WCON®

承　認　書

SPECIFICATION FOR APPROVAL

客戶名稱 Customer：韩国海岩

品名規格 Description：2.54 IDC Socket XXP 弹片式 带凸点 1U"半金 二件式 装中盖 黑色

客戶料號 Customer Part №：

維峰料號 WAFE Part №：5212-XXYBS0BW01

呈送日期 Deliver Date：2013年(Year) 12月(Month) 2日(Day)

客 戶 確 認 (Customer Approved)

核 准 (APPROVAL)	工 程 (ENGINEERING)	品　管 (QC)

承认结果:	□ 承 认	□ 不 承 认	□ 重新送样

維 峰 確 認 (Customer Approved)

核 准 (APPROVE)	审核 (CHECK)	制 作 (PREPARE)
赵 世 志	唐 雄 燕	封 殿 宇

制作单位 (PREPARE BY)

■东莞市維峰五金電子有限公司
DONGGUAN WCON HARDWARE ELECTRONICS CO., LTD
地 址: 廣東省東莞市長安鎮上沙管理区合和区中南中路博业工业园F栋
ADD: Bldg. F Boye Industrial Park Zhongnan Middle Rd. Shangsha,Chang'an,Dongguan,Guangdong
TEL: (0086)769-85358920 FAX: (0086)769-85358915
E-Mail: sales@wcon.com salesdg@wcon.com Http: // www.wcon.com

□昆山市维康電子有限公司
Kunshan-WCON ELECTRONICS CO., LTD
地 址: 江蘇省昆山市千燈鎮北部工业区七蒲支路211号
ADD: Nanwan Village,Qiandeng Town,Kunshan City,Jiangsu Province,PRC
TEL: 086-0512-57468408 FAX: 086-0512-57468468
E-Mail: salesks@wcon.com

FILE NO.E248993　FILE NO.E248993

專業的電腦，通訊類精密連接器及線纜制造商
Professional Manufacturer For Computers and Precision Connectors etc.
国家高薪技术企业，广东省著名商标企业
National high-tech enterprise,Guangdong province famous brand enterprise

ISO9001:2008　ISO:14001:2004
ISO/TS16949:2009　IECQ-QC080000

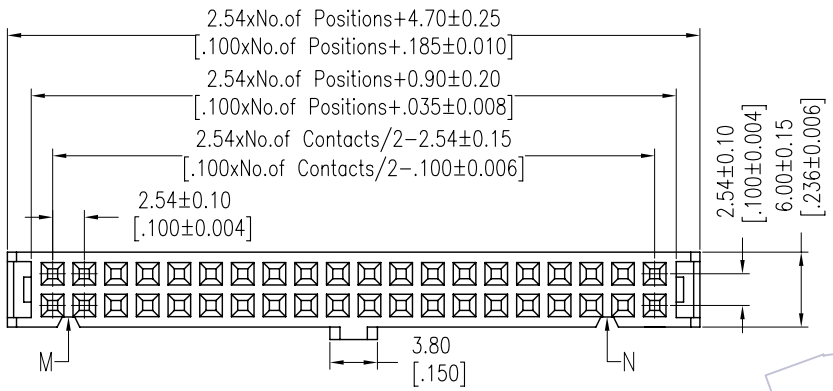
承认书目录

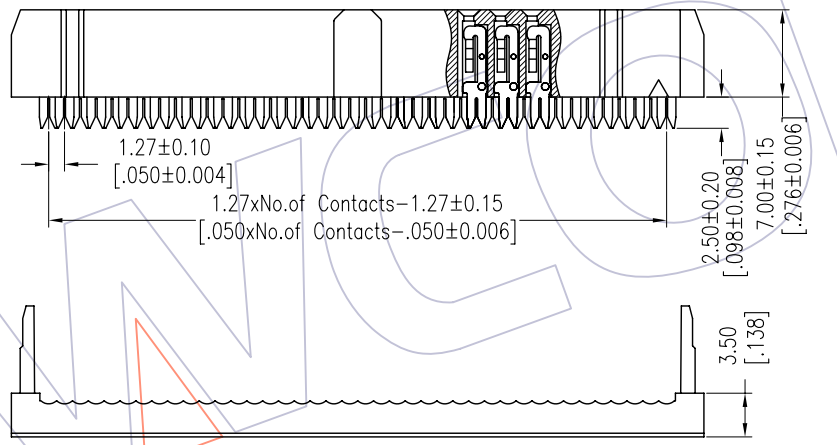
HSF

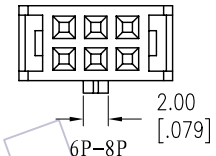
NOTES:
Current Rating: 3.0AMP
Contact Resistance: 20mΩ Max
Withstand Voltage: 1000V AC/DC
Insulation Resistance: 1000MΩ Min
Operation Temperature: −40℃ to +105℃

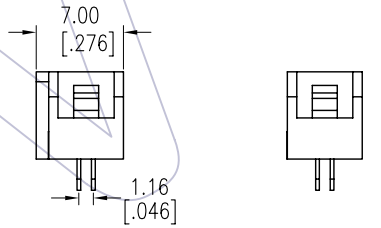
Contact Material:Brass Or Phosphor Bronze
Contact plating:Au Or Sn over Ni
Insulator Material:PBT+30%G.F UL94V-0

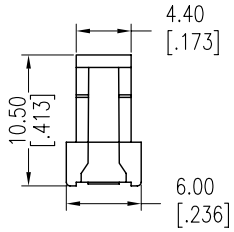
6P Without Slot "M" and "N"
8P−12P With Slot "M", Without Slot "N"
14P−64P With Slot "M" and "N"









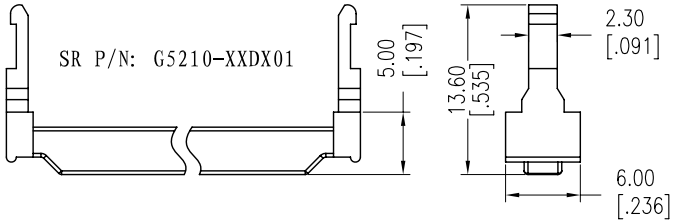


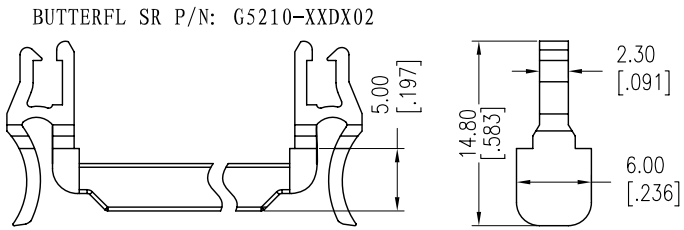
Ordering Information

5212- XX Y B XX B X 01

Two Parts Conn+Cover	No.of Pins 06P 26P 08P 30P 10P 34P 12P 36P 14P 40P 16P 44P 18P 50P 20P 60P 22P 64P 24P	Contact Material B=Brass P=Phosphor Bronze	Contact Plating S0=Gold Flash/Ni S3=10u"Gold/Ni S4=15u"Gold/Ni S5=30u"Gold/Ni SN=Tin	Color Insulator B=Black G=Grey(427C)	Bump N=W/O Bump W=With Bump	

Item	Pitch	Mating
Standard	2.54	3110/3210
Alternate		





REV	DATE	MODIFICATION DESCRIPTION	CHANGE
A0	2012/12/28	NEW	------

OPERATION	
X.X	±0.40
X.XX	±0.25
X.XXX	±0.15
Angle	± 3°
DIM	TOL

DRAW	JYHuang	DATE	2012/12/28
CHECK		DATE	
APPROVE		DATE	

SCALE	FIT
UNIT	mm
SIZE	A4
SHEET	1/1
PROJ.	

PART NO. 5212−XXYBXXBX01

TITLE: 2.54 IDC SOCKET+SR (ONE SIDE CONTACT)

Customer NO.

WCON
Http: www.wcon.com

WCON−Dongguan
Tel: +86 769 85358920
Fax: +86 769 85358915
E-mail: sales@wcon.com

WCON−Kunshan
Tel: +86 512 57468408
Fax: +86 512 57468468
E-mail: salesks@wcon.com

WCON	WCON HARDWARE ELECTRONIC CO., LTD.	SPECIFICATION AND PERFORMANCE	TYPE OF PRODUCT
			2.54mm IDC SOCKET

Table of Content

Rev	Date	Description	Edited by	Approvals	
A0	2010-4-19	Issue	YLANG	Prepared :	
A1	2013-4-30	Modify IR Reflow Graph and temperature	TANG	Checked :	
				Approved :	
				Issued No :	WF029
				Sheet :	1 OF 9

1. Scope:

This specification covers the requirements for product performance, test methods and quality assurance provisions of **2.54mm Insulation Displacement Contacts Socket.**

2. Reference Documents :

The following documents form a part of this specification to the extent specified herein. In the event of conflict between the requirements of this specification and the product drawing, the product drawing shall take precedence. In the event of conflict between the requirements of this specification and the referenced documents, this specification shall take precedence.

A. EIA-364 :

The Test Sequence and Test Procedures for Electrical Connectors and Sockets.

3. Material of Components :

	Component	Material	Finish
1	Housing	Thermoplastic PBT+30%G.F UL94V-0	None
2	Contact	Copper Alloy 青铜	Refer to Ordering Information

4. Design and Construction :

Product shall be of the design, construction and physical dimensions specified in the applicable product drawing.

5. Performance and Test Descriptions :

The product is designed to meet the electrical, mechanical and environmental performance requirements specified below. All tests are performed at ambient temperature unless otherwise specified.

5.1 Electrical Performance :

	Test Items	Test Procedures & Condition	Requirements
1	Contact Resistance	EIA 364-23 Subject mated contacts assembled in housing to closed circuit current of 100 mA maximum at open circuit at 20 mV maximum.	1. Initial value : 20 mΩ max. 2. Final value : 30 mΩ max.
2	Insulation Resistance	EIA 364-21 Measure by applying test potential between the adjacent contacts, and between the contacts and ground in the mated connector assemblies. Test Voltage :1000 V DC. Test Duration : 1 Minute	Not less than 1000 MΩ
3	Dielectric Withstanding Voltage	EIA 364-20 Measure by applying test potential between the adjacent contacts, and between the contacts and ground in the mated connector assemblies. Test Potential : 1000 Vac at sea level Test Duration : 1 Minute	1. No disruptive discharge, leakage or deterioration. 2. Current leakage : ＜0.5 mA

5.2 Mechanical Performance :

	Test Items	Test Procedures & Condition	Requirements
1	Mating and Unmating force	EIA 364-13 Subject terminated connector to mate and unmate to measure the force required to engage and disengage at a rate of 50mm a minute. Record by using autograph.	1. Mating force Maximum 150 gf. 2. Unmating force Minimum 30 gf. (per pin)
2	Durability	EIA 364-09 Mate and Unmate connector assemblies at maximum rate of 200 cycles per hour. Test Cycles : 300 cycles Min	1. No evidence of damage. 2. The electrical performances meet the spec. specified in paragraph 5.1
3	Vibration	EIA 364-28 Condition V Test letter A Subject mated connectors should be tested according to the condition listed below : Test condition : Random Frequency : 50 ~ 2000 Hz PSD value : 3.13 G_{rms} minimum Duration : 15 minutes/axis Times : Each of three mutually perpendicular planes.	1. No evidence of damage. 2. No discontinuities of 1μs or longer duration. 3. The electrical performances meet the spec. specified in paragraph 5.1

	Test Items	Test Procedures & Condition	Requirements
4	Physical Shock	EIA 364-27 Condition H Subject mated connectors should be tested according to the condition listed below : Wave form : Half-sine Peak acceleration : 30 G's Duration : 11 ms Times : 3 shocks in each direction applied along three mutually perpendicular planes, total 18 shocks.	1. No evidence of damage. 2. No discontinuities of 1μs or longer duration. 3. The electrical performances meet the spec. specified in paragraph 5.1

5.3 Environmental Performance :

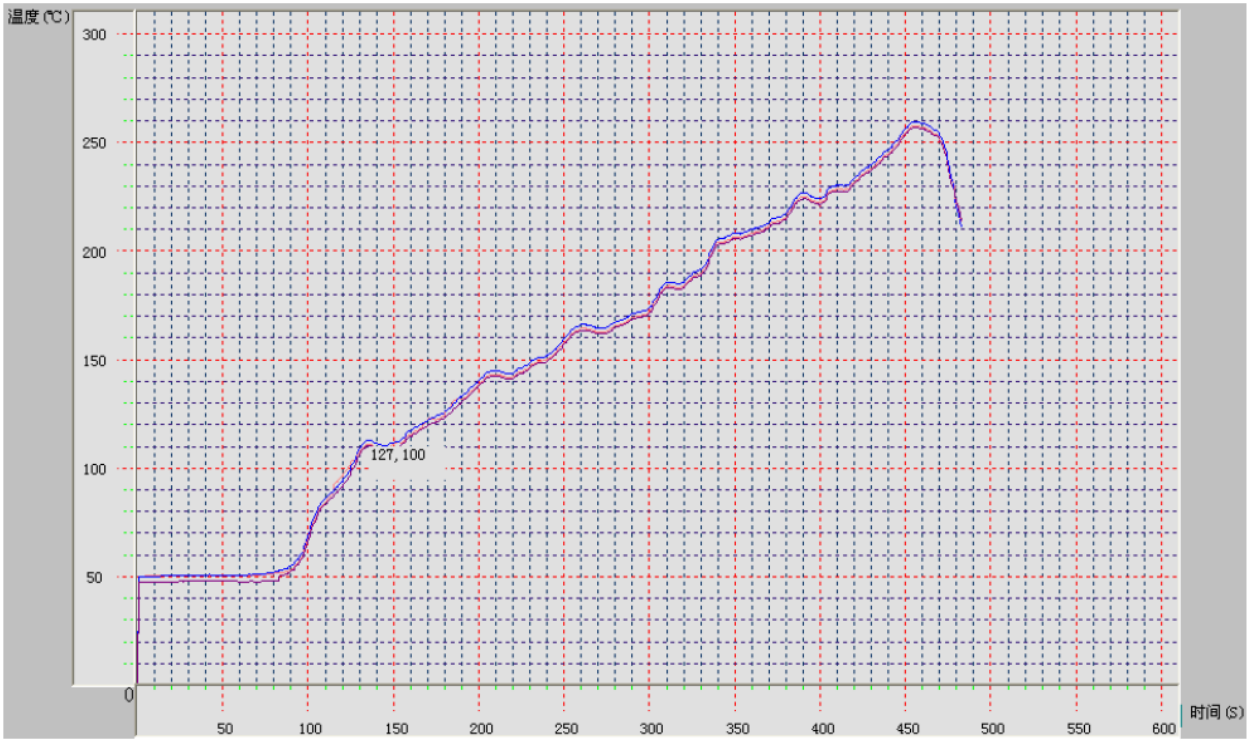
	Test Items	Test Procedures & Condition	Requirements
1	Humidity (Temperature Cycling)	EIA 364-31 Method III Test Condition A Subject mated connectors should be tested according to the condition listed below : Temperature : 25 ~ 65°C Humidity : 90 ~ 95% (R.H) Duration : 96 hours	1. No evidence of damage. 2. The electrical performances meet the spec. specified in paragraph 5.1

	Test Items	Test Procedures & Condition	Requirements
2	Thermal Shock	EIA 364-32 Test Condition I Subject mated connectors should be tested according to the condition listed below : Temperature : -55 ~ 85°C Cycles : 5 Exposure time at temperature extremes : 30 minutes	1. No evidence of damage. 2. The electrical performances meet the spec. specified in paragraph 5.1
3	Salt Spray	EIA 364-26 Test Condition A Subject mated and unmated connectors should be tested according to the condition listed below : Temperature : 235±1.1°C Humidity : 95 ~ 98% (R.H) PH Value : 6.5 ~ 7.2 Duration : 8 hours	1. No evidence of damage. 2. The electrical performances meet the spec. specified in paragraph 5.1
4	Temperature Life	EIA 364-17 Test Condition 3 Method A Subject mated connectors should be tested according to the condition listed below : Temperature : 85±2°C Duration : 96 hours	1. No evidence of damage. 2. The electrical performances meet the spec. specified in paragraph 5.1

	Test Items	Test Procedures & Condition	Requirements
5	Resistance to Soldering Heat	EIA 364-56 Procedure 3 Test Condition C 1. PA6T/LCP Thermoplastic Canbe withstand 260±5°C Temperature IR Stove. Time: 5~10 seconds 2. PBT/PA66 Thermoplastic Canbe withstand 235±5°C Temperature of Tin Pass Wavecrest Under PCB board Temperature: 260±5°C Time: 5~10 seconds	1. No evidence of damage. 2. The electrical performances meet the spec. specified in paragraph 5.1 3. The mechanical performances meet the spec. specified in paragraph 5.2

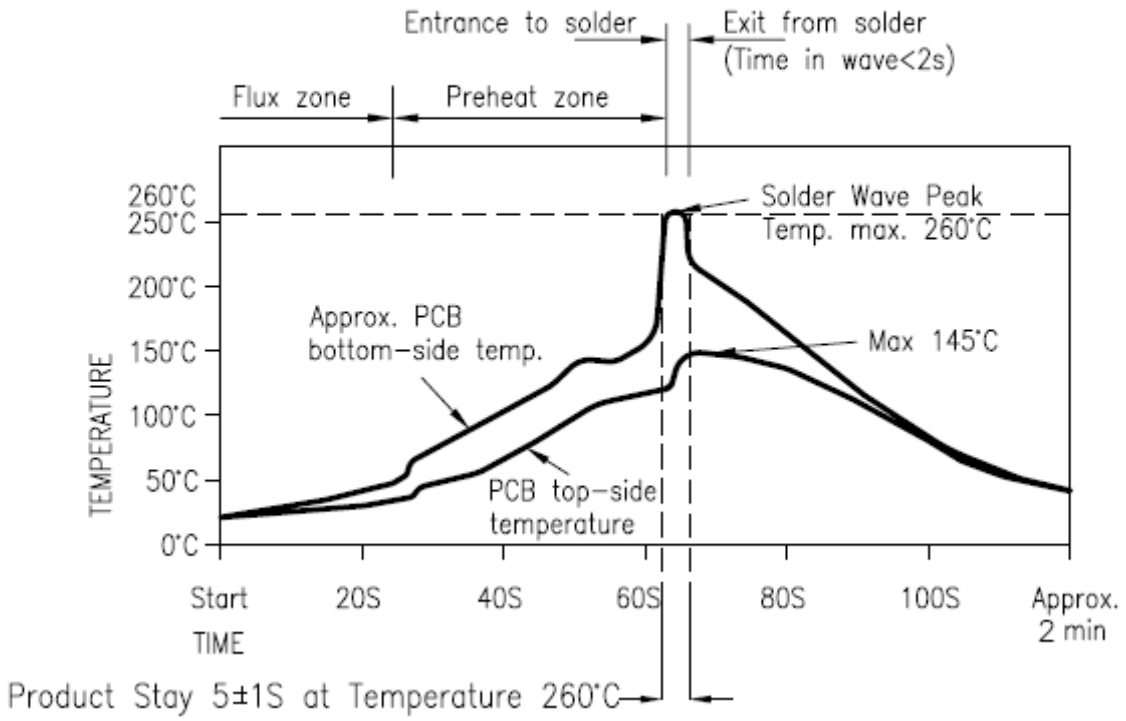
	Test Items	Test Procedures & Condition	Requirements
7	SMT Type Product Pass IR Reflow Test	Test Condition: Temperature: 220℃~225℃~230℃~240℃~265℃ Speed: 8mm/Seconds Temperature exceed 217℃, Product need stay IR Reflow stove 90 Seconds at least Temperature exceed 260℃, Product need stay IR Reflow stove 5 Seconds at least	1. No evidence of damage. 2. The electrical performances meet the spec. specified in paragraph 5.1 3. The electrical performances meet the spec. specified in paragraph 5.2

SMT Type Product Past IR Reflow Graph



	Test Items	Test Procedures & Condition	Requirements
8	DIP Type Product Pass Wavesolder Test	Test Condition: Temperature : 260℃±5℃ 5 S±1 S	1. No evidence of damage. 2. The electrical performances meet the spec. specified in paragraph 5.1 3. The electrical performances meet the spec. specified in paragraph 5.2

DIP Type Product Pass Wavesolder Graph



新 光 合 成 纖 維 股 份 有 限 公 司
中　　壢　　廠
臺 灣
8th Fl., 123, Sec.2, Nanking East Road , Taipei, Taiwan
Tel: 886-2-2507-0131 886-2-2507-1251(30Lines) 886-3-4932131
Fax:888-2-2508-8047 886-3-491-5763

產 品 材 質 證 明

新 耐 特 (SHINITE) PBT

規格(GRADE)：D202G00/D202G15/D202G30/E202G00/E202G15/E202G30

新耐特 (SHINITE) PBT 為新光合成纖維股份有限公司，所產製的工程塑膠系列之一，經由混練程序製得。具有優越的機械性、高剛性、尺寸安定性、耐熱老化性和化學性質。

此外新耐特 (SHINITE) PBT D202G00/D202G15/D202G30/E202G00/E202G15/E202G30 製品 組成如下：

GRADE 規格 / 組成 CHEMICAL NAME	D202G00	D202G15	D202G30	E202G00	E202G15	E202G30
Terephthalate (PBT) 樹脂 CAS NO: 30965-26-5	75%~85%	55%~75%	35%~65%	75%~85%	55%~75%	35%~65%
FlameRetardant 耐燃劑 CAS NO: 71342-77-3+1309-64-4	7%~35%	7%~35%	7%~35%	-	-	-
FlameRetardant 耐燃劑 CAS NO: 68928-70-1+1309-64-4	-	-	-	7%~35%	7%~35%	7%~35%
Glass Fiber 玻璃纖維 CAS NO: 65997-17-3	-	12%~18%	27%~33%	-	12%~18%	27%~33%
Additives 添加劑 CAS NO: N.A.	1%~10%	1%~10%	1%~10%	1%~10%	1%~10%	1%~10%

GREEN PRODUCT (無毒材料)　　符合 RoHS

如有任何的問題及意見，歡迎撥空指教，謝謝。

ENPLA DIVISION
QA Manager :張木村
送出日期:2006/12/6

东莞市金乐金属材料有限公司
DongGuanJinLeMetalsMaterialCo.,Ltd

产品质量证明书
CERTIFICATE OF QUALITY

东莞市虎门镇镇口第二工业区11栋之二
The Second Industry Area, ZhenKuo District, HuMen Town, DongGuan City
TEL:076981617787 FAX:076981617797

客户名称 Customer	东莞维峰五金电子有限公司	牌号 Brand	C2680
合同号 Contract No	081000089	标准 Standard No	GB/T2059-2001
尺寸公差（mm） Size Tolerance	厚度Thickness 0.3±0.015 宽度Width 23.5+0-0.1	签发日期 Dete of Lssue	2008-10-13

序号 NO.	批号 Lot No	状态 Temper	卷数 QTY	规格及重量 Material Description			化学成份 Chemioal compositon						物理性能 Physical Property			表面质量 Surface Quality
				厚度 Thick	宽度 Width	重量 Mass	Cu	Pb	Fe	Bi	P	ZN	抗拉强度 Mpa	延伸率 %	硬度 HV	
1		EH	11	0.3	23.5	974.6	63.5-66	0.05以下	0.05以下	/	0.05以下	余量	583	17	171	OK
合 计 Total						974.6										

备注：本材质证明希妥善保管，如对我公司的产品品质有异议，持本材质证明在半个月内与我公司联系，本公司将竭诚为您服务。

质检部长:赵晓丹

检验员:李冰

东莞市金乐金属材料有限公司 产品质量专用章

牛津仪器 SmartLink FP 读数

App Name : Au-Ni-Cu(薄金).app

读数	微英寸 Au	微英寸 Ni	日期/时间
1	1.03	50.87	2013-11-16 10:13
2	1.08	51.26	2013-11-16 10:14
3	1.11	51.97	2013-11-16 10:15
4	1.02	50.46	2013-11-16 10:16
5	1.05	51.35	2013-11-16 10:17

Test Report

No. : CE/2013/94508 Date : 2013/09/30

SHINKONG SYNTHETIC FIBERS CORPORATION
(SHINKONG INDUSTRY (HANGZHOU) CO., LTD)
8F., NO. 123, SEC. 2, NANKING E. RD., TAIPEI, TAIWAN
(NO.1, AVENUE 6, ECONOMY & TECHNOLOGY DEVELOPMENT ZONE, HANGZHOU, CHINA)

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

Sample Submitted By	:	SHINKONG SYNTHETIC FIBERS CORPORATION
Sample Description	:	THERMOPLASTIC POLYESTER RESIN
Style/Item No.	:	SHINITE® PBT E202G30BK
Manufacturer/Vendor	:	SHINKONG SYNTHETIC FIBERS CORPORATION
Country of Origin	:	TAIWAN
Sample Receiving Date	:	2013/09/25
Testing Period	:	2013/09/25 TO 2013/09/30

==========

Test Requested : As specified by client, with reference to RoHS Directive 2011/65/EU Annex II to determine Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs contents in the submitted sample.

Test Method : Please refer to next pages.

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

SGS TAIWAN LTD
SGS
TAIWAN

Troy Chang / Manager-Tech
Signed for and on behalf of
SGS TAIWAN LTD.
Chemical Laboratory – Taipei

SHINKONG SYNTHETIC FIBERS CORPORATION
(SHINKONG INDUSTRY (HANGZHOU) CO., LTD)
8F., NO. 123, SEC. 2, NANKING E. RD., TAIPEI, TAIWAN
(NO.1, AVENUE 6, ECONOMY & TECHNOLOGY DEVELOPMENT ZONE, HANGZHOU, CHINA)

Test Result(s)

PART NAME No.1 : BLACK PLASTIC PELLETS

Test Item(s)	Unit	Method	MDL	Result
				No.1
Cadmium (Cd)	mg/kg	With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	n.d.
Lead (Pb)	mg/kg	With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	16
Mercury (Hg)	mg/kg	With reference to IEC 62321-4: 2013 and performed by ICP-AES.	2	n.d.
Hexavalent Chromium Cr(VI)	mg/kg	With reference to IEC 62321: 2008 and performed by UV-VIS.	2	n.d.
Sum of PBBs	mg/kg	With reference to IEC 62321: 2008 and performed by GC/MS.	-	n.d.
Monobromobiphenyl	mg/kg		5	n.d.
Dibromobiphenyl	mg/kg		5	n.d.
Tribromobiphenyl	mg/kg		5	n.d.
Tetrabromobiphenyl	mg/kg		5	n.d.
Pentabromobiphenyl	mg/kg		5	n.d.
Hexabromobiphenyl	mg/kg		5	n.d.
Heptabromobiphenyl	mg/kg		5	n.d.
Octabromobiphenyl	mg/kg		5	n.d.
Nonabromobiphenyl	mg/kg		5	n.d.
Decabromobiphenyl	mg/kg		5	n.d.
Sum of PBDEs	mg/kg		-	n.d.
Monobromodiphenyl ether	mg/kg		5	n.d.
Dibromodiphenyl ether	mg/kg		5	n.d.
Tribromodiphenyl ether	mg/kg		5	n.d.
Tetrabromodiphenyl ether	mg/kg		5	n.d.
Pentabromodiphenyl ether	mg/kg		5	n.d.
Hexabromodiphenyl ether	mg/kg		5	n.d.
Heptabromodiphenyl ether	mg/kg		5	n.d.
Octabromodiphenyl ether	mg/kg		5	n.d.
Nonabromodiphenyl ether	mg/kg		5	n.d.
Decabromodiphenyl ether	mg/kg		5	n.d.

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Note：

1. mg/kg = ppm；0.1wt% = 1000ppm
2. n.d. = Not Detected
3. MDL = Method Detection Limit
4. " - " = Not Regulated

SHINKONG SYNTHETIC FIBERS CORPORATION
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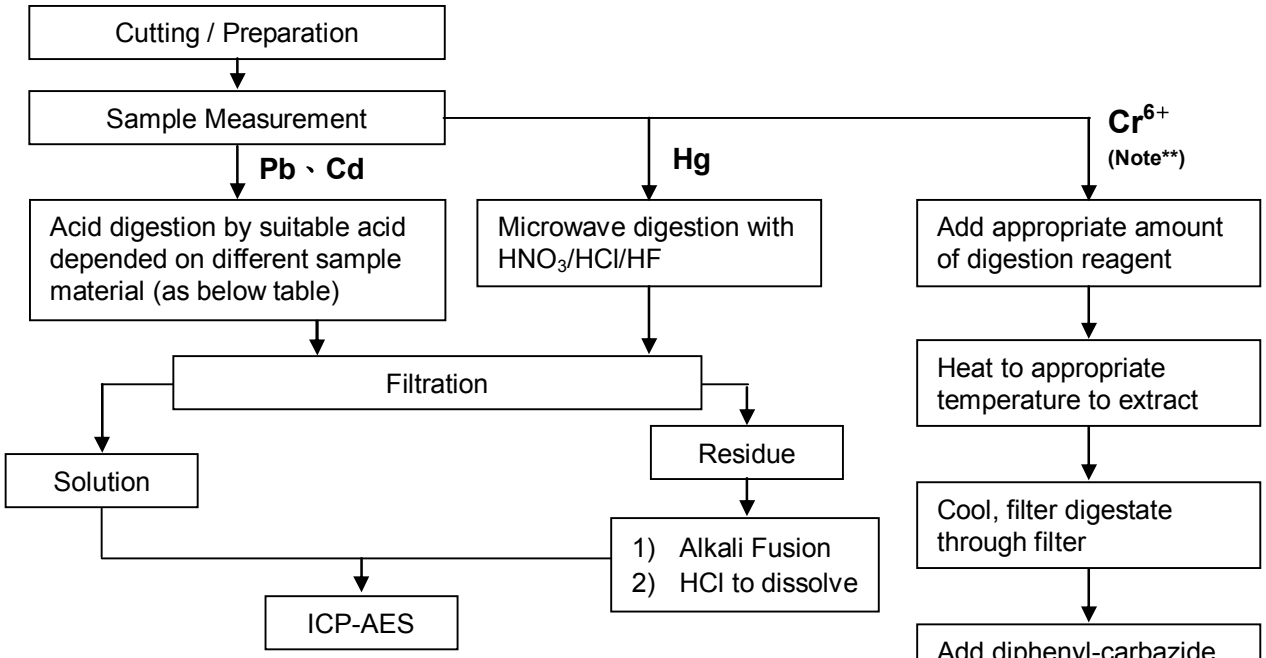
(NO.1, AVENUE 6, ECONOMY & TECHNOLOGY DEVELOPMENT ZONE, HANGZHOU, CHINA)

1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr^{6+} test method excluded)
2) Name of the person who made measurement: Climbgreat Yang
3) Name of the person in charge of measurement: Troy Chang



Sample Material	Digestion Acid
Steel, copper, aluminum, solder	Aqua regia, HNO_3, HCl, HF, H_2O_2
Glass	HNO_3/HF
Gold, platinum, palladium, ceramic	Aqua regia
Silver	HNO_3
Plastic	H_2SO_4, H_2O_2, HNO_3, HCl
Others	Added appropriate reagent to total digestion

Note :** (1) For non-metallic material, add alkaline digestion reagent and heat to 90~95℃.
(2) For metallic material, add pure water and heat to boiling.

SHINKONG SYNTHETIC FIBERS CORPORATION
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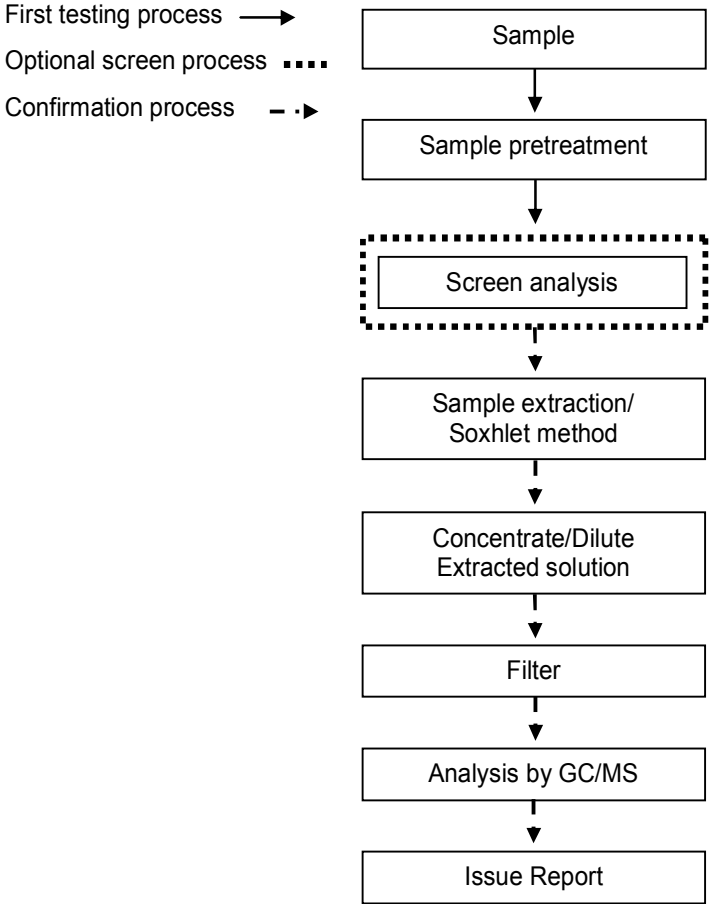
(NO.1, AVENUE 6, ECONOMY & TECHNOLOGY DEVELOPMENT ZONE, HANGZHOU, CHINA)

PBB/PBDE analytical FLOW CHART

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang



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(NO.1, AVENUE 6, ECONOMY & TECHNOLOGY DEVELOPMENT ZONE, HANGZHOU, CHINA)

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

CE/2013/94508

** End of Report **

DONGGUAN JINLE METALS MATERIAL CO.,LTD
YUCHENG ROAD,NUMBER 22,SHATOUSHA DISTRICT,CHANGAN TOWN,DONGGUAN CITY CHINA

This report is to supersede test report CANML1300917501

The following sample(s) was/were submitted and identified on behalf of the clients as : C2680

SGS Job No.	: GC130100332 - GZ
Internal Reference No.	: 6.1
Date of Sample Received	: 17 Jan 2013
Testing Period	: 17 Jan 2013 - 25 Jan 2013

Test Requested : A: As requested by client, SVHC screening is performed according to:
(i) One hundred and thirty eight (138) substances in the Candidate List of Substances of Very High Concern (SVHC) for authorization published by European Chemicals Agency (ECHA) on and before Dec 19, 2012 regarding Regulation (EC) No 1907/2006 concerning the REACH.

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

Summary : A:

According to the specified scope and analytical techniques, concentrations of tested SVHC are ≤ 0.1% (w/w) in the submitted sample.	PASS

Conclusion: : B: 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.

Zmguan

Zm guan
Approved Signatory

Test Sample :

Test Part Description :

Specimen No.	SGS Sample ID	Description
1	CAN13-009175.001	Brassy metal sheet

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:
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 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 Method:

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

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

No.	Substance Name	CAS No.	EC No.	001 Concentration (%)	RL(%)
1	[Phthalato(2-)]dioxotrilead*	69011-06-9	273-688-5	ND	0.005
2	[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	219-943-6	ND	0.050
3	[4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3)§	548-62-9	208-953-6	ND	0.050
4	1,2,3-trichloropropane	96-18-4	202-486-1	ND	0.050
5	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	71888-89-6	276-158-1	ND	0.050
6	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	68515-42-4	271-084-6	ND	0.050
7	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	284-032-2	ND	0.050
8	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	112-49-2	203-977-3	ND	0.050
9	1,2-dichloroethane	107-06-2	203-458-1	ND	0.050
10	1,2-Diethoxyethane	629-14-1	211-076-1	ND	0.050
11	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4	203-794-9	ND	0.050
12	1-Bromopropane	106-94-5	203-445-0	ND	0.050
13	1-Methyl-2-pyrrolidone	872-50-4	212-828-1	ND	0.050
14	2,2'-dichloro-4,4'-methylenedianiline	101-14-4	202-918-9	ND	0.050
15	2-Methoxyaniline; o-Anisidine	90-04-0	201-963-1	ND	0.050
16	2,4-Dinitrotoluene	121-14-2	204-450-0	ND	0.050
17	2-Ethoxyethanol	110-80-5	203-804-1	ND	0.050
18	2-Ethoxyethyl acetate	111-15-9	203-839-2	ND	0.050

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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
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
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No.	Substance Name	CAS No.	EC No.	001 Concentration (%)	RL(%)
19	2-Methoxyethanol	109-86-4	203-713-7	ND	0.050
20	3-Ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2	421-150-7	ND	0.050
21	4-(1,1,3,3-tetramethylbutyl)phenol	140-66-9	205-426-2	ND	0.050
22	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated	-	-	ND	0.050
23	4,4'-bis(dimethylamino) benzophenone (Michler's Ketone)	90-94-8	202-027-5	ND	0.050
24	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol§	561-41-1	209-218-2	ND	0.050
25	4,4'-Diaminodiphenylmethane(MDA)	101-77-9	202-974-4	ND	0.050
26	4,4'-Methylenedi-*o*-toluidine	838-88-0	212-658-8	ND	0.050
27	4,4'-Oxydianiline and its salts	101-80-4	202-977-0	ND	0.050
28	4-Aminoazobenzene	60-09-3	200-453-6	ND	0.050
29	4-Methyl-*m*-phenylenediamine	95-80-7	202-453-1	ND	0.050
30	4-Nonylphenol, branched and linear	-	-	ND	0.050
31	5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	81-15-2	201-329-4	ND	0.050
32	6-Methoxy-*m*-toluidine	120-71-8	204-419-1	ND	0.050
33	Acetic acid, lead salt, basic*	51404-69-4	257-175-3	ND	0.005
34	Acrylamide	79-06-1	201-173-7	ND	0.050
35	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	85535-84-8	287-476-5	ND	0.050
36	Aluminosilicate Refractory Ceramic Fibres*▲	650-017-00-8 (Index no.)	-	ND	0.005
37	Ammonium dichromate*	7789-09-5	232-143-1	ND	0.005
38	Anthracene	120-12-7	204-371-1	ND	0.050
39	Anthracene oil*	90640-80-5	292-602-7	ND	0.050
40	Anthracene oil, anthracene paste*	90640-81-6	292-603-2	ND	0.050

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No.	Substance Name	CAS No.	EC No.	001 Concentration (%)	RL(%)
41	Anthracene oil, anthracene paste, anthracene fraction*	91995-15-2	295-275-9	ND	0.050
42	Anthracene oil, anthracene paste, distn. Lights*	91995-17-4	295-278-5	ND	0.050
43	Anthracene oil, anthracene-low*	90640-82-7	292-604-8	ND	0.050
44	Arsenic acid*	7778-39-4	231-901-9	ND	0.005
45	Benzyl butyl phthalate (BBP)	85-68-7	201-622-7	ND	0.050
46	Biphenyl-4-ylamine	92-67-1	202-177-1	ND	0.050
47	Bis(2-ethylhexyl)phthalate (DEHP)	117-81-7	204-211-0	ND	0.050
48	Bis(2-methoxyethyl) ether	111-96-6	203-924-4	ND	0.050
49	Bis(2-methoxyethyl) phthalate	117-82-8	204-212-6	ND	0.050
50	Bis(pentabromophenyl) ether (DecaBDE)	1163-19-5	214-604-9	ND	0.050
51	Bis(tributyltin)oxide (TBTO)	56-35-9	200-268-0	ND	0.050
52	Boric acid*	10043-35-3 11113-50-1	233-139-2 234-343-4	ND	0.005
53	Calcium arsenate*	7778-44-1	231-904-5	ND	0.005
54	Chromic acid, Oligomers of chromic acid and dichromic acid, Dichromic acid*	7738-94-5, - 13530-68-2	231-801-5, - 236-881-5	ND	0.005
55	Chromium trioxide*	1333-82-0	215-607-8	ND	0.005
56	Cobalt dichloride*	7646-79-9	231-589-4	ND	0.005
57	Cobalt(II) carbonate*	513-79-1	208-169-4	ND	0.005
58	Cobalt(II) diacetate*	71-48-7	200-755-8	ND	0.005
59	Cobalt(II) dinitrate*	10141-05-6	233-402-1	ND	0.005

No.	Substance Name	CAS No.	EC No.	001 Concentration (%)	RL(%)
60	Cobalt(II) sulphate*	10124-43-3	233-334-2	ND	0.005
61	Diarsenic pentaoxide*	1303-28-2	215-116-9	ND	0.005
62	Diarsenic trioxide*	1327-53-3	215-481-4	ND	0.005
63	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	123-77-3	204-650-8	ND	0.050
64	Diboron trioxide*	1303-86-2	215-125-8	ND	0.005
65	Dibutyltin dichloride (DBTC)	683-18-1	211-670-0	ND	0.050
66	Dibutyl phthalate (DBP)	84-74-2	201-557-4	ND	0.050
67	Dichromium tris(chromate)*	24613-89-6	246-356-2	ND	0.005
68	Diethyl sulphate	64-67-5	200-589-6	ND	0.050
69	Diisobutyl phthalate	84-69-5	201-553-2	ND	0.050
70	Disodium tetraborate, anhydrous*	1303-96-4, 1330-43-4, 12179-04-3	215-540-4	ND	0.005
71	Diisopentylphthalate	605-50-5	210-088-4	ND	0.050
72	Dimethyl sulphate	77-78-1	201-058-1	ND	0.050
73	Dinoseb	88-85-7	201-861-7	ND	0.050
74	Dioxobis(stearato)trilead*	12578-12-0	235-702-8	ND	0.005
75	Fatty acids, C16-18, lead salts*	91031-62-8	292-966-7	ND	0.005
76	Formaldehyde, oligomeric reaction products with aniline	25214-70-4	500-036-1	ND	0.050
77	Formamide	75-12-7	200-842-0	ND	0.050
78	Furan	110-00-9	203-727-3	ND	0.050

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No.	Substance Name	CAS No.	EC No.	001 Concentration (%)	RL(%)
79	Henicosafluoroundecanoic acid	2058-94-8	218-165-4	ND	0.050
80	Heptacosafluorotetradecanoic acid	376-06-7	206-803-4	ND	0.050
81	Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified (α-HBCDD, β-HBCDD, γ-HBCDD) Δ	25637-99-4, 3194- 55-6	247-148-4, 221-695-9	ND	0.050
82	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	201-604-9, 236-086-3, 238-009-9	ND	0.050
83	Hexahydromethylphthalic anhydride, Hexahydro-4-methylphthalic anhydride, Hexahydro-1-methylphthalic anhydride, Hexahydro-3-methylphthalic anhydride	☆	☆	ND	0.050
84	Hydrazine	7803-57-8, 302-01-2	206-114-9	ND	0.050
85	Lead bis(tetrafluoroborate)*	13814-96-5	237-486-0	ND	0.005
86	Lead chromate*	7758-97-6	231-846-0	ND	0.005
87	Lead cyanamidate*	20837-86-9	244-073-9	ND	0.005
88	Lead chromate molybdate sulphate red (C.I. Pigment Red 104)*	12656-85-8	235-759-9	ND	0.005
89	Lead diazide, Lead azide*	13424-46-9	236-542-1	ND	0.005
90	Lead dipicrate*	6477-64-1	229-335-2	ND	0.005
91	Lead dinitrate*	10099-74-8	233-245-9	ND	0.005
92	Lead hydrogen arsenate*	7784-40-9	232-064-2	ND	0.005
93	Lead monoxide*	1317-36-8	215-267-0	ND	0.005
94	Lead oxide sulfate*	12036-76-9	234-853-7	ND	0.005
95	Lead styphnate*	15245-44-0	239-290-0	ND	0.005

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No.	Substance Name	CAS No.	EC No.	001 Concentration (%)	RL(%)
96	Lead sulfochromate yellow (C.I. Pigment Yellow 34)*	1344-37-2	215-693-7	ND	0.005
97	Lead tetroxide (orange lead)*	1314-41-6	215-235-6	ND	0.005
98	Lead titanium trioxide*	12060-00-3	235-038-9	ND	0.005
99	Lead titanium zirconium oxide*	12626-81-2	235-727-4	ND	0.005
100	Lead(II) bis(methanesulfonate)*	17570-76-2	401-750-5	ND	0.005
101	Methoxyacetic acid	625-45-6	210-894-6	ND	0.050
102	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	101-61-1	202-959-2	ND	0.050
103	N,N-dimethylacetamide	127-19-5	204-826-4	ND	0.050
104	N,N-dimethylformamide	68-12-2	200-679-5	ND	0.050
105	N-Methylacetamide	79-16-3	201-182-6	ND	0.050
106	N-Pentyl-isopentylphthalate	776297-69-9	-	ND	0.050
107	*o*-Aminoazotoluene	97-56-3	202-591-2	ND	0.050
108	*o*-Toluidine	95-53-4	202-429-0	ND	0.050
109	Pentacosafluorotridecanoic acid	72629-94-8	276-745-2	ND	0.050
110	Pentalead tetraoxide sulphate*	12065-90-6	235-067-7	ND	0.005
111	Pentazinc chromate octahydroxide*	49663-84-5	256-418-0	ND	0.005
112	Phenolphthalein	77-09-8	201-004-7	ND	0.050
113	Pitch, coal tar, high temp.*	65996-93-2	266-028-2	ND	0.050
114	Potassium chromate*	7789-00-6	232-140-5	ND	0.005

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No.	Substance Name	CAS No.	EC No.	001 Concentration (%)	RL(%)
115	Potassium dichromate*	7778-50-9	231-906-6	ND	0.005
116	Potassium hydroxyoctaoxodizincatedichromate*	11103-86-9	234-329-8	ND	0.005
117	Methyloxirane (Propylene oxide)	75-56-9	200-879-2	ND	0.050
118	Pyrochlore, antimony lead yellow*	8012-00-8	232-382-1	ND	0.005
119	Silicic acid, barium salt, lead-doped*	68784-75-8	272-271-5	ND	0.005
120	Silicic acid, lead salt*	11120-22-2	234-363-3	ND	0.005
121	Sodium chromate*	7775-11-3	231-889-5	ND	0.005
122	Sodium dichromate*	7789-12-0, 10588-01-9	234-190-3	ND	0.005
123	Strontium chromate*	7789-06-2	232-142-6	ND	0.005
124	Sulfurous acid, lead salt, dibasic*	62229-08-7	263-467-1	ND	0.005
125	Tetraboron disodium heptaoxide, hydrate*	12267-73-1	235-541-3	ND	0.005
126	Tetraethyllead*	78-00-2	201-075-4	ND	0.005
127	Tetralead trioxide sulphate*	12202-17-4	235-380-9	ND	0.005
128	TGIC (1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione)	2451-62-9	219-514-3	ND	0.050
129	Trichloroethylene	79-01-6	201-167-4	ND	0.050
130	Tricosafluorododecanoic acid	307-55-1	206-203-2	ND	0.050
131	Triethyl arsenate*	15606-95-8	427-700-2	ND	0.005
132	Trilead bis(carbonate)dihydroxide (basic lead carbonate)*	1319-46-6	215-290-6	ND	0.005
133	Trilead diarsenate*	3687-31-8	222-979-5	ND	0.005

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No.	Substance Name	CAS No.	EC No.	001 Concentration (%)	RL(%)
134	Trilead dioxide phosphonate*	12141-20-7	235-252-2	ND	0.005
135	Tris(2-chloroethyl)phosphate	115-96-8	204-118-5	ND	0.050
136	Zirconia Aluminosilicate Refractory Ceramic Fibres*▲	650-017-00-8 (Index no.)	-	ND	0.005
137	α,α-Bis[4-(dimethylamino)phenyl]-4 (phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4) §	6786-83-0	229-851-8	ND	0.050
138	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	423-400-0	ND	0.050

Notes:

(1) RL = Reporting Limit. All RL are based on homogenous material
ND = Not detected (lower than RL), ND is denoted on the SVHC substance.

(2) △ CAS No. of diastereoisomers identified (α-HBCDD, β-HBCDD, γ-HBCDD): 134237-50-6, 134237-51-7, 134237-52-8
☆ CAS No. of Hexahydromethylphathalic anhydride, Hexahydro-4-methylphathalic anhydride, Hexahydro-1-methylphathalic anhydride, Hexahydro-3-methylphathalic 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.

(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

Calculated concentration of diboron trioxide, boric acid, disodium tetraborate anhydrous, tetraboron disodium heptaoxide hydrate and Lead bis(tetrafluoroborate) 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 (VI), silicon, aluminum, zirconium, boron, potassium, strontium, zinc, calcium, antimony, titanium and barium respectively), except molybdenum RL=0.0005%, boron RL=0.0025% (only for Lead bis(tetrafluoroborate)).

(4) § 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).

(5) ▲ On Jun 18, 2012, ECHA consolidated two entries of aluminosilicate refractory ceramic fibres and two of zirconia aluminosilicate refractory ceramic fibres in the Candidate List of SVHC for authorization published in Jan 2010 and Dec 2011 into one entry for aluminosilicate refractory ceramic fibres and one for zirconia aluminosilicate refractory ceramic fibres.

B: RoHS Directive 2011/65/EU

Test Method: With reference to IEC 62321:2008

(1) Determination of Cadmium by ICP-OES.
(2) Determination of Lead by ICP-OES.
(3) Determination of Mercury by ICP-OES.
(4) Determination of Hexavalent Chromium by spot test / Colorimetric Method using UV-Vis.
(5) Determination of PBBs and PBDEs by GC-MS.

Test Item(s):	Limit	Unit	MDL	*001*
Cadmium(Cd)	100	mg/kg	2	ND
Lead (Pb)	1000	mg/kg	2	16
Mercury (Hg)	1000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))	-	-	◇	Negative
Sum of PBBs	1000	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	1000	mg/kg	-	ND
Monobromodiphenyl ether	-	mg/kg	5	ND
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

(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 Cr(VI) results represent status of the sample at the time of testing.

C: Hexabromocyclododecane (HBCDD)

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

Test Item(s):	Unit	MDL	*001*
Hexabromocyclododecane (HBCDD)	mg/kg	10	ND

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

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

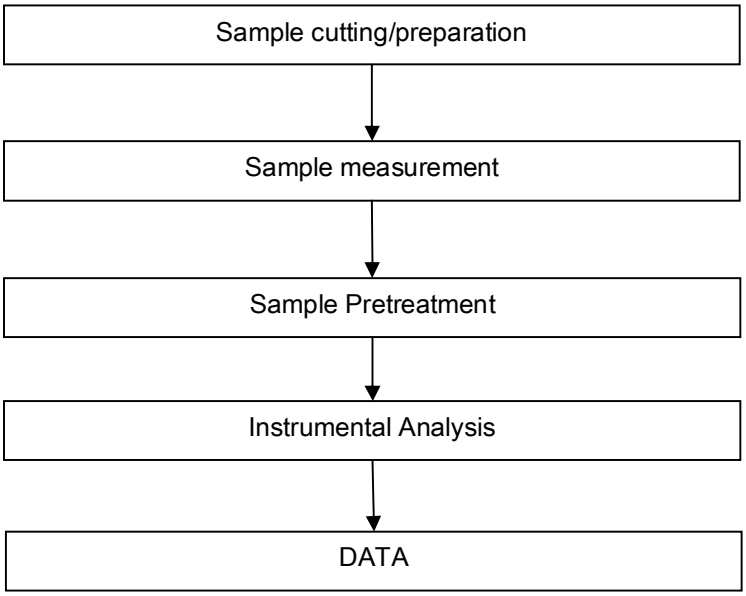
Test Item(s):	Unit	MDL	*001*
Dibutyl phthalate (DBP)	%(w/w)	0.003	ND
Butyl benzyl phthalate (BBP)	%(w/w)	0.003	ND
Bis (2-ethylhexyl) phthalate (DEHP)	%(w/w)	0.003	ND

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

ATTACHMENTS

SVHC Testing Flow Chart

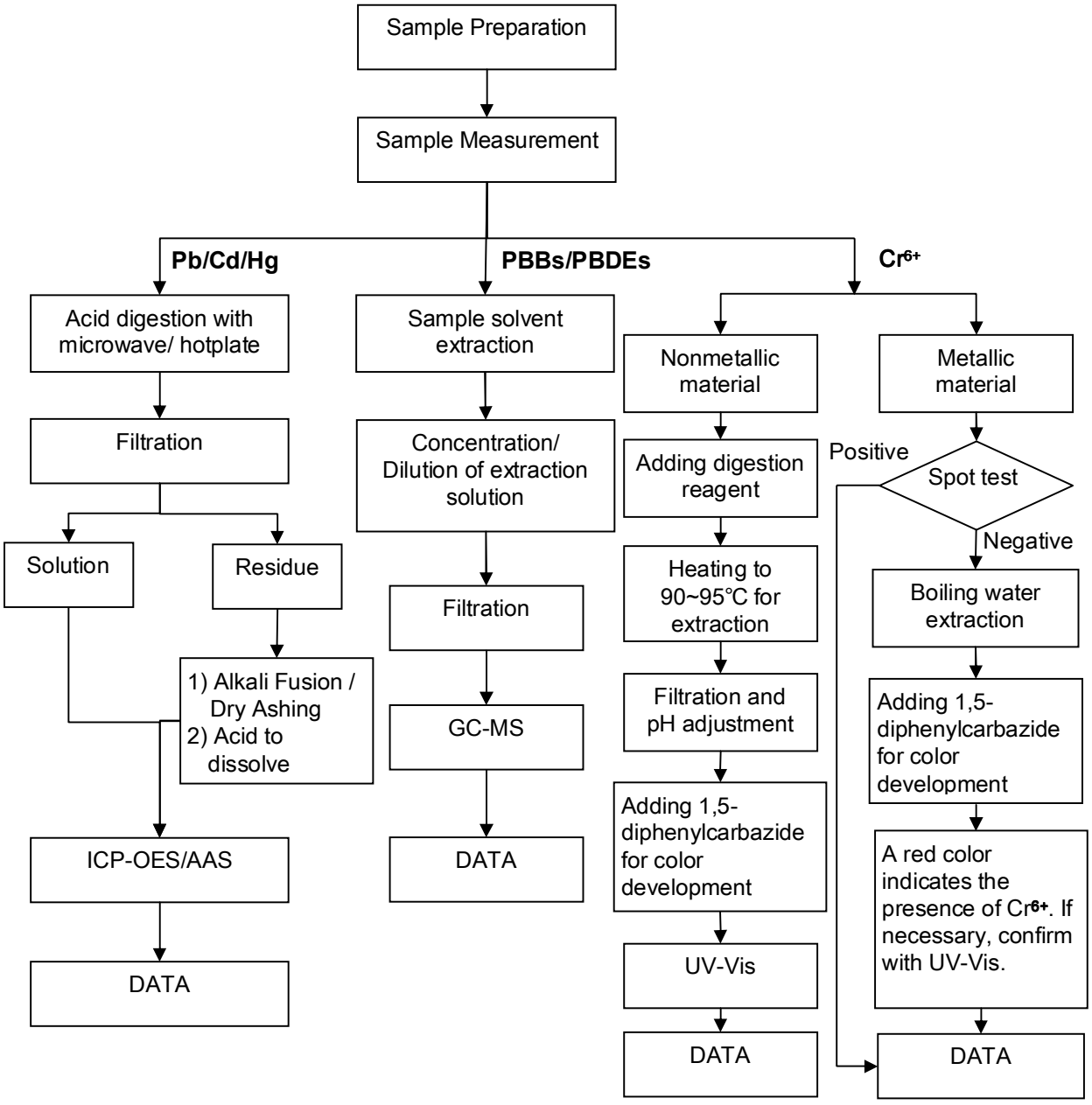
1) Name of the person who made testing: Michael Tso / Liu Qiong
2) Name of the person in charge of testing: Adams Yu / Yolanda Wei



ATTACHMENTS

RoHS Testing Flow Chart

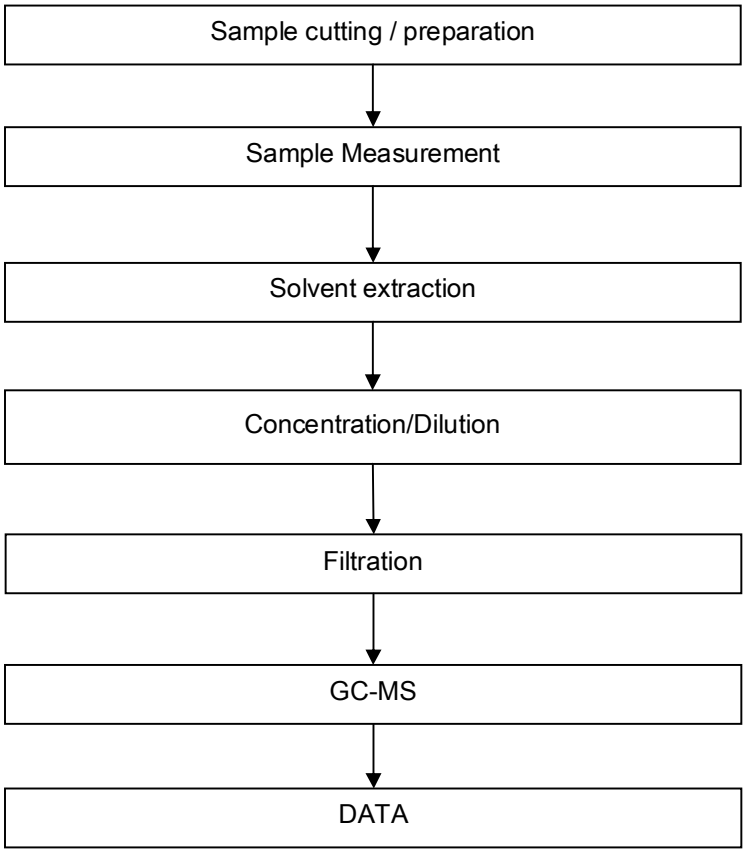
1) Name of the person who made testing: Michael Tso / Cutey Yu
2) Name of the person in charge of testing: Adams Yu / Yolanda Wei
3) These samples were dissolved totally by pre-conditioning method according to below flow chart (Cr^{6+} and PBBs/PBDEs test method excluded).



ATTACHMENTS

HBCDD Testing Flow Chart

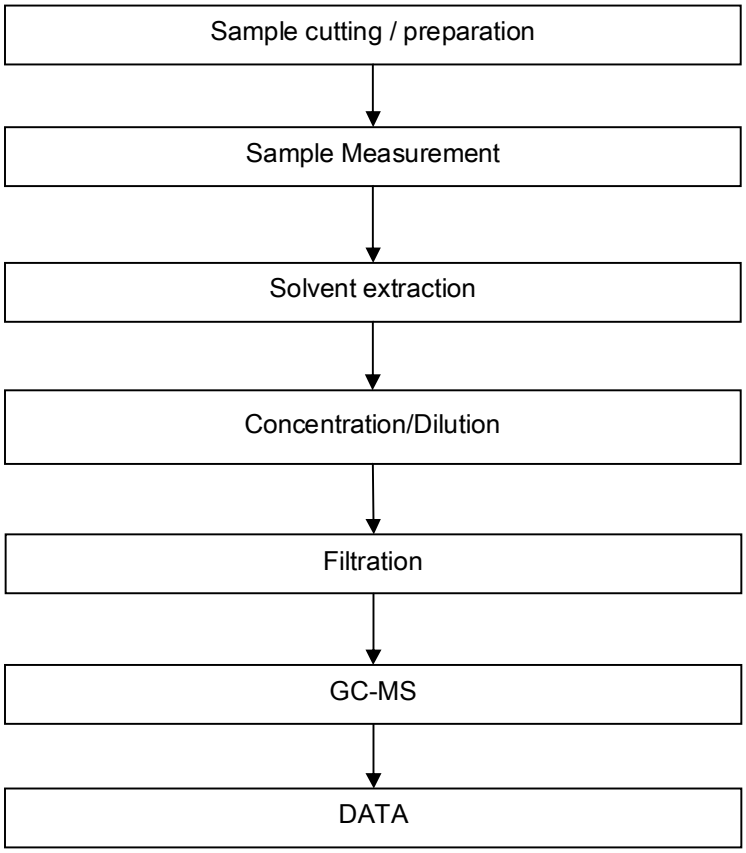
1) Name of the person who made testing: Cutey Yu
2) Name of the person in charge of testing: Yolanda Wei



ATTACHMENTS

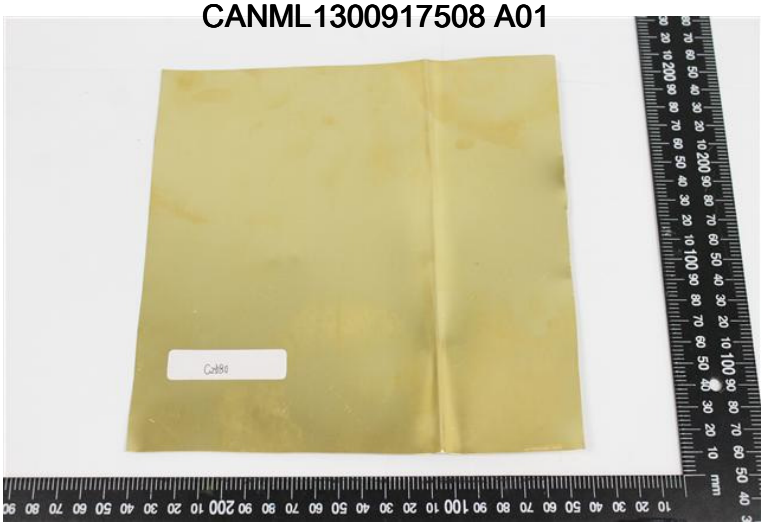
Phthalates Testing Flow Chart

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



Sample photo:

CANML1300917508 A01



CAN13-009175.001

SGS authenticate the photo on original report only

*** End of Report ***

SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch Testing Center Chemical Laboratory.
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
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
Member of the SGS Group (SGS SA)

Test Report

Report No. RHS01F009785004

Applicant HANG KEI PLATING(SHEN ZHEN)CO.,LTD
Address BIOCK3,JIAOTANG INDUSTRIAL ZONE,XIHUANLU,BAOAN DISTRICT,SHENZHEN,P.R.CHINA

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

Sample Name	端子镍镀层
Part No.	测试片
Sample Received Date	Aug. 1, 2013
Testing Period	Aug. 1, 2013 to Aug. 6, 2013

Test Requested As specified by client, to test Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)), 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).

Tested by Rick Li Reviewed by Vargas He

Approved by Danny Liu Date Aug. 6, 2013

Technical Manager

No. 1012251264

Test Report

Test Method

Test Item(s)	Test Method	Measured Equipment(s)
Fluorine(F)	Refer to BS EN 14582:2007	IC
Chlorine(Cl)	Refer to BS EN 14582:2007	IC
Bromine(Br)	Refer to BS EN 14582:2007	IC
Iodine(I)	Refer to BS EN 14582:2007	IC
Lead(Pb)	Refer to IEC 62321:2008 Ed.1	ICP-OES
Cadmium(Cd)	Refer to IEC 62321:2008 Ed.1	ICP-OES
Mercury(Hg)	Refer to IEC 62321:2008 Ed.1	ICP-OES
Hexavalent Chromium(Cr(VI))	IEC 62321:2008 Ed.1 Annex B	UV-Vis

Test Result(s)

Tested Item(s)	**Result**	**MDL**
Halogen(s)		
Fluorine (F)	N.D.	10 µg/cm²
Chlorine (Cl)	N.D.	10 µg/cm²
Bromine (Br)	N.D.	10 µg/cm²
Iodine (I)	N.D.	10 µg/cm²

Tested Item(s)	**Result**	**MDL**
Lead(Pb)	N.D.	2 mg/kg
Cadmium (Cd)	N.D.	2 mg/kg
Mercury(Hg)	N.D.	2 mg/kg
Hexavalent Chromium(Cr(VI))	Negative	/

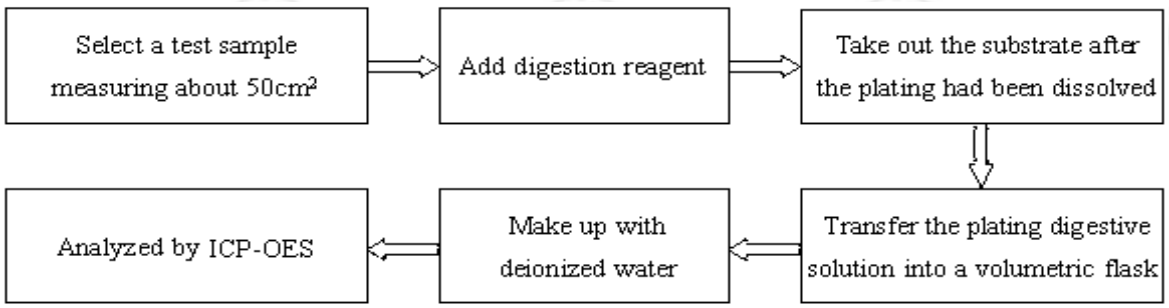
Tested Sample/Part Description Silvery plating

Note: **The washed plating had been dissolved totally tested for Lead, Cadmium, Mercury.**
-MDL = Method Detection Limit
-N.D. = Not Detected (<MDL)
-mg/kg = ppm = parts per million
-Negative = Absence of Cr(VI) , the detected Cr(VI) concentration in the boiling water extraction solution is less than 0.02 mg/kg with 50cm² sample surface area used.

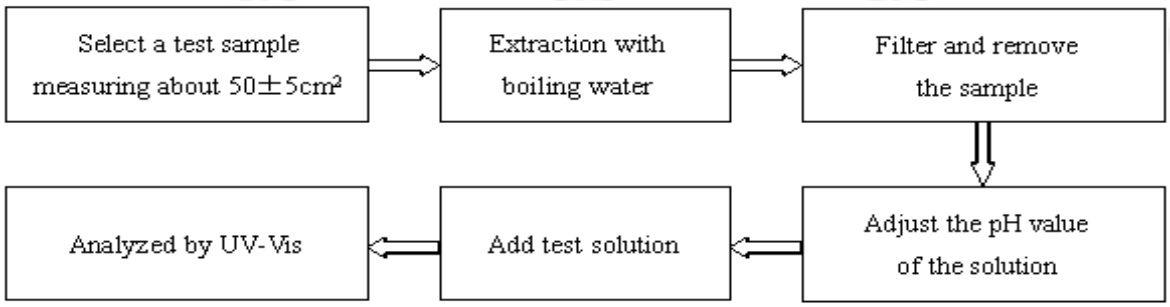
Test Report

Test Process

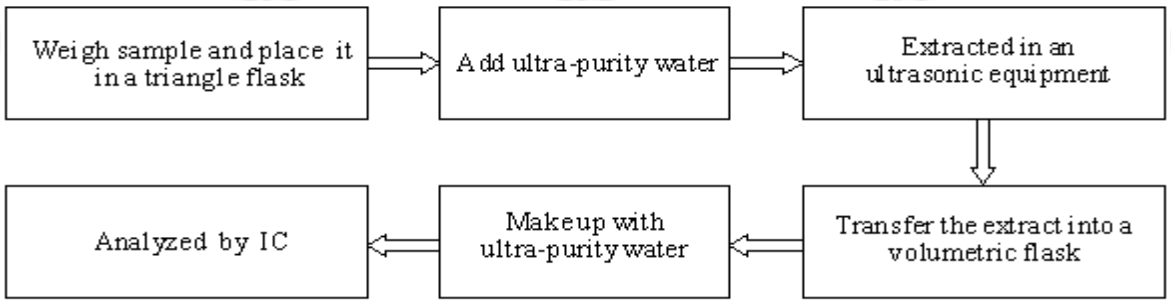
1. Lead(Pb), Cadmium(Cd), Mercury(Hg)



2. Hexavalent Chromium(Cr(VI))

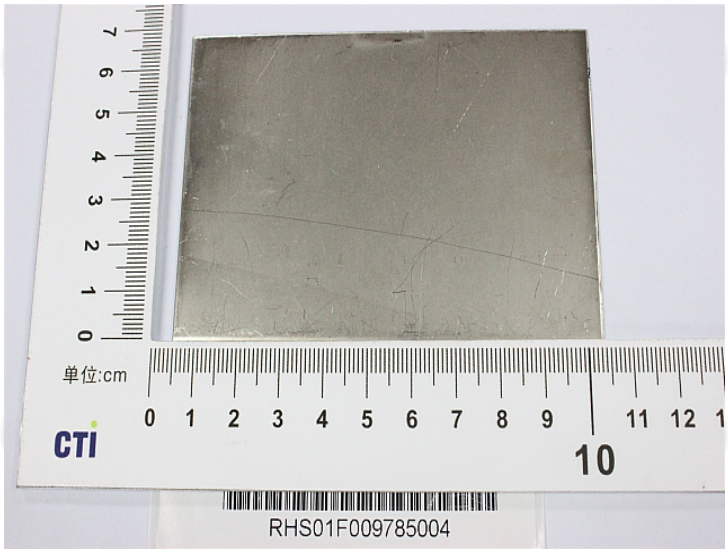


3. Fluorine(F), Chlorine(Cl), Bromine(Br), Iodine(I)



Test Report

Photo(s) of the sample(s)



*** End of report ***

Test Report

Report No. RHS01F009785006

Applicant HANG KEI PLATING(SHEN ZHEN)CO.,LTD
Address BIOCK3,JIAOTANG INDUSTRIAL ZONE,XIHUANLU,BAOAN DISTRICT,SHENZHEN,P.R.CHINA

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

Sample Name	端子金镀层
Part No.	测试片
Sample Received Date	Aug. 1, 2013
Testing Period	Aug. 1, 2013 to Aug. 6, 2013

Test Requested As specified by client, to test Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)), 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).

Tested by Rick Li Reviewed by Vargas He

Approved by Danny Liu Date Aug. 6, 2013

Technical Manager

CENTRE TESTING INTERNATIONAL CTI SZ03

No. 1012251264

Test Report

Report No. RHS01F009785006

Test Method

Test Item(s)	Test Method	Measured Equipment(s)
Fluorine(F)	Refer to BS EN 14582:2007	IC
Chlorine(Cl)	Refer to BS EN 14582:2007	IC
Bromine(Br)	Refer to BS EN 14582:2007	IC
Iodine(I)	Refer to BS EN 14582:2007	IC
Lead(Pb)	Refer to IEC 62321:2008 Ed.1	ICP-OES
Cadmium(Cd)	Refer to IEC 62321:2008 Ed.1	ICP-OES
Mercury(Hg)	Refer to IEC 62321:2008 Ed.1	ICP-OES
Hexavalent Chromium(Cr(VI))	IEC 62321:2008 Ed.1 Annex B	UV-Vis

Test Result(s)

Tested Item(s)	**Result**	**MDL**
Halogen(s)		
Fluorine (F)	N.D.	10 µg/cm²
Chlorine (Cl)	N.D.	10 µg/cm²
Bromine (Br)	N.D.	10 µg/cm²
Iodine (I)	N.D.	10 µg/cm²

Tested Item(s)	**Result**	**MDL**
Lead(Pb)	N.D.	2 mg/kg
Cadmium (Cd)	N.D.	2 mg/kg
Mercury(Hg)	N.D.	2 mg/kg
Hexavalent Chromium(Cr(VI))	Negative	/

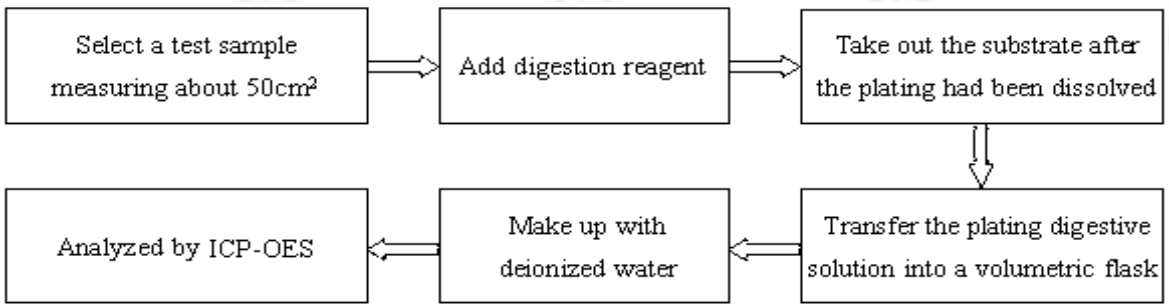
Tested Sample/Part Description Golden plating

Note: **The washed plating had been dissolved totally tested for Lead, Cadmium, Mercury.**
-MDL = Method Detection Limit
-N.D. = Not Detected (<MDL)
-mg/kg = ppm = parts per million
-Negative = Absence of Cr(VI) , the detected Cr(VI) concentration in the boiling water extraction solution is less than 0.02 mg/kg with 50cm² sample surface area used.

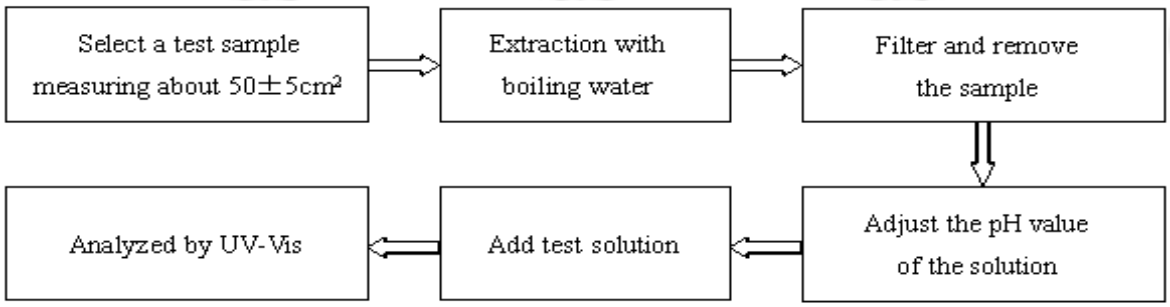
Test Report

Test Process

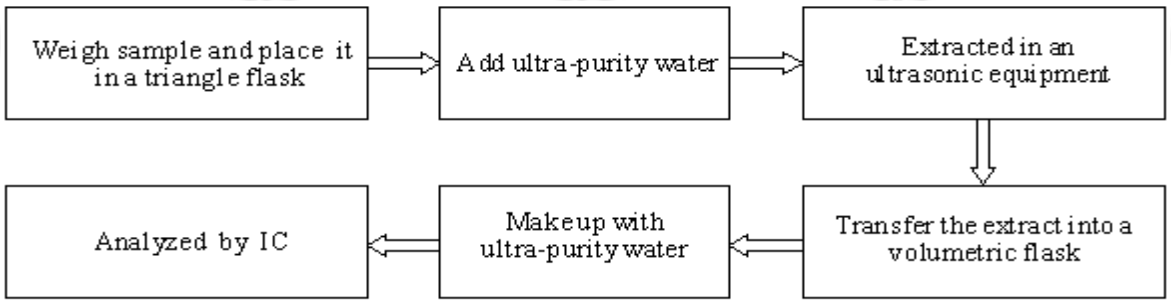
1. Lead(Pb), Cadmium(Cd), Mercury(Hg)



2. Hexavalent Chromium(Cr(VI))



3. Fluorine(F), Chlorine(Cl), Bromine(Br), Iodine(I)



Test Report

Photo(s) of the sample(s)

*** End of report ***