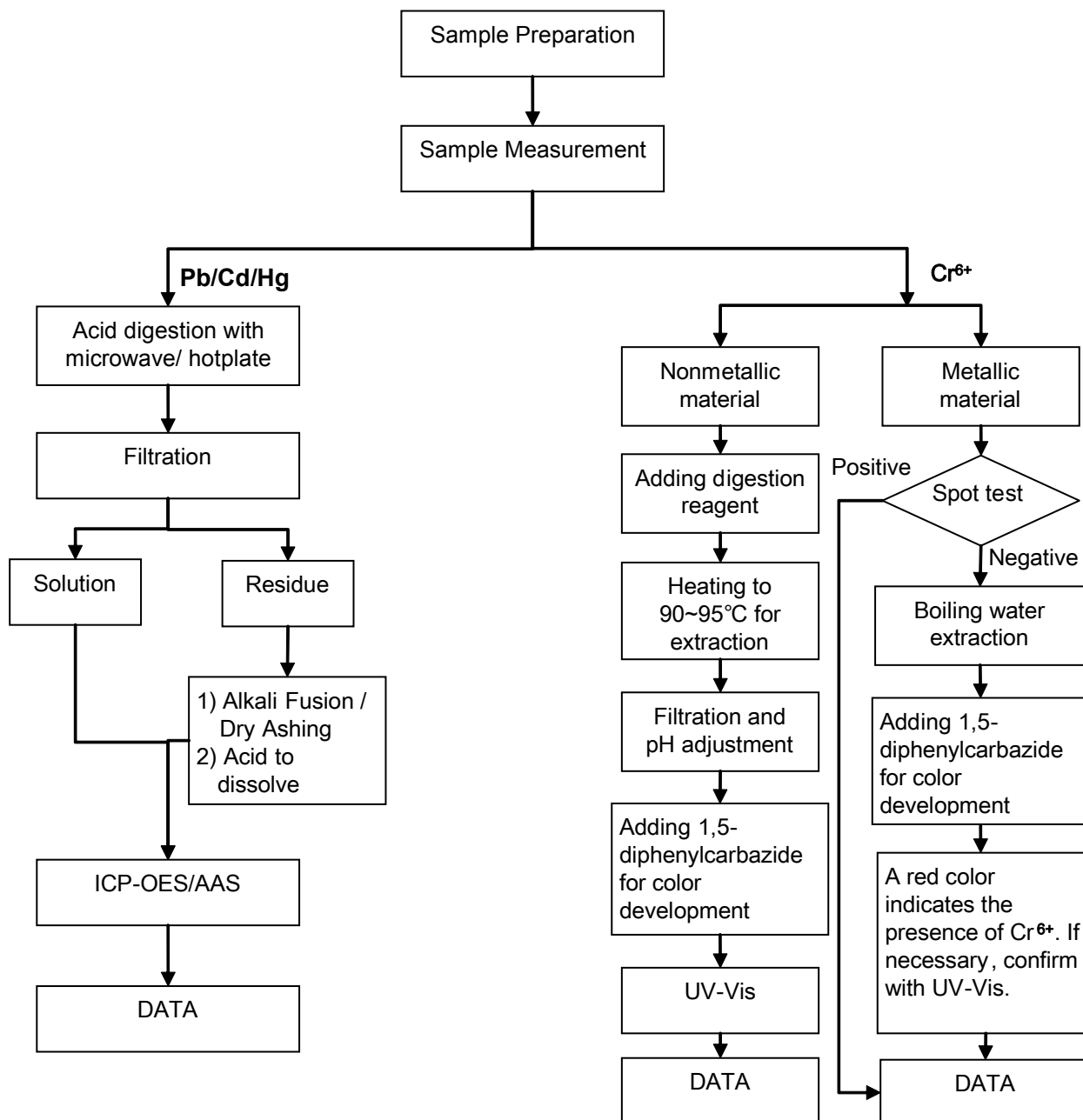
(1) For the purposes of this entry, Article 4(1) (b) shall apply to concentrations of PFOS equal to or below 10 mg/kg (0,001 % by weight) when it occurs in substances or in preparations.

(2) For the purposes of this entry, Article 4(1) (b) shall apply to concentrations of PFOS in semi-finished products or articles, or parts thereof, if the concentration of PFOS is lower than 0,1 % by weight calculated with reference to the mass of structurally or micro-structurally distinct parts that contain PFOS or, for textiles or other coated materials, if the amount of PFOS is lower than 1µg /m2 of the coated material.

ATTACHMENTS

RoHS Testing Flow Chart

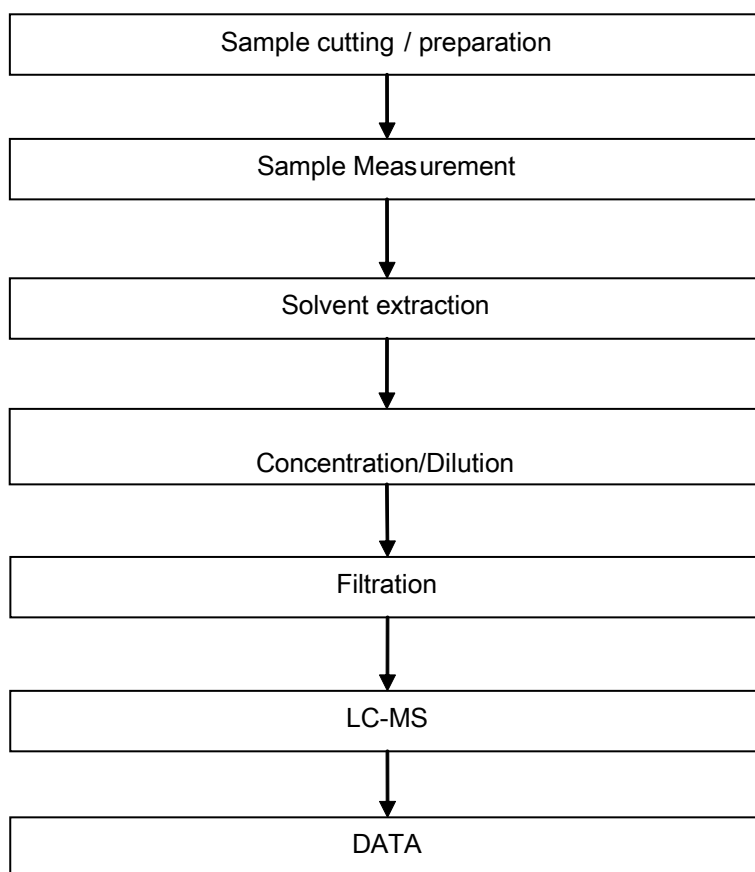
- 1) Name of the person who made testing: Bruce Xiao
- 2) Name of the person in charge of testing: Bella Wang
- 3) These samples were dissolved totally by pre-conditioning method according to below flow chart (Cr⁶⁺ test method excluded).



ATTACHMENTS

PFOA / PFOS Testing Flow Chart

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



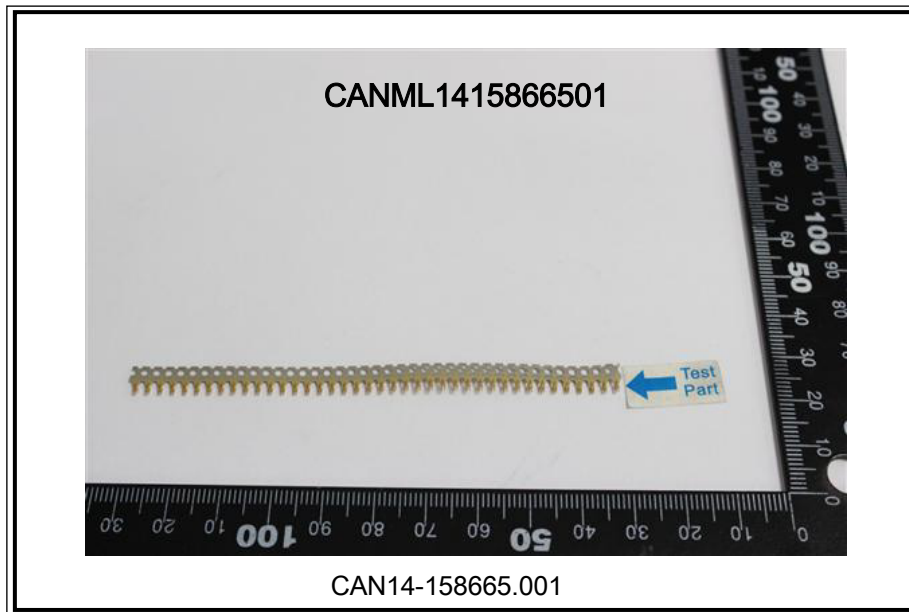
Test Report

No. CANML1415866501

Date: 29 Sep 2014

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Sample photo:



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*** End of Report ***