

承認書

APPROVAL SHEET

客戶名稱
Customer: 研揚科技股份有限公司

飛偉料號
FW P/N: FWAA-1473

客戶料號
Cus. P/N: 170X000382

規格敘述
DESCRIPTION: Cable. 6P. Pitch=1.0mm. 150mm

審核 Approved By	業務 Sales Dept	品保 QA Dept	工程 Engineering Dept
王俊偉	張全生	劉江華	楊仁貴

客戶簽章

Customer Signature:

審核 Approved By	核對 Checked By	檢驗 Tested By

飛偉科技有限公司

FLYINGWAY TECH CO., LTD

Address: 新北市永和區中和路343號3F-1

TEL: 02-22311313

FAX: 02-22311020

CONTACT: Chino Wang

E-Mail: chino@flyingwaytech.com.tw

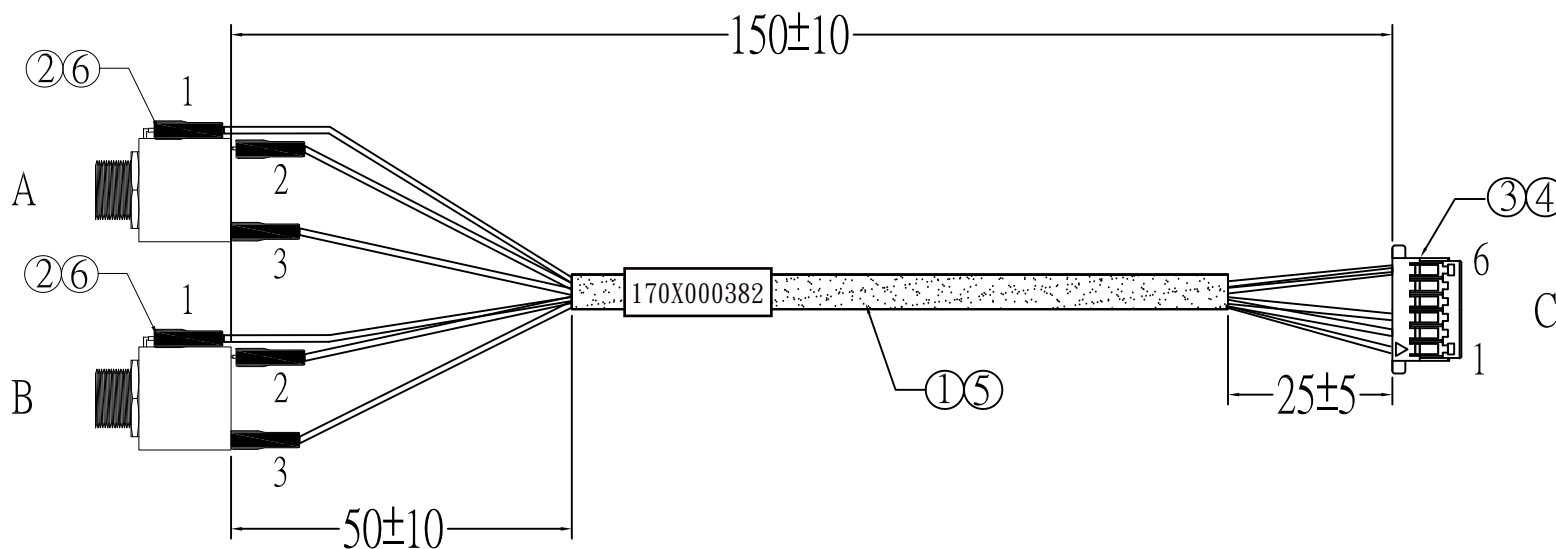
Cellphone: 0983588528

DATE: 2022/02/25

RoHS Compliant

Pin對照表

A	1	2	3				
B	1				2	3	
C	3	1	2	5	6		4
顏色	黑	棕	紅		綠	綠	



附上螺帽,不用鎖在 JACK 头上

6	套管:L=10mm 厚 黑	6	pcs	WOER或同級品
5	套管:L=75mm 薄 黑	1	pcs	WOER或同級品
4	TER:11002TOP-2E	4	pcs	JCTC或同級品
3	HSG:11002H00-6P	1	pcs	JCTC或同級品
2	PHONK JACK:Φ3.5mm SCJ311M1NXS1B00G	2	pcs	旭全或同級品
1	線材:UL1571#28 OD=0.8 棕,紅各1 L=153*2.5T*1.6 / 黑,綠各3	共8	pcs	瑞興或同級品
NO	品名規格	數量	單位	生產廠商

客戶工程師	Jimmy	
版次	變更內容	變更日期
A	新發行	2021/07/22
B	修改PIN DEFINE	2021/09/29

飛偉科技有限公司 FLYINGWAY TECH CO., LTD
 TEL: 02-2231-1313
 FAX: 02-2231-1020
 E-MAIL: chino@flyingwaytech.com.tw

TITLE: AUDIO JACK CABLE 150mm

FW P/N: FWAA-1473

CUS. P/N: 170X000382

REV: B DWG BY: Irene CHECKED BY: Chino DATE: 2021/09/29

瑞興電線有限公司

UL 1571
80°C 30V

HOOK-UP WIRE
PVC 電子線

UL Subject 758

UL FILE NO: E108485

▲說明：

- 導體使用絞線 30-24AWG 鍍錫銅
- PVC 絕緣
- 額定溫度：80°C，額定電壓：30Volts
- 可通過 UL VW-1 垂直型耐燃測試

▲應用：

- 電子設備二次回路中內部連接用線

▲Product Description：

- Tinned copper conductor 30-24AWG
- Color-coded PVC insulation
- Rated temperature：80°C, Rated voltage：30Volts
- Passes UL VW-1 vertical flame test

▲Applications

- Internal wiring of class 2 circuits in electronic equipment

構造及電器性能

structure & electric properties



UL 1571	額定 Range		導體 Conductor		絕緣體 Insulation		公差值 Tolerance mm	最大導體 阻抗 Maximum Conductor Resistance Ω / Km	最小絕緣 阻抗 Minimum Insulation Resistance MΩ / Km	絕緣 耐電壓 (VAC/min) Insulation Potential Strength
	溫度 Temp °C	電壓 Voltage V	線號 AWG	構成 NO./mm	厚度 Thickness mm	外徑 O.D. mm				
Stranded 多芯線	80°C	30V	30	0.100/ 7	0.20	0.70	± 0.05	387	15	2000
			30	0.100/ 7	0.11	0.55	± 0.05	387		
			28	0.127/ 7	0.20	0.80	± 0.05	244		
			28	0.127/ 7	0.11	0.60	± 0.05	244		
			26	0.160/ 7	0.20	0.90	± 0.05	153		
			24	0.160/11	0.20	1.05	± 0.05	95.8		
Top-Coated (ATC) 先絞後鍍			28	0.127/ 7	0.20	0.80	± 0.05	244		

AVLV2.E108485 - APPLIANCE WIRING MATERIAL - COMPONENT

Appliance Wiring Material - Component

See General Information for Appliance Wiring Material - Component

REI HSING WIRE CO LTD

56-5 JIUN-ING ST

SHUH-LIN, TAIPEI HSIEN 238 TAIWAN

E108485

Table of Recognized Styles

Single-conductor, thermoplastic insulation.							
1007	1164	1285	1497	1589	1723	10800	11028
1010	1180	1316	1500	1591	1726	10981	11042
1011	1185	1330	1516	1592	1789	10982	11045
1013	1198	1331	1533	1617	10064	10983	11047
1015	1199	1332	1538	1618	10070	10984	
1028	1212	1333	1569	1672	10109	10985	
1032	1213	1371	1571	1674	10198	10986	
1061	1226	1429	1577	1685	10362	10987	
1080	1227	1430	1581	1709	10368	10993	
1095	1283	1431	1584	1710	10369	11027	
Multiple-conductor, thermoplastic insulation.							
2096	2476	2697	20005	20855	21099	21143	21458
2444	2547	2733	20080	21016	21100	21307	
2464	2555	2851	20276	21064	21101	21309	
2468	2562	2854	20850	21088	21118	21310	
Single-conductor, thermoset insulation.							
3099	3173	3271	3321	3369	3406	3512	3613
3122	3239	3275	3323	3385	3443	3587	3615
3132	3265	3289	3364	3386	3463	3590	3713
3135	3266	3302	3367	3398	3464	3610	

Multiple-conductor, thermoset insulation.							
4384	4478						
Single and multiple-conductor specialty items.							
5140	5243						

Marking: Company name, voltage rating, temperature rating, conductor size, conductor material if other than copper, and use.

Last Updated on 2018-05-16

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Report No. A2210256417101012

Company Name shown on Report REIHSING(DONGGUAN) ELECTRIC WIRE AND CABLE CO.,LTD

Address NO.18 LANYUAN ROAD XINAN VILLAGE CHANGAN TOWN DONGGUAN CITY GUANGDONG CHINA

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

Sample Name BROWN PVC LF INSULATED WIRE
 Part No. UL1015 LF WIRE UL1007,1015,1571,1061,1028,1032,1080,
 1095,1569,1581,1674,1500,1283,1285,
 1011,1013,1497,1789,1685,1617,1672,1618,1010,1316,1429,1430,1431,3443,3610,
 2468,2464,2444,20080,2555,2476,2697,2733,2562,2096,1533,2547,20005,20276,
 2854,2851,1185,10070,10198,SPT,(H)VSF,(H)VFF,(H)VCTF,(H)VCFK,H05V2-U,
 H05V2-K,AV,AVS,AVSS,CCC60227IEC02(RV)06(RV)08(RV-90)52(RVV)
 53(RVV),OR Other PVC insulated wire

Supplier Reihsing
 Sample Received Date Jul. 1, 2021
 Testing Period Jul. 1, 2021 to Jul. 6, 2021

Test Requested As specified by client, to test Lead (Pb), Cadmium (Cd), Mercury (Hg), Hexavalent Chromium (Cr(VI)), Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs), Phthalates (DBP, BBP, DEHP, DIBP), Hexabromocyclododecane (HBCDD) 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

Grace Sun

Approved by

Hill Zheng

Hill Zheng
Technical Manager

Reviewed by

Amos Fong

Date

Jul. 6, 2021

No. R338852088

Centre Testing International Group Co.,Ltd.

CTI Building, Xing Dong Community, Xin'an Sub-district, Bao'an District, Shenzhen City, Guangdong Province, P.R. China

Test Report

Report No. A2210256417101012

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Test Method

Test Item(s)	Test Method	Measured Equipment(s)
Lead (Pb)	IEC 62321-5:2013	ICP-OES
Cadmium (Cd)	IEC 62321-5:2013	ICP-OES
Mercury (Hg)	IEC 62321-4:2013+AMD1:2017 CSV	ICP-OES
Hexavalent Chromium (Cr(VI))	IEC 62321-7-2:2017 and/or determination of Total Chromium by IEC 62321-5:2013	UV-Vis/ICP-OES
Polybrominated Biphenyls (PBBs)	IEC 62321-6:2015	GC-MS
Polybrominated Diphenyl Ethers (PBDEs)	IEC 62321-6:2015	GC-MS
Phthalates (DBP, BBP, DEHP, DIBP)	IEC 62321-8:2017	GC-MS
Hexabromocyclododecane (HBCDD)	Refer to US EPA 3540C:1996 & US EPA 8270E:2018	GC-MS

Test Report

Report No. A2210256417101012

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Test Result(s)

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))	N.D.	8 mg/kg
Tested Item(s)	Result	MDL
Polybrominated Biphenyls (PBBs)		
Monobromobiphenyl	N.D.	5 mg/kg
Dibromobiphenyl	N.D.	5 mg/kg
Tribromobiphenyl	N.D.	5 mg/kg
Tetrabromobiphenyl	N.D.	5 mg/kg
Pentabromobiphenyl	N.D.	5 mg/kg
Hexabromobiphenyl	N.D.	5 mg/kg
Heptabromobiphenyl	N.D.	5 mg/kg
Octabromobiphenyl	N.D.	5 mg/kg
Nonabromobiphenyl	N.D.	5 mg/kg
Decabromobiphenyl	N.D.	5 mg/kg
Tested Item(s)	Result	MDL
Polybrominated Diphenyl Ethers (PBDEs)		
Monobromodiphenyl ether	N.D.	5 mg/kg
Dibromodiphenyl ether	N.D.	5 mg/kg
Tribromodiphenyl ether	N.D.	5 mg/kg
Tetrabromodiphenyl ether	N.D.	5 mg/kg
Pentabromodiphenyl ether	N.D.	5 mg/kg
Hexabromodiphenyl ether	N.D.	5 mg/kg
Heptabromodiphenyl ether	N.D.	5 mg/kg
Octabromodiphenyl ether	N.D.	5 mg/kg
Nonabromodiphenyl ether	N.D.	5 mg/kg
Decabromodiphenyl ether	N.D.	5 mg/kg

Test Report

Report No. A2210256417101012

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Test Result(s)

Tested Item(s)	Result	MDL
Phthalates (DBP, BBP, DEHP, DIBP)		
Dibutyl phthalate(DBP) CAS#:84-74-2	N.D.	50 mg/kg
Butyl benzyl phthalate(BBP) CAS#:85-68-7	N.D.	50 mg/kg
Di-(2-ethylhexyl) phthalate(DEHP) CAS#:117-81-7	N.D.	50 mg/kg
Diisobutyl phthalate(DIBP) CAS#:84-69-5	N.D.	50 mg/kg
Tested Item(s)		
Result		
MDL		
Hexabromocyclododecane(HBCDD)	N.D.	5 mg/kg

Sample/Part Description Brown wire jacket**Remark:** The sample(s) had been dissolved totally tested for Lead, Cadmium, Mercury.

-MDL = Method Detection Limit

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

-mg/kg = ppm = parts per million

- Information Statement: Different Part No. with different buyer.

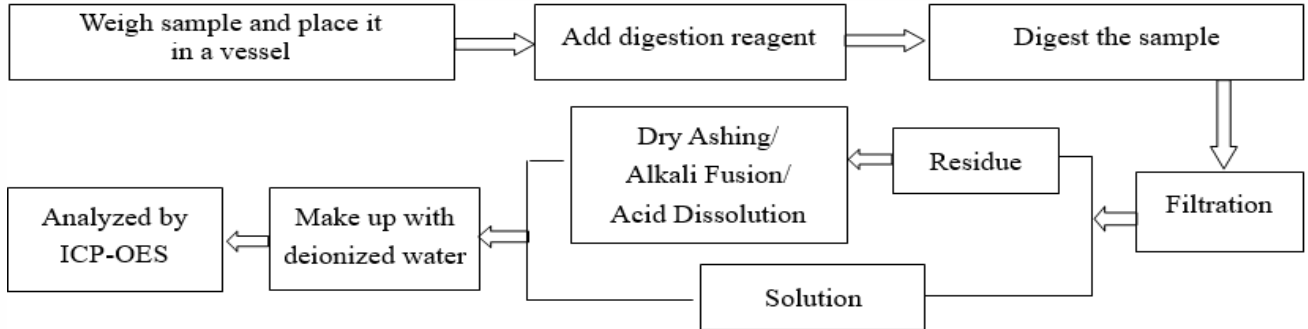
Test Report

Report No. A2210256417101012

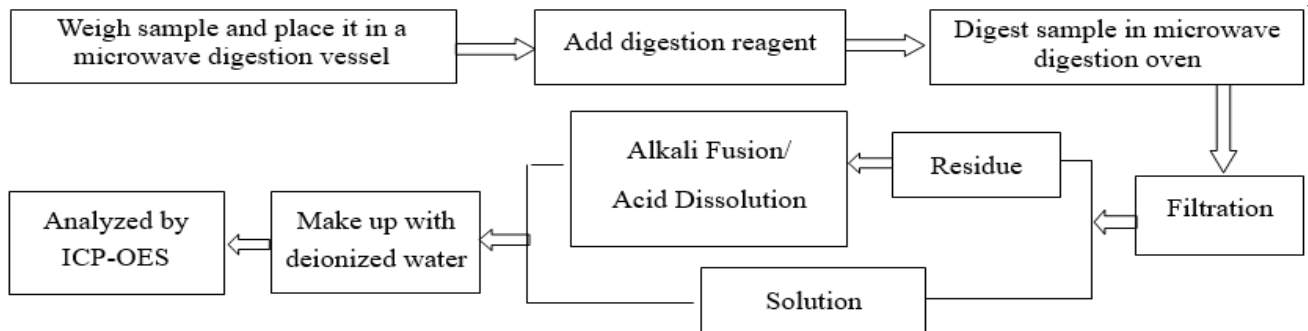
Page 5 of 7

Test Process

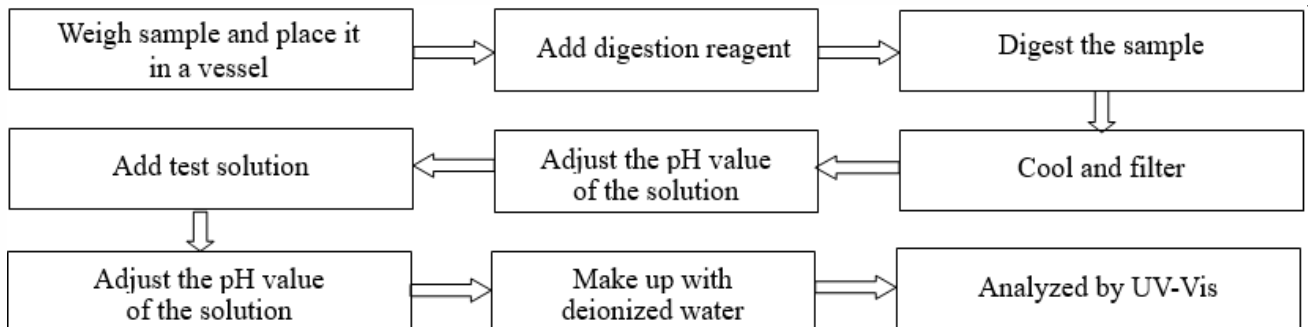
1. Lead (Pb), Cadmium (Cd), Chromium (Cr)



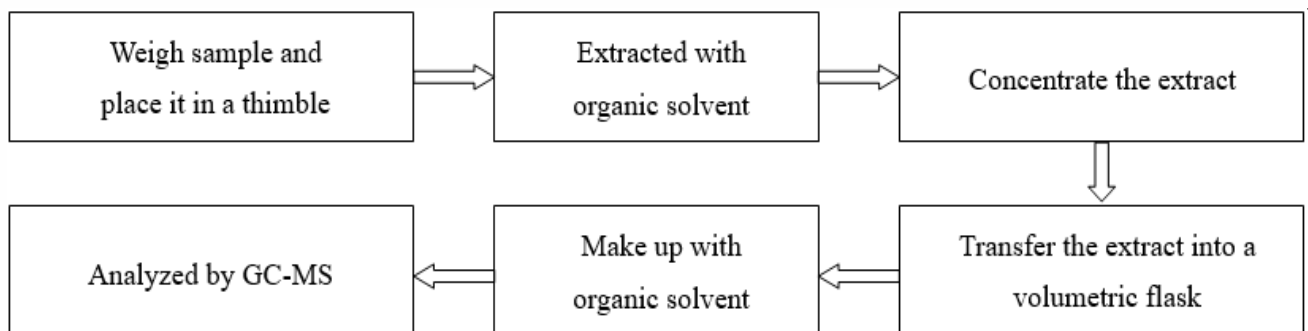
2. Mercury (Hg)



3. Hexavalent Chromium (Cr(VI))



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

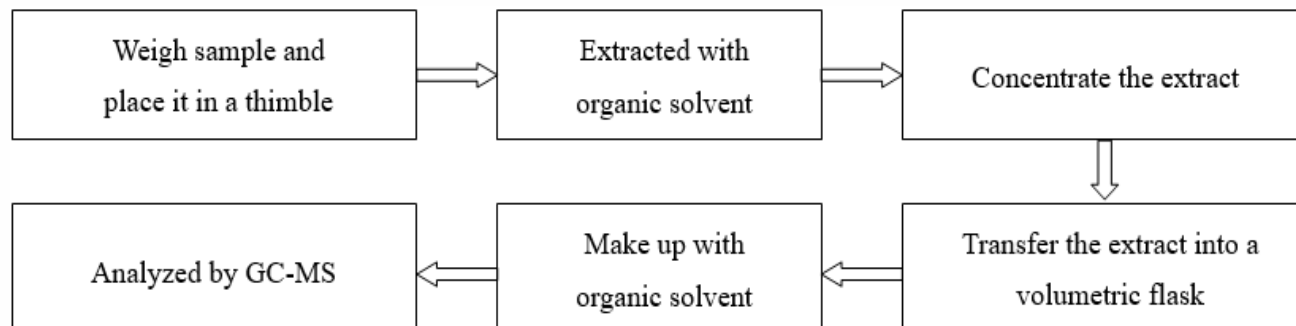


Test Report

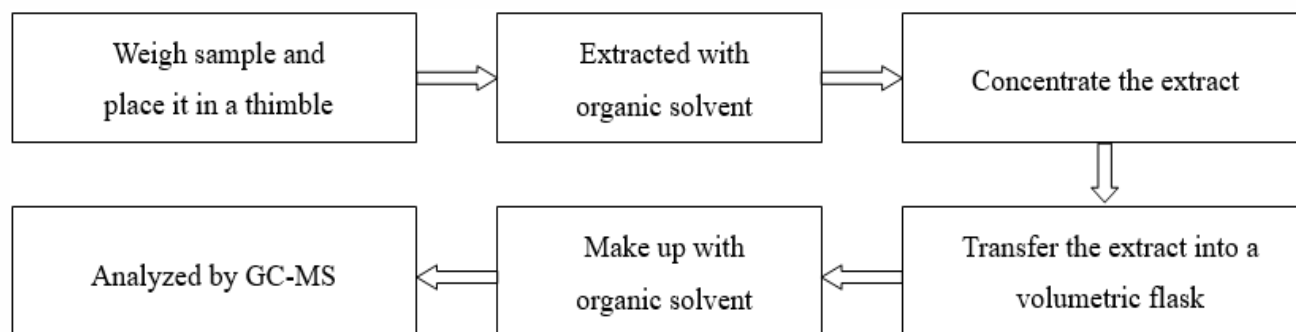
Report No. A2210256417101012

Page 6 of 7

5. Phthalates (DBP, BBP, DEHP, DIBP)



6. Hexabromocyclododecane (HBCDD)



有限公司

Test Report

Report No. A2210256417101012

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Photo(s) of the sample(s)



Statement:

1. This report is considered invalid without approved signature, special seal and the seal on the perforation;
2. The Company Name shown on Report and Address, the sample(s) and sample information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified;
3. The result(s) shown in this report refer(s) only to the sample(s) tested;
4. Without written approval of CTI, this report can't be reproduced except in full;
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*** End of report ***

Test Report



Report No. A2210256417102012

Company Name shown on Report REIHsing(DONGGUAN) ELECTRIC WIRE AND CABLE CO.,LTD

Address NO.18 LANYUAN ROAD XINAN VILLAGE CHANGAN TOWN DONGGUAN CITY GUANGDONG CHINA

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

Sample Name BROWN PVC LF INSULATED WIRE
Part No. UL1015 LF WIRE UL1007,1015,1571,1061,1028,1032,1080, 1095,1569,1581,1674,1500,1283,1285, 1011,1013,1497,1789,1685,1617,1672,1618,1010,1316,1429,1430,1431,3443,3610, 2468,2464,2444,20080,2555,2476,2697,2733,2562,2096,1533,2547,20005,20276, 2854,2851,1185,10070,10198,SPT,(H)VSF,(H)VFF,(H)VCTF,(H)VCFK,H05V2-U, H05V2-K,AV,AVS,AVSS,CCC60227IEC02(RV)06(RV)08(RV-90)52(RVV) 53(RVV),OR Other PVC insulated wire

Supplier Reihsing
Sample Received Date Jul. 1, 2021
Testing Period Jul. 1, 2021 to Jul. 7, 2021

Test Requested As specified by client, to test Phthalates 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 Grace Sun

Approved by Hill Zheng

Hill Zheng
Technical Manager

Reviewed by [Signature]

Date Jul. 7, 2021

No. R338851376

CTI Building, Xing Dong Community, Xin'an Sub-district, Bao'an District, Shenzhen City, Guangdong Province, P.R. China

Test Report

Report No. A2210256417102012

Page 2 of 6

Test Method

Test Item(s)	Test Method	Measured Equipment(s)
Phthalates	Refer to EN 14372:2004(E)	GC-MS



Test Report

Report No. A2210256417102012

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Test Result(s)

Tested Item(s)	Result	MDL
Phthalates		
Di-n-octyl phthalate(DNOP) CAS#:117-84-0	N.D.	30 mg/kg
Di-isononyl phthalate(DINP) CAS#:28553-12-0,68515-48-0	N.D.	50 mg/kg
Di-iso-decyl phthalate(DIDP) CAS#:26761-40-0,68515-49-1	N.D.	50 mg/kg
Dimethyl phthalate(DMP) CAS#:131-11-3	N.D.	30 mg/kg
Diethyl phthalate(DEP) CAS#:84-66-2	N.D.	30 mg/kg
Dipropyl phthalate(DPrP) CAS#:131-16-8	N.D.	30 mg/kg
Diisobutyl phthalate(DIBP) CAS#:84-69-5	N.D.	30 mg/kg
Dipentyl phthalate(DPP) CAS#:131-18-0	N.D.	30 mg/kg
Dicyclohexyl phthalate(DCHP) CAS#:84-61-7	N.D.	30 mg/kg
Diisooctyl phthalate(DIOP) CAS#:27554-26-3	N.D.	50 mg/kg
Dinonyl phthalate(DNP) CAS#:84-76-4	N.D.	30 mg/kg
Di-n-hexyl phthalate(DNHP) CAS#:84-75-3	N.D.	30 mg/kg
Bis(2-methoxyethyl) phthalate(DMEP) CAS#:117-82-8	N.D.	30 mg/kg
Diisopentylphthalate(DIPP) CAS#:605-50-5	N.D.	30 mg/kg
Diundecyl phthalates(DUP) CAS#:3648-20-2	N.D.	30 mg/kg
N-Pentyl-isopentyl phthalate(NIPP) CAS#:776297-69-9	N.D.	30 mg/kg
① 1,2-Benzenedicarboxylic acid, di-(C7-11)-branched and linear alkyl esters(DHNUP) CAS#:68515-42-4	N.D.	50 mg/kg

Test Report

Report No. A2210256417102012

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Test Result(s)

^① 1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich(DIHP) CAS#:71888-89-6	N.D.	50 mg/kg
Di-2-propylheptyl phthalate(DPHpP) CAS#:53306-54-0	N.D.	30 mg/kg

Sample/Part Description Brown wire jacket

Remark:

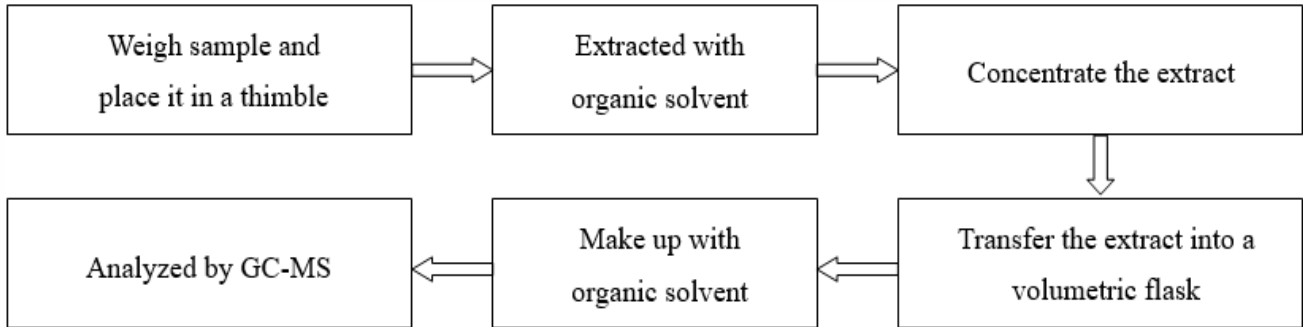
- MDL = Method Detection Limit
- N.D. = Not Detected (<MDL)
- mg/kg = ppm = parts per million
- ^①: In view of the substances are established as UVCB substances (substances of unknown or variable composition, complex reaction products or biological materials) consisting of different and variable constituents, the test results are calculated based on the main constituents of the representative compounds for substances.
- Information Statement: Different Part No. with different buyer.

Test Report

Report No. A2210256417102012

Page 5 of 6

Test Process



华测检测有限公司

Test Report

Report No. A2210256417102012

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Photo(s) of the sample(s)



Statement:

1. This report is considered invalid without approved signature, special seal and the seal on the perforation;
2. The Company Name shown on Report and Address, the sample(s) and sample information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified;
3. The result(s) shown in this report refer(s) only to the sample(s) tested;
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*** End of report ***



Report No. A2210256417101010

Company Name shown on Report REIHSING(DONGGUAN) ELECTRIC WIRE AND CABLE CO.,LTD

Address NO.18 LANYUAN ROAD XINAN VILLAGE CHANGAN TOWN DONGGUAN CITY GUANGDONG CHINA

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

Sample Name GREEN PVC LF INSULATED WIRE
 Part No. UL1015 LF WIRE UL1007,1015,1571,1061,1028,1032,1080,
 1095,1569,1581,1674,1500,1283,1285,
 1011,1013,1497,1789,1685,1617,1672,1618,1010,1316,1429,1430,1431,3443,3610,
 2468,2464,2444,20080,2555,2476,2697,2733,2562,2096,1533,2547,20005,20276,
 2854,2851,1185,10070,10198,SPT,(H)VSF,(H)VFF,(H)VCTF,(H)VCFK,H05V2-U,
 H05V2-K,AV,AVS,AVSS,CCC60227IEC02(RV)06(RV)08(RV-90)52(RVV)
 53(RVV),OR Other PVC insulated wire

Supplier Reihsing
 Sample Received Date Jul. 1, 2021
 Testing Period Jul. 1, 2021 to Jul. 6, 2021

Test Requested As specified by client, to test Lead (Pb), Cadmium (Cd), Mercury (Hg), Hexavalent Chromium (Cr(VI)), Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs), Phthalates (DBP, BBP, DEHP, DIBP), Hexabromocyclododecane (HBCDD) 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

Grace Sun

Reviewed by

Amos Fong

Approved by

Hill Zheng

Date

Jul. 6, 2021

Hill Zheng
Technical Manager

No. R338852088

Centre Testing International Group Co.,Ltd.

CTI Building, Xing Dong Community, Xin'an Sub-district, Bao'an District, Shenzhen City, Guangdong Province, P.R. China

Test Report

Report No. A2210256417101010

Page 2 of 7

Test Method

Test Item(s)	Test Method	Measured Equipment(s)
Lead (Pb)	IEC 62321-5:2013	ICP-OES
Cadmium (Cd)	IEC 62321-5:2013	ICP-OES
Mercury (Hg)	IEC 62321-4:2013+AMD1:2017 CSV	ICP-OES
Hexavalent Chromium (Cr(VI))	IEC 62321-7-2:2017 and/or determination of Total Chromium by IEC 62321-5:2013	UV-Vis/ICP-OES
Polybrominated Biphenyls (PBBs)	IEC 62321-6:2015	GC-MS
Polybrominated Diphenyl Ethers (PBDEs)	IEC 62321-6:2015	GC-MS
Phthalates (DBP, BBP, DEHP, DIBP)	IEC 62321-8:2017	GC-MS
Hexabromocyclododecane (HBCDD)	Refer to US EPA 3540C:1996 & US EPA 8270E:2018	GC-MS

Test Report

Report No. A2210256417101010

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Test Result(s)

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))	N.D.	8 mg/kg
Tested Item(s)	Result	MDL
Polybrominated Biphenyls (PBBs)		
Monobromobiphenyl	N.D.	5 mg/kg
Dibromobiphenyl	N.D.	5 mg/kg
Tribromobiphenyl	N.D.	5 mg/kg
Tetrabromobiphenyl	N.D.	5 mg/kg
Pentabromobiphenyl	N.D.	5 mg/kg
Hexabromobiphenyl	N.D.	5 mg/kg
Heptabromobiphenyl	N.D.	5 mg/kg
Octabromobiphenyl	N.D.	5 mg/kg
Nonabromobiphenyl	N.D.	5 mg/kg
Decabromobiphenyl	N.D.	5 mg/kg
Tested Item(s)	Result	MDL
Polybrominated Diphenyl Ethers (PBDEs)		
Monobromodiphenyl ether	N.D.	5 mg/kg
Dibromodiphenyl ether	N.D.	5 mg/kg
Tribromodiphenyl ether	N.D.	5 mg/kg
Tetrabromodiphenyl ether	N.D.	5 mg/kg
Pentabromodiphenyl ether	N.D.	5 mg/kg
Hexabromodiphenyl ether	N.D.	5 mg/kg
Heptabromodiphenyl ether	N.D.	5 mg/kg
Octabromodiphenyl ether	N.D.	5 mg/kg
Nonabromodiphenyl ether	N.D.	5 mg/kg
Decabromodiphenyl ether	N.D.	5 mg/kg

Test Report

Report No. A2210256417101010

Page 4 of 7

Test Result(s)

Tested Item(s)	Result	MDL
Phthalates (DBP, BBP, DEHP, DIBP)		
Dibutyl phthalate(DBP) CAS#:84-74-2	N.D.	50 mg/kg
Butyl benzyl phthalate(BBP) CAS#:85-68-7	N.D.	50 mg/kg
Di-(2-ethylhexyl) phthalate(DEHP) CAS#:117-81-7	N.D.	50 mg/kg
Diisobutyl phthalate(DIBP) CAS#:84-69-5	N.D.	50 mg/kg
Tested Item(s)		
Result		
MDL		
Hexabromocyclododecane(HBCDD)	N.D.	5 mg/kg

Sample/Part Description Green wire jacket**Remark:** The sample(s) had been dissolved totally tested for Lead, Cadmium, Mercury.

-MDL = Method Detection Limit

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

-mg/kg = ppm = parts per million

- Information Statement: Different Part No. with different buyer.

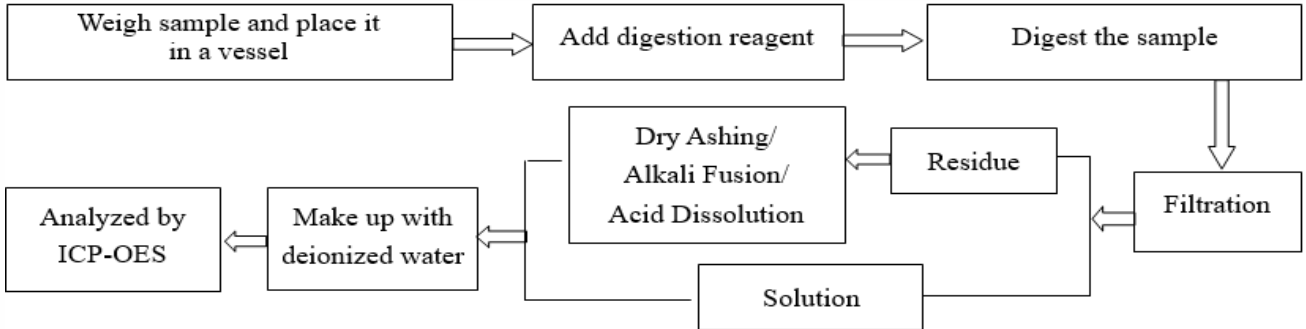
Test Report

Report No. A2210256417101010

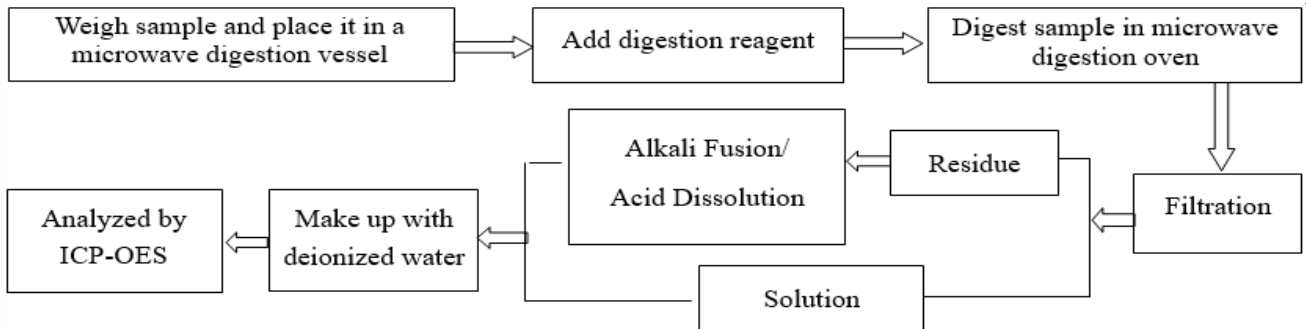
Page 5 of 7

Test Process

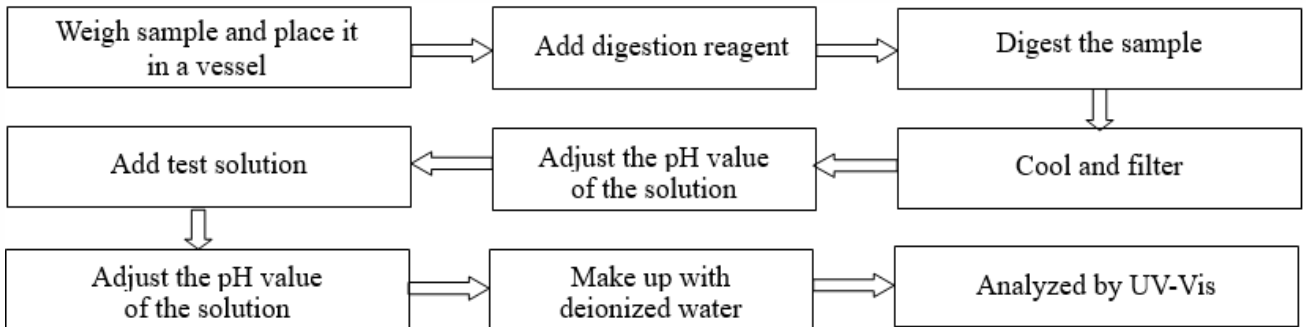
1. Lead (Pb), Cadmium (Cd), Chromium (Cr)



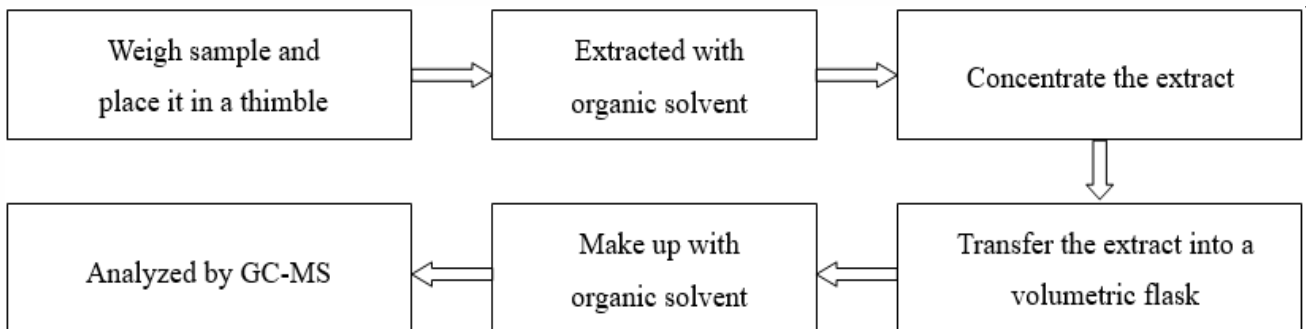
2. Mercury (Hg)



3. Hexavalent Chromium (Cr(VI))



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

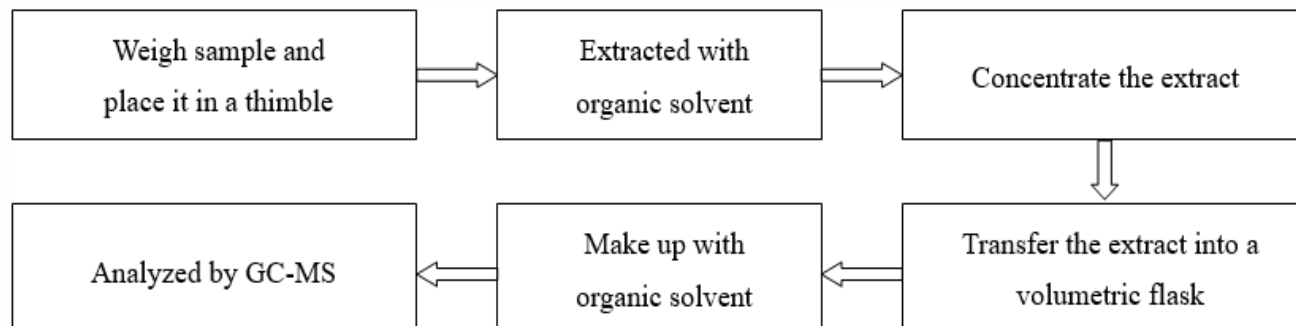


Test Report

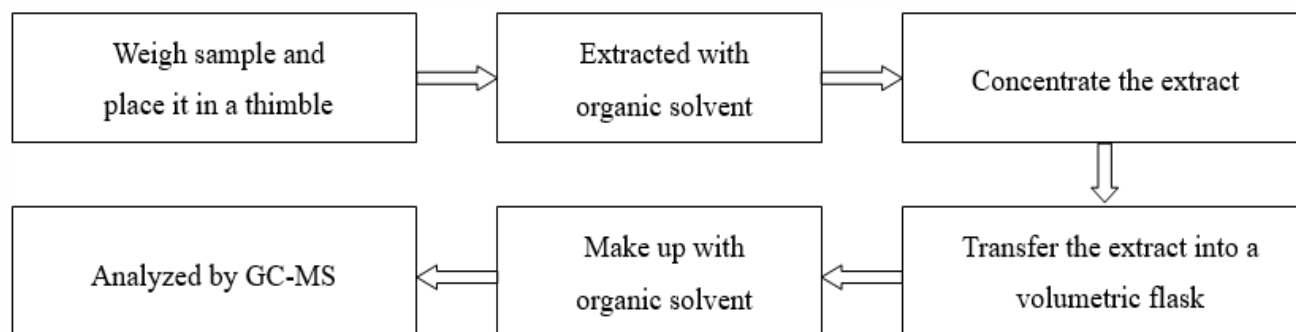
Report No. A2210256417101010

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5. Phthalates (DBP, BBP, DEHP, DIBP)



6. Hexabromocyclododecane (HBCDD)



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Test Report

Report No. A2210256417101010

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Photo(s) of the sample(s)



Statement:

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3. The result(s) shown in this report refer(s) only to the sample(s) tested;
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Test Report



Report No. A2210256417102010

Company Name shown on Report REIHsing(DONGGUAN) ELECTRIC WIRE AND CABLE CO.,LTD

Address NO.18 LANYUAN ROAD XINAN VILLAGE CHANGAN TOWN DONGGUAN CITY GUANGDONG CHINA

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

Sample Name GREEN PVC LF INSULATED WIRE
Part No. UL1015 LF WIRE UL1007,1015,1571,1061,1028,1032,1080, 1095,1569,1581,1674,1500,1283,1285, 1011,1013,1497,1789,1685,1617,1672,1618,1010,1316,1429,1430,1431,3443,3610, 2468,2464,2444,20080,2555,2476,2697,2733,2562,2096,1533,2547,20005,20276, 2854,2851,1185,10070,10198,SPT,(H)VSF,(H)VFF,(H)VCTF,(H)VCFK,H05V2-U, H05V2-K,AV,AVS,AVSS,CCC60227IEC02(RV)06(RV)08(RV-90)52(RVV) 53(RVV),OR Other PVC insulated wire

Supplier Reihsing
Sample Received Date Jul. 1, 2021
Testing Period Jul. 1, 2021 to Jul. 7, 2021

Test Requested As specified by client, to test Phthalates 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 Grace Sun

Approved by Hill Zheng

Hill Zheng
Technical Manager

Reviewed by [Signature]

Date Jul. 7, 2021

No. R338851376

CTI Building, Xing Dong Community, Xin'an Sub-district, Bao'an District, Shenzhen City, Guangdong Province, P.R. China

Test Report

Report No. A2210256417102010

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Test Method

Test Item(s)	Test Method	Measured Equipment(s)
Phthalates	Refer to EN 14372:2004(E)	GC-MS

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Test Report

Report No. A2210256417102010

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Test Result(s)

Tested Item(s)	Result	MDL
Phthalates		
Di-n-octyl phthalate(DNOP) CAS#:117-84-0	N.D.	30 mg/kg
Di-isononyl phthalate(DINP) CAS#:28553-12-0,68515-48-0	N.D.	50 mg/kg
Di-iso-decyl phthalate(DIDP) CAS#:26761-40-0,68515-49-1	N.D.	50 mg/kg
Dimethyl phthalate(DMP) CAS#:131-11-3	N.D.	30 mg/kg
Diethyl phthalate(DEP) CAS#:84-66-2	N.D.	30 mg/kg
Dipropyl phthalate(DPrP) CAS#:131-16-8	N.D.	30 mg/kg
Diisobutyl phthalate(DIBP) CAS#:84-69-5	N.D.	30 mg/kg
Dipentyl phthalate(DPP) CAS#:131-18-0	N.D.	30 mg/kg
Dicyclohexyl phthalate(DCHP) CAS#:84-61-7	N.D.	30 mg/kg
Diisooctyl phthalate(DIOP) CAS#:27554-26-3	N.D.	50 mg/kg
Dinonyl phthalate(DNP) CAS#:84-76-4	N.D.	30 mg/kg
Di-n-hexyl phthalate(DNHP) CAS#:84-75-3	N.D.	30 mg/kg
Bis(2-methoxyethyl) phthalate(DMEP) CAS#:117-82-8	N.D.	30 mg/kg
Diisopentylphthalate(DIPP) CAS#:605-50-5	N.D.	30 mg/kg
Diundecyl phthalates(DUP) CAS#:3648-20-2	N.D.	30 mg/kg
N-Pentyl-isopentyl phthalate(NIPP) CAS#:776297-69-9	N.D.	30 mg/kg
① 1,2-Benzenedicarboxylic acid, di-(C7-11)-branched and linear alkyl esters(DHNUP) CAS#:68515-42-4	N.D.	50 mg/kg

Test Report

Report No. A2210256417102010

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Test Result(s)

^① 1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich(DIHP) CAS#:71888-89-6	N.D.	50 mg/kg
Di-2-propylheptyl phthalate(DPHpP) CAS#:53306-54-0	N.D.	30 mg/kg

Sample/Part Description Green wire jacket

Remark:

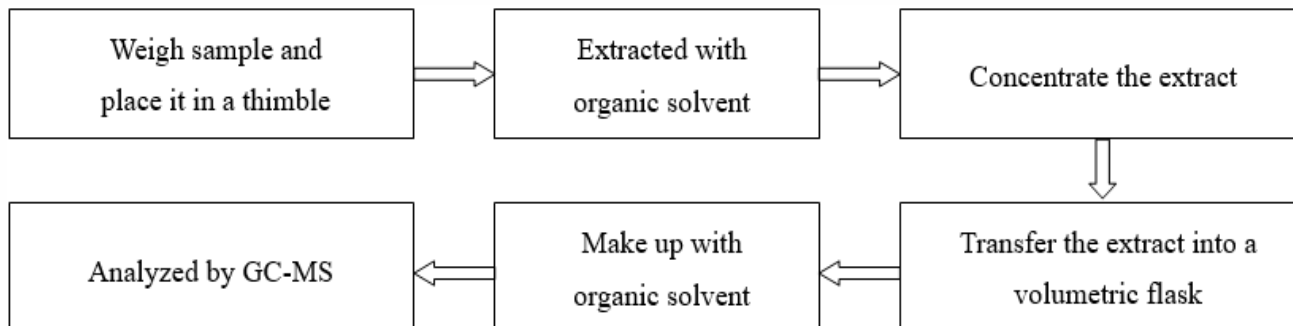
- MDL = Method Detection Limit
- N.D. = Not Detected (<MDL)
- mg/kg = ppm = parts per million
- ^①: In view of the substances are established as UVCB substances (substances of unknown or variable composition, complex reaction products or biological materials) consisting of different and variable constituents, the test results are calculated based on the main constituents of the representative compounds for substances.
- Information Statement: Different Part No. with different buyer.

Test Report

Report No. A2210256417102010

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Test Process



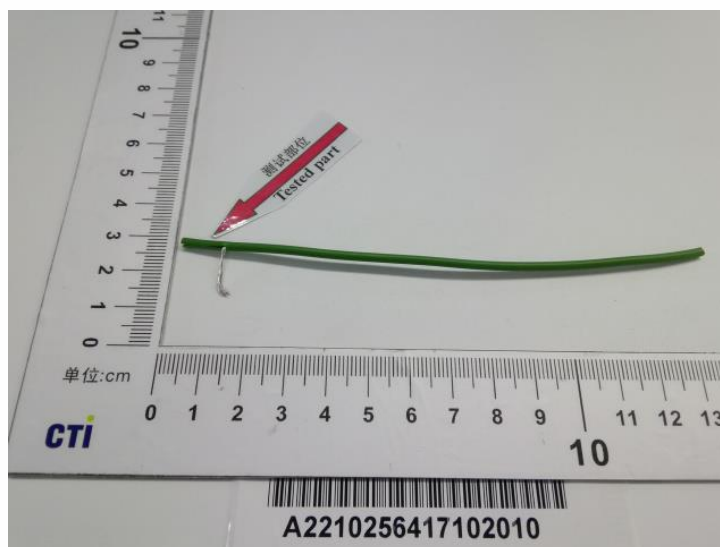
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Test Report

Report No. A2210256417102010

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Photo(s) of the sample(s)



Statement:

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3. The result(s) shown in this report refer(s) only to the sample(s) tested;
4. Without written approval of CTI, this report can't be reproduced except in full;
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*** End of report ***



Report No. A2210256417101005

Company Name shown on Report REIHsing(DONGGUAN) ELECTRIC WIRE AND CABLE CO.,LTD

Address NO.18 LANYUAN ROAD XINAN VILLAGE CHANGAN TOWN DONGGUAN CITY GUANGDONG CHINA

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

Sample Name RED PVC LF INSULATED WIRE
 Part No. UL1015 LF WIRE UL1007,1015,1571,1061,1028,1032,1080,
 1095,1569,1581,1674,1500,1283,1285,
 1011,1013,1497,1789,1685,1617,1672,1618,1010,1316,1429,1430,1431,3443,3610,
 2468,2464,2444,20080,2555,2476,2697,2733,2562,2096,1533,2547,20005,20276,
 2854,2851,1185,10070,10198,SPT,(H)VSF,(H)VFF,(H)VCTF,(H)VCFK,H05V2-U,
 H05V2-K,AV,AVS,AVSS,CCC60227IEC02(RV)06(RV)08(RV-90)52(RVV)
 53(RVV),OR Other PVC insulated wire

Supplier Reihsing
 Sample Received Date Jul. 1, 2021
 Testing Period Jul. 1, 2021 to Jul. 6, 2021

Test Requested As specified by client, to test Lead (Pb), Cadmium (Cd), Mercury (Hg), Hexavalent Chromium (Cr(VI)), Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs), Phthalates (DBP, BBP, DEHP, DIBP), Hexabromocyclododecane (HBCDD) 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

Grace Sun

Approved by

Hill Zheng

Hill Zheng
Technical Manager

Reviewed by

Amos Fong

Date

Jul. 6, 2021

No. R338852088

Centre Testing International Group Co.,Ltd.

CTI Building, Xing Dong Community, Xin'an Sub-district, Bao'an District, Shenzhen City, Guangdong Province, P.R. China

Test Report

Report No. A2210256417101005

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Test Method

Test Item(s)	Test Method	Measured Equipment(s)
Lead (Pb)	IEC 62321-5:2013	ICP-OES
Cadmium (Cd)	IEC 62321-5:2013	ICP-OES
Mercury (Hg)	IEC 62321-4:2013+AMD1:2017 CSV	ICP-OES
Hexavalent Chromium (Cr(VI))	IEC 62321-7-2:2017 and/or determination of Total Chromium by IEC 62321-5:2013	UV-Vis/ICP-OES
Polybrominated Biphenyls (PBBs)	IEC 62321-6:2015	GC-MS
Polybrominated Diphenyl Ethers (PBDEs)	IEC 62321-6:2015	GC-MS
Phthalates (DBP, BBP, DEHP, DIBP)	IEC 62321-8:2017	GC-MS
Hexabromocyclododecane (HBCDD)	Refer to US EPA 3540C:1996 & US EPA 8270E:2018	GC-MS

Test Report

Report No. A2210256417101005

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Test Result(s)

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))	N.D.	8 mg/kg
Tested Item(s)	Result	MDL
Polybrominated Biphenyls (PBBs)		
Monobromobiphenyl	N.D.	5 mg/kg
Dibromobiphenyl	N.D.	5 mg/kg
Tribromobiphenyl	N.D.	5 mg/kg
Tetrabromobiphenyl	N.D.	5 mg/kg
Pentabromobiphenyl	N.D.	5 mg/kg
Hexabromobiphenyl	N.D.	5 mg/kg
Heptabromobiphenyl	N.D.	5 mg/kg
Octabromobiphenyl	N.D.	5 mg/kg
Nonabromobiphenyl	N.D.	5 mg/kg
Decabromobiphenyl	N.D.	5 mg/kg
Tested Item(s)	Result	MDL
Polybrominated Diphenyl Ethers (PBDEs)		
Monobromodiphenyl ether	N.D.	5 mg/kg
Dibromodiphenyl ether	N.D.	5 mg/kg
Tribromodiphenyl ether	N.D.	5 mg/kg
Tetrabromodiphenyl ether	N.D.	5 mg/kg
Pentabromodiphenyl ether	N.D.	5 mg/kg
Hexabromodiphenyl ether	N.D.	5 mg/kg
Heptabromodiphenyl ether	N.D.	5 mg/kg
Octabromodiphenyl ether	N.D.	5 mg/kg
Nonabromodiphenyl ether	N.D.	5 mg/kg
Decabromodiphenyl ether	N.D.	5 mg/kg

Test Report

Report No. A2210256417101005

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Test Result(s)

Tested Item(s)	Result	MDL
Phthalates (DBP, BBP, DEHP, DIBP)		
Dibutyl phthalate(DBP) CAS#:84-74-2	N.D.	50 mg/kg
Butyl benzyl phthalate(BBP) CAS#:85-68-7	N.D.	50 mg/kg
Di-(2-ethylhexyl) phthalate(DEHP) CAS#:117-81-7	N.D.	50 mg/kg
Diisobutyl phthalate(DIBP) CAS#:84-69-5	N.D.	50 mg/kg
Tested Item(s)		
Result		
MDL		
Hexabromocyclododecane(HBCDD)	N.D.	5 mg/kg

Sample/Part Description Red wire jacket**Remark:** The sample(s) had been dissolved totally tested for Lead, Cadmium, Mercury.

-MDL = Method Detection Limit

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

-mg/kg = ppm = parts per million

- Information Statement: Different Part No. with different buyer.

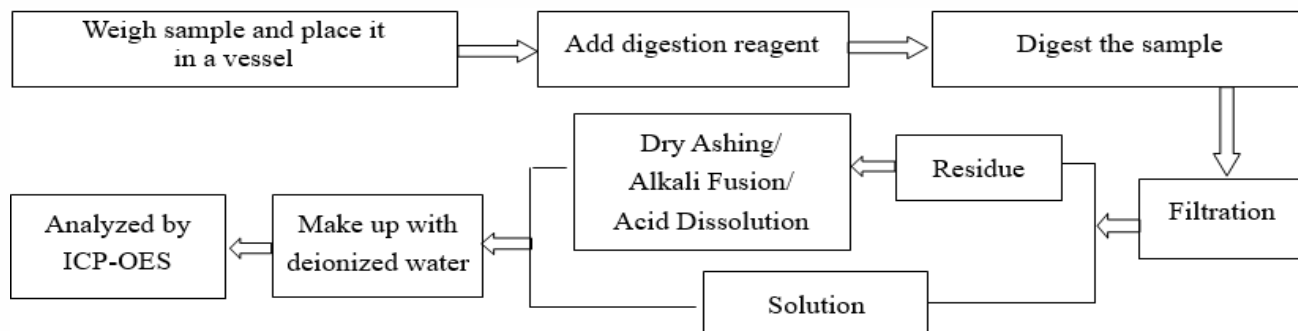
Test Report

Report No. A2210256417101005

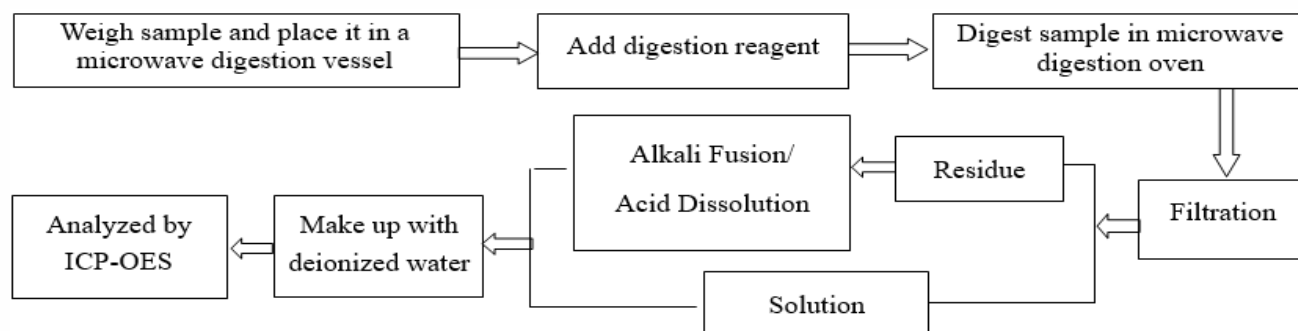
Page 5 of 7

Test Process

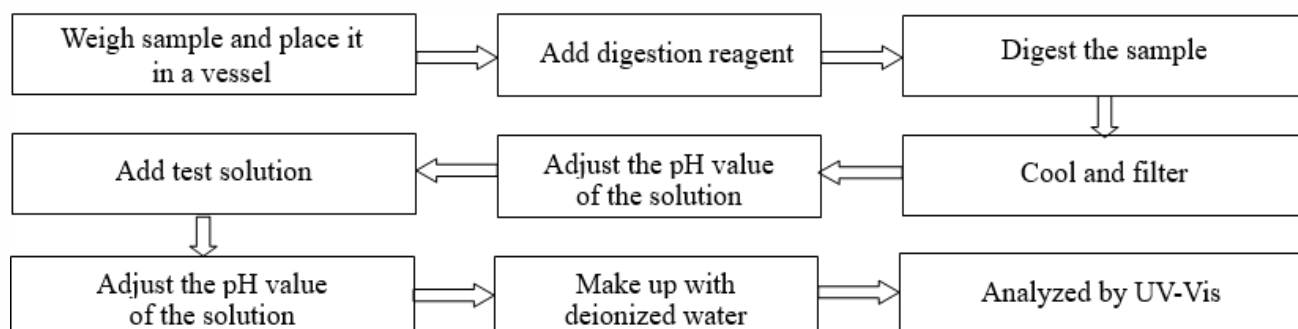
1. Lead (Pb), Cadmium (Cd), Chromium (Cr)



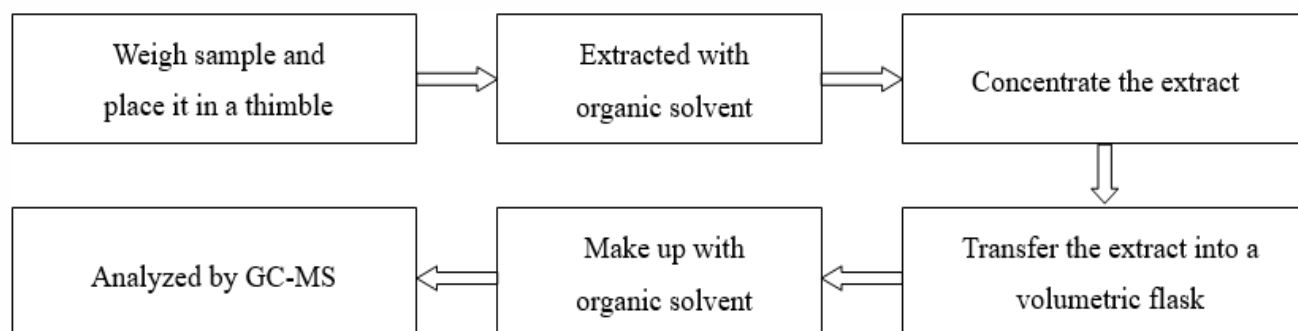
2. Mercury (Hg)



3. Hexavalent Chromium (Cr(VI))



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

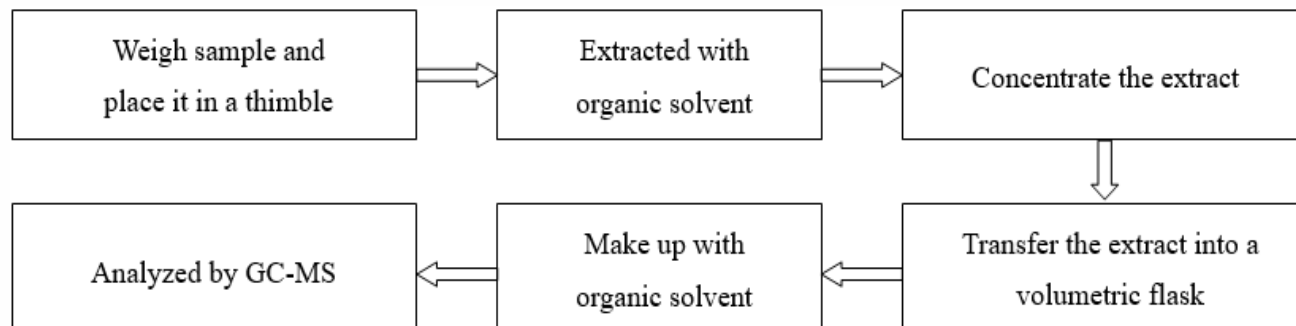


Test Report

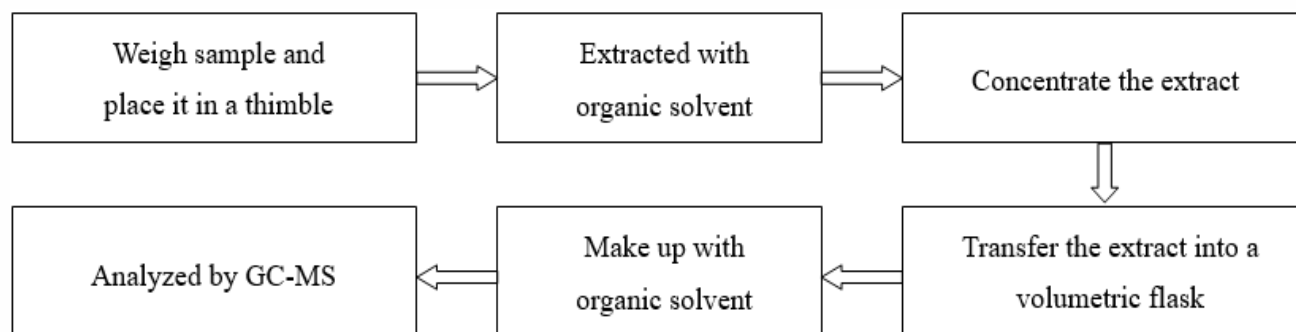
Report No. A2210256417101005

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5. Phthalates (DBP, BBP, DEHP, DIBP)



6. Hexabromocyclododecane (HBCDD)



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Test Report

Report No. A2210256417101005

Page 7 of 7

Photo(s) of the sample(s)



Statement:

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3. The result(s) shown in this report refer(s) only to the sample(s) tested;
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Test Report



Report No. A2210256417102005

Company Name shown on Report REIHsing(DONGGUAN) ELECTRIC WIRE AND CABLE CO.,LTD

Address NO.18 LANYUAN ROAD XINAN VILLAGE CHANGAN TOWN DONGGUAN CITY GUANGDONG CHINA

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

Sample Name RED PVC LF INSULATED WIRE
Part No. UL1015 LF WIRE UL1007,1015,1571,1061,1028,1032,1080, 1095,1569,1581,1674,1500,1283,1285, 1011,1013,1497,1789,1685,1617,1672,1618,1010,1316,1429,1430,1431,3443,3610, 2468,2464,2444,20080,2555,2476,2697,2733,2562,2096,1533,2547,20005,20276, 2854,2851,1185,10070,10198,SPT,(H)VSF,(H)VFF,(H)VCTF,(H)VCFK,H05V2-U, H05V2-K,AV,AVS,AVSS,CCC60227IEC02(RV)06(RV)08(RV-90)52(RVV) 53(RVV),OR Other PVC insulated wire

Supplier Reihsing
Sample Received Date Jul. 1, 2021
Testing Period Jul. 1, 2021 to Jul. 7, 2021

Test Requested As specified by client, to test Phthalates 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

Grace Sun

Approved by

Hill Zheng

Hill Zheng

Technical Manager

Reviewed by

Amber Jang

Date

Jul. 7, 2021

No. R338851376

CTI Building, Xing Dong Community, Xin'an Sub-district, Bao'an District, Shenzhen City, Guangdong Province, P.R. China

Test Report

Report No. A2210256417102005

Page 2 of 6

Test Method

Test Item(s)	Test Method	Measured Equipment(s)
Phthalates	Refer to EN 14372:2004(E)	GC-MS



Test Report

Report No. A2210256417102005

Page 3 of 6

Test Result(s)

Tested Item(s)	Result	MDL
Phthalates		
Di-n-octyl phthalate(DNOP) CAS#:117-84-0	N.D.	30 mg/kg
Di-isononyl phthalate(DINP) CAS#:28553-12-0,68515-48-0	N.D.	50 mg/kg
Di-iso-decyl phthalate(DIDP) CAS#:26761-40-0,68515-49-1	N.D.	50 mg/kg
Dimethyl phthalate(DMP) CAS#:131-11-3	N.D.	30 mg/kg
Diethyl phthalate(DEP) CAS#:84-66-2	N.D.	30 mg/kg
Dipropyl phthalate(DPrP) CAS#:131-16-8	N.D.	30 mg/kg
Diisobutyl phthalate(DIBP) CAS#:84-69-5	N.D.	30 mg/kg
Dipentyl phthalate(DPP) CAS#:131-18-0	N.D.	30 mg/kg
Dicyclohexyl phthalate(DCHP) CAS#:84-61-7	N.D.	30 mg/kg
Diisooctyl phthalate(DIOP) CAS#:27554-26-3	N.D.	50 mg/kg
Dinonyl phthalate(DNP) CAS#:84-76-4	N.D.	30 mg/kg
Di-n-hexyl phthalate(DNHP) CAS#:84-75-3	N.D.	30 mg/kg
Bis(2-methoxyethyl) phthalate(DMEP) CAS#:117-82-8	N.D.	30 mg/kg
Diisopentylphthalate(DIPP) CAS#:605-50-5	N.D.	30 mg/kg
Diundecyl phthalates(DUP) CAS#:3648-20-2	N.D.	30 mg/kg
N-Pentyl-isopentyl phthalate(NIPP) CAS#:776297-69-9	N.D.	30 mg/kg
① 1,2-Benzenedicarboxylic acid, di-(C7-11)-branched and linear alkyl esters(DHNUP) CAS#:68515-42-4	N.D.	50 mg/kg

Test Report

Report No. A2210256417102005

Page 4 of 6

Test Result(s)

^① 1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich(DIHP) CAS#:71888-89-6	N.D.	50 mg/kg
Di-2-propylheptyl phthalate(DPHpP) CAS#:53306-54-0	N.D.	30 mg/kg

Sample/Part Description Red wire jacket

Remark:

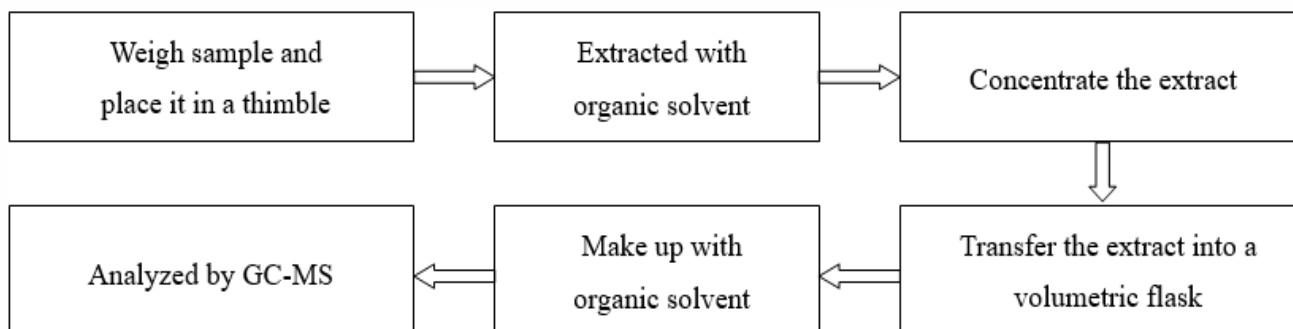
- MDL = Method Detection Limit
- N.D. = Not Detected (<MDL)
- mg/kg = ppm = parts per million
- ^①: In view of the substances are established as UVCB substances (substances of unknown or variable composition, complex reaction products or biological materials) consisting of different and variable constituents, the test results are calculated based on the main constituents of the representative compounds for substances.
- Information Statement: Different Part No. with different buyer.

Test Report

Report No. A2210256417102005

Page 5 of 6

Test Process



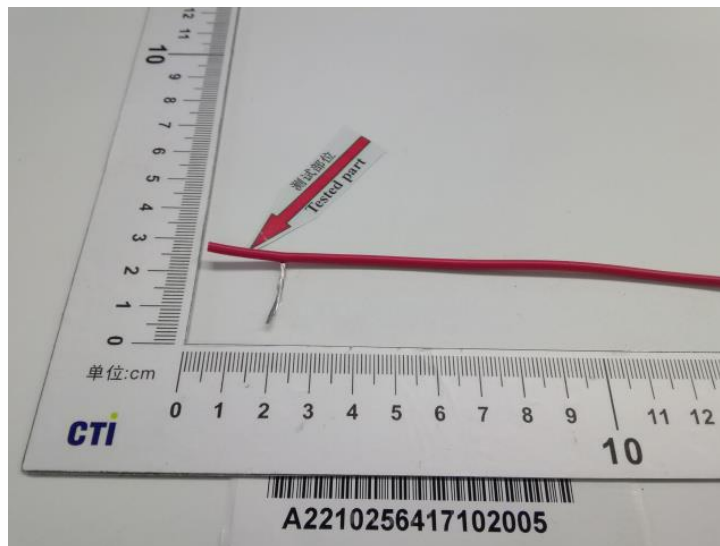
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Test Report

Report No. A2210256417102005

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Photo(s) of the sample(s)



Statement:

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3. The result(s) shown in this report refer(s) only to the sample(s) tested;
4. Without written approval of CTI, this report can't be reproduced except in full;
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*** End of report ***



Report No. A2210256417101004

Company Name shown on Report REIHsing(DONGGUAN) ELECTRIC WIRE AND CABLE CO.,LTD

Address NO.18 LANYUAN ROAD XINAN VILLAGE CHANGAN TOWN DONGGUAN CITY GUANGDONG CHINA

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

Sample Name BLACK PVC LF INSULATED WIRE
 Part No. UL1015 LF WIRE UL1007,1015,1571,1061,1028,1032,1080,
 1095,1569,1581,1674,1500,1283,1285,
 1011,1013,1497,1789,1685,1617,1672,1618,1010,1316,1429,1430,1431,3443,3610,
 2468,2464,2444,20080,2555,2476,2697,2733,2562,2096,1533,2547,20005,20276,
 2854,2851,1185,10070,10198,SPT,(H)VSF,(H)VFF,(H)VCTF,(H)VCFK,H05V2-U,
 H05V2-K,AV,AVS,AVSS,CCC60227IEC02(RV)06(RV)08(RV-90)52(RVV)
 53(RVV),OR Other PVC insulated wire

Supplier Reihsing
 Sample Received Date Jul. 1, 2021
 Testing Period Jul. 1, 2021 to Jul. 6, 2021

Test Requested As specified by client, to test Lead (Pb), Cadmium (Cd), Mercury (Hg), Hexavalent Chromium (Cr(VI)), Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs), Phthalates (DBP, BBP, DEHP, DIBP), Hexabromocyclododecane (HBCDD) 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 Grace Sun

Reviewed by *Amos Fong*

Approved by Hill Zheng

Date

Jul. 6, 2021

Hill Zheng
Technical Manager

No. R338852088

Centre Testing International Group Co.,Ltd.

CTI Building, Xing Dong Community, Xin'an Sub-district, Bao'an District, Shenzhen City, Guangdong Province, P.R. China

Test Report

Report No. A2210256417101004

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Test Method

Test Item(s)	Test Method	Measured Equipment(s)
Lead (Pb)	IEC 62321-5:2013	ICP-OES
Cadmium (Cd)	IEC 62321-5:2013	ICP-OES
Mercury (Hg)	IEC 62321-4:2013+AMD1:2017 CSV	ICP-OES
Hexavalent Chromium (Cr(VI))	IEC 62321-7-2:2017 and/or determination of Total Chromium by IEC 62321-5:2013	UV-Vis/ICP-OES
Polybrominated Biphenyls (PBBs)	IEC 62321-6:2015	GC-MS
Polybrominated Diphenyl Ethers (PBDEs)	IEC 62321-6:2015	GC-MS
Phthalates (DBP, BBP, DEHP, DIBP)	IEC 62321-8:2017	GC-MS
Hexabromocyclododecane (HBCDD)	Refer to US EPA 3540C:1996 & US EPA 8270E:2018	GC-MS

Test Report

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Test Result(s)

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))	N.D.	8 mg/kg
Tested Item(s)	Result	MDL
Polybrominated Biphenyls (PBBs)		
Monobromobiphenyl	N.D.	5 mg/kg
Dibromobiphenyl	N.D.	5 mg/kg
Tribromobiphenyl	N.D.	5 mg/kg
Tetrabromobiphenyl	N.D.	5 mg/kg
Pentabromobiphenyl	N.D.	5 mg/kg
Hexabromobiphenyl	N.D.	5 mg/kg
Heptabromobiphenyl	N.D.	5 mg/kg
Octabromobiphenyl	N.D.	5 mg/kg
Nonabromobiphenyl	N.D.	5 mg/kg
Decabromobiphenyl	N.D.	5 mg/kg
Tested Item(s)	Result	MDL
Polybrominated Diphenyl Ethers (PBDEs)		
Monobromodiphenyl ether	N.D.	5 mg/kg
Dibromodiphenyl ether	N.D.	5 mg/kg
Tribromodiphenyl ether	N.D.	5 mg/kg
Tetrabromodiphenyl ether	N.D.	5 mg/kg
Pentabromodiphenyl ether	N.D.	5 mg/kg
Hexabromodiphenyl ether	N.D.	5 mg/kg
Heptabromodiphenyl ether	N.D.	5 mg/kg
Octabromodiphenyl ether	N.D.	5 mg/kg
Nonabromodiphenyl ether	N.D.	5 mg/kg
Decabromodiphenyl ether	N.D.	5 mg/kg

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Test Result(s)

Tested Item(s)	Result	MDL
Phthalates (DBP, BBP, DEHP, DIBP)		
Dibutyl phthalate(DBP) CAS#:84-74-2	N.D.	50 mg/kg
Butyl benzyl phthalate(BBP) CAS#:85-68-7	N.D.	50 mg/kg
Di-(2-ethylhexyl) phthalate(DEHP) CAS#:117-81-7	N.D.	50 mg/kg
Diisobutyl phthalate(DIBP) CAS#:84-69-5	N.D.	50 mg/kg
Tested Item(s)		
Result		
MDL		
Hexabromocyclododecane(HBCDD)	N.D.	5 mg/kg

Sample/Part Description Black wire jacket**Remark:** The sample(s) had been dissolved totally tested for Lead, Cadmium, Mercury.

-MDL = Method Detection Limit

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

-mg/kg = ppm = parts per million

- Information Statement: Different Part No. with different buyer.

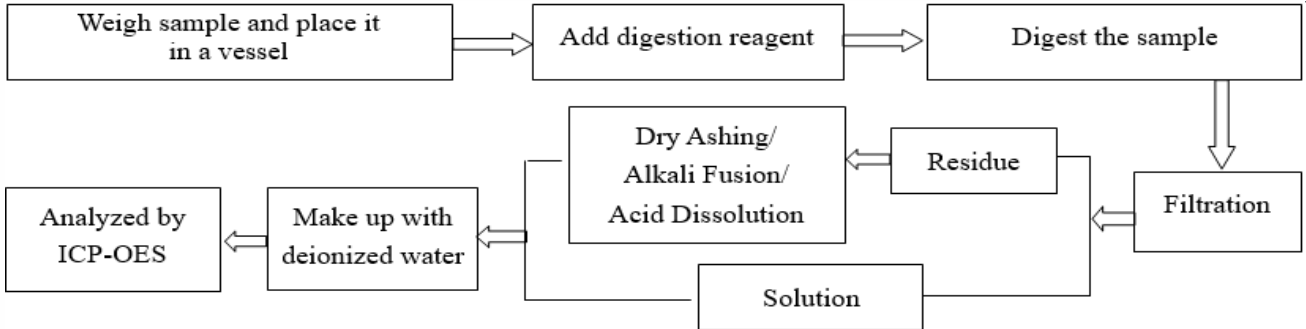
Test Report

Report No. A2210256417101004

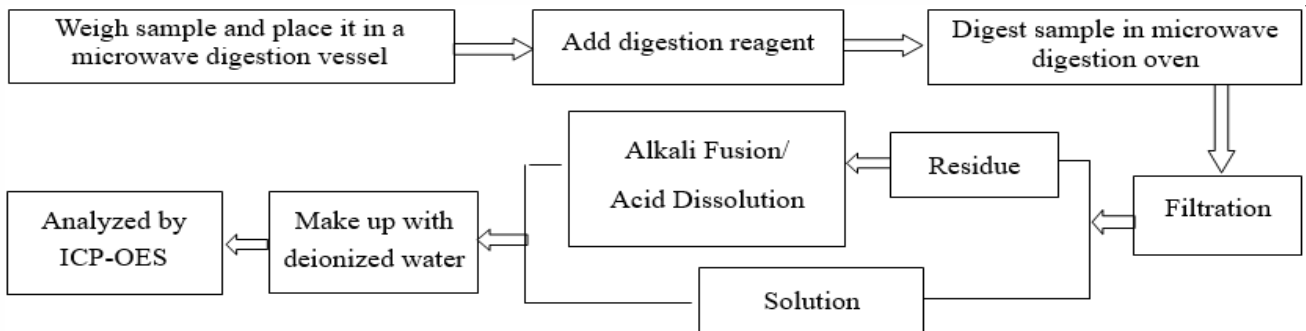
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Test Process

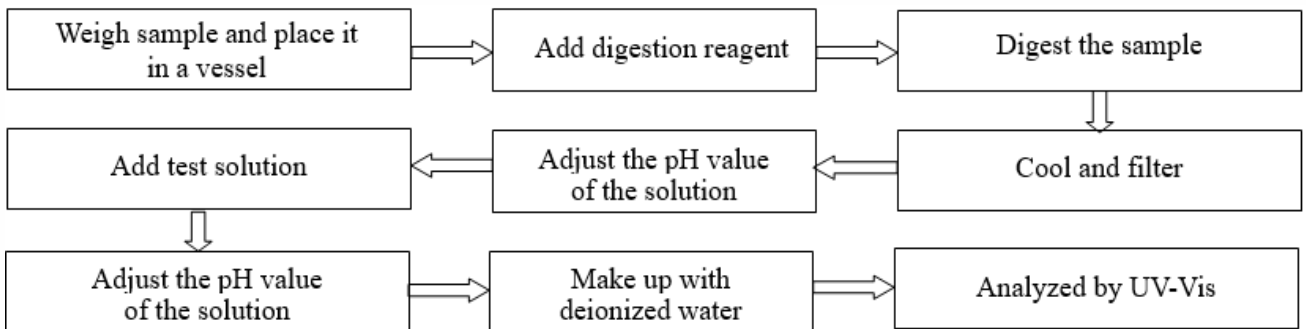
1. Lead (Pb), Cadmium (Cd), Chromium (Cr)



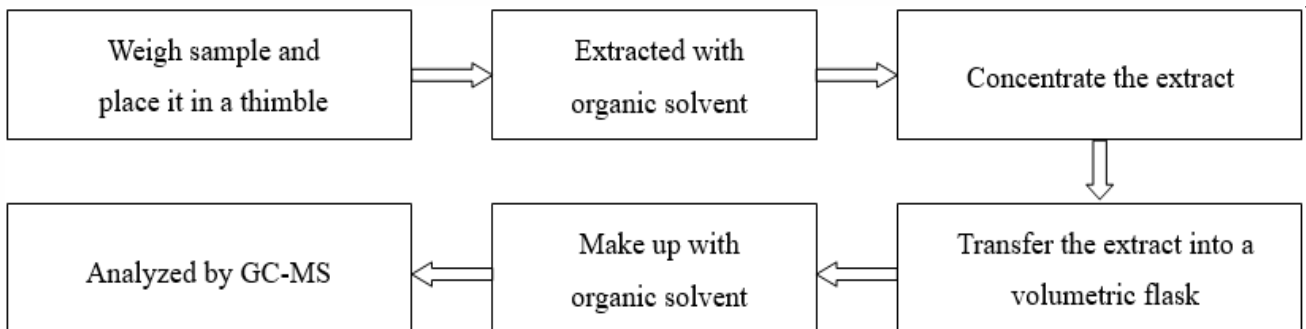
2. Mercury (Hg)



3. Hexavalent Chromium (Cr(VI))



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

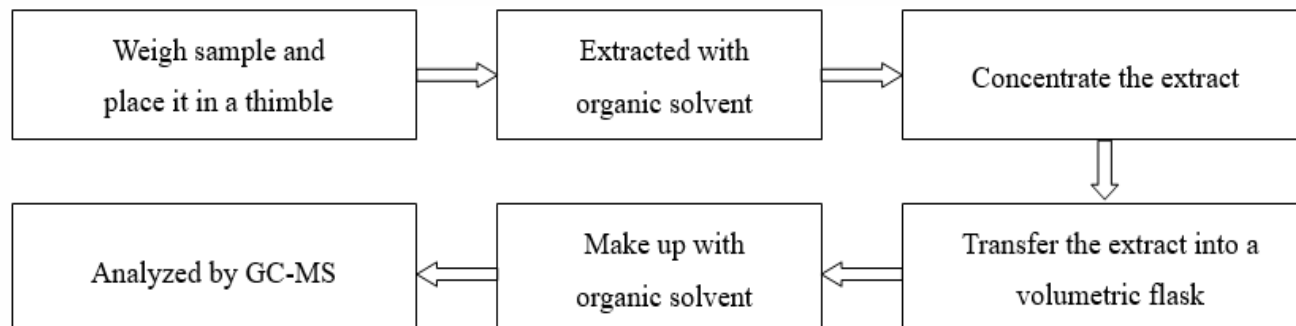


Test Report

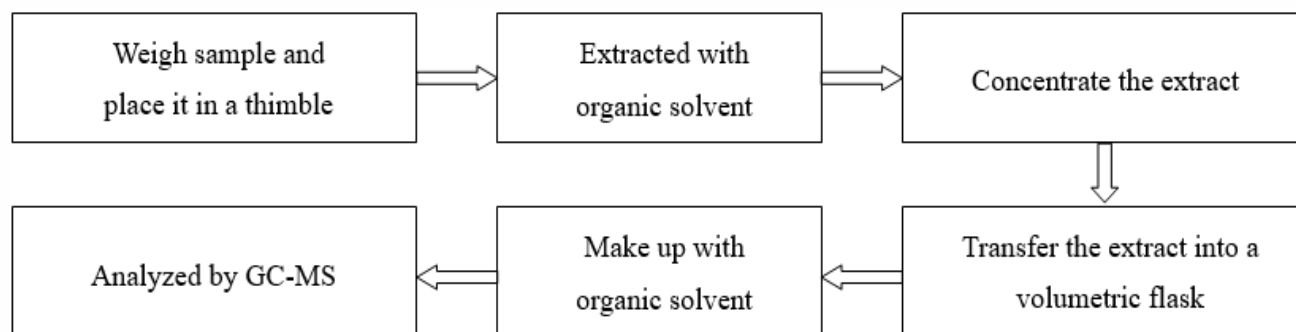
Report No. A2210256417101004

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5. Phthalates (DBP, BBP, DEHP, DIBP)



6. Hexabromocyclododecane (HBCDD)



有限公司

Test Report

Report No. A2210256417101004

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Photo(s) of the sample(s)



Statement:

1. This report is considered invalid without approved signature, special seal and the seal on the perforation;
2. The Company Name shown on Report and Address, the sample(s) and sample information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified;
3. The result(s) shown in this report refer(s) only to the sample(s) tested;
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*** End of report ***

Test Report



Report No. A2210256417102004

Company Name shown on Report REIHSING(DONGGUAN) ELECTRIC WIRE AND CABLE CO.,LTD

Address NO.18 LANYUAN ROAD XINAN VILLAGE CHANGAN TOWN DONGGUAN CITY GUANGDONG CHINA

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

Sample Name BLACK PVC LF INSULATED WIRE
Part No. UL1015 LF WIRE UL1007,1015,1571,1061,1028,1032,1080, 1095,1569,1581,1674,1500,1283,1285, 1011,1013,1497,1789,1685,1617,1672,1618,1010,1316,1429,1430,1431,3443,3610, 2468,2464,2444,20080,2555,2476,2697,2733,2562,2096,1533,2547,20005,20276, 2854,2851,1185,10070,10198,SPT,(H)VSF,(H)VFF,(H)VCTF,(H)VCFK,H05V2-U, H05V2-K,AV,AVS,AVSS,CCC60227IEC02(RV)06(RV)08(RV-90)52(RVV) 53(RVV),OR Other PVC insulated wire

Supplier Reihsing
Sample Received Date Jul. 1, 2021
Testing Period Jul. 1, 2021 to Jul. 7, 2021

Test Requested As specified by client, to test Phthalates 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 Grace Sun

Approved by Hill Zheng

Hill Zheng
Technical Manager

Reviewed by Amber Jony

Date Jul. 7, 2021

No. R338851376

CTI Building, Xing Dong Community, Xin'an Sub-district, Bao'an District, Shenzhen City, Guangdong Province, P.R. China

Test Report

Report No. A2210256417102004

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Test Method

Test Item(s)	Test Method	Measured Equipment(s)
Phthalates	Refer to EN 14372:2004(E)	GC-MS



Test Report

Report No. A2210256417102004

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Test Result(s)

Tested Item(s)	Result	MDL
Phthalates		
Di-n-octyl phthalate(DNOP) CAS#:117-84-0	N.D.	30 mg/kg
Di-isononyl phthalate(DINP) CAS#:28553-12-0,68515-48-0	N.D.	50 mg/kg
Di-iso-decyl phthalate(DIDP) CAS#:26761-40-0,68515-49-1	N.D.	50 mg/kg
Dimethyl phthalate(DMP) CAS#:131-11-3	N.D.	30 mg/kg
Diethyl phthalate(DEP) CAS#:84-66-2	N.D.	30 mg/kg
Dipropyl phthalate(DPrP) CAS#:131-16-8	N.D.	30 mg/kg
Diisobutyl phthalate(DIBP) CAS#:84-69-5	N.D.	30 mg/kg
Dipentyl phthalate(DPP) CAS#:131-18-0	N.D.	30 mg/kg
Dicyclohexyl phthalate(DCHP) CAS#:84-61-7	N.D.	30 mg/kg
Diisooctyl phthalate(DIOP) CAS#:27554-26-3	N.D.	50 mg/kg
Dinonyl phthalate(DNP) CAS#:84-76-4	N.D.	30 mg/kg
Di-n-hexyl phthalate(DNHP) CAS#:84-75-3	N.D.	30 mg/kg
Bis(2-methoxyethyl) phthalate(DMEP) CAS#:117-82-8	N.D.	30 mg/kg
Diisopentylphthalate(DIPP) CAS#:605-50-5	N.D.	30 mg/kg
Diundecyl phthalates(DUP) CAS#:3648-20-2	N.D.	30 mg/kg
N-Pentyl-isopentyl phthalate(NIPP) CAS#:776297-69-9	N.D.	30 mg/kg
① 1,2-Benzenedicarboxylic acid, di-(C7-11)-branched and linear alkyl esters(DHNUP) CAS#:68515-42-4	N.D.	50 mg/kg

Test Report

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Test Result(s)

^① 1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich(DIHP) CAS#:71888-89-6	N.D.	50 mg/kg
Di-2-propylheptyl phthalate(DPHpP) CAS#:53306-54-0	N.D.	30 mg/kg

Sample/Part Description Black wire jacket

Remark:

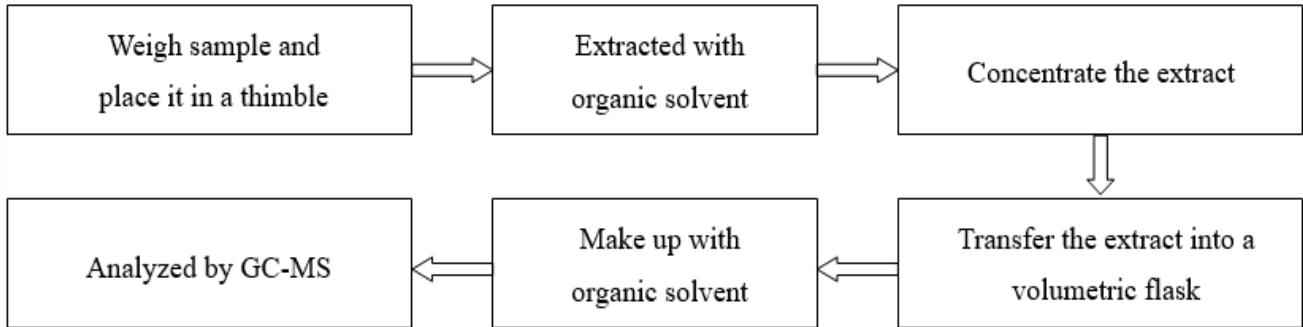
- MDL = Method Detection Limit
- N.D. = Not Detected (<MDL)
- mg/kg = ppm = parts per million
- ^①: In view of the substances are established as UVCB substances (substances of unknown or variable composition, complex reaction products or biological materials) consisting of different and variable constituents, the test results are calculated based on the main constituents of the representative compounds for substances.
- Information Statement: Different Part No. with different buyer.

Test Report

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Test Process



华测检测有限公司

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Photo(s) of the sample(s)



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3. The result(s) shown in this report refer(s) only to the sample(s) tested;
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*** End of report ***



Test Report

Report No. A2210256417104001

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Company Name shown on Report REIHSING(DONGGUAN) ELECTRIC WIRE AND CABLE CO.,LTD
Address NO.18 LANYUAN ROAD XINAN VILLAGE CHANGAN TOWN DONGGUAN CITY GUANGDONG CHINA

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

Sample Name BLUE PVC LF INSULATED WIRE
Part No. UL1015 LF WIRE UL1007,1015,1571,1061,1028,1032,1080, 1095, 1569,1581,1674,1500,1283,1285, 1011,1013,1497,1789,1685, 1617,1672,1618,1010,1316,1429,1430,1431,3443,3610,2468,2464,2444, 20080,2555,2476,2697,2733,2562,2096,1533,2547,20005,20276,2854, 2851,1185,10070,10198,SPT,(H)VSE,(H)VFF,(H)VCTE,(H)VCFK, H05V2-U,H05V2-K,AV,AVS,AVSS, CCC60227IEC02(RV)06(RV)08(RV-90)52(RVV)53(RVV),OR Other PVC insulated wire
Supplier Reihsing
Sample Received Date Jul. 1, 2021
Testing Period Jul. 1, 2021 to Jul. 9, 2021

Test Requested 1.As specified by client, to screen the 211 substances of very high concern (SVHC) under Regulation(EC) No 1907/2006 of REACH in the submitted sample(s).
2.As specified by client, to screen the 8 substances published on March 9th 2021 submitted by EU Member States to ECHA for intention for identification of substance of very high concern (SVHC) under Regulation(EC) No 1907/2006 of REACH in the submitted sample(s).

Test Method Please refer to the following page(s).

Test Result(s) Please refer to the following page(s).

Summary 1.According to the analytical results, concentrations of 211 SVHC substances are all less than 0.1% (w/w) in the submitted sample(s).
2.According to the analytical results, concentrations of 8 substances for intention for identification of SVHC are all less than 0.1%(w/w) in the submitted sample(s).

Tested by

Sunny Liu

Reviewed by

Amber Peng

Approved by

Hill Zheng

Date

Jul. 9, 2021

Hill Zheng
Technical Manager

No. R338852112



CTI Testing International Group Co.,Ltd.

Inspection & Testing Services
111 Building, Xing Dong Community, Xin'an Sub-district, Bao'an District, Shenzhen City, Guangdong Province, P.R. China

Test Report

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Test Result(s) 1

Batch	No.	Substance Name(s)	CAS No.	EC No.	Concentration (%)	Report Limit (%)
-	-	All tested SVHC (See the candidate list)	-	-	N.D.	-

Test Result(s) 2

Batch	No.	Substance Name(s)	CAS No.	EC No.	Concentration (%)	Report Limit (%)
-	-	All tested intention for identification of SVHC (See the list of intention for identification of SVHC(Published on March 9 th 2021))	-	-	N.D.	-

Test Method:

Refer to US EPA3052:1996, US EPA 3050B:1996, US EPA3060A:1996, US EPA 3550C:2007,
US EPA 3540C:1996, ISO 17353:2004(E), EN 14582:2016 for sample pretreatment.

Analyzed by ICP-OES, UV-Vis, PLM, SEM, IC, HPLC, GC-MS, GC-MS(NCI), GC-FID and LC-MS-MS.

Sample/Part Description Blue wire jacket

Test Report

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Remark:

1. The table of tested result(s) only shows detected SVHC/intention for identification of SVHC, and SVHC/intention for identification of SVHC that below Report Limit are not reported. Please refer to the Candidate List of SVHC/ intention for identification of SVHC on next pages.
2. w/w = weight by weight; 0.1%= 1000 mg/kg =1000 ppm
3. N.D. = Not Detected (<report limit)
4. *: Concentration value of the substance by the conversion from the test results of certain elements. Concentration value of Bis(tributyltin)oxide(TBTO), Dibutyltin dichloride (DBTC), 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE), Reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate and 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 and MOTE), Dibutylbis(pentane-2,4-dionato-O,O')tin, [Dioctyltin dilaurate, stannane, dioctyl-, bis(coco acyloxy) derivs., and any other stannane, dioctyl-, bis(fatty acyloxy) derivs. wherein C12 is the predominant carbon number of the fatty acyloxy moiety] by the conversion from the test results of certain compounds(Tributyl Tins(TBT), Dibutyl Tins(DBT), Dioctyl Tins(DOT), Monoctyl Tins(MOT)).
5. **: All refractory ceramic fibres are covered by index number 650-017-00-8 in Annex VI of the Regulation on Classification, Labeling and Packaging of chemical substances and mixtures, the so called CLP Regulation (Regulation (EC) No 1272/2008).
6. ***: C.I.: Colour Index
7. ****: Light fractions from distillation
8. *****: Concentration value of Disodiumtetraborate, anhydrous and Tetraboron disodium heptaoxide, hydrate is evaluated by Disodiumtetraborate, with no consider of the hydrate. Concentration value of Sodium perborate; perboric acid, sodium salt; Sodium peroxometaborate is evaluated by Sodium perborate, with no consider of the hydrate.
9. ^: Concentration value of Formaldehyde, oligomeric reaction products with aniline by the conversion from the test results of certain compounds(2,4-Diaminodiphenylmethane, 4,4'-Diaminodiphenylmethane, 2,2-Diaminodiphenylmethane).
10. ①: In view of the substances are established as UVCB substances(substances of unknown or variable composition, complex reaction products or biological materials) consisting of different and variable constituents, the test results are calculated based on the main constituents of the representative compounds for substances. When the content of the representative substances is equal to or higher than 0.1% (w/w), the presence of the substance in the sample need to be further confirmed by checking MSDS or requesting from suppliers.
11. ②: In view of the substance contain variable substances, the test results are calculated based on main constituents of the representative compounds for the substances, and the test results of the representative compounds are calculated based on the result of specified heavy metal elements.
12. Information Statement: Different Part No. with different buyer.

Test Report

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Candidate List of SVHC

Batch	No.	Substance Name(s)	CAS No.	EC No.	Report Limit (%)
I	1	Anthracene	120-12-7	204-371-1	0.005
I	2	4,4'- Diaminodiphenylmethane	101-77-9	202-974-4	0.005
I	3	Dibutyl phthalate(DBP)	84-74-2	201-557-4	0.005
I	4	Cobalt dichloride*	7646-79-9	231-589-4	0.01
I	5	Diarsenic pentaoxide*	1303-28-2	215-116-9	0.01
I	6	Diarsenic trioxide*	1327-53-3	215-481-4	0.01
I	7	Sodium dichromate*	7789-12-0 10588-01-9	234-190-3	0.01
I	8	5-tert-butyl-2,4,6-trinitro-m-xylene (Musk xylene)	81-15-2	201-329-4	0.005
I	9	Bis(2-ethyl(hexyl)phthalate)(DEHP)	117-81-7	204-211-0	0.005
I	10	Hexabromocyclododecane (HBCDD)	25637-99-4 3194-55-6 (134237-50-6) (134237-51-7) (134237-52-8)	247-148-4 221-695-9	0.005
I	11	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins) (SCCPs)	85535-84-8	287-476-5	0.01
I	12	Bis(tributyltin)oxide (TBTO)*	56-35-9	200-268-0	0.005
I	13	Lead hydrogen arsenate*	7784-40-9	232-064-2	0.01
I	14	Benzyl butyl phthalate(BBP)	85-68-7	201-622-7	0.005
I	15	Triethyl arsenate*	15606-95-8	427-700-2	0.01
II	16	^① Anthracene oil	90640-80-5	292-602-7	0.05
II	17	^① Anthracene oil, anthracene paste, distn. lights ****	91995-17-4	295-278-5	0.05
II	18	^① Anthracene oil, anthracene paste,anthracene fraction	91995-15-2	295-275-9	0.05
II	19	^① Anthracene oil, anthracene-low	90640-82-7	292-604-8	0.05
II	20	^① Anthracene oil, anthracene paste	90640-81-6	292-603-2	0.05
II	21	^① Pitch, coal tar, high-temp.	65996-93-2	266-028-2	0.05
II	22	Acrylamide	79-06-1	201-173-7	0.01
II	23	2,4-dinitrotoluene	121-14-2	204-450-0	0.01
II	24	Diisobutyl phthalate (DIBP)	84-69-5	201-553-2	0.005
II	25	^② Lead chromate	7758-97-6	231-846-0	0.05
II	26	^② Lead chromate molybdate sulphate red (C.I. Pigment Red 104)***	12656-85-8	235-759-9	0.05

Test Report

Report No. A2210256417104001

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Batch	No.	Substance Name(s)	CAS No.	EC No.	Report Limit (%)
II	27	^② Lead sulfochromate yellow (C.I. Pigment Yellow 34)***	1344-37-2	215-693-7	0.05
II	28	Tris(2-chloroethyl)phosphate (TCEP)	115-96-8	204-118-5	0.01
III	29	Trichloroethylene	79-01-6	201-167-4	0.005
III	30	Boric acid*	10043-35-3 11113-50-1	233-139-2 234-343-4	0.01
III	31	^② Disodium tetraborate, anhydrous*****	1330-43-4 12179-04-3 1303-96-4	215-540-4	0.01
III	32	^② Tetraboron disodium heptaoxide, hydrate*****	12267-73-1	235-541-3	0.01
III	33	Sodium chromate*	7775-11-3	231-889-5	0.01
III	34	Potassium chromate*	7789-00-6	232-140-5	0.01
III	35	Ammonium dichromate*	7789-09-5	232-143-1	0.01
III	36	Potassium dichromate*	7778-50-9	231-906-6	0.01
IV	37	Cobalt(II) sulphate*	10124-43-3	233-334-2	0.01
IV	38	Cobalt(II) dinitrate*	10141-05-6	233-402-1	0.01
IV	39	Cobalt(II) carbonate*	513-79-1	208-169-4	0.01
IV	40	Cobalt(II) diacetate*	71-48-7	200-755-8	0.01
IV	41	2-methoxyethanol	109-86-4	203-713-7	0.005
IV	42	2-ethoxyethanol	110-80-5	203-804-1	0.005
IV	43	Chromium trioxide*	1333-82-0	215-607-8	0.01
IV	44	^① Acids generated from chromium trioxide and their oligomers: Chromic acid, Dichromic acid, Oligomers of chromic acid and dichromic acid*	7738-94-5 13530-68-2	231-801-5 236-881-5	0.01
V	45	2-ethoxyethyl acetate	111-15-9	203-839-2	0.01
V	46	Strontium chromate*	7789-06-2	232-142-6	0.01
V	47	^① 1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	68515-42-4	271-084-6	0.01
V	48	Hydrazine	7803-57-8 302-01-2	206-114-9	0.01
V	49	1-methyl-2-pyrrolidone (NMP)	872-50-4	212-828-1	0.01
V	50	1,2,3-trichloropropane	96-18-4	202-486-1	0.01
V	51	^① 1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	71888-89-6	276-158-1	0.01
VI	52	Dichromium tris(chromate)*	24613-89-6	246-356-2	0.01
VI	53	Potassium hydroxyoctaoxodizincatedichromate*	11103-86-9	234-329-8	0.01

Test Report

Report No. A2210256417104001

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Batch	No.	Substance Name(s)	CAS No.	EC No.	Report Limit (%)
VI	54	Pentazinc chromate octahydroxide*	49663-84-5	256-418-0	0.01
VI	55	^② Aluminosilicate Refractory Ceramic Fibres (RCF) **	-	-	0.05
VI	56	^② Zirconia Aluminosilicate Refractory Ceramic Fibres (Zr-RCF) **	-	-	0.05
VI	57	^① Formaldehyde, oligomeric reaction products with aniline [▲]	25214-70-4	500-036-1	0.01
VI	58	Bis(2-methoxyethyl) phthalate	117-82-8	204-212-6	0.005
VI	59	2-Methoxyaniline(o-Anisidine)	90-04-0	201-963-1	0.005
VI	60	4-(1,1,3,3-tetramethylbutyl)phenol	140-66-9	205-426-2	0.005
VI	61	1,2-dichloroethane	107-06-2	203-458-1	0.005
VI	62	Bis(2-methoxyethyl) ether	111-96-6	203-924-4	0.005
VI	63	Arsenic acid*	7778-39-4	231-901-9	0.01
VI	64	Calcium arsenate*	7778-44-1	231-904-5	0.01
VI	65	Trilead diarsenate*	3687-31-8	222-979-5	0.01
VI	66	N,N-dimethylacetamide (DMAC)	127-19-5	204-826-4	0.005
VI	67	2,2'-dichloro-4,4'-methylenedianiline (MOCA)	101-14-4	202-918-9	0.005
VI	68	Phenolphthalein	77-09-8	201-004-7	0.005
VI	69	Lead diazide, Lead azide*	13424-46-9	236-542-1	0.01
VI	70	Lead styphnate*	15245-44-0	239-290-0	0.01
VI	71	Lead dipicrate*	6477-64-1	229-335-2	0.01
VII	72	1,2-bis(2-methoxyethoxy) ethane (TEGDME; triglyme)	112-49-2	203-977-3	0.01
VII	73	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4	203-794-9	0.01
VII	74	Diboron trioxide*	1303-86-2	215-125-8	0.01
VII	75	Formamide	75-12-7	200-842-0	0.01
VII	76	Lead(II) bis(methanesulfonate)*	17570-76-2	401-750-5	0.01
VII	77	1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazine-2,4,6-trione (TGIC)	2451-62-9	219-514-3	0.01
VII	78	1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione (β-TGIC)	59653-74-6	423-400-0	0.01
VII	79	4,4'-bis(dimethylamino) benzophenone (Michler's ketone)	90-94-8	202-027-5	0.01
VII	80	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	101-61-1	202-959-2	0.01

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Batch	No.	Substance Name(s)	CAS No.	EC No.	Report Limit (%)
VII	81	[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	0.01
VII	82	[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	0.01
VII	83	α,α -Bis[4-(dimethylamino)phenyl]-4-(phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4)***	6786-83-0	229-851-8	0.01
VII	84	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol	561-41-1	209-218-2	0.01
VIII	85	Bis(pentabromophenyl) ether (decabromodiphenyl ether; DecaBDE)	1163-19-5	214-604-9	0.05
VIII	86	^① 4-Nonylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof]	-	-	0.05
VIII	87	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))(ADCA)	123-77-3	204-650-8	0.05
VIII	88	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues]	-	-	0.05
VIII	89	Henicosaflluoroundecanoic acid	2058-94-8	218-165-4	0.05
VIII	90	Pentacosaflluorotridecanoic acid	72629-94-8	276-745-2	0.05
VIII	91	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	0.05

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Batch	No.	Substance Name(s)	CAS No.	EC No.	Report Limit (%)
VIII	92	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	247-094-1 243-072-0 256-356-4 260-566-1	0.05
VIII	93	Heptacosafuorotetradecanoic acid	376-06-7	206-803-4	0.05
VIII	94	Diisopentylphthalate(DIPP)	605-50-5	210-088-4	0.05
VIII	95	^① 1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	284-032-2	0.05
VIII	96	n-pentyl-isopentylphthalate	776297-69-9	933-378-9	0.05
VIII	97	Methoxyacetic acid	625-45-6	210-894-6	0.05
VIII	98	Tricosafuorododecanoic acid	307-55-1	206-203-2	0.05
VIII	99	1,2-diethoxyethane	629-14-1	211-076-1	0.05
VIII	100	3-ethyl-2-methyl-2-(3-methylbutyl)- 1,3-oxazolidine	143860-04-2	421-150-7	0.05
VIII	101	4-methyl-m-phenylenediamine (toluene-2,4-diamine)	95-80-7	202-453-1	0.05
VIII	102	N-methylacetamide	79-16-3	201-182-6	0.05
VIII	103	Pentalead tetraoxide sulphate*	12065-90-6	235-067-7	0.01
VIII	104	Biphenyl-4-ylamine	92-67-1	202-177-1	0.05
VIII	105	Dinoseb (6-sec-butyl-2,4-dinitrophenol)	88-85-7	201-861-7	0.05
VIII	106	Dioxobis(stearato)trilead*	12578-12-0	235-702-8	0.01
VIII	107	Lead dinitrate*	10099-74-8	233-245-9	0.01
VIII	108	Tetralead trioxide sulphate*	12202-17-4	235-380-9	0.01
VIII	109	Lead monoxide (lead oxide)*	1317-36-8	215-267-0	0.01
VIII	110	Lead titanium trioxide*	12060-00-3	235-038-9	0.01
VIII	111	4,4'-methylenedi-o-toluidine	838-88-0	212-658-8	0.05
VIII	112	Acetic acid, lead salt, basic*	51404-69-4	257-175-3	0.01
VIII	113	Dimethyl sulphate	77-78-1	201-058-1	0.05
VIII	114	Furan	110-00-9	203-727-3	0.05
VIII	115	Pyrochlore, antimony lead yellow*	8012-00-8	232-382-1	0.01
VIII	116	Tetraethyllead*	78-00-2	201-075-4	0.01
VIII	117	[Phthalato(2-)]dioxotrilead*	69011-06-9	273-688-5	0.01
VIII	118	Diethyl sulphate	64-67-5	200-589-6	0.05
VIII	119	Lead cyanamidate*	20837-86-9	244-073-9	0.01
VIII	120	Silicic acid (H ₂ Si ₂ O ₅), barium salt (1:1), lead-doped*	68784-75-8	272-271-5	0.01
VIII	121	Trilead dioxide phosphonate*	12141-20-7	235-252-2	0.01
VIII	122	<i>o</i> -Toluidine	95-53-4	202-429-0	0.05

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Batch	No.	Substance Name(s)	CAS No.	EC No.	Report Limit (%)
VIII	123	<i>o</i> -aminoazotoluene	97-56-3	202-591-2	0.05
VIII	124	4-aminoazobenzene	60-09-3	200-453-6	0.05
VIII	125	6-methoxy- <i>m</i> -toluidine (<i>p</i> -cresidine)	120-71-8	204-419-1	0.05
VIII	126	Dibutyltin dichloride (DBTC)*	683-18-1	211-670-0	0.05
VIII	127	Lead titanium zirconium oxide*	12626-81-2	235-727-4	0.01
VIII	128	Methyloxirane (Propylene oxide)	75-56-9	200-879-2	0.05
VIII	129	1-bromopropane (n-propyl bromide)	106-94-5	203-445-0	0.05
VIII	130	Trilead bis(carbonate)dihydroxide*	1319-46-6	215-290-6	0.01
VIII	131	Fatty acids, C16-18, lead salts*	91031-62-8	292-966-7	0.01
VIII	132	Orange lead (lead tetroxide)*	1314-41-6	215-235-6	0.01
VIII	133	Sulfurous acid, lead salt, dibasic*	62229-08-7	263-467-1	0.01
VIII	134	4,4'-oxydianiline and its salts	101-80-4	202-977-0	0.05
VIII	135	Lead oxide sulfate*	12036-76-9	234-853-7	0.01
VIII	136	Lead bis(tetrafluoroborate)*	13814-96-5	237-486-0	0.01
VIII	137	Silicic acid, lead salt*	11120-22-2	234-363-3	0.01
VIII	138	N,N-dimethylformamide	68-12-2	200-679-5	0.05
IX	139	Cadmium	7440-43-9	231-152-8	0.01
IX	140	Cadmium oxide*	1306-19-0	215-146-2	0.01
IX	141	Dipentyl phthalate (DPP)	131-18-0	205-017-9	0.01
IX	142	^① 4-Nonylphenol, branched and linear, ethoxylated[<i>substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB- and well-defined substances, polymers and homologues, which include any of the individual isomers and/or combinations thereof</i>]	-	-	0.05
IX	143	Ammonium pentadecafluorooctanoate (APFO)	3825-26-1	223-320-4	0.01
IX	144	Pentadecafluorooctanoic acid (PFOA)	335-67-1	206-397-9	0.01
X	145	^① Trixylyl phosphate	25155-23-1	246-677-8	0.01
X	146	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	217-710-3	0.01
X	147	Dihexyl phthalate	84-75-3	201-559-5	0.01

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Batch	No.	Substance Name(s)	CAS No.	EC No.	Report Limit (%)
X	148	Cadmium sulphide*	1306-23-6	215-147-8	0.01
X	149	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)***	573-58-0	209-358-4	0.01
X	150	Lead di(acetate)*	301-04-2	206-104-4	0.01
X	151	Imidazolidine-2-thione (2-imidazoline-2-thiol)	96-45-7	202-506-9	0.01
XI	152	^① 1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	271-093-5	0.01
XI	153	Cadmium chloride*	10108-64-2	233-296-7	0.01
XI	154	^② Sodium perborate; perboric acid, sodium salt*****	15120-21-5 11138-47-9	239-172-9 234-390-0	0.01
XI	155	^② Sodium peroxometaborate*****	7632-04-4	231-556-4	0.01
XII	156	2-(2H-Benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	247-384-8	0.01
XII	157	2-Benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	223-346-6	0.01
XII	158	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)*	15571-58-1	239-622-4	0.05
XII	159	Cadmium fluoride*	7790-79-6	232-222-0	0.01
XII	160	Cadmium sulphate*	10124-36-4 31119-53-6	233-331-6	0.01
XII	161	^① Reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate and 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 and MOTE)*	-	-	0.05
XIII	162	^① 1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with $\geq 0.3\%$ of dihexyl phthalate (EC No. 201- 559-5)	68515-51-5 68648-93-1	271-094-0 272-013-1	0.05

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Batch	No.	Substance Name(s)	CAS No.	EC No.	Report Limit (%)
XIII	163	^① 5-sec-butyl-2-(2,4-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [1], 5-sec-butyl-2-(4,6-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [2] [covering any of the individual stereoisomers of [1] and [2] or any combination thereof]	-	-	0.05
XIV	164	Nitrobenzene	98-95-3	202-716-0	0.01
XIV	165	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1	223-383-8	0.01
XIV	166	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	36437-37-3	253-037-1	0.01
XIV	167	1,3-propanesultone	1120-71-4	214-317-9	0.01
XIV	168	Perfluorononan-1-oic-acid and its sodium and ammonium salts	375-95-1 21049-39-8 4149-60-4	206-801-3 - -	0.01
XV	169	Benzo[def]chrysene (Benzo[a]pyrene)	50-32-8	200-028-5	0.01
XVI	170	4,4'-isopropylidenediphenol (bisphenol A; BPA)	80-05-7	201-245-8	0.01
XVI	171	Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts	3108-42-7 335-76-2 3830-45-3	221-470-5 206-400-3 -	0.01
XVI	172	<i>p</i> -(1,1-dimethylpropyl)phenol	80-46-6	201-280-9	0.01
XVI	173	^① 4-heptylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 7 covalently bound predominantly in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof]	-	-	0.05
XVII	174	Perfluorohexane-1-sulphonic acid and its salts (PFHxS)	-	-	0.0005
XVIII	175	Dechlorane plus (including any of its individual anti- and syn-isomers or any combination thereof)	-	-	0.01
XVIII	176	Benzo[a]anthracene	56-55-3	200-280-6	0.01
XVIII	177	Cadmium nitrate*	10325-94-7	233-710-6	0.01
XVIII	178	Cadmium carbonate*	513-78-0	208-168-9	0.01

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Batch	No.	Substance Name(s)	CAS No.	EC No.	Report Limit (%)
XVIII	179	Cadmium hydroxide*	21041-95-2	244-168-5	0.01
XVIII	180	Chrysene	218-01-9	205-923-4	0.01
XVIII	181	^① Reaction products of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol, branched and linear (RP-HP)[with $\geq 0.1\%$ w/w 4-heptylphenol, branched and linear (4-HPbl)]	-	-	0.05
XIX	182	Octamethylcyclotetrasiloxane (D4)	556-67-2	209-136-7	0.01
XIX	183	Decamethylcyclopentasiloxane (D5)	541-02-6	208-764-9	0.01
XIX	184	Dodecamethylcyclohexasiloxane (D6)	540-97-6	208-762-8	0.01
XIX	185	Lead	7439-92-1	231-100-4	0.01
XIX	186	Disodium octaborate*	12008-41-2	234-541-0	0.01
XIX	187	Benzo[ghi]perylene	191-24-2	205-883-8	0.01
XIX	188	^① Terphenyl, hydrogenated	61788-32-7	262-967-7	0.01
XIX	189	Ethylenediamine (EDA)	107-15-3	203-468-6	0.01
XIX	190	Benzene-1,2,4-tricarboxylic acid 1,2 anhydride (trimellitic anhydride) (TMA)	552-30-7	209-008-0	0.01
XIX	191	Dicyclohexyl phthalate (DCHP)	84-61-7	201-545-9	0.01
XX	192	2,2-bis(4'-hydroxyphenyl)-4-methylpentane	6807-17-6	401-720-1	0.01
XX	193	Benzo[k]fluoranthene	207-08-9	205-916-6	0.01
XX	194	Fluoranthene	206-44-0	205-912-4	0.01
XX	195	Phenanthrene	85-01-8	201-581-5	0.01
XX	196	Pyrene	129-00-0	204-927-3	0.01
XX	197	1,7,7-trimethyl-3-(phenylmethylene) bicyclo[2.2.1]heptan-2-one (3-benzylidene camphor) (3-BC)	15087-24-8	239-139-9	0.01
XXI	198	2,3,3,3-tetrafluoro-2- (heptafluoropropoxy) propionic acid, its salts and its acyl halides (covering any of their individual isomers and combinations thereof)	-	-	0.01
XXI	199	2-methoxyethyl acetate	110-49-6	203-772-9	0.01
XXI	200	4-tert-butylphenol	98-54-4	202-679-0	0.01
XXI	201	^① Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with $\geq 0.1\%$ w/w of 4-nonylphenol, branched and linear (4-NP)	-	-	0.01

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Batch	No.	Substance Name(s)	CAS No.	EC No.	Report Limit (%)
XXII	202	2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone	119313-12-1	404-360-3	0.01
XXII	203	2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	71868-10-5	400-600-6	0.01
XXII	204	Diisohexyl phthalate	71850-09-4	276-090-2	0.01
XXII	205	Perfluorobutane sulfonic acid (PFBS) and its salts	-	-	0.01
XXIII	206	1-vinylimidazole	1072-63-5	214-012-0	0.01
XXIII	207	2-methylimidazole	693-98-1	211-765-7	0.01
XXIII	208	Butyl 4-hydroxybenzoate	94-26-8	202-318-7	0.01
XXIII	209	Dibutylbis(pentane-2,4-dionato-O,O')tin *	22673-19-4	245-152-0	0.05
XXIV	210	bis(2-(2-methoxyethoxy)ethyl) ether	143-24-8	205-594-7	0.01
XXIV	211	Diocyltin dilaurate, stannane, dioctyl-, bis(coco acyloxy) derivs., and any other stannane, dioctyl-, bis(fatty acyloxy) derivs. wherein C12 is the predominant carbon number of the fatty acyloxy moiety *	-	-	0.05

List of intention for identification of SVHC (Published on March 9th 2021)

Batch	No.	Substance Name(s)	CAS No.	EC No.	Report Limit (%)
XXV	1	1,4-dioxane	123-91-1	204-661-8	0.01
XXV	2	2,2-bis(bromomethyl) propane 1,3-diol (BMP) 2,2-dimethylpropan-1-ol, tribromo derivative/3-bromo-2,2-bis(bromomethyl)-1-propanol (TBNPA) 2,3-dibromo-1-propanol (2,3-DBPA)	3296-90-0 36483-57-5 1522-92-5 96-13-9	221-967-7 253-057-0 202-480-9	0.01
XXV	3	2-(4-tert-butylbenzyl)propionaldehyde and its individual stereoisomers	-	-	0.01
XXV	4	4,4'-(1-methylpropylidene) bisphenol; (bisphenol B) (BPB)	77-40-7	201-025-1	0.01
XXV	5	Glutaral	111-30-8	203-856-5	0.01

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Batch	No.	Substance Name(s)	CAS No.	EC No.	Report Limit (%)
XXV	6	^① Medium-chain chlorinated paraffins (MCCP) [UVCB substances consisting of more than or equal to 80% linear chloroalkanes with carbon chain lengths within the range from C14 to C17]	-	-	0.01
XXV	7	Orthoboric acid, sodium salt *	13840-56-7	237-560-2	0.01
XXV	8	^① Phenol, alkylation products (mainly in para position) with C12-rich branched or linear alkyl chains from oligomerisation, covering any individual isomers and/ or combinations thereof (PDDP)	-	-	0.01

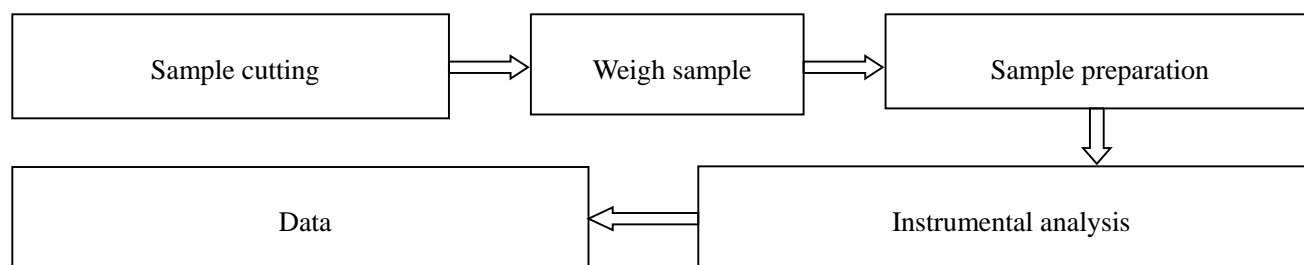
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Appendix:

1. Any supplier of an article containing a substance that is included in the Candidate List in a concentration above 0.1 % weight by weight (w/w) has the duty to communicate information in accordance with Article 33 of European Union regulation concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH).
 - 1) Any supplier shall provide the recipient of the article with sufficient information to allow safe use of the article including, as a minimum, the name of that substance.
 - 2) On request by a consumer any supplier shall provide the consumer with sufficient information to allow safe use of the article including, as a minimum, the name of that substance within 45 days of receipt of the request, free of charge.
2. The supplier of a substance that is included in the Candidate List on their own shall provide the recipient of the substance with a safety data sheet for free compiled in accordance with Article 3 and Annex II of REACH.
3. The supplier of a mixture that containing a substance that is included in the Candidate List shall exchange information in accordance with Article 31, Article 32, and Annex II of REACH.
 - 1) Any supplier shall provide the recipient of the mixture with a safety data sheet for free where a preparation meets the criteria for classification as dangerous in accordance with Directives 1999/45/EC.
 - 2) Any supplier shall provide the recipient of the mixture with a safety data sheet for free where a preparation does not meet the criteria for classification as dangerous in accordance with Directive 1999/45/EC, but contains any substance that is included in the Candidate List in an individual concentration of ≥ 0.1 % by weight for non-gaseous mixtures or ≥ 0.2 % by volume for gaseous mixtures.

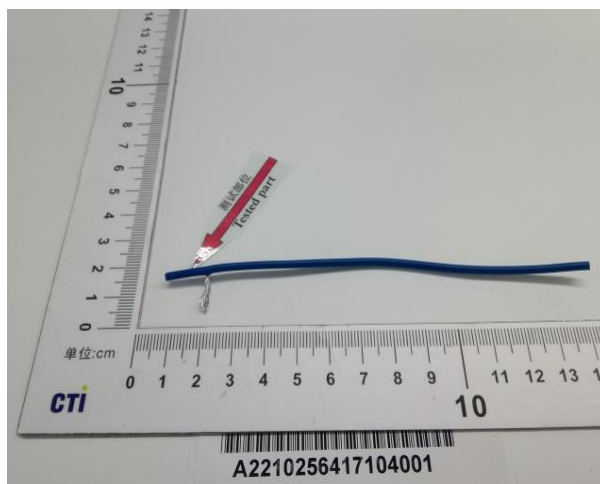
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Photo(s) of the sample(s)



Statement:

1. This report is considered invalid without approved signature, special seal and the seal on the perforation;
2. The Company Name shown on Report and Address, the sample(s) and sample information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified;
3. The result(s) shown in this report refer(s) only to the sample(s) tested;
4. Without written approval of CTI, this report can't be reproduced except in full;
5. In case of any discrepancy between the English version and Chinese version of the testing reports (if generated), the Chinese version shall prevail.

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Test Report

No. SZXEC2101211304

Date: 30 Apr 2021

Page 1 of 6

SINWA LASER TECHNOLOGY CO.,LTD

50.WU KONG 5 TH RD., WU KU INDUSTRIAL PARK, TAIBEI TAIWAN

The following sample(s) was/were submitted and identified on behalf of the clients as : INK BLACK FOR WIRE &CABLE PRINTING

SGS Job No. : RP21-009316 - SZ

Model No. : I-PVC-02

Date of Sample Received : 25 Apr 2021

Testing Period : 25 Apr 2021 - 29 Apr 2021

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, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs) and Phthalates such as Bis(2-ethylhexyl) phthalate (DEHP) , Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) , and Diisobutyl phthalate (DIBP) comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

Signed for and on behalf of
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch



Kitty Xu
Approved Signatory

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SZXEC2101211304



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Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	SZX21-012113.002	Black liquid

Remarks :

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

RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU

Test Method : With reference to IEC 62321-4:2013+AMD1:2017, IEC62321-5:2013, IEC62321-7-2:2017, IEC 62321-6:2015 and IEC62321-8:2017, analyzed by ICP-OES, UV-Vis and GC-MS.

Test Item(s)	Limit	Unit	MDL	002
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1,000	mg/kg	2	ND
Mercury (Hg)	1,000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))	1,000	mg/kg	8	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
Dibromodiphenyl ether	-	mg/kg	5	ND
Tribromodiphenyl ether	-	mg/kg	5	ND
Tetrabromodiphenyl ether	-	mg/kg	5	ND
Pentabromodiphenyl ether	-	mg/kg	5	ND



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Test Report

No. SZXEC2101211304

Date: 30 Apr 2021

Page 3 of 6

<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>002</u>
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
Dibutyl Phthalate (DBP)	1,000	mg/kg	50	ND
Butyl benzyl Phthalate (BBP)	1,000	mg/kg	50	ND
Bis(2-ethylhexyl) Phthalate (DEHP)	1,000	mg/kg	50	ND
Diisobutyl Phthalate (DIBP)	1,000	mg/kg	50	ND

Notes :

- (1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.
- (2) IEC 62321 series is equivalent to EN 62321 series
https://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25
- (3) The restriction of DEHP, BBP, DBP and DIBP shall apply to medical devices, including in vitro medical devices, and monitoring and control instruments, including industrial monitoring and control instruments, from 22 July 2021.

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



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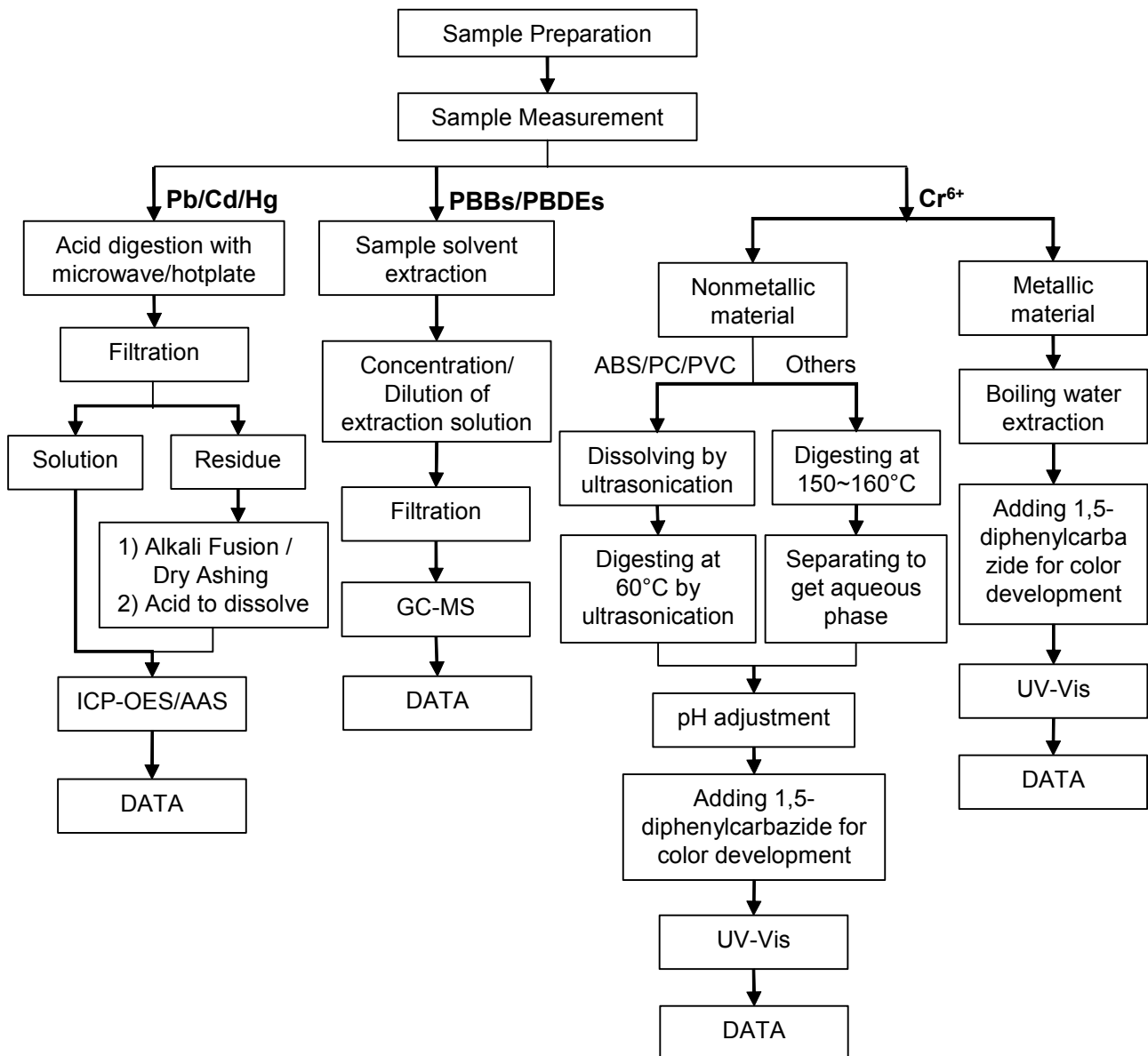
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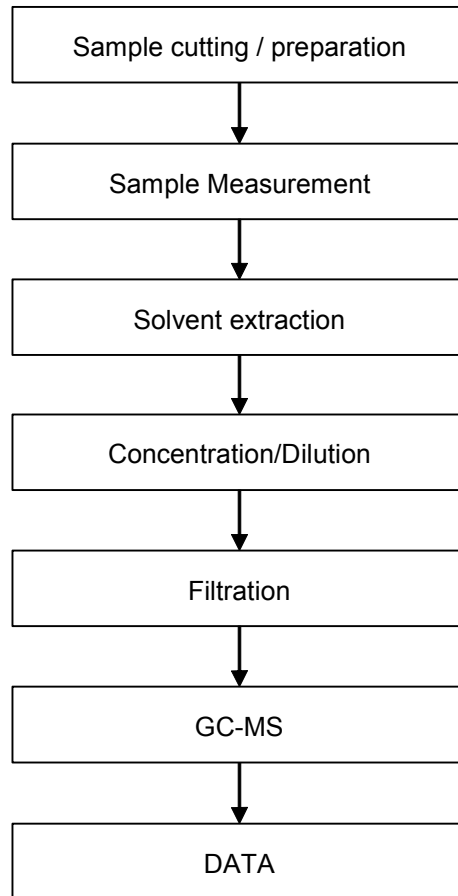
Pb/Cd/Hg/Cr⁶⁺/PBBs/PBDEs Testing Flow Chart

1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ and PBBs/PBDEs test method excluded).



ATTACHMENTS

Phthalates Testing Flow Chart



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Sample photo:



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Test Report

No. CANEC2102611101

Date: 03 Mar 2021

Page 1 of 7

DONGGUAN LUCKY FLY CONDUCTOR CO.,LTD

QIAO ZI REGION CHANG PING TOWN DONG GUAN CITY GUANG DONG PROVINCE
CHINA

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

SGS Job No. : CP21-006792 - GZ

Main Substance : Cu

Date of Sample Received : 25 Feb 2021

Testing Period : 25 Feb 2021 - 03 Mar 2021

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, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs) and Phthalates such as Bis(2-ethylhexyl) phthalate (DEHP) , Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) , and Diisobutyl phthalate (DIBP) comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

Signed for and on behalf of
SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch

Allie Chen

Allie Chen
Approved Signatory

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CANEC2102611101



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Guangzhou Branch

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Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	CAN21-026111.001	Copper-colored metal wire

Remarks :

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

RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU

Test Method : With reference to IEC 62321-4:2013+A1:2017, IEC 62321-5:2013, IEC 62321-7-1:2015 , IEC 62321-6:2015 and IEC 62321-8:2017, analyzed by ICP-OES , UV-Vis and GC-MS .

Test Item(s)	Limit	Unit	MDL	001
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1,000	mg/kg	2	ND
Mercury (Hg)	1,000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))▼	-	µg/cm ²	0.10	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
Dibromodiphenyl ether	-	mg/kg	5	ND
Tribromodiphenyl ether	-	mg/kg	5	ND
Tetrabromodiphenyl ether	-	mg/kg	5	ND
Pentabromodiphenyl ether	-	mg/kg	5	ND



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Test Report

No. CANEC2102611101

Date: 03 Mar 2021

Page 3 of 7

<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
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
Dibutyl phthalate (DBP)	1000	mg/kg	50	ND
Butyl benzyl phthalate (BBP)	1000	mg/kg	50	ND
Bis (2-ethylhexyl) phthalate (DEHP)	1000	mg/kg	50	ND
Diisobutyl Phthalates (DIBP)	1000	mg/kg	50	ND

Notes :

- (1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.
- (2) IEC 62321 series is equivalent to EN 62321 series
https://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25
- (3) ▼= a. The sample is positive for CrVI if the CrVI concentration is greater than 0.13 µg/cm². The sample coating is considered to contain CrVI
 b. The sample is negative for CrVI if CrVI is ND (concentration less than 0.10 µg/cm²). The coating is considered a non-CrVI based coating
 c. The result between 0.10 µg/cm² and 0.13 µg/cm² is considered to be inconclusive - unavoidable coating variations may influence the determination
 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.

Elementary Analysis

Test Method : SGS In-house method (GZTC CHEM-TOP-009-01, with reference to EPA 3050B:1996), analysis was performed by ICP-OES.

<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Beryllium (Be)	mg/kg	5	ND



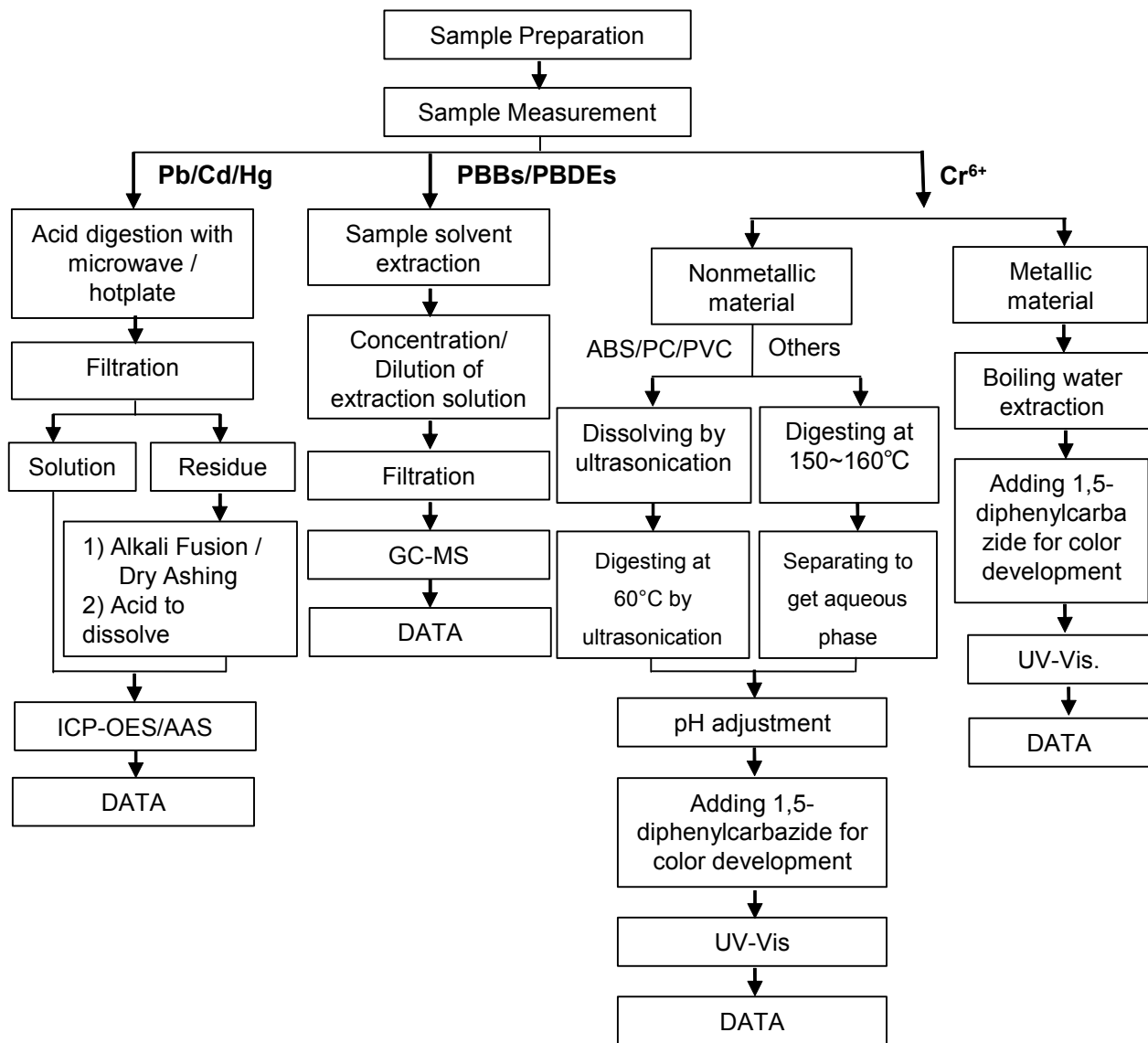
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Pb/Cd/Hg/Cr⁶⁺/PBBs/PBDEs Testing Flow Chart

1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ and PBBs/PBDEs test method excluded).

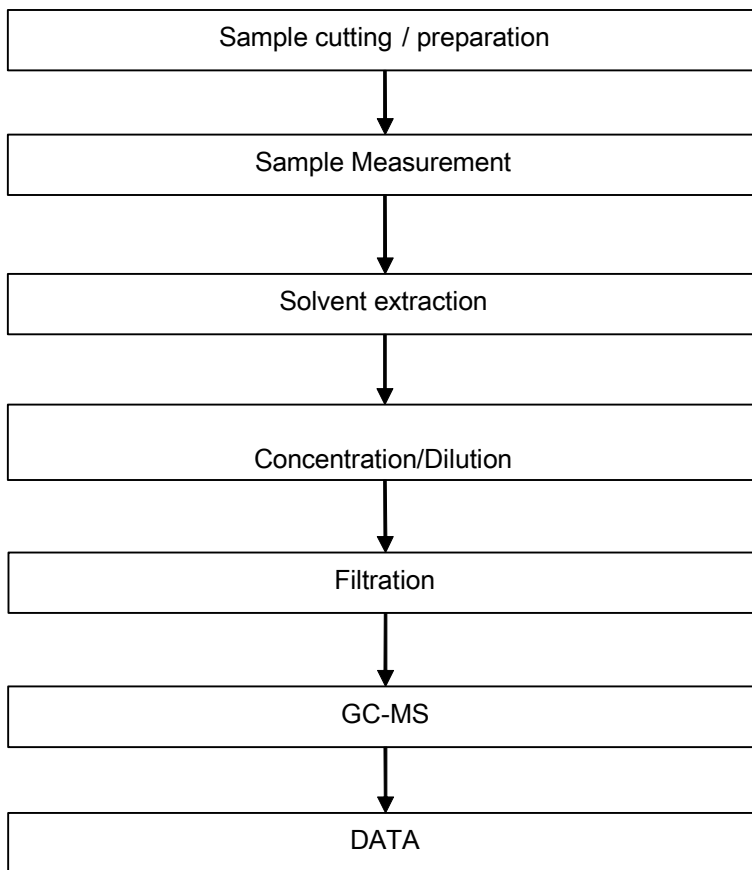


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Phthalates Testing Flow Chart

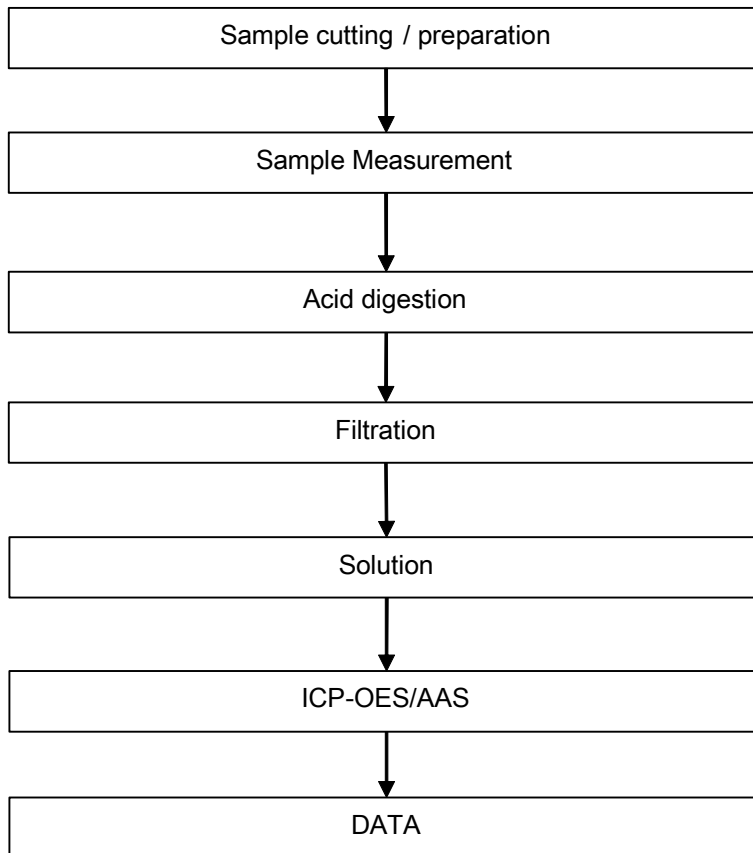


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Elementary Testing Flow Chart



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Sample photo:



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Test Report

No. CANEC2102611102

Date: 03 Mar 2021

Page 1 of 12

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QIAO ZI REGION CHANG PING TOWN DONG GUAN CITY GUANG DONG PROVINCE
CHINA

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

SGS Job No. : CP21-006792 - GZ

Main Substance : Sn, Cu

Date of Sample Received : 25 Feb 2021

Testing Period : 25 Feb 2021 - 03 Mar 2021

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, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs) and Phthalates such as Bis(2-ethylhexyl) phthalate (DEHP) , Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) , and Diisobutyl phthalate (DIBP) comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

Signed for and on behalf of
SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch

Allie Chen

Allie Chen
Approved Signatory

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CANEC2102611102



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Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	CAN21-026111.002	Silvery plated metal wire

Remarks :

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

RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU

Test Method : With reference to IEC 62321-4:2013+A1:2017, IEC 62321-5:2013, IEC 62321-7-1:2015 , IEC 62321-6:2015 and IEC 62321-8:2017, analyzed by ICP-OES , UV-Vis and GC-MS .

Test Item(s)	Limit	Unit	MDL	002
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1,000	mg/kg	2	ND
Mercury (Hg)	1,000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))▼	-	µg/cm ²	0.10	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
Dibromodiphenyl ether	-	mg/kg	5	ND
Tribromodiphenyl ether	-	mg/kg	5	ND
Tetrabromodiphenyl ether	-	mg/kg	5	ND
Pentabromodiphenyl ether	-	mg/kg	5	ND



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<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>002</u>
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
Dibutyl phthalate (DBP)	1000	mg/kg	50	ND
Butyl benzyl phthalate (BBP)	1000	mg/kg	50	ND
Bis (2-ethylhexyl) phthalate (DEHP)	1000	mg/kg	50	ND
Diisobutyl Phthalates (DIBP)	1000	mg/kg	50	ND

Notes :

- (1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.
- (2) IEC 62321 series is equivalent to EN 62321 series
https://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25
- (3) ▼= a. The sample is positive for CrVI if the CrVI concentration is greater than 0.13 µg/cm². The sample coating is considered to contain CrVI
 b. The sample is negative for CrVI if CrVI is ND (concentration less than 0.10 µg/cm²). The coating is considered a non-CrVI based coating
 c. The result between 0.10 µg/cm² and 0.13 µg/cm² is considered to be inconclusive - unavoidable coating variations may influence the determination
 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.

Elementary Analysis

Test Method : SGS In-house method (GZTC CHEM-TOP-009-01, with reference to EPA 3050B:1996), analysis was performed by ICP-OES.

<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>002</u>
Beryllium (Be)	mg/kg	5	ND

AfPS GS 2019:01 PAK - Polycyclic Aromatic Hydrocarbons (PAHs)

Test Method : With reference to AfPS GS 2019:01 PAK, analysis was performed by GC-MS.



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<u>Test Item(s)</u>	<u>CAS NO.</u>	<u>Unit</u>	<u>MDL</u>	<u>002</u>
Naphthalene(NAP)	91-20-3	mg/kg	0.1	ND
Phenanthrene(PHE)	85-01-8	mg/kg	0.1	ND
Anthracene(ANT)	120-12-7	mg/kg	0.1	ND
Fluoranthene(FLT)	206-44-0	mg/kg	0.1	ND
Pyrene(PYR)	129-00-0	mg/kg	0.1	ND
Benzo(a)anthracene(BaA)	56-55-3	mg/kg	0.1	ND
Chrysene(CHR)	218-01-9	mg/kg	0.1	ND
Benzo(b)fluoranthene(BbF)	205-99-2	mg/kg	0.1	ND
Benzo(j)fluoranthene(BjF)	205-82-3	mg/kg	0.1	ND
Benzo(k)fluoranthene(BkF)	207-08-9	mg/kg	0.1	ND
Benzo(a)pyrene(BaP)	50-32-8	mg/kg	0.1	ND
Benzo(e)pyrene(BeP)	192-97-2	mg/kg	0.1	ND
Indeno(1,2,3-c,d)pyrene(IPY)	193-39-5	mg/kg	0.1	ND
Dibenzo(a,h)anthracene(DBA)	53-70-3	mg/kg	0.1	ND
Benzo(g,h,i)perylene(BPE)	191-24-2	mg/kg	0.1	ND
Sum of 4 PAHs (Phenanthrene, Pyrene, Anthracene, Fluoranthene)	-	mg/kg	-	ND
Sum of 15 PAHs	-	mg/kg	-	ND



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AfPS (German commission for Product Safety) : PAHs requirements

Parameter (mg/kg)	Category 1	Category 2		Category 3	
	Materials intended to be placed in the mouth, or materials coming into long-term contact with skin (more than 30s) during the intended use -in toys according to Directive 2009/48/EC or -for the use by children ^{a,b} up to 3 years of age.	Materials not covered by category 1, coming into long-term contact (more than 30s) or short-term repetitive contact ^c with skin during the intended or foreseeable use ^d .			Materials covered neither by category 1 nor by category 2, coming into short-term contact (up to 30s) with skin during the intended or foreseeable use.
		a. use by children	b. other consumer products	a. use by children	b. other consumer products
Benzo(a)pyrene (BaP)	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo(e)pyrene (BeP)	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo(a)anthracene (BaA)	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo(b)fluoranthene (BbF)	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo(j)fluoranthene (BjF)	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo(k)fluoranthene (BkF)	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Chrysene (CHR) mg/kg	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Dibenzo(a,h)anthracene (DBA)	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo(g,h,i)perylene (BPE)	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Indeno(1,2,3-cd)pyrene (IPY)	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Phenanthrene (PHE), pyrene (PYR), anthracene (ANT), fluoranthene (FLT)	< 1 Sum	< 5 Sum	< 10 Sum	< 20 Sum	< 50 Sum
Naphthalene (NAP)	< 1	< 2		< 10	
Sum of 15 PAHs	<1	< 5	< 10	< 20	< 50

Note:

- ^a A "Child" is legally defined as a person before reaching the age of 14 years.
- ^b Use by children includes both active and passive contact by children.
- ^c Definition "short-term repetitive contact" taken from REACH Annex XVII entry 50 amendment (Regulation (EC) No. 1272/2013)
- ^d According to the definition of the German Product Safety Act (ProdSG) (chapter 1 Article 2 No. 28) "foreseeable use" shall mean the use of a product in a manner that the person placing it on the market, has not intended, but which could be reasonably foreseeable.

Remark: The German committee on Product Safety (AfPS) published a new PAHs document (AfPS GS 2019:01 PAK) on April 10, 2020, which will be binding for the issue of GS mark certificate from July 1, 2020.

Perfluorooctane sulfonates (PFOS) and its derivatives

Test Method : With reference to CEN/TS15968:2010, analysis was performed by LC-MS or LC-MS/MS.



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<u>Test Item(s)</u>	<u>CAS NO.</u>	<u>Unit</u>	<u>MDL</u>	<u>002</u>
Perfluorooctane sulfonates (PFOS) ^	1763-23-1	mg/kg	0.010	ND
Perfluorooctane Sulfonamide (PFOSA)	754-91-6	mg/kg	0.010	ND
N-methylperfluoro-1-octanesulfonamide(MeFOSA)	31506-32-8	mg/kg	0.010	ND
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	mg/kg	0.010	ND
2-(N-methylperfluoro-1-octanesulfonamido) -ethanol(MeFOSE)	24448-09-7	mg/kg	0.010	ND
2-(N-ethylperfluoro-1-octanesulfonamido) -ethanol(EtFOSE)	1691-99-2	mg/kg	0.010	ND
Perfluorooctane sulfonates (PFOS) and its derivatives	-	mg/kg	-	ND

Notes :

(1) ^ PFOS including PFOS-K (CAS No.: 2795-39-3), PFOS-Li (CAS No.: 29457-72-5), PFOS-NH₄ (CAS No.: 29081-56-9), PFOS-NH(OH)₂ (CAS No.: 70225-14-8), PFOS-N(C₂H₅)₄ (CAS No.: 56773-42-3), PFOS-DDA(CAS No.:251099-16-8) and POSF (CAS No.: 307-35-7)



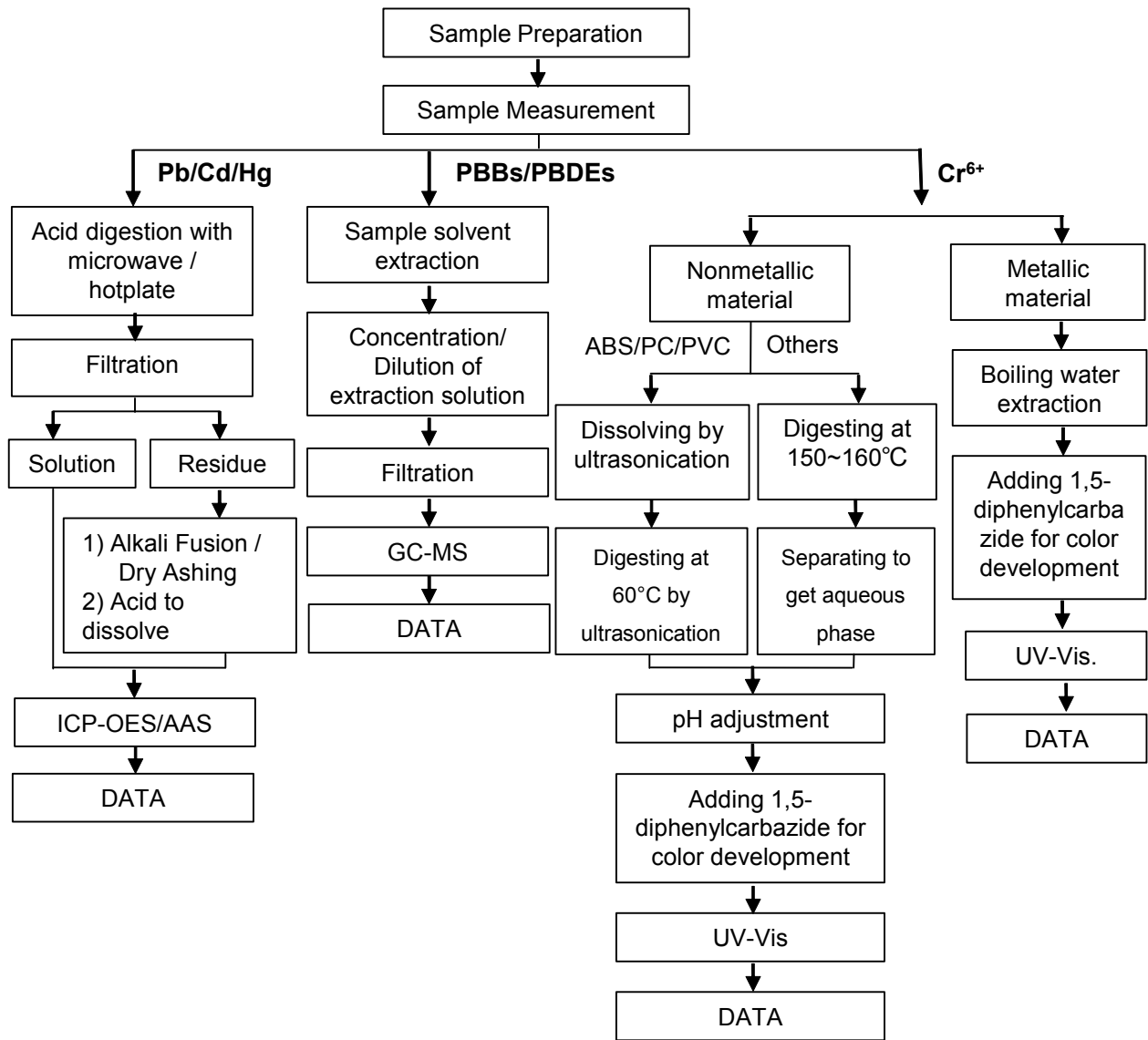
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Pb/Cd/Hg/Cr⁶⁺/PBBs/PBDEs Testing Flow Chart

1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ and PBBs/PBDEs test method excluded).

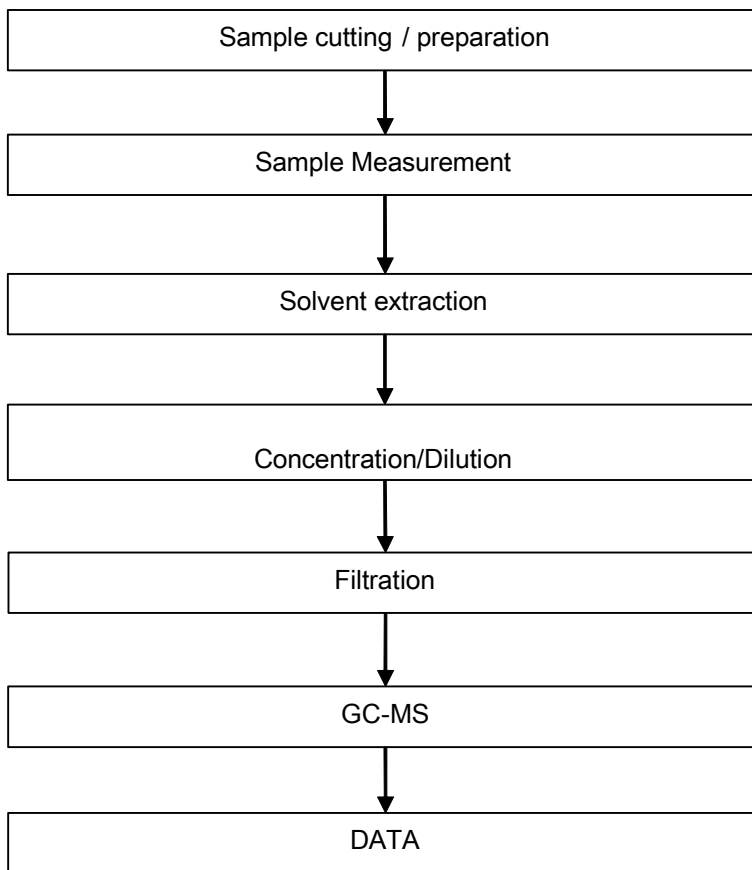


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Phthalates Testing Flow Chart

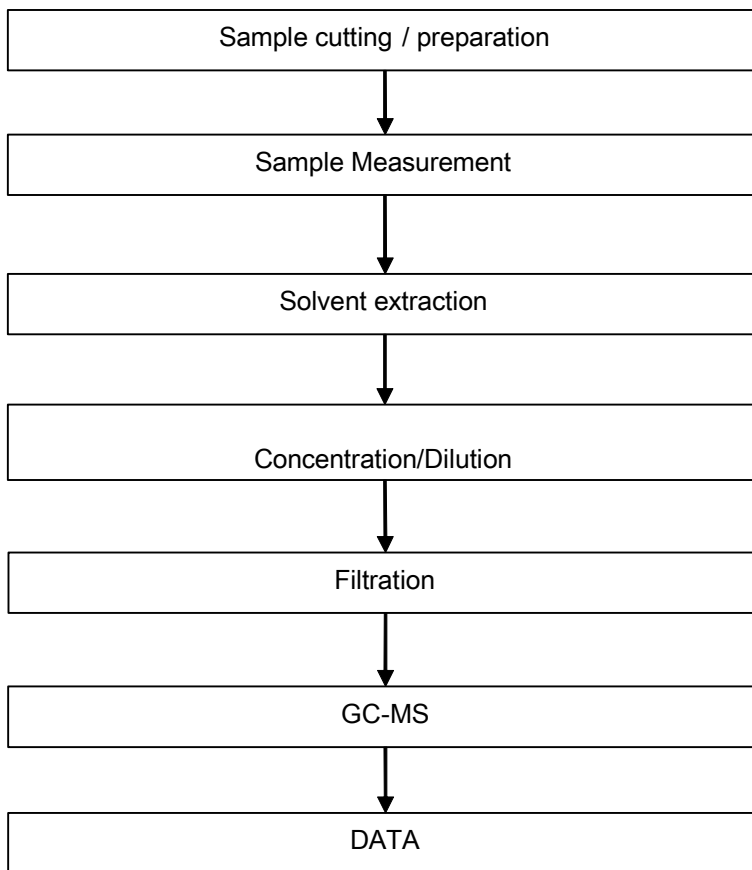


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PAHs Testing Flow Chart

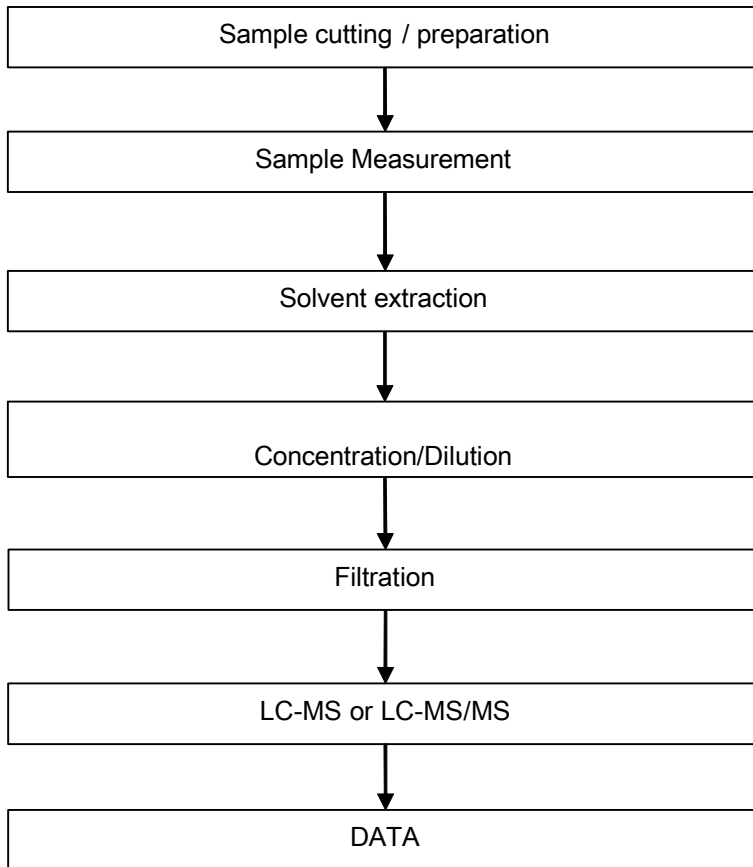


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PFOA / PFOS Testing Flow Chart

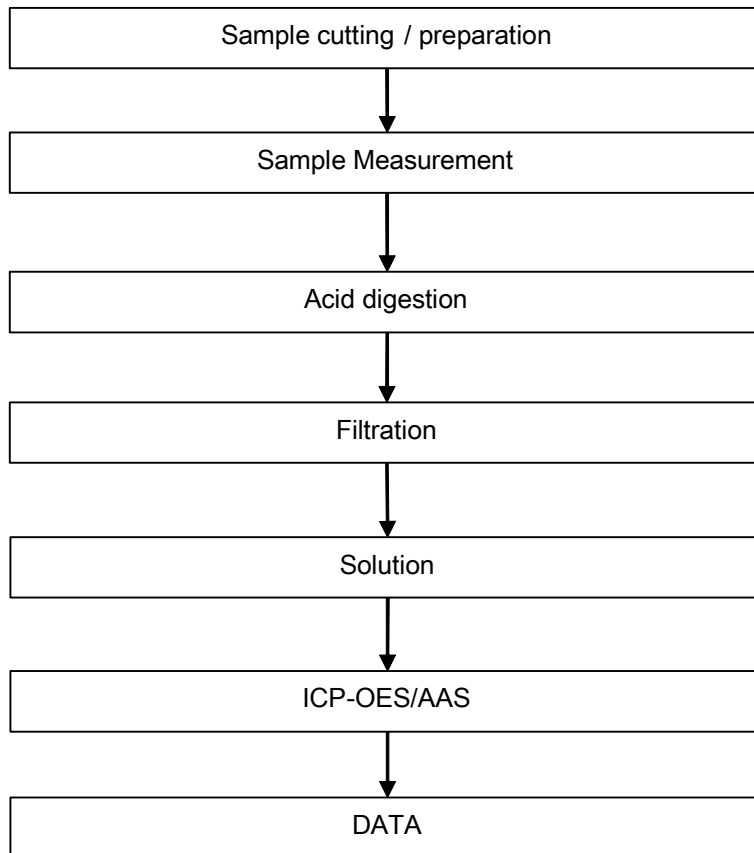


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Elementary Testing Flow Chart



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Sample photo:



SGS authenticate the photo on original report only

*** End of Report ***



Test Report

No. SZXEC2101211301

Date: 30 Apr 2021

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SINWA LASER TECHNOLOGY CO.,LTD

50.WU KONG 5 TH RD., WU KU INDUSTRIAL PARK, TAIBEI TAIWAN

The following sample(s) was/were submitted and identified on behalf of the clients as : INK WHITE FOR WIRE &CABLE PRINTING

SGS Job No. : RP21-009316 - SZ

Model No. : I-PVC-01

Date of Sample Received : 25 Apr 2021

Testing Period : 25 Apr 2021 - 29 Apr 2021

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, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs) and Phthalates such as Bis(2-ethylhexyl) phthalate (DEHP) , Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) , and Diisobutyl phthalate (DIBP) comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

Signed for and on behalf of
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch



Kitty Xu
Approved Signatory

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SZXEC2101211301



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Shenzhen Branch Testing Laboratory

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中国·深圳·龙岗区坂田吉华路430号江灏工业园4栋SGS大楼 邮编: 518129 t (86-755) 25328888 f (86-755) 83106190 e sgs.china@sgs.com

Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	SZX21-012113.001	White liquid

Remarks :

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

RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU

Test Method : With reference to IEC 62321-4:2013+AMD1:2017, IEC62321-5:2013, IEC62321-7-2:2017, IEC 62321-6:2015 and IEC62321-8:2017, analyzed by ICP-OES, UV-Vis and GC-MS.

Test Item(s)	Limit	Unit	MDL	001
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1,000	mg/kg	2	ND
Mercury (Hg)	1,000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))	1,000	mg/kg	8	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
Dibromodiphenyl ether	-	mg/kg	5	ND
Tribromodiphenyl ether	-	mg/kg	5	ND
Tetrabromodiphenyl ether	-	mg/kg	5	ND
Pentabromodiphenyl ether	-	mg/kg	5	ND



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Test Report

No. SZXEC2101211301

Date: 30 Apr 2021

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<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
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
Dibutyl Phthalate (DBP)	1,000	mg/kg	50	ND
Butyl benzyl Phthalate (BBP)	1,000	mg/kg	50	ND
Bis(2-ethylhexyl) Phthalate (DEHP)	1,000	mg/kg	50	ND
Diisobutyl Phthalate (DIBP)	1,000	mg/kg	50	ND

Notes :

- (1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.
- (2) IEC 62321 series is equivalent to EN 62321 series
https://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25
- (3) The restriction of DEHP, BBP, DBP and DIBP shall apply to medical devices, including in vitro medical devices, and monitoring and control instruments, including industrial monitoring and control instruments, from 22 July 2021.

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



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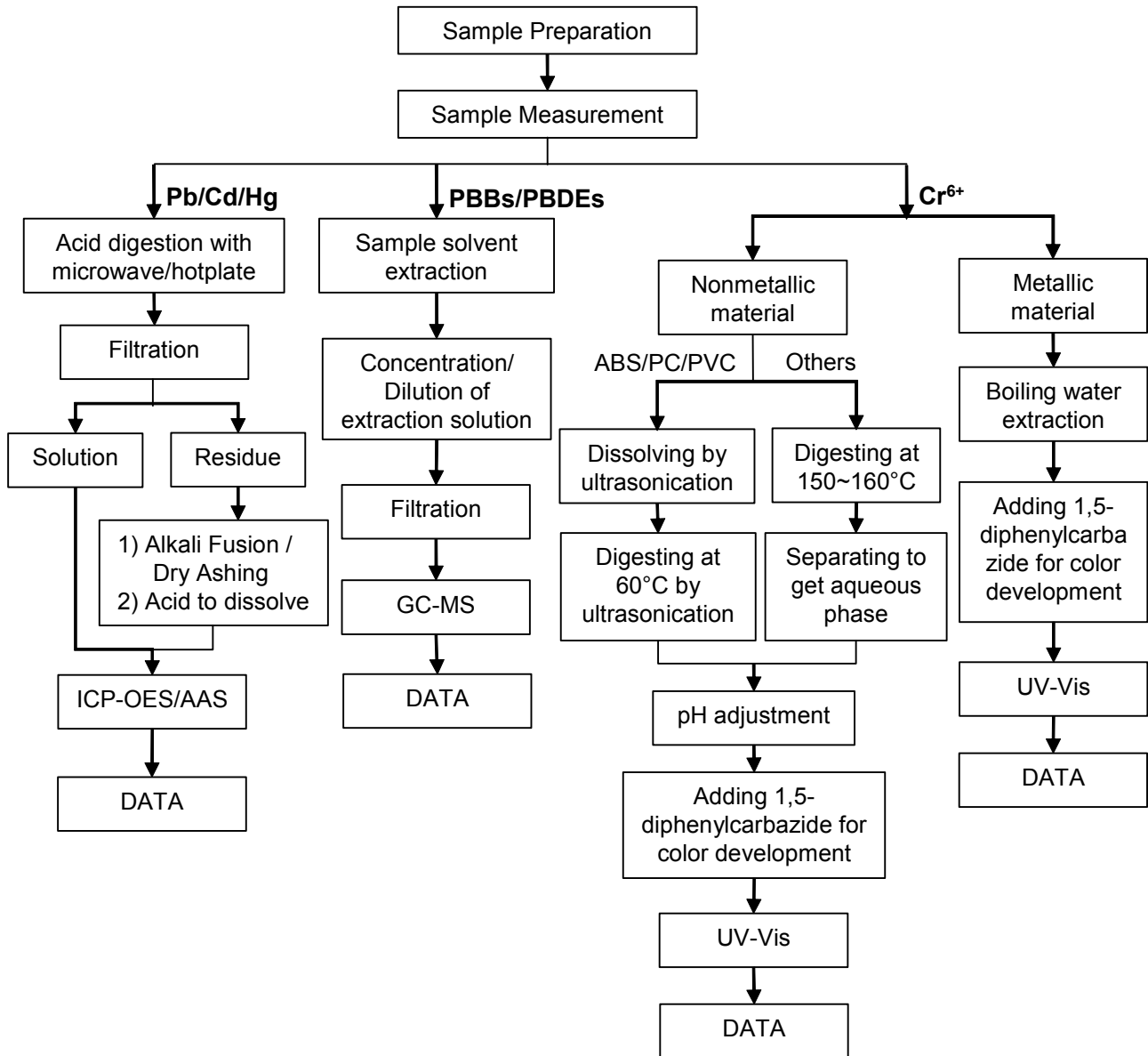
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Pb/Cd/Hg/Cr⁶⁺/PBBs/PBDEs Testing Flow Chart

1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ and PBBs/PBDEs test method excluded).



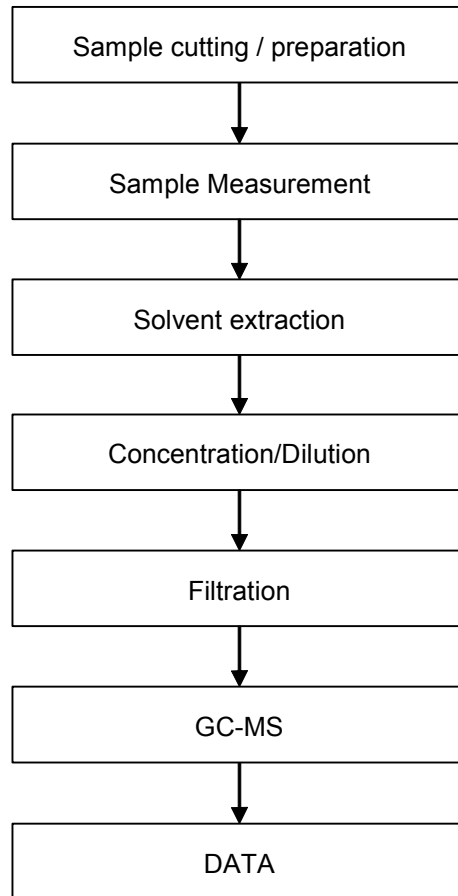
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ATTACHMENTS

Phthalates Testing Flow Chart

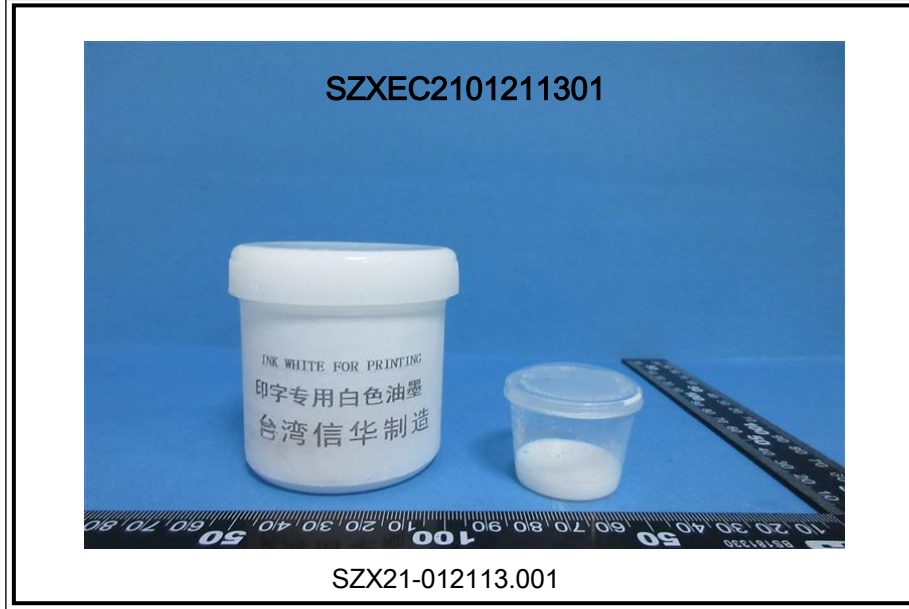


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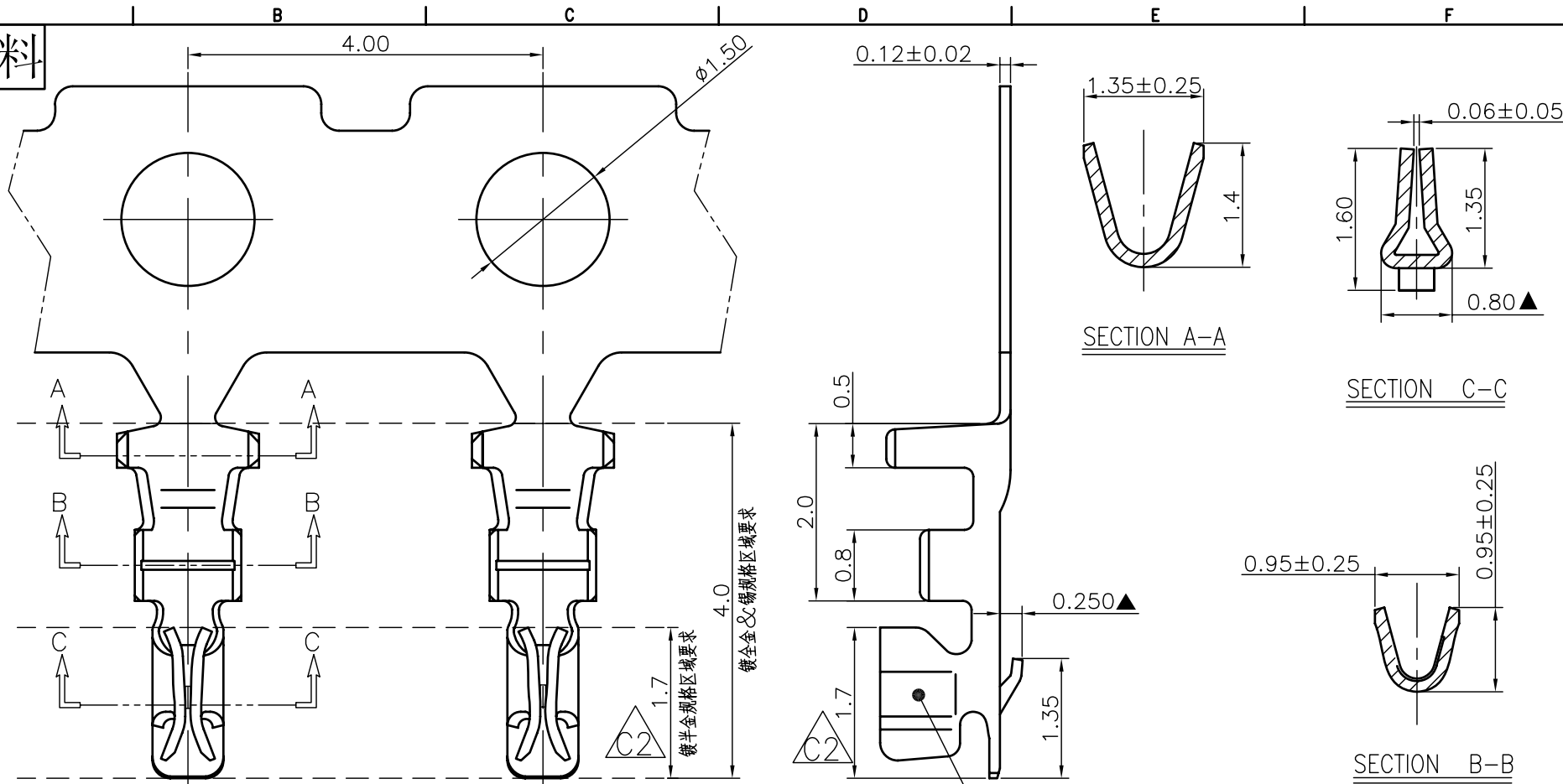
Sample photo:



SGS authenticate the photo on original report only

*** End of Report ***

环保物料



Specification & Ordering Information:

Options	Part No	Wire Range	Insulation O.D.	Material	Finish	Qty/reel
1	11002TOP-2E-S-NK	AWG #28~#32	0.80mm(max)	Phosphor Bronze	Tin-plated 80μ"Min	2,0000 PCS
2	11002TOP-5X-S-NK	AWG #28~#32	0.80mm(max)	Phosphor Bronze	Gold Plated on Overall.	2,0000 PCS
3	11002TOP-0X-S-NK	AWG #28~#32	0.80mm(max)	Phosphor Bronze	Gold Plated on Contact Area.	2,0000 PCS

Note: 11002TOP-XX-S-NK $\triangle C1$

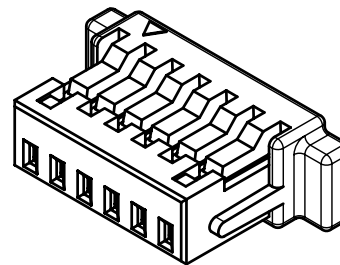
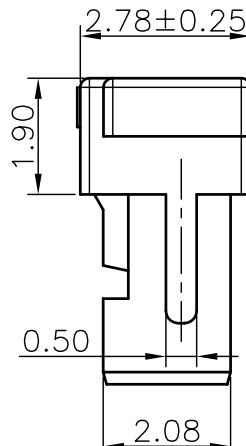
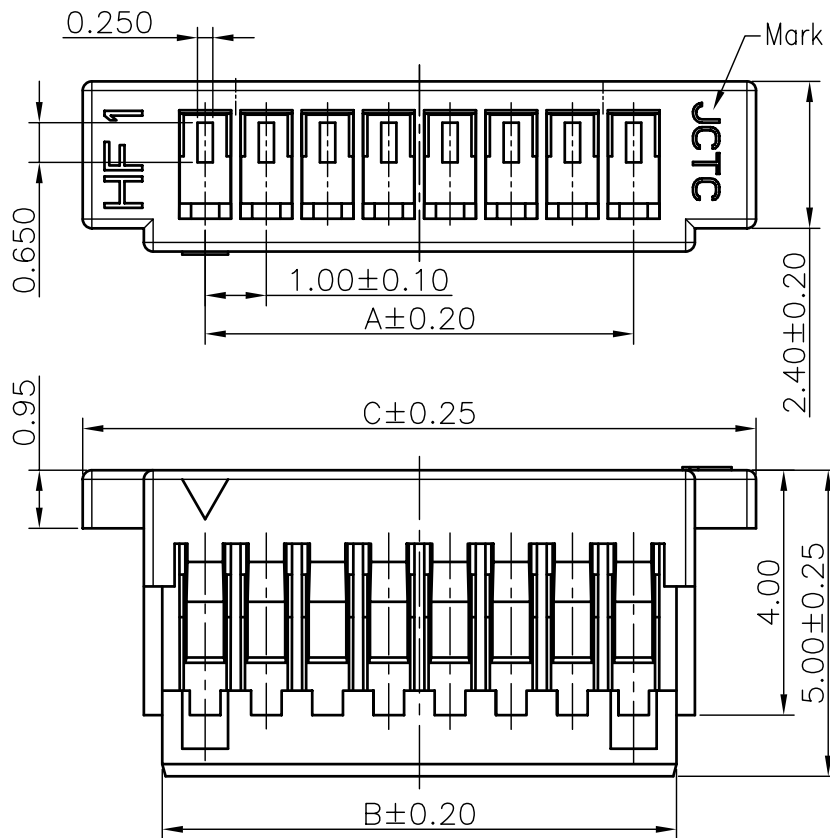
0A--Gold-flash 0B--2μ" 0C--3μ" 0D--4μ" 0E--5μ" 5A--Gold-flash 5B--2μ" 5C--3μ" 5D--4μ" 5E--5μ"
 0F--10μ" 0G--15μ" 0H--30μ" 0I--50μ" 5F--10μ" 5G--15μ" 5H--30μ" 5I--50μ"

C3	11.05.31	TR1105310082	EAST	唐海江	一般公差 GENERAL TOLERANCE		绘图 DR.	EAST	JCTC 东莞市胜蓝电子有限公司 TERMINAL & CONNECTORS — 富强电子厂 —	料号 PART NO. 11002TOP-XX-S-NK		
C2	10.08.05	TR1007270049	EAST	唐海江	X.X ±0.25	X' ±5'	校对 CHK.	唐海江		文件编号 NUMBER ENDE05		
C1	09.12.21	修改电镀码料号,增加Mark码	EAST	唐海江	X.XX ±0.15	X.X' ±2'	审核 CHK.	梁友莲	品名 TITLE JST1.0端子 松端	比例 SCALE	SHEET	版次 REV.
C0	09.12.09	换图框发行	EAST	唐海江	X.XXX ±0.08	▲ MAJOR DIM.	核准 APPD.	王志刚		1/1	1/1	C3
版次 REV.	日期 DATE	变更内容 DESCRIPTION	审核 CHK.	核准 APPD.	单位 UNIT	mm						

环保物料

Specifications:
 Rated Voltage : 50V AC/DC
 Rated Current : 1A AC,DC
 Withstand Voltage : 500V AC/minute
 Contact Resistance : 20mΩ(MAX.)
 Insulation Resistance : 100MΩ(MIN.)
 Temperature Range : -25°C~+85°C

Dimensional Ordering Information:			
Circuits Part No	Dimensions		
	A	B	C
2P	1.00	2.40	5.00
3P	2.00	3.40	6.00
4P	3.00	4.40	7.00
5P	4.00	5.40	8.00
6P	5.00	6.40	9.00
7P	6.00	7.40	10.00
8P	7.00	8.40	11.00
9P	8.00	9.40	12.00
10P	9.00	10.40	13.00
11P	10.00	11.40	14.00
12P	11.00	12.40	15.00
13P	12.00	13.40	16.00
14P	13.00	14.40	17.00
15P	14.00	15.40	18.00
16P	15.00	16.40	19.00
17P	16.00	17.40	20.00
18P	17.00	18.40	21.00
19P	18.00	19.40	22.00
20P	19.00	20.40	23.00
21P	20.00	21.40	24.00
24P	23.00	24.40	27.00
30P	29.00	30.40	33.00



18P~2.11

11002H00-NPX-HF-NK
 ① ② ③④ ⑤ ⑥

Suitable for JCTC 11002 series terminal

- ① Series No.
- ② H90 : Side Contact
H00 : Up Contact
- ③ No. of Circuits
- ④ A: Product color (A--Y)
Blank : Natural type
- ⑤ HF : Halogen Free
- ⑥ Blank: Mark NK: No Mark

Part No.	Material	Color
11002H00-NP	PBT,UL94V-0	Natural(White)
11002H00-NPA	PBT,UL94V-0	Black
11002H00-NPC	Nylon 66,UL94V-0	Red
11002H00-NPE	Nylon 66,UL94V-0	Yellow
11002H00-NP-HF	Nylon 66,UL94V-0	Natural(White)
11002H00-NPA-HF	Nylon 66,UL94V-0	Black

Part No.	Material	Color
11002H00-NP-NK	PBT,UL94V-0	Natural(White)
11002H00-NPA-NK	PBT,UL94V-0	Black
11002H00-NPC-NK	Nylon 66,UL94V-0	Red
11002H00-NPE-NK	Nylon 66,UL94V-0	Yellow
11002H00-NP-HF-NK	Nylon 66,UL94V-0	Natural(White)
11002H00-NPA-HF-NK	Nylon 66,UL94V-0	Black

版次 REV.	日期 DATE	变更内容 DESCRIPTION	审核 CHK.	核准 APPD.	单位 UNIT	mm	绘图 DR.	欧阳小强	校对 CHK.	奕友连	审核 CHK.	奕友连	核准 APPD.	王志刚	料号 PART NO.	11002H00-NPX-XX-XX	文件编号 NUMBER	ENDE05	比例 SCALE	1/1	SHEET	1/1	版次 REV.	C4
C4	12.07.24	将18P主体厚度由2.08改为2.11	奕友连	王志刚	一般公差 GENERAL TOLERANCE		绘 图	欧阳小强	JCTC® 东莞市胜蓝电子有限公司		TERMINAL & CONNECTORS 富强电子厂		料号 PART NO.	11002H00-NPX-XX-XX	文件编号 NUMBER	ENDE05	比例 SCALE	1/1	SHEET	1/1	版次 REV.	C4		
C3	11.07.19	主体增加“HF”	奕友连	王志刚	X.X ±0.25	X' ±5'	校 对	奕友连	品名 TITLE		JST 1.00mm PITCH HOUSING		比例 SCALE	1/1	SHEET	1/1	版次 REV.	C4						
C2	10.11.25	新增黑色无卤规格	奕友连	王志刚	X.XX ±0.15	X.X' ±2'	审 核	奕友连	JST 1.00mm PITCH HOUSING		JST 1.00mm PITCH HOUSING		比例 SCALE	1/1	SHEET	1/1	版次 REV.	C4						
C1	10.07.06	新增24P,30P规格	奕友连	王志刚	X.XXX ±0.08	▲ MAJOR DIM.	核 准	王志刚	JST 1.00mm PITCH HOUSING		JST 1.00mm PITCH HOUSING		比例 SCALE	1/1	SHEET	1/1	版次 REV.	C4						



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SHENGLAN TECHNOLOGY CO LTD

E338796

No.4 Hexing Rd
Shatou Southern District
Changan Town
Dongguan, Guangdong 523846 CHINA

Connectors, Model(s) Cat. No. 11002H00, follow by -2X, follow by 5, 6, 8, 9, 10, 12, 15, 17, 18, 20, 25, follow by P, follow by A thru Z or 1 thru 9, follow by -A thru -Z or -1 thru -9, follow by A thru Z or 1 thru 9, follow by -A thru -Z, follow by A thru Z.

Connectors, Model(s) Cat. No. 11002W00, follow by -2X, follow by 5, 6, 8, 9, 10, 12, 15, 20, 25, follow by P, follow by A thru Z or 1 thru 9, follow by -A thru -Z or -1 thru -9, follow by A thru Z or 1 thru 9, follow by -A thru -Z, follow by A thru Z.

Connectors, Model(s) Cat. No. 11002W90, follow by -2X, follow by 5, 6, 8, 9, 10, 15, 20, 25, follow by P, follow by A thru Z or 1 thru 9, follow by -A thru -Z or -1 thru -9, follow by A thru Z or 1 thru 9, follow by -A thru -Z, follow by A thru Z.

Connectors, Model(s) Cat. No. 11004H, followed by -2x10 or -2x15, followed by PL.

Connectors, Model(s) Cat. No. 11006H00, followed by -2X10, -2X15 or -2X20, followed by P.

Connectors, Model(s) Cat. No. 11252H, followed by -2x, followed by 5, 10, 15 or 20, followed by P.

Connectors, Model(s) Cat. No. 11252W, followed by -2X, followed by 5, 10, 15 or 20, followed by P.

Connectors, Model(s) Cat. No. 11253H, followed by -20 or -30, followed by P.

Connectors, Model(s) Cat. No. 11253W, followed by -20 or -30, followed by P.

Connectors, Model(s) Cat. No. 11258H00, follow by -4, -5, -6, -7, -8, -9, -10, -11, -12, -13, -14, -15, -20, follow by P, follow by A thru Z or 1 thru 9, follow by -L, follow by -A thru -Z or -1 thru -9, follow A thru Z or 1 thru 9.

Connectors, Model(s) Cat. No. 11258W90, follow by -S, follow by -4, -5, -6, -7, -8, -9, -10, -11, -12, -13, -14, -15, -20, follow by P, follow by A thru Z or 1 thru 9, follow by -L, follow by -A thru -Z or -1 thru -9, follow by A thru Z or 1 thru 9.

Connectors, Model(s) Cat. No. 11500H00, followed by -2 thru -15, followed by P.

Connectors, Model(s) Cat. No. 11500W00, followed by -2 thru -15, followed by P.

Connectors, Model(s) Cat. No. 12002H00, follow by -2 thru -16, follow by P, follow by A thru Z or 1 thru 9, follow by -L, follow by -A thru -Z or -1 thru -9, follow by A thru Z or 1 thru 9.

Connectors, Model(s) Cat. No. 12002W00, follow by -2 thru -16, follow by P, follow by A thru Z or 1 thru 9, follow by -L, follow by -A thru -Z or -1 thru -9, follow by A thru Z or 1 thru 9.

Connectors, Model(s) Cat. No. 12002W90, follow by -2 thru -16, follow by P, follow by A thru Z or 1 thru 9, follow by -L, follow by -A thru -Z or -1 thru -9, follow by A thru Z or 1 thru 9.

Connectors, Model(s) Cat. No. 12003H, followed by -2x, followed by 2 thru 17, followed by P.

Connectors, Model(s) Cat. No. 12009H00, followed by -2X2, -2X3 or -2X4, followed by P.

Connectors, Model(s) Cat. No. 12504H00, followed by -2 thru -15, followed by P, followed by -L.

Connectors, Model(s) Cat. No. 12505H00, followed by -2 thru -15 or -20, followed by P.

Connectors, Model(s) Cat. No. 12505W00, follow by -2 thru -15, follow by P, follow by A thru Z or 1 thru 9, follow by -A thru -Z or -1 thru -9, follow by -A thru -Z or -1 thru -9, follow by A thru Z or 1 thru 9, follow by -A thru -Z, follow by A thru Z.

Connectors, Model(s) Cat. No. 12505W90, follow by -2 thru -15, follow by P, follow by A thru Z or 1 thru 9, follow by -A thru -Z or -1 thru -9, follow by -A thru -Z or -1 thru -9, follow by A thru Z or 1 thru 9, follow by -A thru -Z, follow by A thru Z.

Connectors, Model(s) Cat. No. 12541H, followed by -2x, followed by 1 thru 20, followed by P.

Connectors, Model(s) Cat. No. 12543H, followed by -2 thru -20, followed by P.

Connectors, Model(s) Cat. No. 12547H00, followed by -3 thru -8, followed by P.

Connectors, Model(s) Cat. No. 13502W90, followed by -2P, followed by A thru Z, followed by -A thru -Z, or -0 thru -9, followed by -A thru -Z, or -0 thru -9, followed by -A thru -Z, or -0 thru -9, followed by -A thru -Z, or -0 thru -9.

Connectors, Model(s) Cat. No. 13962H00, 13962W00 and 13962W90, followed by -2P thru -10P, followed by A thru Z, followed by -A thru -Z, or -0 thru -9, followed by -A thru -Z, or -0 thru -9.

Connectors, Model(s) Cat. No. 22001H, followed by -2 thru -16, followed by P.

Connectors, Model(s) Cat. No. 22501H, followed by -2 thru -14, followed by P.

Connectors, Model(s) Cat. Nos. 10500H and 10500W, followed by -41 or -51, followed by P.

Connectors, Model(s) Cat. Nos. 11001H and 11001W, followed by -30, followed by P.

Connectors, Model(s) Cat. Nos. 11002H and 11002W, followed by -2 thru -20, followed by P.

Connectors, Model(s) Cat. Nos. 11003H and 11003W, followed by -2 thru -30, followed by P.

Connectors, Model(s) Cat. Nos. 11005H and 11005W, followed by -2X, followed by 2 thru 25, followed by P.

Connectors, Model(s) Cat. Nos. 11251H and 11251W, followed by -2 thru -15, followed by P.

Connectors, Model(s) Cat. Nos. 11254H00, 12006H, 12006W, 12504H and 12504W, followed by -2 thru -15, followed by P.

Connectors, Model(s) Cat. Nos. 11255H, 11255W, 11256H and 11256W, followed by -2 thru -30, followed by P.

Connectors, Model(s) Cat. Nos. 11257H, follow by -4 thru -15, followed by PL.

Connectors, Model(s) Cat. Nos. 11257W, 12503H00 and 12503W00, follow by -2 thru -15, followed by P.

Connectors, Model(s) Cat. Nos. 11501H and 11501W, followed by -2 thru -13, followed by P.

Connectors, Model(s) Cat. Nos. 11501H00 and 11501W00, followed by -14 or -15, followed by P.

Connectors, Model(s) Cat. Nos. 12001H and 12001W, followed by -2 thru -16, followed by P.

Connectors, Model(s) Cat. Nos. 12002H and 12002W, followed by -2x, followed by 2 thru 15, followed by P.

Connectors, Model(s) Cat. Nos. 12004H, 12004W and 12005W, follow by -2 thru -16, followed by P.

Connectors, Model(s) Cat. Nos. 12005H, follow by -2 thru -16, followed by PL.

Connectors, Model(s) Cat. Nos. 12501H and 12501W, followed by -2 thru -16, followed by P.

Connectors, Model(s) Cat. Nos. 12502H and 12502W, followed by -2 thru -15, followed by P.

Connectors, Model(s) Cat. Nos. 50801H and 50801W, follow by -2 thru -24, followed by P.

Connectors, Model(s) Cat. Nos. 51274H-7P and 51275H-7P.

Model(s) BCUM-200A-PE, BICF-200A-PE, HS-0021-PC-GY, HS-0023-PC-GY

Marking: Company name and model designation on the device or carton.

Last Updated on 2018-11-15

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SHENGLAN TECHNOLOGY CO.,LTD.

NO.4HECING ROAD SHATOU SOUTHERN DISTRICT CHANGAN TOWN DONGGUAN CITY GUANGDONG PROVINCE 523863 CHINA

The following sample(s) was/were submitted and identified on behalf of the clients as : Nylon 66 UL94V-0 Natural color Housing

SGS Job No. : CP21-048910 - SZ
 Model No. : 12502
 Client Ref. Info. : PLEASE SEE REMARK
 Date of Sample Received : 08 Sep 2021
 Testing Period : 08 Sep 2021 - 16 Sep 2021
 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).

Result Summary :

Test Requested	Conclusion
RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU	PASS
Elementary Analysis	See Results
Red Phosphor	See Results
Tetrabromobisphenol A (TBBP-A)	See Results
Phthalates	See Results
Perfluorooctanoic acid (PFOA) and its salts & Perfluorooctane sulfonates (PFOS) and its derivatives	See Results
AfPS GS 2019:01 PAK - Polycyclic Aromatic Hydrocarbons (PAHs)	See Results
European Regulation POPs (EU) 2019/1021 – Alkanes C10-C13, chloro (short-chain chlorinated paraffins) (SCCPs)	PASS
Hexabromocyclododecane (HBCDD)	See Results
Phthalate(s)	See Results



SGS-CSTC Standards Technical Services Co., Ltd.
 Guangzhou Branch Testing Center Chemical Laboratory.

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Signed for and on behalf of
SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch

Sasa zhi

Sasa Zhi
Approved Signatory

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Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	CAN21-168224.001	White plastic

Remarks :

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

RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU

Test Method : With reference to IEC 62321-4:2013+A1:2017, IEC 62321-5:2013, IEC 62321-7-2:2017 , IEC 62321-6:2015 and IEC 62321-8:2017, analyzed by ICP-OES , UV-Vis and GC-MS .

<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1000	mg/kg	2	ND
Mercury (Hg)	1000	mg/kg	2	ND
Hexavalent Chromium (CrVI)	1000	mg/kg	8	ND
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



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<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Octabromodiphenyl ether	-	mg/kg	5	ND
Nonabromodiphenyl ether	-	mg/kg	5	ND
Decabromodiphenyl ether	-	mg/kg	5	ND
Dibutyl phthalate (DBP)	1000	mg/kg	50	ND
Butyl benzyl phthalate (BBP)	1000	mg/kg	50	ND
Bis (2-ethylhexyl) phthalate (DEHP)	1000	mg/kg	50	ND
Diisobutyl Phthalates (DIBP)	1000	mg/kg	50	ND

Notes :

(1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.

(2) IEC 62321 series is equivalent to EN 62321 series

https://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25

(3) The restriction of DEHP, BBP, DBP and DIBP shall apply to medical devices, including in vitro medical devices, and monitoring and control instruments, including industrial monitoring and control instruments, from 22 July 2021.

Elementary Analysis

Test Method : SGS In-house method (GZTC CHEM-TOP-004-01, with reference to EPA 3052:1996), analysis was performed by ICP-OES.

<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Antimony (Sb)	mg/kg	10	ND
Tin (Sn)	mg/kg	5	ND

Red Phosphor

Test Method : SGS In-house method (GZTC CHEM-TOP-215-01), analysis was performed by PY-GC/MS/ICP-OES.

<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Red phosphorus	mg/kg	500	ND

Tetrabromobisphenol A (TBBP-A)

Test Method : SGS In-house method (GZTC CHEM-TOP-065, With reference to EPA 3540C:1996 & EPA 8270E:2017), analysis was performed by LC-MS/MS.



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<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Tetrabromobisphenol A (TBBP-A)	mg/kg	5	ND

Phthalates

Test Method : With reference to IEC 62321-8:2017, analysis was performed by GC-MS.

<u>Test Item(s)</u>	<u>CAS NO.</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Diisononyl Phthalate (DINP)	28553-12-0 / 68515-48-0	%(w/w)	0.005	ND
Di-n-octyl Phthalate (DNOP)	117-84-0	%(w/w)	0.005	ND
Diisodecyl Phthalate (DIDP)	26761-40-0 / 68515-49-1	%(w/w)	0.005	ND
Di-n-hexyl Phthalate (DnHP)	84-75-3	%(w/w)	0.005	ND
Diethyl Phthalate (DEP)	84-66-2	%(w/w)	0.005	ND
Dimethyl Phthalate (DMP)	131-11-3	%(w/w)	0.005	ND
Diisooctyl Phthalate (DIOP)	27554-26-3	%(w/w)	0.005	ND
Dipropyl Phthalate (DPrP)	131-16-8	%(w/w)	0.005	ND
Dicyclohexyl Phthalate (DCHP)	84-61-7	%(w/w)	0.005	ND
Dipentyl Phthalates (DPENP/DnPP)	131-18-0	%(w/w)	0.005	ND
Dibenzyl Phthalate (DBzP)	523-31-9	%(w/w)	0.005	ND
Diphenyl Phthalate (DPhP)	84-62-8	%(w/w)	0.005	ND
Di(2-ethylhexyl)adipate (DEHA)	103-23-1	%(w/w)	0.005	ND
Diisopentyl Phthalate (DIPP)	605-50-5	%(w/w)	0.005	ND
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	71888-89-6	%(w/w)	0.005	ND
1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	68515-42-4	%(w/w)	0.005	ND
Di-n-heptyl Phthalate (DnHpP)	3648-21-3	%(w/w)	0.005	ND
Dinonyl Phthalate (DNP)	84-76-4	%(w/w)	0.005	ND
Bis(2-methoxyethyl) Phthalate (DMEP)	117-82-8	%(w/w)	0.005	ND

Perfluorooctanoic acid (PFOA) and its salts & Perfluorooctane sulfonates (PFOS) and its derivatives

Test Method : With reference to CEN/TS15968:2010, analysis was performed by LC-MS or LC-MS/MS.

<u>Test Item(s)</u>	<u>CAS NO.</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Perfluorooctanoic acid (PFOA) and its salts+	335-67-1	mg/kg	0.010	ND
Perfluorooctane sulfonates (PFOS) ^	1763-23-1	mg/kg	0.010	ND
Perfluorooctane Sulfonamide (PFOSA)	754-91-6	mg/kg	0.010	ND



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Test Item(s)	CAS NO.	Unit	MDL	001
N-methylperfluoro-1-octanesulfonamide(MeFOSA)	31506-32-8	mg/kg	0.010	ND
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	mg/kg	0.010	ND
2-(N-methylperfluoro-1-octanesulfonamido)-ethanol(MeFOSE)	24448-09-7	mg/kg	0.010	ND
2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol(EtFOSE)	1691-99-2	mg/kg	0.010	ND
Perfluorooctane sulfonates (PFOS) and its derivatives	-	mg/kg	-	ND

Notes :

- (1) + PFOA and its salts including PFOA-Na (CAS No.: 335-95-5), PFOA-K (CAS No.: 2395-00-8), PFOA-Ag (CAS No.: 335-93-3), PFOA-F (CAS No.: 335-66-0) and APFO (CAS No.: 3825-26-1);
 (2) ^ PFOS including PFOS-K (CAS No.: 2795-39-3), PFOS-Li (CAS No.: 29457-72-5), PFOS-NH₄ (CAS No.: 29081-56-9), PFOS-NH(OH)₂ (CAS No.: 70225-14-8), PFOS-N(C₂H₅)₄ (CAS No.: 56773-42-3), PFOS-DDA(CAS No.:251099-16-8) and POSF (CAS No.: 307-35-7)

AfPS GS 2019:01 PAK - Polycyclic Aromatic Hydrocarbons (PAHs)

Test Method : With reference to AfPS GS 2019:01 PAK, analysis was performed by GC-MS.

Test Item(s)	CAS NO.	Unit	MDL	001
Naphthalene(NAP)	91-20-3	mg/kg	0.1	ND
Phenanthrene(PHE)	85-01-8	mg/kg	0.1	ND
Anthracene(ANT)	120-12-7	mg/kg	0.1	ND
Fluoranthene(FLT)	206-44-0	mg/kg	0.1	ND
Pyrene(PYR)	129-00-0	mg/kg	0.1	ND
Benzo(a)anthracene(BaA)	56-55-3	mg/kg	0.1	ND
Chrysene(CHR)	218-01-9	mg/kg	0.1	ND
Benzo(b)fluoranthene(BbF)	205-99-2	mg/kg	0.1	ND
Benzo(j)fluoranthene(BjF)	205-82-3	mg/kg	0.1	ND
Benzo(k)fluoranthene(BkF)	207-08-9	mg/kg	0.1	ND
Benzo(a)pyrene(BaP)	50-32-8	mg/kg	0.1	ND
Benzo(e)pyrene(BeP)	192-97-2	mg/kg	0.1	ND
Indeno(1,2,3-c,d)pyrene(IPY)	193-39-5	mg/kg	0.1	ND
Dibenzo(a,h)anthracene(DBA)	53-70-3	mg/kg	0.1	ND
Benzo(g,h,i)perylene(BPE)	191-24-2	mg/kg	0.1	ND
Sum of 4 PAHs (Phenanthrene, Pyrene, Anthracene, Fluoranthene)	-	mg/kg	-	ND
Sum of 15 PAHs	-	mg/kg	-	ND



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AfPS (German commission for Product Safety) : PAHs requirements

Parameter (mg/kg)	Category 1	Category 2		Category 3	
	Materials intended to be placed in the mouth, or materials coming into long-term contact with skin (more than 30s) during the intended use -in toys according to Directive 2009/48/EC or -for the use by children ^{a,b} up to 3 years of age.	Materials not covered by category 1, coming into long-term contact (more than 30s) or short-term repetitive contact ^c with skin during the intended or foreseeable use ^d .		Materials covered neither by category 1 nor by category 2, coming into short-term contact (up to 30s) with skin during the intended or foreseeable use.	
		a. use by children	b. other consumer products	a. use by children	b. other consumer products
Benzo(a)pyrene (BaP)	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo(e)pyrene (BeP)	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo(a)anthracene (BaA)	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo(b)fluoranthene (BbF)	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo(j)fluoranthene (BjF)	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo(k)fluoranthene (BkF)	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Chrysene (CHR)	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Dibenzo(a,h)anthracene (DBA)	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo(g,h,i)perylene (BPE)	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Indeno(1,2,3-cd)pyrene (IPY)	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Phenanthrene (PHE), pyrene (PYR), anthracene (ANT), fluoranthene (FLT)	< 1 Sum	< 5 Sum	< 10 Sum	< 20 Sum	< 50 Sum
Naphthalene (NAP)	< 1	< 2		< 10	
Sum of 15 PAHs	<1	< 5	< 10	< 20	< 50

Note:

- ^a A "Child" is legally defined as a person before reaching the age of 14 years.
- ^b Use by children includes both active and passive contact by children.
- ^c Definition "short-term repetitive contact" taken from REACH Annex XVII entry 50 amendment (Regulation (EC) No. 1272/2013)
- ^d According to the definition of the German Product Safety Act (ProdSG) (chapter 1 Article 2 No. 28) "foreseeable use" shall mean the use of a product in a manner that the person placing it on the market, has not intended, but which could be reasonably foreseeable.

Remark: The German committee on Product Safety (AfPS) published a new PAHs document (AfPS GS 2019:01 PAK) on April 10, 2020, which will be binding for the issue of GS mark certificate from July 1, 2020.

European Regulation POPs (EU) 2019/1021– Alkanes C10-C13, chloro (short-chain chlorinated paraffins) (SCCPs)

Test Method : With reference to ISO 18219-1:2021, analysis was performed by GC-NCI-MS / LC-MSMS.



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<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Alkanes C10-C13, chloro (short-chain chlorinated paraffins) (SCCPs)	1500	mg/kg	50	ND
Comment				PASS
Alkanes C14-C17, chloro (medium -chain chlorinated paraffins) (MCCPs)	-	mg/kg	50	ND

Hexabromocyclododecane (HBCDD)

Test Method : SGS in house method (GZTC CHEM-TOP-073, with reference to EPA 3550C:2007), analysis was performed by GC-MS.

<u>Test Item(s)</u>	<u>CAS NO.</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified (α -HBCDD, β -HBCDD, γ -HBCDD)	25637-99-4	mg/kg	10	ND
	3194-55-6			
	134237-50-6			
	134237-51-7			
	134237-52-8			

Phthalate(s)

Test Method : With reference to SGS in house method (SGS-CCL-TOP-042-41) , analysis was performed by LC-MS.

<u>Test Item(s)</u>	<u>CAS NO.</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Phthalic acid, mono-2-ethylhexyl ester(MEHP)	4376-20-9	%(w/w)	0.003	ND



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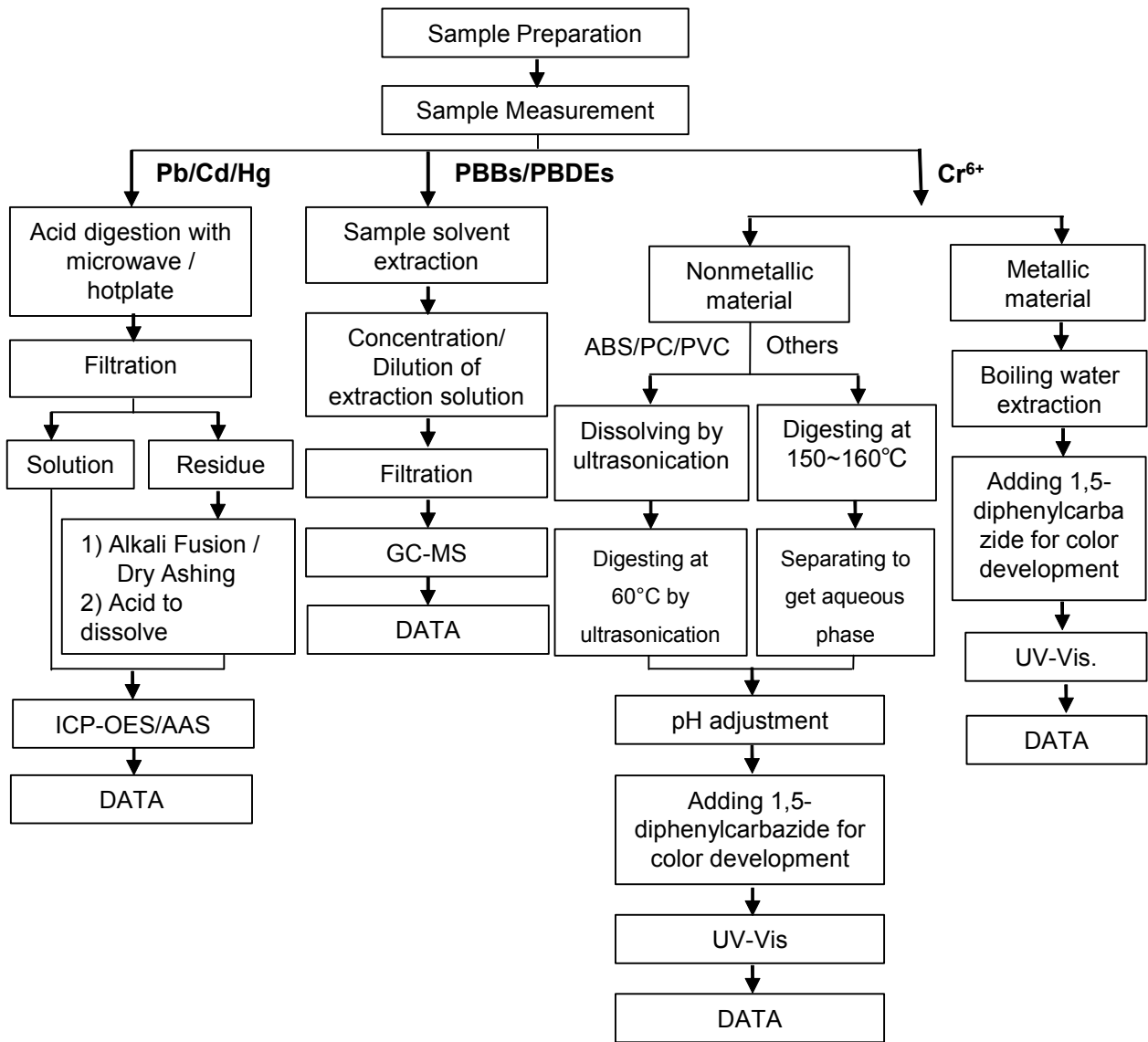
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Pb/Cd/Hg/Cr⁶⁺/PBBs/PBDEs Testing Flow Chart

1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ and PBBs/PBDEs test method excluded).

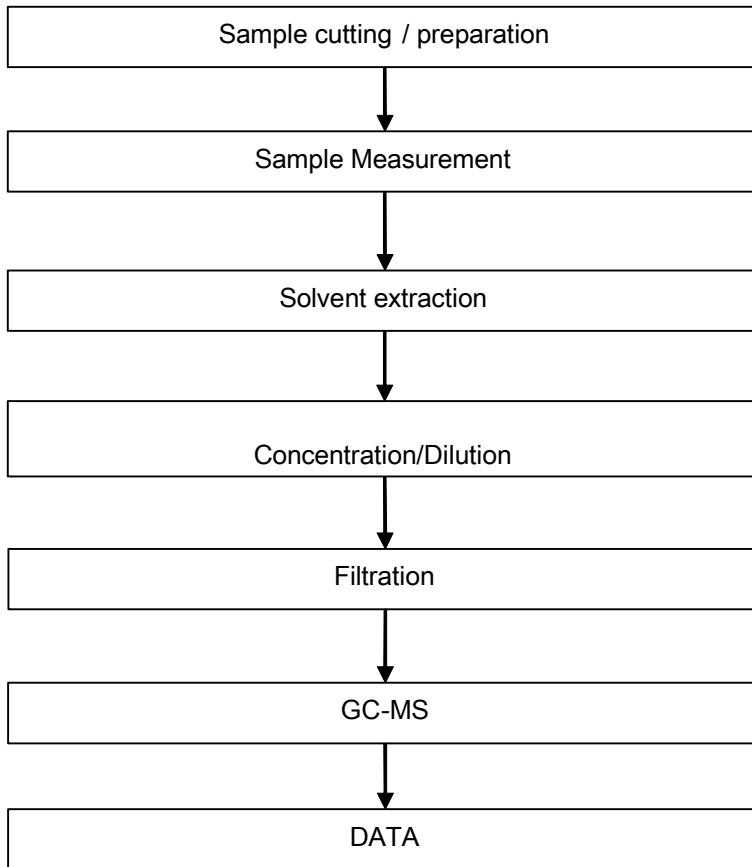


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Phthalates Testing Flow Chart

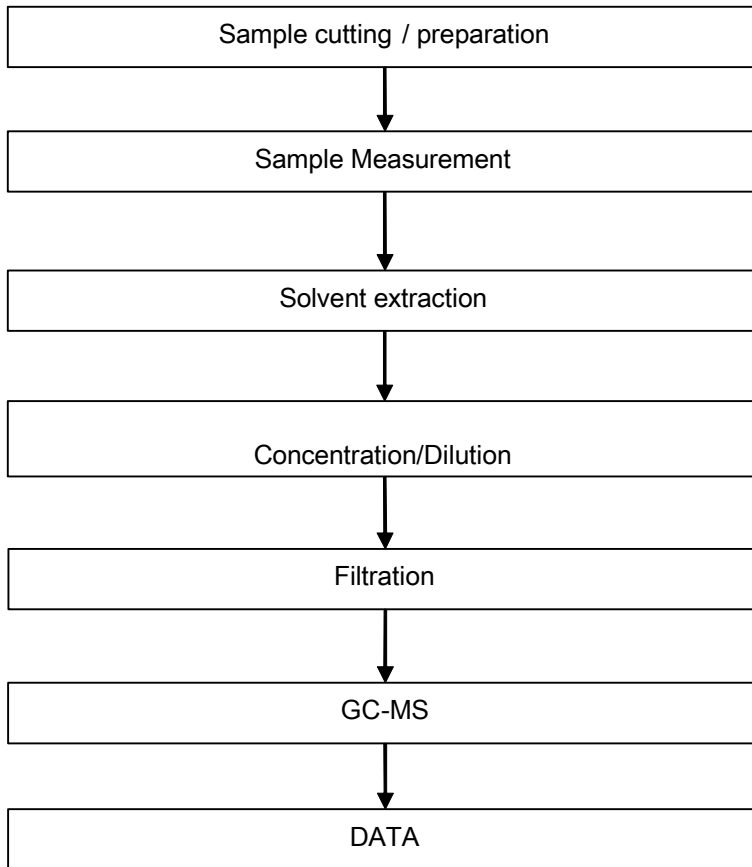


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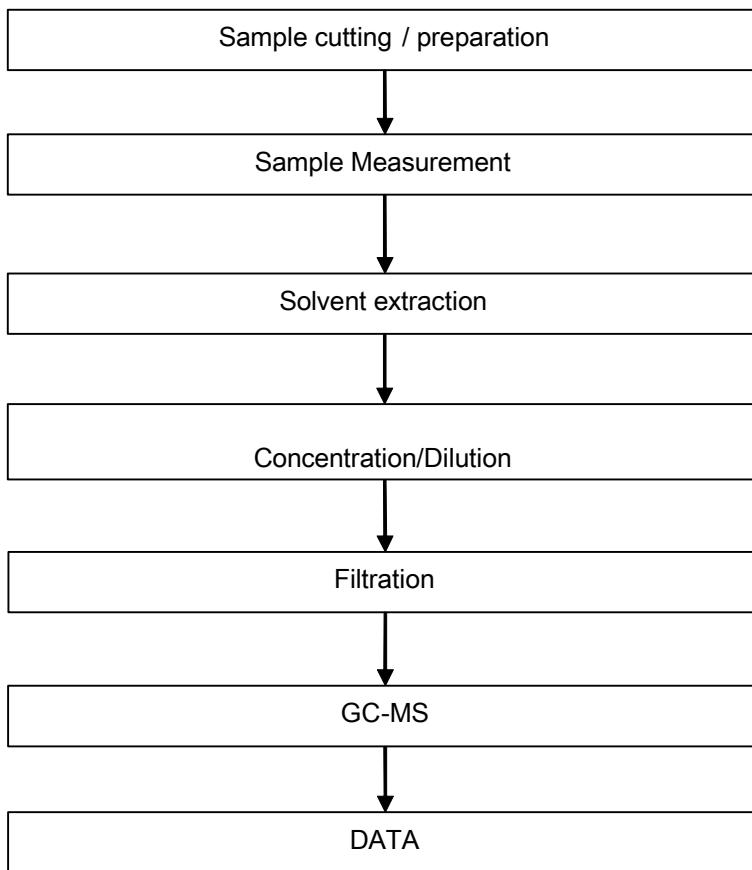


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HBCDD Testing Flow Chart

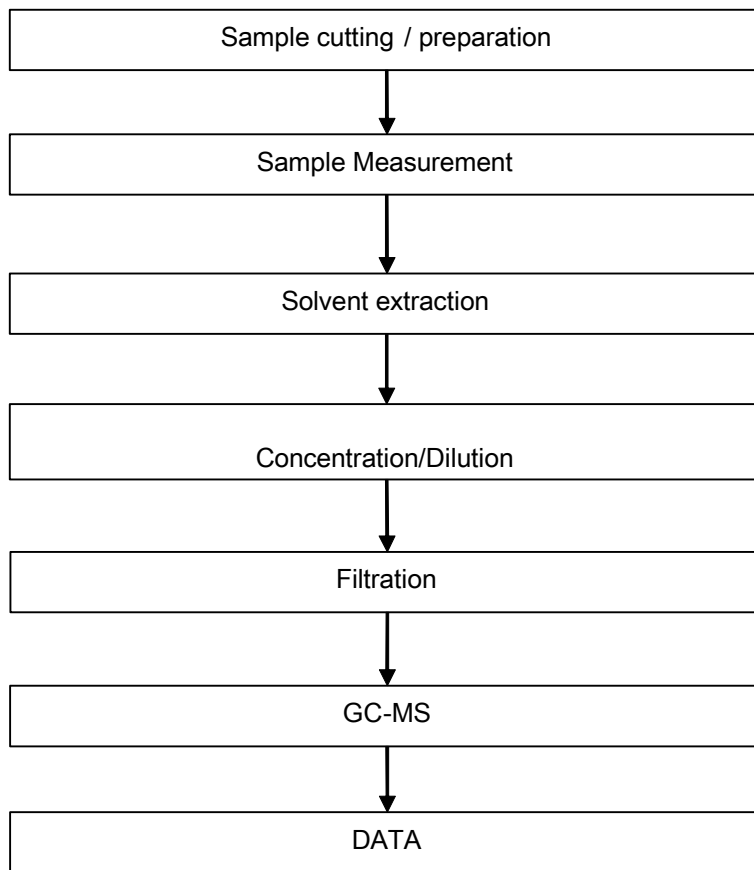


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PAHs Testing Flow Chart

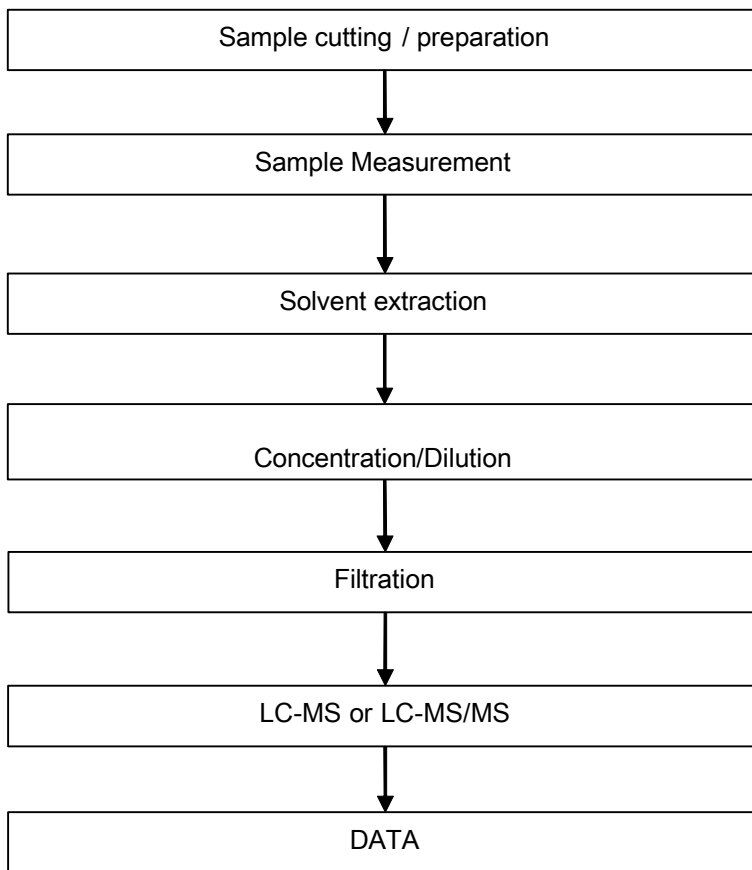


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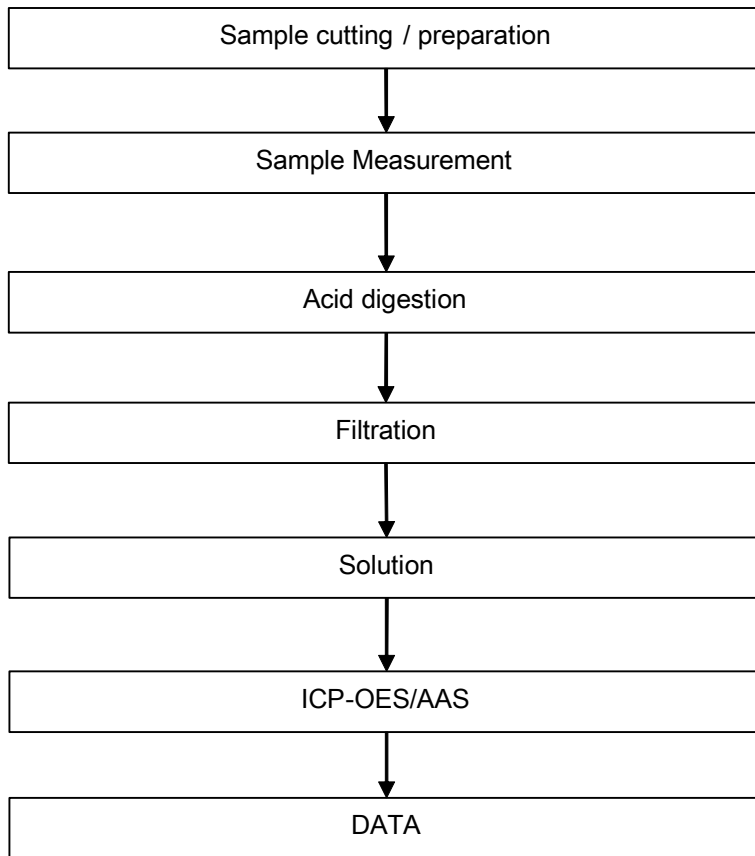
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PFOA / PFOS Testing Flow Chart



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Elementary Testing Flow Chart

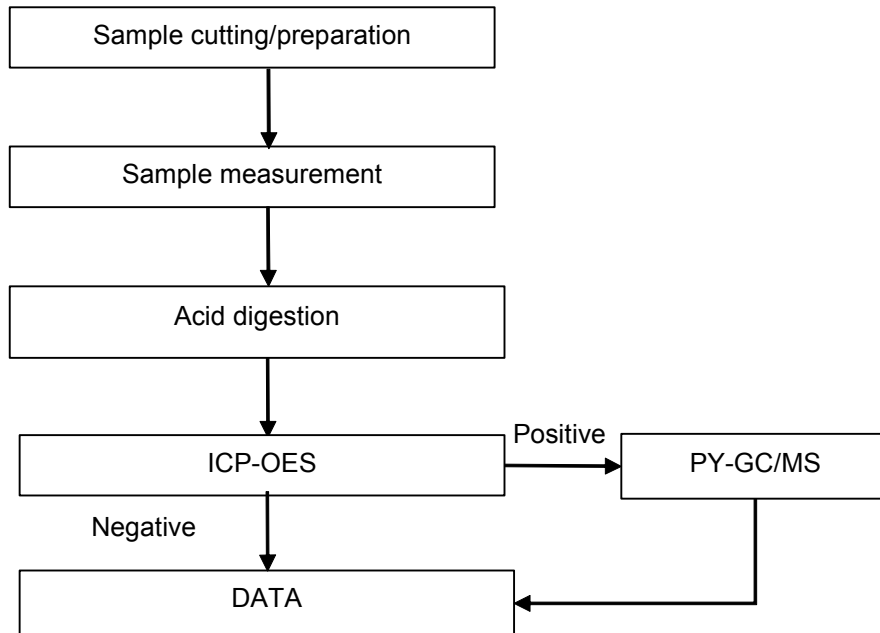


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Red phosphorus Testing Flow Chart

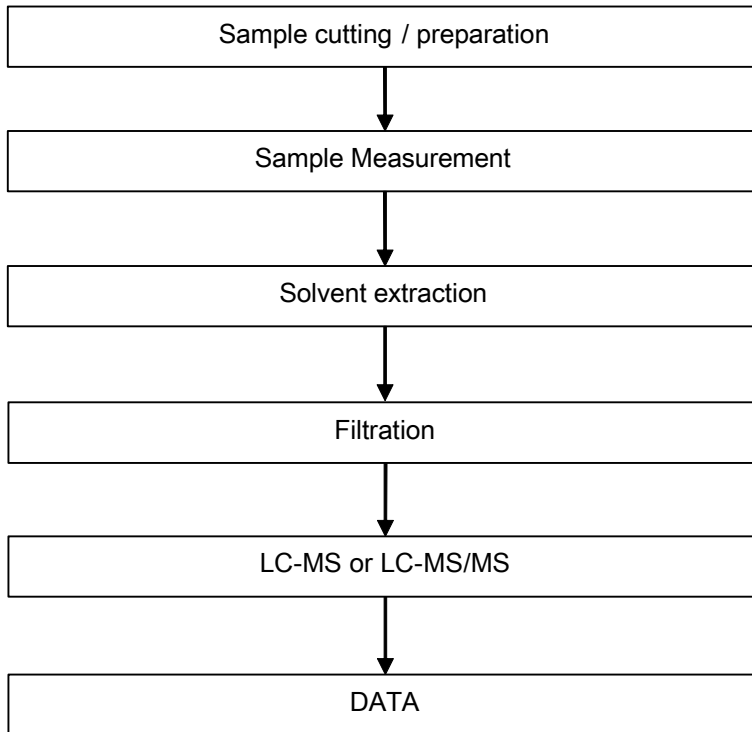


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TBBP-A Testing Flow Chart



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Sample photo:



SGS authenticate the photo on original report only

*** End of Report ***



Test Report

No. CANEC2120842410

Date: 18 Nov 2021

Page 1 of 8

SHENGLAN TECHNOLOGY CO.,LTD.

NO.4HECING ROAD SHATOU SOUTHERN DISTRICT CHANGAN TOWN DONGGUAN CITY GUANGDONG PROVINCE 523863 CHINA

The following sample(s) was/were submitted and identified on behalf of the clients as : Phosphor copper nickel plated tin terminal

SGS Job No. : CP21-059441 - SZ
Model No. : 12504
Client Ref. Info. : Please see REMARK
Date of Sample Received : 09 Nov 2021
Testing Period : 09 Nov 2021 - 18 Nov 2021
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 selected part of submitted sample(s), the results of Lead, Mercury, Cadmium, Hexavalent chromium comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

Signed for and on behalf of
SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch

Allie Chen

Allie Chen
Approved Signatory

scan to see the report



6B050814



SGS-CSTC Standards Technical Services Co., Ltd.
Guangzhou Branch Testing Center Chemical Laboratory.

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t (86-20) 82155555 sgs.china@sgs.com

Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	CAN21-208424.004	Silvery 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 (EU) 2015/863 amending Annex II to Directive 2011/65/EU

Test Method : With reference to IEC 62321-4:2013+A1:2017, IEC 62321-5:2013, IEC 62321-7-1:2015, analyzed by ICP-OES and UV-Vis .

<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>004</u>
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1,000	mg/kg	2	45
Mercury (Hg)	1,000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))▼	-	µg/cm ²	0.10	ND

Notes :

- (1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.
- (2) IEC 62321 series is equivalent to EN 62321 series
https://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25
- (3) ▼= a. The sample is positive for CrVI if the CrVI concentration is greater than 0.13 µg/cm². The sample coating is considered to contain CrVI
 b. The sample is negative for CrVI if CrVI is ND (concentration less than 0.10 µg/cm²). The coating is considered a non-CrVI based coating
 c. The result between 0.10 µg/cm² and 0.13 µg/cm² is considered to be inconclusive - unavoidable coating variations may influence the determination
 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.

Elementary Analysis



SGS-CSTC Standards Technical Services Co., Ltd.
 Guangzhou Branch Testing Center Chemical Laboratory.

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Test Report

No. CANEC2120842410

Date: 18 Nov 2021

Page 3 of 8

Test Method : SGS In-house method (GZTC CHEM-TOP-009-01, with reference to EPA 3050B:1996), analysis was performed by ICP-OES.

<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>004</u>
Beryllium (Be)	mg/kg	5	ND

Perfluorooctanoic acid (PFOA) and its salts & Perfluorooctane sulfonates (PFOS) and its derivatives

Test Method : With reference to CEN/TS15968:2010, analysis was performed by LC-MS or LC-MS/MS.

<u>Test Item(s)</u>	<u>CAS NO.</u>	<u>Unit</u>	<u>MDL</u>	<u>004</u>
Perfluorooctanoic acid (PFOA) and its salts+	335-67-1	mg/kg	0.010	ND
Perfluorooctane sulfonates (PFOS) ^	1763-23-1	mg/kg	0.010	ND
Perfluorooctane Sulfonamide (PFOSA)	754-91-6	mg/kg	0.010	ND
N-methylperfluoro-1-octanesulfonamide(MeFOSA)	31506-32-8	mg/kg	0.010	ND
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	mg/kg	0.010	ND
2-(N-methylperfluoro-1-octanesulfonamido)-ethanol(MeFOSE)	24448-09-7	mg/kg	0.010	ND
2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol(EtFOSE)	1691-99-2	mg/kg	0.010	ND
Perfluorooctane sulfonates (PFOS) and its derivatives	-	mg/kg	-	ND

Notes :

- (1) + PFOA and its salts including PFOA-Na (CAS No.: 335-95-5), PFOA-K (CAS No.: 2395-00-8), PFOA-Ag (CAS No.: 335-93-3), PFOA-F (CAS No.: 335-66-0) and APFO (CAS No.: 3825-26-1);
- (2) ^ PFOS including PFOS-K (CAS No.: 2795-39-3), PFOS-Li (CAS No.: 29457-72-5), PFOS-NH₄ (CAS No.: 29081-56-9), PFOS-NH(OH)₂ (CAS No.: 70225-14-8), PFOS-N(C₂H₅)₄ (CAS No.: 56773-42-3), PFOS-DDA(CAS No.:251099-16-8) and POSF (CAS No.: 307-35-7)



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 12543、12544、12545、12546、12547、12548、12549、13402、13502、13601、13961、
 13962、13963、14000、15001、15002、15101、15080、17921、20001、20501、20502、
 20503、20602、20800、20803、21001、21251、21501、21502、21611、21811、21813、
 21814、21816、21817、21818、21819、22001、22002、22501、23501、32001、33001、
 33002、34201、34202、35401、34502、35081、35082、36201、36202、40001、40301、
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 41002、41003、41004、41005、41019、41040、41043、41251、42003、50001、50003、
 50004、50005、50006、50007、50501、50601、50602、50801、50802、51001、51050、
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 52002、52003、52004、52005、52006、52041、52042、52401、52501、52502、52503、
 52504、54003、54301、55001、60000、60001、60100、61001、61002、61003、61004、
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 70910、71008、71101、72001、72007、72008、72010、72101、80001、80202、8060、
 80601、80751、80802、81272、81290、81290、86502、LVA11、QB140、UCCA8、B0007、
 B0020、B0027、B0028、B0033、B0105、TND A3、JTHA8、SAF85、UAHA2、TNA11、
 TND A3、RJCA9、RJHA6、DSB11、MCB11、UAB11、WFB11、WTB11、RJB11、HDB11、
 HDB12、HDB13、UCB11、UBB1B、UBB11、UAB16、UADB8、JAB11、YB、TP、MCMBE1、
 UMB1B、RJMAE2、BUA0CB、BUA0CB、UCMAJ1、BS0130、RJMBE1、BS0133、BS0134、
 TNKBB1、TNTAC1、UATAA1、UAMAE1、USB2.0、UAMAE1、UATAA1、TNTAE1、UCMAJ1、
 TNTBT3、9001、9002、5000102、BT035210、THREE IN ONE、FOUR IN ONE、USB、HDMI、
 RJ、0308、XSBO、XSB1、UA10103、UA09092、MHF、FPC、FFC、SATA、CARD、LVM、
 BS-8、JACK、J-PIM、RCA、BUAOHV、SUASN2、BOO、JTHA8、BUAO、OEM、TNAOPO、
 SCA、TUAOPH、SUAS02、AWDANW、AWDCIW、AWDATB、AHFANB、TNTBC1、TNB12、
 TNKBG1/2/3/4、UBB14、US90、HE103A、BCO、WUSF5526、UBDU2、UBMBS1/2、BB0、
 BPO、HD9A、PIN、TUA0PX、6500、BS0261、B0032、BP0156、BP0237、BT035210、HP HS、
 N85、QB140、UC、Charging gun、BB0158、B0026、SA96、SA95、U1B、AT89、TN、UBB、
 BAB11-00BDL1XXL-H、M0143-CA-XX、M0142-CA-XX、HDMAC1XNA-R、HDMAC2XNA-R、
 BM0249-NL-BK、BM0248-NL-BK、BB0152-XX-XX、M0054-SUS-PA、C11-060-06-AG160、
 6000M0F-0S-4、6000M0F-0S-4-B、BS0128-NY-BK、BS0127-NY-BK、HF96-2XXX-XB01、
 UFB11、UFB12、UFB13、LJ SERIES



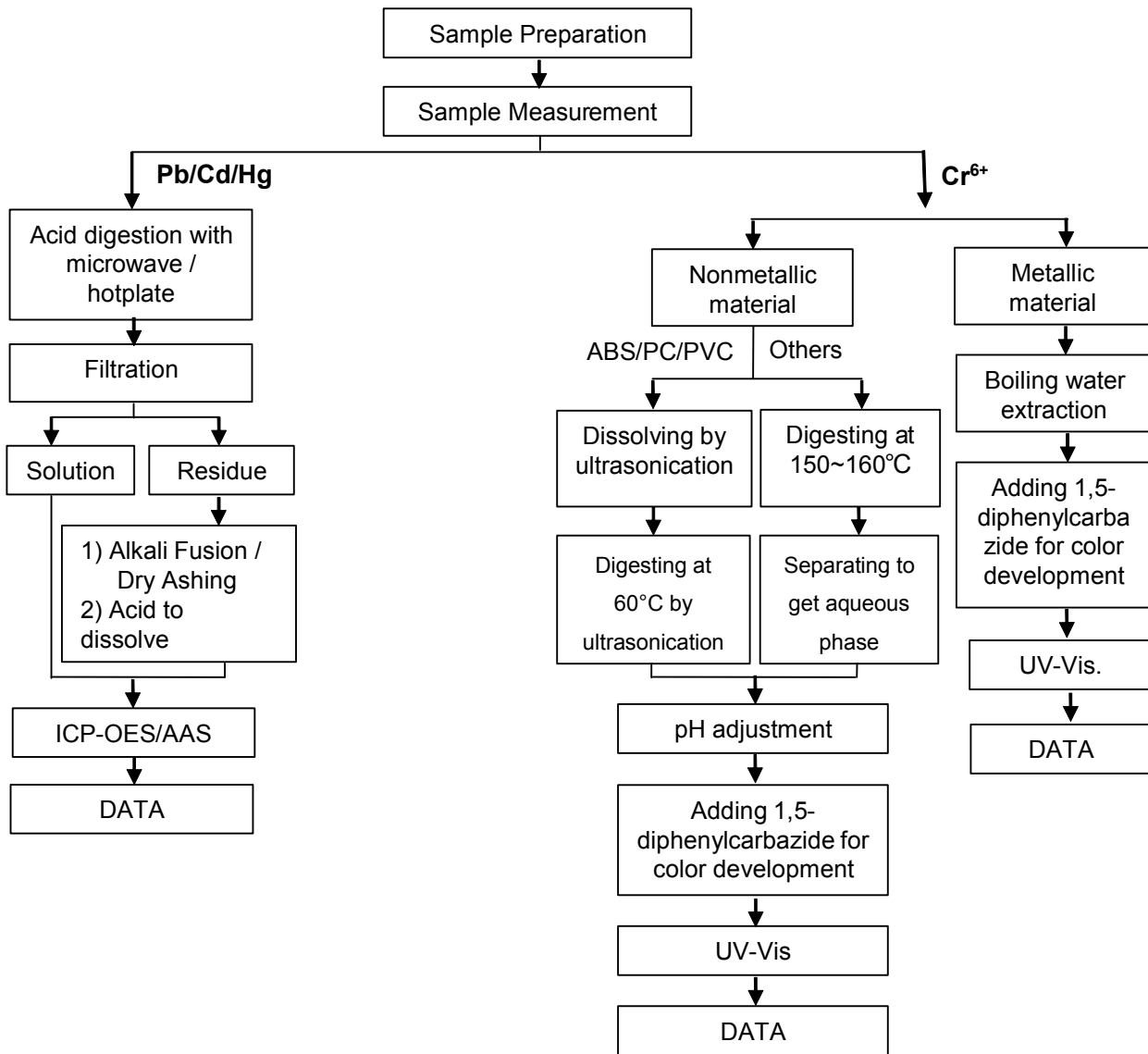
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Pb/Cd/Hg/Cr⁶⁺ Testing Flow Chart

1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ test method excluded).

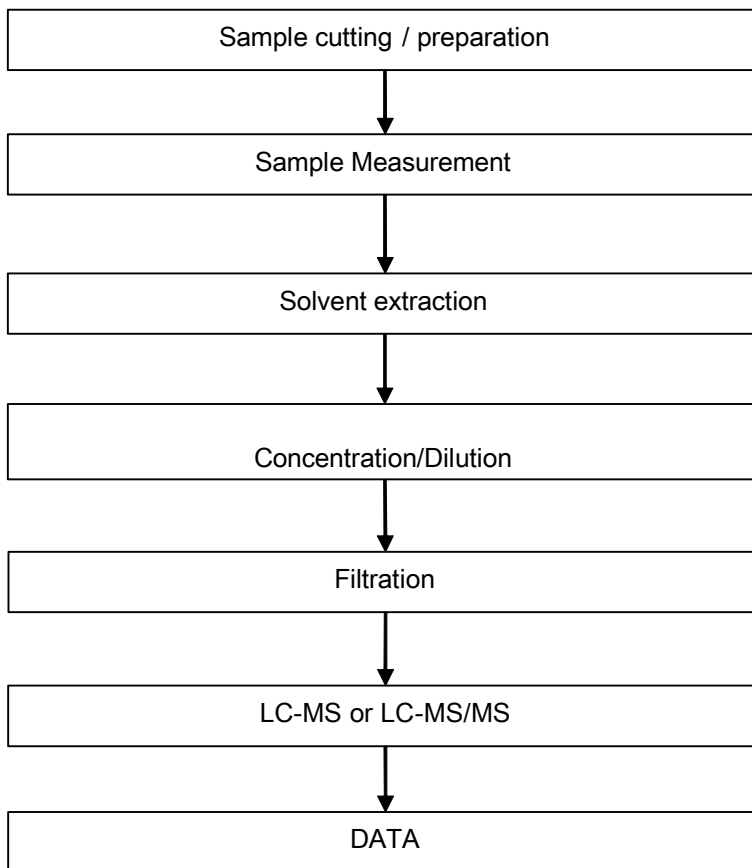


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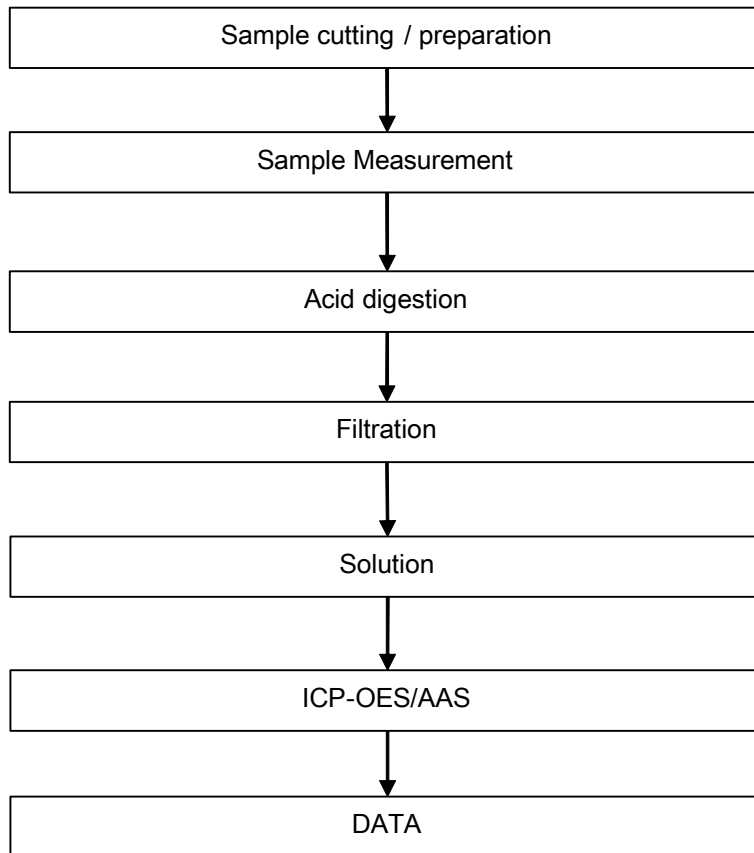
ATTACHMENTS

PFOA / PFOS Testing Flow Chart



ATTACHMENTS

Elementary Testing Flow Chart



Sample photo:



SGS authenticate the photo on original report only

*** End of Report ***



弘源碩電子材料有限公司

HungYuanShuo Electronic Accessories CO.,LTD

产品规格承认书

版本：A/1

产品名称	H 无卤环保热缩套管	供应商代码	
规格/型号	所有系列	客户编号	

供應商確認（弘源碩電子材料有限公司）

拟制/日期	审核/日期
范松林 / 2012 年 1 月 15 日	宋大春 / 2012 年 1 月 15 日

客戶確認

客户批准/日期		
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1 主题内容与适用范围

本承认书规定了无卤环保阻燃型热收缩套管的技术要求、试验方法、检验规则以及包装等内容。

本承认书适用于电线连接、焊点保护、电线端部处理、线束及电子元器件的防护和绝缘处理、健身器材零部件和钢结构表面防护、相关产品的防锈和防腐处理、电线和其它产品的标识等用途的无卤阻燃型热收缩套管。

2 引用标准

Standard for Extruded Electrical Tubing UL 224.

3 术语

3.1 热收缩材料

以可塑性线型高聚物或高聚物合金为基材，用高能辐照方法或化学方法使聚合物分子链部分交联成为网状结构获得弹性“记忆效应”，经加热扩张至特定尺寸后冷却定型，使用时加热到适当温度后自行收缩到扩张前的形状和尺寸，这种材料称为热收缩材料。

3.2 热收缩套管

将上述高聚物或高聚物合金通过挤出成型得到规定尺寸的管状中间产品，辐照（或化学）交联后加热扩张，冷却定型得到的具有一定尺寸的管状产品成为热收缩套管。

3.3 绿色 RSFR 无卤阻燃热收缩材料

在热收缩材料中添加一定量的不含卤素、重金属等对环境有害的阻燃剂，使之符合一定阻燃要求和环保要求，则成为绿色 RSFR 无卤阻燃热收缩材料。

4 技术要求

4.1 使用条件

4.1.1 连续使用的环境温度： $-55^{\circ}\text{C}\sim 125^{\circ}\text{C}$ 。

4.1.2 可在酸、碱条件下长期使用。

4.1.3 可在环保要求严格的条件下长期使用。

4.2 外观要求

4.2.1 制品表面无明显划伤、凹凸不平、竹节状缺陷。

4.2.2 表面光洁、无油污、无积尘。

4.2.3 印字清晰、无重影、无多余墨迹、无印不全或打滑现象。

4.3 热收缩性能

4.3.1 起始收缩温度 70°C ；超薄型完全收缩温度 110°C ，普通型完全收缩温度 125°C 。

按照 UL224 标准，完全收缩到位温度为 200°C ，3 分钟。

4.3.2 纵向收缩率不超过 $\pm 5\%$

4.4 材料的性能特性

材料的理化性能符合表 1 规定。

4.5 收缩套管的产品尺寸

无卤阻燃型薄壁热收缩套管的产品尺寸符合表 2 规定，无卤阻燃型热收缩套管的产品尺寸符合表 3 规定。

4.6 颜色

标准颜色：黑色、红色、蓝色、黄色、绿色、白色，其它颜色如紫色、灰色、棕色等可根据客户要求定做。

4.7 使用方法

在使用过程中，为了保证热缩套管能完全收缩到位，使用强制鼓风式恒温烘箱，并将收缩温度控制在 125°C 。特别注意，当把热缩套管放入烘箱过程中，烘箱温度有一下降趋势，要达到设定温度需要一定的时间；同时，在烘箱内通过热空气循环流动使热缩套管达到最终收缩温度同样需要一定

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的时间。因此，必须在烘箱实际温度达到设定温度并保持该温度 3 分钟左右，热缩套管才能完全收缩到位。

表 1 无卤阻燃型热收缩套管的性能特性

性能		测试方法	性能指标	
物理性能	拉伸强度/MPa	GB/T1040	≥10.4	
	断裂伸长率/%	GB/T1040	≥200	
	热老化后拉伸强度/MPa	UL224; 158℃×168hr	≥7.3	
	热老化后断裂伸长率/%	UL224; 158℃×168hr	≥100	
	耐热冲击	UL224; 250℃×4hr	不发粘, 不龟裂	
	抗冷弯曲	UL224; -30℃×1hr	不龟裂	
电气性能	耐压	300V	UL224	2500V 不击穿
		600V	UL224	2500V 不击穿
	击穿强度/KV/mm		GB/T1408	≥15
	体积电阻率/Ω•cm		GB/T1410	≥1×10 ¹⁴
化学性能	铜安定性		UL224; 158℃×168hr	PASS
	抗腐蚀性		UL224; 158℃×168hr	PASS
	阻燃性		UL224	VW-1

表 2 H-CB 管（无卤阻燃型薄壁热收缩套管）的产品尺寸

规格 (mm)	收缩前尺寸 (mm)		收缩后尺寸 (mm)		旧包装	新包装	适用范围 (mm)
	内径	壁厚	内径	壁厚	米/盘	米/盘	
Φ0.6CB	0.90±0.2	0.13±0.05	≤0.40	0.20±0.10	200	400	0.4~0.7
Φ0.8CB	1.10±0.2	0.13±0.05	≤0.50	0.20±0.10	200	400	0.6~0.8
Φ1.0CB	1.40±0.2	0.13±0.05	≤0.65	0.20±0.10	200	400	0.7~1.0
Φ1.5CB	1.90±0.2	0.13±0.05	≤0.85	0.20±0.10	200	400	0.9~1.4
Φ2.0CB	2.40±0.2	0.13±0.05	≤1.00	0.22±0.10	200	400	1.1~1.8
Φ2.5CB	2.90±0.2	0.13±0.05	≤1.30	0.25±0.10	200	400	1.4~2.3
Φ3.0CB	3.40±0.2	0.13±0.05	≤1.50	0.28±0.10	200	400	1.6~2.7
Φ3.5CB	3.90±0.2	0.13±0.05	≤1.80	0.28±0.10	200	400	1.9~3.2
Φ4.0CB	4.40±0.2	0.15±0.05	≤2.00	0.30±0.10	200	400	2.1~3.6
Φ4.5CB	4.90±0.2	0.15±0.05	≤2.30	0.30±0.10	100	200	2.4~4.0
Φ5.0CB	5.50±0.2	0.15±0.05	≤2.5	0.32±0.10	100	200	2.6~4.5
Φ6.0CB	6.50±0.2	0.15±0.05	≤3.0	0.32±0.10	100	200	3.1~5.4
Φ7CB	7.50±0.3	0.15±0.05	≤3.5	0.32±0.10	200	200	3.7~6.3
Φ8CB	8.50±0.3	0.15±0.05	≤4.0	0.32±0.10	200	200	4.2~7.2
Φ9CB	9.50±0.3	0.15±0.05	≤4.5	0.35±0.10	200	200	4.7~8.0
Φ10CB	10.5±0.3	0.15±0.05	≤5.0	0.35±0.10	200	200	5.2~9.0

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Φ11CB	11.5±0.3	0.18±0.05	≤5.5	0.40±0.10	200	200	5.7~10.0
Φ12CB	12.5±0.3	0.20±0.05	≤6.0	0.40±0.10	200	200	6.2~11.0
Φ13CB	13.5±0.3	0.20±0.05	≤6.5	0.40±0.10	200	200	6.7~12.0
Φ14CB	14.5±0.3	0.20±0.05	≤7.0	0.40±0.10	200	200	7.3~13.0
Φ15CB	15.5±0.4	0.20±0.05	≤7.5	0.40±0.10	200	200	7.8~14.0
Φ16CB	16.5±0.4	0.22±0.05	≤8.0	0.40±0.10	200	200	8.3~15.8
Φ17CB	17.5±0.4	0.22±0.05	≤8.5	0.40±0.10	200	200	8.8~16.0
Φ18CB	18.5±0.4	0.22±0.05	≤9.0	0.42±0.10	200	200	9.3~17.0
Φ20CB	20.5±0.5	0.25±0.05	≤10.0	0.45±0.10	200	200	10.5~19.0
Φ22CB	22.5±0.5	0.25±0.05	≤11.0	0.45±0.10	200	200	11.5~20.5
Φ25CB	25.5±0.5	0.25±0.05	≤12.5	0.45±0.10	100	100	13.0~24.0

E203950    WOER RSFR(CB) TUBE 125°C VW-1 H (Φ9CB)

表3 H管（无卤阻燃型热收缩套管）的产品尺寸要求

规格 (mm)	收缩前尺寸 (mm)		收缩后尺寸 (mm)		旧包装 米/盘	新包装 米/盘	适用范围 (mm)
	内径	壁厚	最大内径	壁厚			
Φ0.6	0.9±0.2	0.18±0.05	≤0.40	0.33±0.10	200	400	0.4~0.7
Φ0.8	1.1±0.2	0.18±0.05	≤0.50	0.33±0.10	200	400	0.6~0.8
Φ1.0	1.5±0.2	0.20±0.05	≤0.65	0.36±0.10	200	400	0.75~0.9
Φ1.5	2.0±0.2	0.20±0.05	≤0.85	0.36±0.10	200	400	0.95~1.4
Φ2.0	2.5±0.2	0.20±0.05	≤1.00	0.45±0.10	200	400	1.1~1.8
Φ2.5	3.0±0.2	0.20±0.05	≤1.30	0.45±0.10	200	400	1.35~2.3
Φ3.0	3.5±0.2	0.23±0.05	≤1.50	0.45±0.10	200	400	1.6~2.7
Φ3.5	4.0±0.2	0.23±0.05	≤1.80	0.45±0.10	200	400	1.85~3.2
Φ4.0	4.5±0.2	0.25±0.05	≤2.00	0.45±0.10	200	400	2.1~3.6
Φ4.5	5.0±0.2	0.28±0.05	≤2.30	0.56±0.10	100	200	2.35~4.0
Φ5.0	5.5±0.2	0.28±0.05	≤2.50	0.56±0.10	100	200	2.6~4.5
Φ6.0	6.5±0.2	0.28±0.05	≤3.00	0.56±0.10	100	200	3.1~5.4
Φ7.0	7.5±0.3	0.30±0.05	≤3.50	0.56±0.10	100	100	3.7~6.3
Φ8.0	8.5±0.3	0.30±0.08	≤4.00	0.56±0.10	100	100	4.2~7.2
Φ9.0	9.5±0.3	0.30±0.08	≤4.50	0.56±0.10	100	100	4.7~8.0
Φ10	10.5±0.3	0.30±0.08	≤5.00	0.56±0.10	100	100	5.2~9.0
Φ11	11.5±0.3	0.30±0.08	≤5.50	0.56±0.10	100	100	5.7~10
Φ12	12.5±0.3	0.30±0.08	≤6.00	0.56±0.10	100	100	6.2~11
Φ13	13.5±0.3	0.35±0.08	≤6.50	0.56±0.10	100	100	6.7~12
Φ14	14.5±0.3	0.35±0.10	≤7.00	0.70±0.10	100	100	7.3~13
Φ15	15.5±0.4	0.35±0.10	≤7.50	0.70±0.10	100	100	7.8~14

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规格 (mm)	收缩前尺寸 (mm)		收缩后尺寸 (mm)		旧包装	新包装	适用范围 (mm)
Φ16	16.5±0.4	0.35±0.10	≤8.00	0.70±0.10	100	100	8.3~15
Φ17	17.5±0.4	0.35±0.10	≤8.50	0.70±0.10	100	100	8.8~16
Φ18	19.0±0.5	0.35±0.10	≤9.00	0.70±0.10	100	100	9.3~17
Φ20	22.0±0.5	0.40±0.10	≤10.00	0.83±0.10	100	100	10.4~19
Φ22	24.0±0.5	0.40±0.12	≤11.00	0.83±0.15	100	100	11.4~21
Φ25	26.0±0.5	0.45±0.12	≤12.50	0.90±0.15	50	50	12.8~24
Φ28	29.0±0.5	0.45±0.12	≤14.00	0.90±0.15	50	50	14.4~29
Φ30	31.5±1.0	0.45±0.12	≤15.00	1.00±0.15	50	50	16~29
Φ35	36.5±1.0	0.45±0.12	≤17.50	1.00±0.15	50	50	18~34
Φ40	41.5±1.0	0.50±0.12	≤20.00	1.00±0.15	50	50	21~39
Φ45	46.5±1.0	0.50±0.15	≤22.50	1.00±0.20	25	25	23.5~44
Φ50	≥50	0.50±0.15	≤25.00	1.10±0.20	25	25	26~49

E203950   WOER RSFR-H TUBE 125°C VW-1 H (Φ9)

注: Φ30 及以上规格产品默认为 G 管 (环保性能符合欧盟 RoHS 2002/95/EC 标准)。如果客户需 H 无卤热缩套管, 须在订单上注明。

4.8 环境物质

本承诺书承诺不使用以下物质, 四大重金属、多溴联苯 (PBB)、多溴联苯醚 (PBDE)、卤素等通过 SGS 检测。无卤阻燃型热收缩套管的环保特性列于表 4。

1. 多氯化联苯 (PCB) 类
2. 多氯化萘 (PCN) 类
3. 氯化石蜡
4. 灭蚁灵 (Mirex)
5. 其它有机氯化物
6. 有机溴化合物-多溴联苯 (PBB)
7. 有机溴化合物-多溴联苯醚 (PBDE)
8. 有机锡化合物 (三丁基锡化合物和三苯基锡化合物)
9. 石棉
10. 偶氮化合物
11. 甲醛

表 4 无卤阻燃型热收缩套管的环保特性

环境物质	含量	测试方法
氟 (F)	≤200PPM	EN 14582 Method B
氯 (Cl)	≤900ppm	EN 14582 Method B
溴 (Br)	≤900ppm	EN 14582 Method B
碘 (I)	≤200PPM	EN 14582 Method B

弘源碩電子材料有限公司

镉 (Cd)	≤5ppm	IEC 62321
铅 (Pb)	≤90ppm	IEC 62321
铬 (Cr ⁶⁺)	≤5ppm	IEC 62321
汞 (Hg)	≤5ppm	IEC 62321
砷 (As)	≤50ppm	EPA 3052
钡 (Ba)	≤1000ppm	EPA 3052
锑 (Sb)	≤60ppm	EPA 3052
硒 (Se)	≤25ppm	EPA 3052

备注：氯 (Cl) + 溴 (Br) <1500ppm

5. 材质证明书

材 质 证 明 书

沃尔核材股份有限公司无卤环保型 RSFR-H 热缩套管是一种阻燃型的热收缩套管，组成材料为聚烯烃加适量阻燃剂和助剂。产品中铅 (Pb)、镉 (Cd)、汞 (Hg)、六价铬 (Cr⁶⁺)、多溴联苯 (PBB)、多溴联苯醚 (PBDE) 等环境物质含量符合日本 SONY-SS-00259 和欧盟 RoHS 2002/95/EC 指令环保要求。其主要成份如下：

原料名称			使用目的	含量	供应商	CAS. NO.
中文	英文	分子式				
聚烯烃	Polyolefin	(CH ₂ CH ₂) _n	主剂	50%	北京有机	9002-88-4
氢氧化镁	Magnesium Hydroxide	Mg(OH) ₂	阻燃剂	35%	锦昊辉	1309-42-8
磷系阻燃剂	Phosphorus	(NH ₄ PO ₃) _n	阻燃剂	10%	上海海以	7723-14-0
色母粒	Pigment	色母+填充剂	着色剂	5%	华万彩	——
油墨	Printing Ink	——	印字	——	上海捷信	——

6. 技术资料

- (1) UL/cUL 证书
- (2) ISO9001 证书
- (3) ISO14001 证书
- (4) ISO/TS16949 证书
- (5) SGS/ITS/CTI 检测报告

弘源碩電子材料有限公司

二零一二年一月十五日



YDPU2.E203950 Tubing, Extruded Insulating - Component

Page Bottom

Tubing, Extruded Insulating - Component

See General Information for Tubing, Extruded Insulating - Component

SHENZHEN WOER HEAT-SHRINKABLE MATERIAL CO LTD

E203950

XINWEI INDUSTRIAL PARK, WOER MANSION

NANSHAN DISTRICT, XILI

SHENZHEN, GUANGDONG 518052 CHINA

Cat. No.	Max V	Max Temp C	Col Recognized	Max Temp Rated Oil Resistance C	VW-1 Rated #
Flexible Heat-Shrinkable Polyolefin Tubing					
RSFR	600	125	All except Clear	None	\$
WKZM-x-yz	600	125	White	None	No
RSFR-H	600	125	All except Clear	None	Yes
RSFR(CB)	300	125	All except Clear	None	Yes
Not Heat-Shrinkable PTFE Tubing					
WF	600	200	Natural	None	Yes
Heat-Shrinkable Polyolefin Tubing with Meltable Liner					
SBRS	600	125	All except Clear	None	Yes
Not Heat-Shrinkable Standard Wall Silicone Tubing					
WST-600	600	150	White	None	@

x-yz - x represents tubing expanded ID, yz represents any alpha and/or numeric combination - for internal client code.

- Tubing is considered to comply with the optional VW-1 flammability requirements only if it is so marked for tubing authorized below.

@ - VW-1 rated for internal diameter sizes 6.50 - 15.00 mm only.

\$ - VW-1 rated for Black color only.

Marking: Company name or file number "E203950", catalog number, voltage rating, temperature rating in degrees C, inside diameter (before and after recovery), and date of manufacture shall be marked on tags attached to both ends of the tubing, on the shipping spool label or on the smallest unit container.

Last Updated on 2008-04-30

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Test Report

No. CANEC2107441701

Date: 11 May 2021

Page 1 of 6

SINWA LASER TECHNOLOGY CO.,LTD

50.WU KONG 5 TH RD.,WU KU INDUSTRIAL PARK .TAIPEI TAIWAN

The following sample(s) was/were submitted and identified on behalf of the clients as : HALOGEN FREE WHITE INK

SGS Job No. : CP21-022586 - SZ
Model No. : I-TPE-01
Client Ref. Info. : I-TPE-01;I-PE-01;I-TPR-01;I-PPE-01;I-PP-01;I-TPU-01;I-RU-01.
Date of Sample Received : 06 May 2021
Testing Period : 06 May 2021 - 11 May 2021
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, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs) and Phthalates such as Bis(2-ethylhexyl) phthalate (DEHP) , Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) , and Diisobutyl phthalate (DIBP) comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

Signed for and on behalf of
SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch

Jessie Li

Jessie Li
Approved Signatory

scan to see the report



CANEC2107441701



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Guangzhou Branch Technical Services Co., Ltd. Guangzhou Branch

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Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	CAN21-074417.001	White ink

Remarks :

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

RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU

Test Method : With reference to IEC 62321-4:2013+A1:2017, IEC 62321-5:2013, IEC 62321-7-2:2017 , IEC 62321-6:2015 and IEC 62321-8:2017, analyzed by ICP-OES , UV-Vis and GC-MS .

<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1,000	mg/kg	2	ND
Mercury (Hg)	1,000	mg/kg	2	ND
Hexavalent Chromium (CrVI)	1,000	mg/kg	8	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
Dibromodiphenyl ether	-	mg/kg	5	ND
Tribromodiphenyl ether	-	mg/kg	5	ND
Tetrabromodiphenyl ether	-	mg/kg	5	ND
Pentabromodiphenyl ether	-	mg/kg	5	ND



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Test Report

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Date: 11 May 2021

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<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
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
Dibutyl phthalate (DBP)	1,000	mg/kg	50	ND
Butyl benzyl phthalate (BBP)	1,000	mg/kg	50	ND
Bis (2-ethylhexyl) phthalate (DEHP)	1,000	mg/kg	50	ND
Diisobutyl Phthalates (DIBP)	1,000	mg/kg	50	ND

Notes :

- (1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.
- (2) IEC 62321 series is equivalent to EN 62321 series
https://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25
- (3) The restriction of DEHP, BBP, DBP and DIBP shall apply to medical devices, including in vitro medical devices, and monitoring and control instruments, including industrial monitoring and control instruments, from 22 July 2021.

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



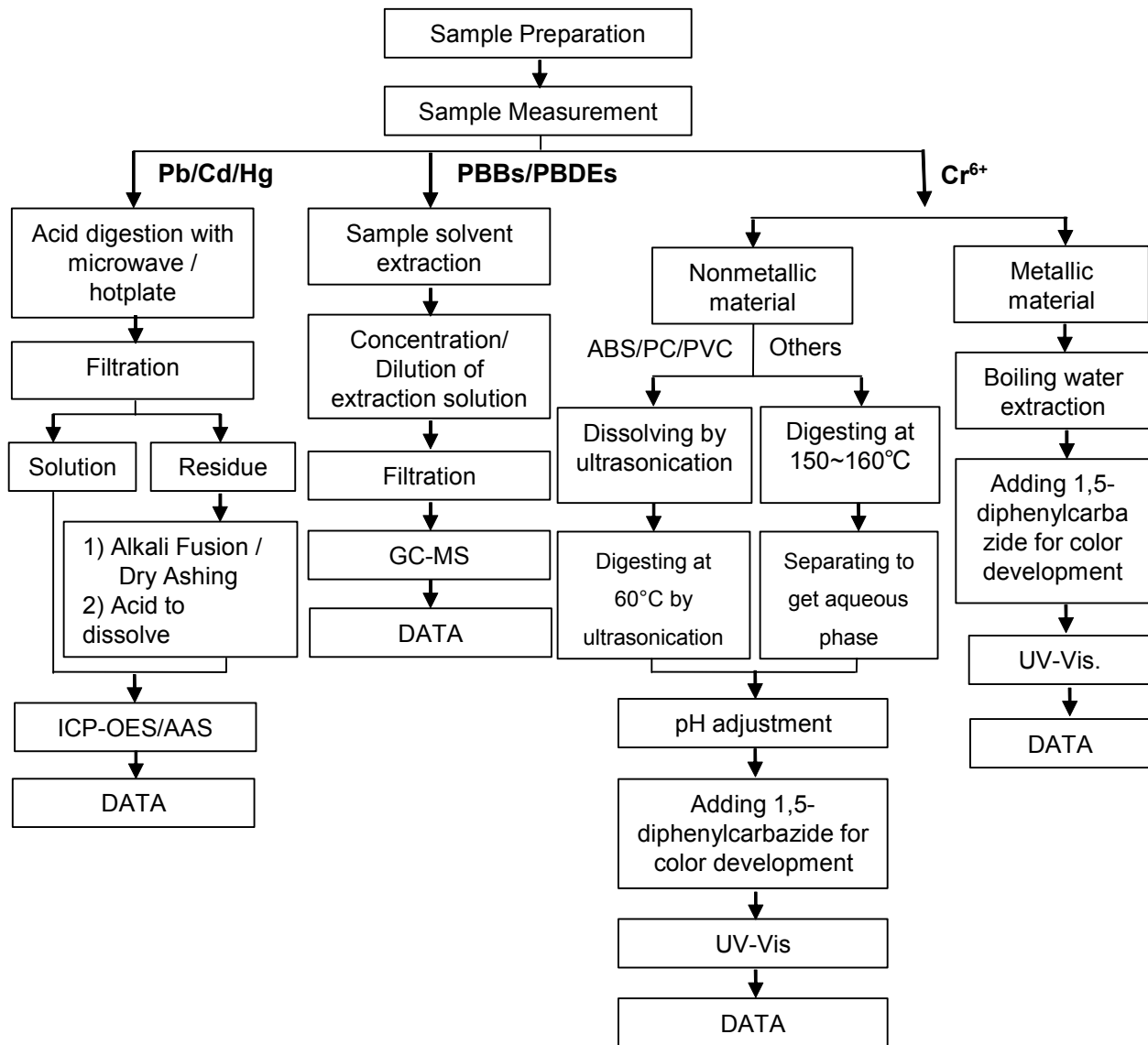
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Pb/Cd/Hg/Cr⁶⁺/PBBs/PBDEs Testing Flow Chart

1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ and PBBs/PBDEs test method excluded).

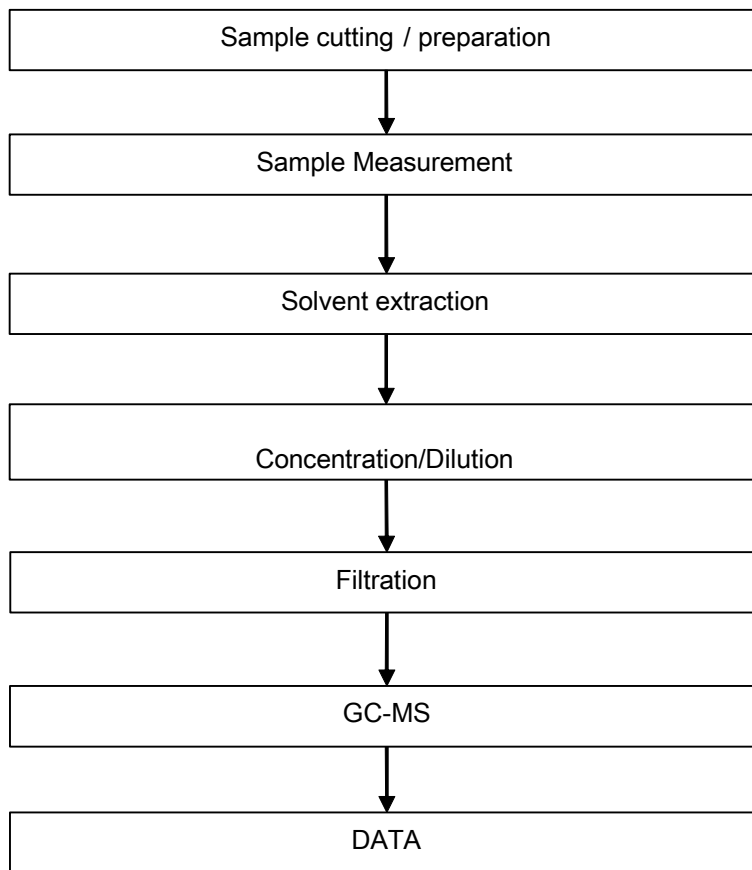


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Phthalates Testing Flow Chart



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Sample photo:



SGS authenticate the photo on original report only

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Test Report (SVHC)

No. CANEC2104393801

Date: 30 Mar 2021

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SHENZHEN WOER HEAT-SHRINKABLE MATERIAL CO.,LTD.
WOER INDUSTRIAL PARK,LANJING NORTH ROAD, LONGTIAN STREET,PINGSHAN
DISTRICT,SHENZHEN, GUANGDONG

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

SGS Job No. : CP21-013177 - SZ
Date of Sample Received : 24 Mar 2021
Testing Period : 24 Mar 2021 - 30 Mar 2021
Test Requested : As requested by client, SVHC screening is performed according to:
(i) Two hundred and eleven (211) substances in the Candidate List of Substances of Very High Concern (SVHC) for authorization published by European Chemicals Agency (ECHA) on and before Jan 19, 2021 regarding Regulation (EC) No 1907/2006 concerning the REACH.
Test Results : Please refer to next page(s).

Summary :

According to the specified scope and evaluation screening, the test results of SVHC are $\leq 0.1\%$ (w/w) in the submitted sample.	PASS
---	------

Signed for and on behalf of
SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch

Jessie Li

Jessie Li
Approved Signatory

scan to see the report



CANEC2104393801



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SGS-CSTC Standards Technical Services Co., Ltd.
Guangzhou Branch

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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. REACH obligation:
 - 2.1 Concerning article(s):
Communication:
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.

Notification:

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).

SGS adopts the ruling of the Court of Justice of the European Union on the definition of an article under REACH unless indicated otherwise. Detail explanation is available at the following link:

<http://www.sgs.com/-/media/global/documents/technical-documents/technical-bulletins/sgs-crs-position-statement-on-svhc-in-articles-a4-en-16-06.pdf?la=en>

2.2 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.

2.3 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 its amendments, client is suggested to prepare a Safety

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Test Report (SVHC)

No. CANEC2104393801

Date: 30 Mar 2021

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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 hazardous under the CLP Regulation (EC) No 1272/2008, when it contains a substance with concentration equal to, or greater than the classification limit as set in Regulation (EC) No. 1272/2008; or
- a mixture is not classified as hazardous under the CLP Regulation (EC) No 1272/2008, but contains either:
 - (a) a substance posing human health or environmental hazards in an individual concentration of $\geq 1\%$ by weight for mixtures that are solid or liquids (i.e., non-gaseous mixtures) or $\geq 0.2\%$ by volume for gaseous mixtures; or
 - (b) a substance that is PBT, or vPvB in an individual concentration of $\geq 0.1\%$ 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 $\geq 0.1\%$ by weight for non-gaseous mixtures; or
 - (d) a substance for which there are Europe-wide workplace exposure limits.

3. 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	CAN21-043938.001	Black tube

Test Method :

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



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

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



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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 (Test data will be shown if it \geq RL. RL is not regulatory limit.) 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) and to the worst-case scenario.
** The test result is based on the calculation of selected marker(s) and to the worst-case scenario.
For detail information, please refer to the SGS REACH website:
<http://www.sgs.com/en/Consumer-Goods-Retail/Toys-and-Juvenile-Products/Toys/REACH/Management-of-SVHC.aspx>
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. § 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) \geq 0.1% (w/w).



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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)	-	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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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 molybdate sulphate red (C.I. Pigment Red 104)*	12656-85-8	0.005
II	25	Lead chromate*	7758-97-6	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*	-	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*	-	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 *	-	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*	-	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]dimethylammonium 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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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	-	0.050
VIII	101	Diazene-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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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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Test Report (SVHC)

No. CANEC2104393801

Date: 30 Mar 2021

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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	Dihexyl 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	Trixylyl phosphate	25155-23-1	0.050
XI	152	1,2-Benzenedicarboxylic acid, dihexyl 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



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Full list of tested SVHC:

Batch	No.	Substance Name	CAS No.	RL (%)
XII	156	2-(2H-Benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	0.050
XII	157	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	0.050
XII	158	2-Ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate; DOTE	15571-58-1	0.050
XII	159	Cadmium fluoride*	7790-79-6	0.005
XII	160	Cadmium sulphate*	10124-36-4, 31119-53-6	0.005
XII	161	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
XIII	162	1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate	-	0.050
XIII	163	5-sec-butyl-2-(2,4-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [1], 5-sec-butyl-2-(4,6-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [2] [covering any of the individual isomers of [1] and [2] or any combination thereof]	-	0.050
XIV	164	1,3-propanesultone	1120-71-4	0.050
XIV	165	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1	0.050
XIV	166	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	36437-37-3	0.050
XIV	167	Nitrobenzene	98-95-3	0.050
XIV	168	Perfluorononan-1-oic-acid and its sodium and ammonium salts	-	0.050
XV	169	Benzo[def]chrysene (Benzo[a]pyrene)	50-32-8	0.050

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Full list of tested SVHC:

Batch	No.	Substance Name	CAS No.	RL (%)
XVI	170	4,4'-isopropylidenediphenol (bisphenol A)	80-05-7	0.050
XVI	171	4-Heptylphenol, branched and linear	-	0.050
XVI	172	Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts	-	0.050
XVI	173	p-(1,1-dimethylpropyl)phenol	80-46-6	0.050
XVII	174	Perfluorohexane-1-sulphonic acid and its salts	-	0.050
XVIII	175	1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo[12.2.1.16,9.02,13.05,10]octadeca-7,15-diene ("Dechlorane Plus"™) [covering any of its individual anti- and syn-isomers or any combination thereof]	-	0.050
XVIII	176	Benz[a]anthracene	56-55-3	0.050
XVIII	177	Cadmium nitrate*	10325-94-7	0.005
XVIII	178	Cadmium carbonate*	513-78-0	0.005
XVIII	179	Cadmium hydroxide*	21041-95-2	0.005
XVIII	180	Chrysene	218-01-9	0.050
XVIII	181	Reaction products of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol, branched and linear (RP-HP) [with ≥0.1% w/w 4-heptylphenol, branched and linear]	-	0.050
XIX	182	Benzene-1,2,4-tricarboxylic acid 1,2-anhydride (trimellitic anhydride)	552-30-7	0.050
XIX	183	Benzo[ghi]perylene	191-24-2	0.050
XIX	184	Decamethylcyclopentasiloxane (D5)	541-02-6	0.050
XIX	185	Dicyclohexyl phthalate (DCHP)	84-61-7	0.050
XIX	186	Disodium octaborate*	12008-41-2	0.005
XIX	187	Dodecamethylcyclohexasiloxane (D6)	540-97-6	0.050



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Full list of tested SVHC:

Batch	No.	Substance Name	CAS No.	RL (%)
XIX	188	Ethylenediamine	107-15-3	0.050
XIX	189	Lead*	7439-92-1	0.005
XIX	190	Octamethylcyclotetrasiloxane (D4)	556-67-2	0.050
XIX	191	Terphenyl hydrogenated	61788-32-7	0.050
XX	192	1,7,7-trimethyl-3-(phenylmethylene)bicyclo[2.2.1]heptan-2-one (3-benzylidene camphor)	15087-24-8	0.050
XX	193	2,2-bis(4'-hydroxyphenyl)-4- methylpentane	6807-17-6	0.050
XX	194	Benzo[k]fluoranthene	207-08-9	0.050
XX	195	Fluoranthene	206-44-0	0.050
XX	196	Phenanthrene	85-01-8	0.050
XX	197	Pyrene	129-00-0	0.050
XXI	198	2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acyl halides (covering any of their individual isomers and combinations thereof)	-	0.050
XXI	199	2-methoxyethyl acetate	110-49-6	0.050
XXI	200	4-tert-butylphenol (PTBP)	98-54-4	0.050
XXI	201	Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with ≥ 0.1% w/w of 4-nonylphenol, branched and linear (4-NP)	-	0.050
XXII	202	2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone	119313-12-1	0.050
XXII	203	2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	71868-10-5	0.050
XXII	204	Diisohexyl phthalate	71850-09-4	0.050
XXII	205	Perfluorobutane sulfonic acid (PFBS) and its salts	-	0.050



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Full list of tested SVHC:

Batch	No.	Substance Name	CAS No.	RL (%)
XXIII	206	1-vinylimidazole	1072-63-5	0.050
XXIII	207	2-methylimidazole	693-98-1	0.050
XXIII	208	Butyl 4-hydroxybenzoate	94-26-8	0.050
XXIII	209	Dibutylbis(pentane-2,4-dionato-O,O')tin**	22673-19-4	0.050
XXIV	210	bis(2-(2-methoxyethoxy)ethyl) ether	143-24-8	0.050
XXIV	211	Diocetyl tin dilaurate, stannane, dioctyl-, bis(coco acyloxy) derivs., and any other stannane, dioctyl-, bis(fatty acyloxy) derivs. wherein C12 is the predominant carbon number of the fatty acyloxy moiety**	-	0.050

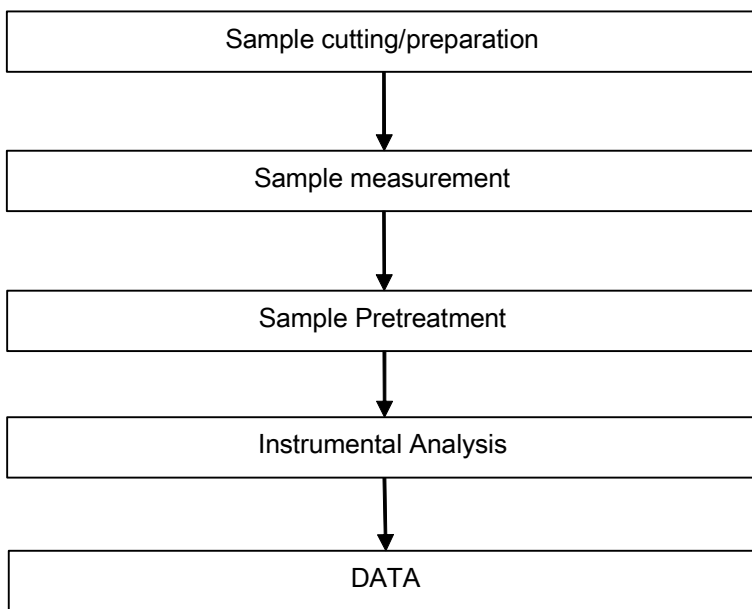


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SVHC Testing Flow Chart



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Sample photo:



SGS authenticate the photo on original report only

*** End of Report ***



Test Report

No. CANEC2116449507

Date: 10 Sep 2021

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SHENZHEN WOER HEAT-SHRINKABLE MATERIAL CO.,LTD.

WOER INDUSTRIAL PARK,LANJING NORTH ROAD, LONGTIAN STREET,PINGSHAN DISTRICT,SHENZHEN CHINA

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

SGS Job No. : CP21-047799 - SZ

Date of Sample Received : 02 Sep 2021

Testing Period : 02 Sep 2021 - 09 Sep 2021

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, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs) and Phthalates such as Bis(2-ethylhexyl) phthalate (DEHP) , Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) , and Diisobutyl phthalate (DIBP) comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

Signed for and on behalf of
SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch

Zm guan
Approved Signatory

scan to see the report



CANEC2116449507



Test Report

No. CANEC2116449507

Date: 10 Sep 2021

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Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	CAN21-164495.001	Black tube

Remarks :

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

RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU

Test Method : With reference to IEC 62321-4:2013+A1:2017, IEC 62321-5:2013, IEC 62321-7-2:2017 , IEC 62321-6:2015 and IEC 62321-8:2017, analyzed by ICP-OES , UV-Vis and GC-MS .

Test Item(s)	Limit	Unit	MDL	001
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1,000	mg/kg	2	ND
Mercury (Hg)	1,000	mg/kg	2	ND
Hexavalent Chromium (CrVI)	1,000	mg/kg	8	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
Dibromodiphenyl ether	-	mg/kg	5	ND
Tribromodiphenyl ether	-	mg/kg	5	ND
Tetrabromodiphenyl ether	-	mg/kg	5	ND
Pentabromodiphenyl ether	-	mg/kg	5	ND



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<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
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
Dibutyl phthalate (DBP)	1,000	mg/kg	50	ND
Butyl benzyl phthalate (BBP)	1,000	mg/kg	50	ND
Bis (2-ethylhexyl) phthalate (DEHP)	1,000	mg/kg	50	ND
Diisobutyl Phthalates (DIBP)	1,000	mg/kg	50	ND

Notes :

- (1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.
- (2) IEC 62321 series is equivalent to EN 62321 series
https://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25
- (3) The restriction of DEHP, BBP, DBP and DIBP shall apply to medical devices, including in vitro medical devices, and monitoring and control instruments, including industrial monitoring and control instruments, from 22 July 2021.

Halogen

Test Method : With reference to EN 14582:2016, analysis was performed by IC.

<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Fluorine (F)	mg/kg	50	167
Chlorine (Cl)	mg/kg	50	ND
Bromine (Br)	mg/kg	50	ND
Iodine (I)	mg/kg	50	ND



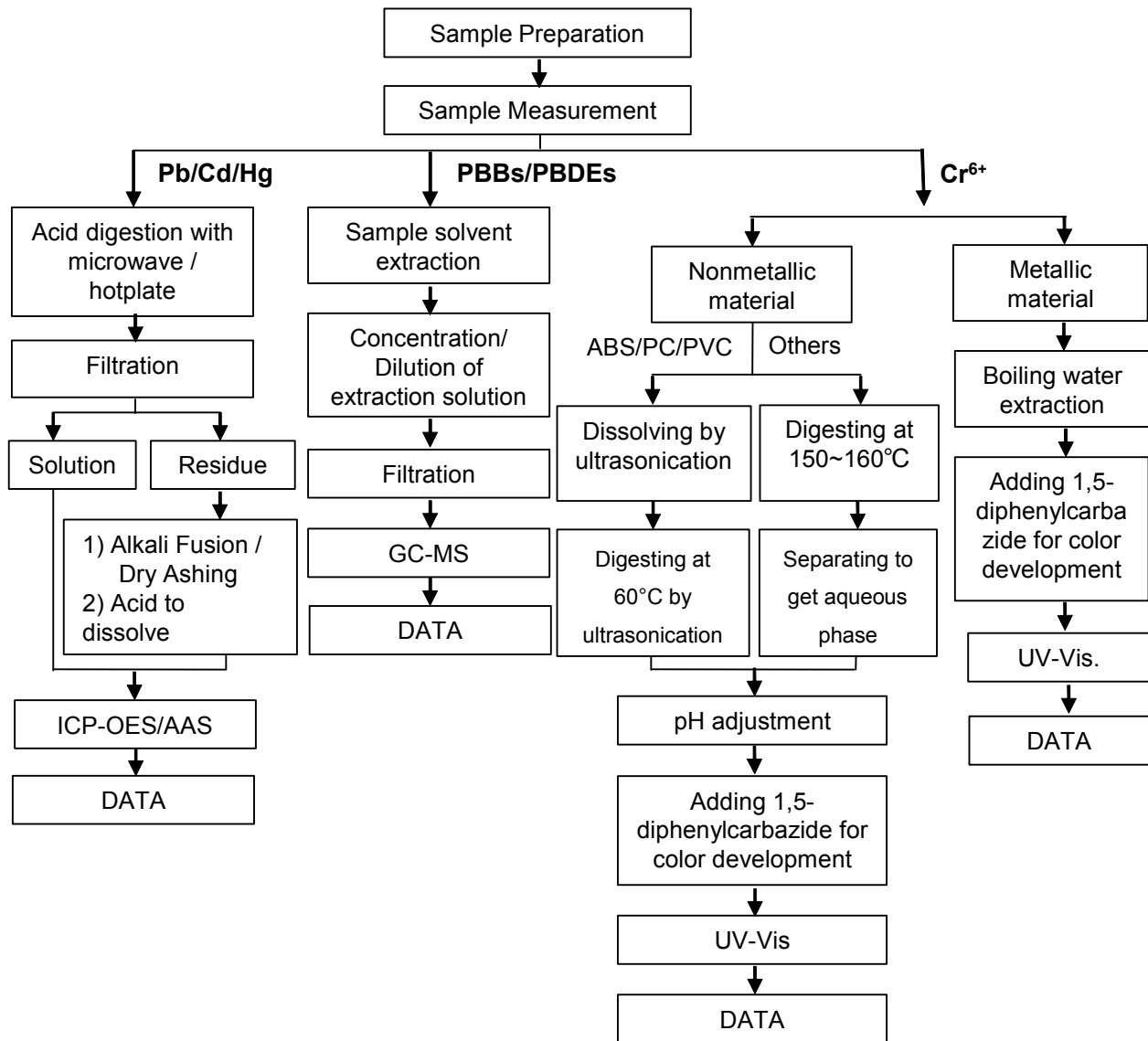
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Pb/Cd/Hg/Cr⁶⁺/PBBs/PBDEs Testing Flow Chart

1) These samples were dissolved totally by pre-conditioning method according to below flow chart.
(Cr⁶⁺ and PBBs/PBDEs test method excluded).

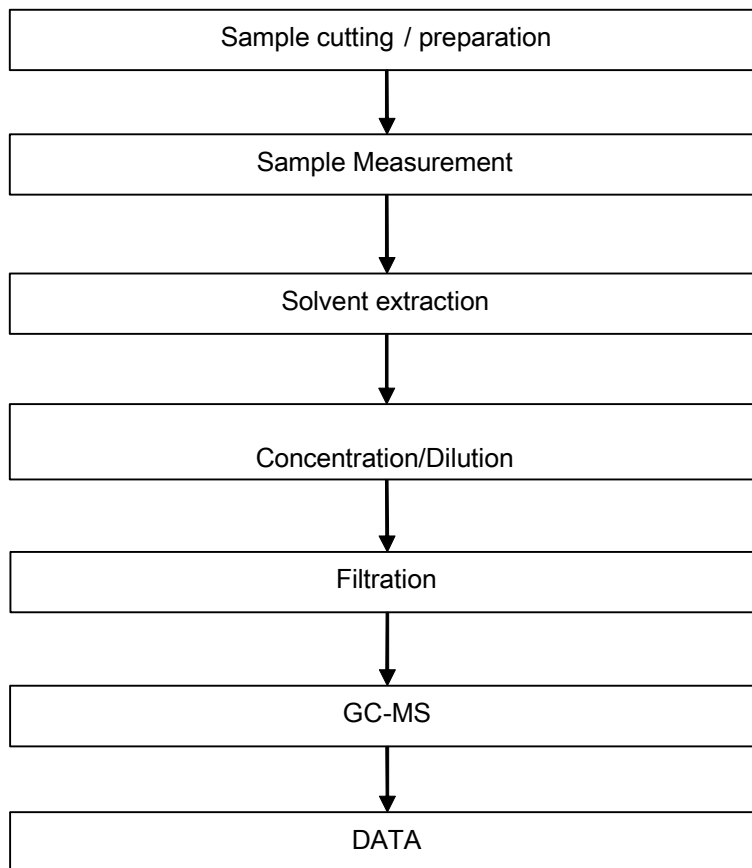


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Phthalates Testing Flow Chart

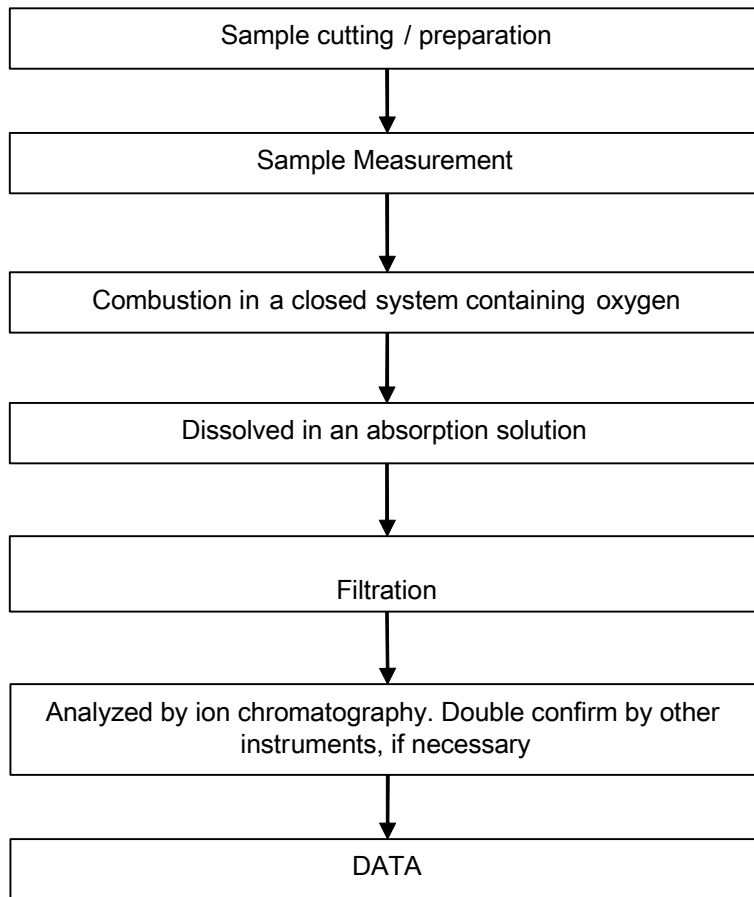


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ATTACHMENTS

Halogen Testing Flow Chart



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Test Report

No. CANEC2116449507

Date: 10 Sep 2021

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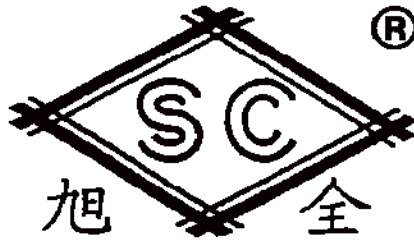
Sample photo:



SGS authenticate the photo on original report only

*** End of Report ***





IECQ QC080000

承認書

APPROVED SHEET



ISO9001:2015

客 戶	飞伟科技有限公司	
品 名 DESCRIPTION	3.5Ø PHONE JACK	
客 戶 料 號 CUSTOMER P/N		制 作 者 THE PRODUCER
應 用 機 種 APPLICATION		
旭 全 料 號 S.C. P/N	SCJ311M1NXS1B00G (For RoHSCompliant)	核 准 APPROVAL
業 務 擔 當 者 SALES IN CHARGE	姚 怡 如	
提 出 日 期 ISSUE DATE	Dec/03/2020	

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SPECIFICATIONS 仕樣書

S. C. MODEL NO.: SCJ311M1NXS1B00G (For ROHS Compliant)	DATE	Dec/03/2020
DESCRIPTION: 3.5Ø PHONE JACK	PAGE	1/6
1. GENERAL 概要		
1.1 Scope 適用範圍		
The specification covers the requirements for 3.5Ø PHONE JACKS intended for audio systems and similar electronic apparatuses. 該規範涵蓋了用於音頻系統 3.5Ø 插孔要求，以及類似的電子設備。		
1.2 Compliance with specification 仕樣承諾事項		
The specification shall be read in conjunction with the applicable part drawing and the individual specification, if any. Whenever this specification conflicts with the applicable part drawing and/or the individual specification, the latter shall govern. 該規格根據產品設計和個別的規格來參考，如果有不遵守規格專案，將產品圖有記載的事項優先於本規格。		
1.3 Mating plug 適合插頭		
The mate plug shall be as shown in Appendix Fig.1 or equivalent. 適合插頭如下附件 1 或是相同相等的。		
1.4 Gauge plug 標準插頭		
The gauge plug shall be as shown in Appendix Fig. 1 or equivalent. 標準插頭如下附件 1 或是相同相等的。		
2. CONSTRUCTION 構造		
2.1 Design and Construction 外觀與結構		
The 3.5Ø phone jack shall be the design, construction and dimensions as shown in the applicable part drawing. 3.5 Ø 插頭應為適用於產品圖中所示的設計、結構和尺寸。		
2.2 Components and Materials 使用部件和材料		
Components and materials shall be used as specified in the applicable part drawing. 使用的零件和材料在產品圖上表示。		



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SPECIFICATIONS 仕様書

S.C. MODEL NO.: SCJ311M1NXS1B00G (For ROHS Compliant)	DATE	Dec/03/2020
DESCRIPTION: 3.5Ø PHONE JACK	PAGE	2/6

3. Mechanical 機械的性能

3.1 Insertion and Extraction force 插力和拔力

Insertion and extraction force of the jack shall be measured with a load cell or equivalent, the gauge plug shall be inserted into the jack and extracted from the jack slowly. Insertion and extraction force shall be a value as specified in items (1) and (2) below.

以插拔力機測量插力和拔力。產品水準或垂直插入、拔出。插力和拔力如下表示。

Item	Condition	Result/Value
Insertion force 插力	Before test or initial 試驗前(試驗初期)	0.4Kg to 2.0Kg
	After life test 壽命試驗後	0.3Kg to 2.0Kg
	After humidity 耐濕試驗後	0.3Kg to 2.0Kg
	After heat test 耐熱試驗後	0.3Kg to 2.0Kg
	After cold test 耐寒試驗後	0.3Kg to 2.0Kg
	After resistance to soldering heat test 焊接測試後	0.3Kg to 2.0Kg
Extraction force 拔力	Before test or initial 試驗前(試驗初期)	0.4Kg to 2.0Kg
	After life test 壽命試驗後	0.3Kg to 2.0Kg
	After humidity 耐濕試驗後	0.3Kg to 2.0Kg
	After heat test 耐熱試驗後	0.3Kg to 2.0Kg
	After cold test 耐寒試驗後	0.3Kg to 2.0Kg
	After resistance to soldering heat test 焊接測試後	0.3Kg to 2.0Kg

Terminal strength 端子強度

A force of 500 grams shall be applied at a tip of the terminal in every direction of vertical and horizontal to the axis of the terminal for a period of 10 seconds. The jack shall show no evidence of mechanical damage or breakdown, and no losing the terminal except bending the terminal, causing electrical failure or damage to the extent of practical.

在產品的端子上以 500g 的負荷力，時間 10 秒的情況下，產品不能有破裂、端子不能有脫落，但端子彎曲是可以接受的。



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SPECIFICATIONS 仕樣書

S.C. MODEL NO.: SCJ311M1NXS1B00G (For ROHS Compliant)	DATE	Dec/03/2020
DESCRIPTION: 3.5Ø PHONE JACK	PAGE	3/6

4. ELECTRICAL 電氣性能

4.1 Insulation resistance: 絕緣強度

100MΩ (min) at 500VDC

Item	Condition	Result /Value
Insulation resistance 絕緣阻抗	500VDC applied between mutually insulated terminals or metal parts. 於相互絕緣端子間或金屬零件間加以 DC500V 直流電測得之絕緣強度需滿足以下條件。 (1) Before test or initial 試驗前(試驗初期) (2) After humidity test 耐濕試驗後 (3) After heat test 耐熱試驗後 (4) After cold test 耐寒試驗後 (5) After resistance to soldering heat test 焊接測試後	 ≥ 100MΩ ≥ 50MΩ ≥ 100MΩ ≥ 100MΩ ≥ 100MΩ
Contact resistance 接觸組抗	Contact resistance between terminals should satisfy (1)-(6) when measured by using 1kHz, AC 100mA or less. 用 100 毫安 1000 赫茲交流電加於端子間所測得的接觸組抗需滿足下列條件。 (1) Before test or initial 試驗前(試驗初期) (2) After life test 壽命試驗後 (3) After humidity test 耐濕試驗後 (4) After heat test 耐熱試驗後 (5) After cold test 耐寒試驗後 (6) After resistance to soldering heat test 焊接測試後	 ≤ 30mΩ ≤ 60mΩ ≤ 30mΩ ≤ 30mΩ ≤ 30mΩ ≤ 30mΩ



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SPECIFICATIONS

仕樣書

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DESCRIPTION: 3.5Ø PHONE JACK	PAGE	4/6

5. Physical 物理的性能

5.1 Resistance to soldering heat 銲錫耐熱試驗

The jack shall be tested under condition as specified in items (1) or (2) below, shall not occur remarkable deterioration of the part contracted and electrical damage or failure to the extent of practical use, shall comply with paragraphs 3.1 and 4.1. ◦

依照下列(1)和(2)的試驗方式執行後, 插座結構不能惡化, 且電氣性能須滿足 3.1 和 4.1 項基準而不能受損。

- (1) Condition of the jack for printed circuit board: The jack shall be mounted or plant to 1.6 millimeters thickness copper coil clad phenolic laminated board with a suitable hole layout to meet terminal arrangement of the jack tested, the area to be soldered of the terminal shall immerced into molten solder at a temperature of $165^{\circ}\pm 5^{\circ}\text{C}$ for 5 ± 1 seconds.

PCB 板用：按指定厚度 1.6mm 銅箔線路板, 將插座插入板上 然後端子須能通過被浸入溫度為 $165^{\circ}\pm 5^{\circ}\text{C}$ 的錫爐內 5 秒 ± 1 秒時間。

- (2) Condition of the jack for hand soldering: The terminal of jack tested shall be heated to 1.5 millimeters over from the wiring hole or slit of the terminal by a soldering iron to have a capacity of 60 watts consumption at a temperature controlled of $350^{\circ}\text{C}\pm 10^{\circ}\text{C}$ for a period of 3 ± 0.5 seconds.

電線配線用：端子前約 2mm 長或有孔部位, 然後沾浸過焊錫以 $350^{\circ}\text{C}\pm 10^{\circ}\text{C}$, 60W 電烙鐵 3 秒 ± 0.5 秒焊接時間。

5.2 Solderability 銲接特性試驗

The terminal of jack tested shall be dipped into soldering flux of period of 5 to 10 seconds to preflux and shall be immerced into molten solder of or equivalent to 2 ± 0.5 millimeters from a tip of the terminal for a dwell time of 3 ± 0.5 seconds. At the conclusion of this test, the tested area shall be covered more than three quarters of immerced area with fresh solder.

插座的端子先以助焊液浸入 5 秒 到 10 秒, 然後浸入銲錫槽內或同等以端子須浸入 $2\pm 0.5\text{mm}$ 長, 3 ± 0.5 秒鐘的時間來測試。



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SPECIFICATIONS 仕様書

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6. Enviromental 環境

● Humidity test 耐濕試驗

The jack shall be exposed in a humidity chamber at a temperature of $40^{\circ}\pm 2^{\circ}\text{C}$ and at a relative humidity of 90 to 95% for a period of 96 hours, then shall be returned to a room ambient, dewdrops on the surface of jack shall be blown off, thereafter, the jack shall be allowed to remain in a room ambient for 30 minutes to stabilize measurement. At the conclusion of this test, the jack shall comply with paragraphs 3.1, and 4.1.

在溫度 $40^{\circ}\text{C}\pm 2^{\circ}\text{C}$ 相對濕度 90~95% 的恆溫恆濕中放置 96 小時後取出，擦除表面上的水滴，再放置於長溫常濕中 30 分鐘後測定，滿足 3.1, 4.1 項要求。

6.1 Heat test 耐熱試驗

The jack shall be exposed in a heat chamber at a temperature of $70^{\circ}\pm 2^{\circ}\text{C}$ and at a relative humidity of below 50% for a period of 96 hours, thereafter, the jack shall be returned and allowed to remain in a room ambient for 30 minutes. At the conclusion of this test, the jack shall comply with paragraph 3.1, and 4.1.

在溫度 $70^{\circ}\text{C}\pm 2^{\circ}\text{C}$ 、濕度 50% 以下的恆溫槽中放置 96 小時後取出，再放置於常溫常濕中 30 分鐘後測定，滿足 3.1, 和 4.1 項要求。

6.2 Cold test 耐寒試驗

The jack shall be exposed in a cold chamber at a temperature of $-40^{\circ}\pm 2^{\circ}\text{C}$ for a period of 96 hours, thereafter, the jack shall be returned and allowed to remain in a room ambient for 30 minutes, before measurement, the dewdrops on jack shall be blown off to stabilize measurement. At the conclusion of this test, the jack shall comply with paragraphs 3.1, and 4.1.

於溫度 $-40^{\circ}\text{C}\pm 2^{\circ}\text{C}$ 的恆溫槽中放置 96 小時後取出，擦除表面上的水滴後，再放置常溫常濕中 30 分鐘後測定，滿足 3.1, 和 4.1 項要求。



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7. Endurance 耐久性

7.1 Life test 壽命試驗

The life test shall consist of 5,000 cycles of insertion and extraction with the mate plug or gauge plug at a rate of 20 to 30 cycles per minute under no load. At the conclusion of this test, the jack shall comply with 3, 3.1, 4, and 4.1.

於無負載狀態以適合的或制式的插頭，以每分鐘 20~30 回頻度，作 5000 回的插入拔出測試。此項測試結果須滿足 3, 3.1, 4, 4.1 項要求。

7.2 Measuring condition 測量條件

Unless otherwise specified herein, all measurements and tests shall be made at a temperature of 5° to 35°C and a relative humidity of 40 to 85%.

除非有其他特別要求規定，所有的測試條件皆以溫度 5~35°C，相對濕度 40~85%為基準。

3.5Ø PHONE JACK ACCESSORIES

Fig. 1) Matching Plug and Gauge Plug

Unit : m/m

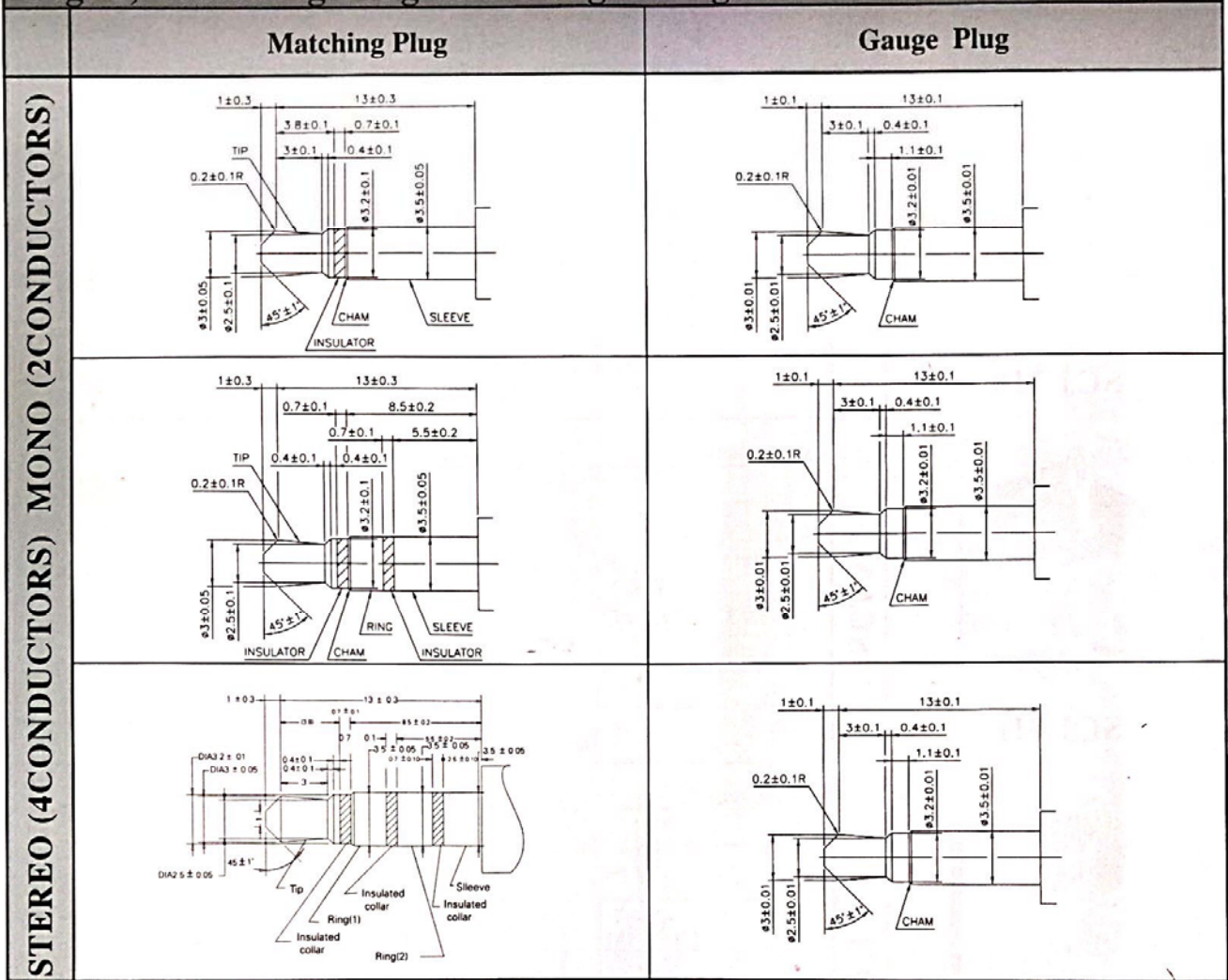
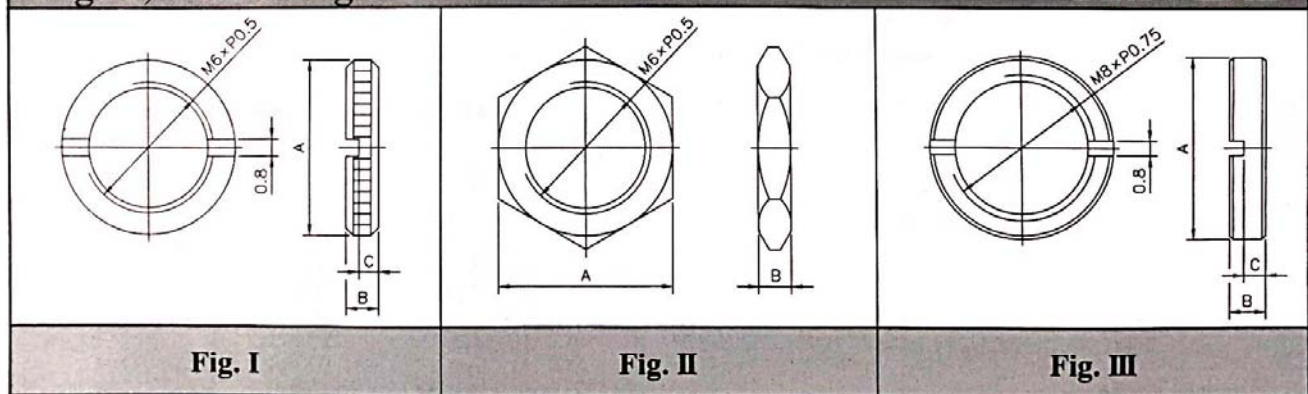


Fig. 2) Matching Nut

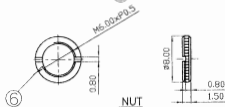
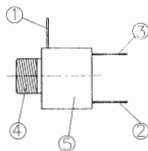
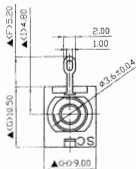
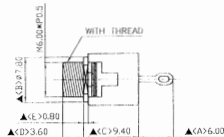
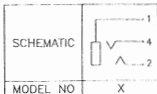
Unit : m/m



Order Code No.	Fig.	Shape	Description			Dimension		
			Thread	Material	Finish	Dia. A	Dim. B	Dim. C
1	Fig. I	Round	M6×P0.5	Brass	Nickel	Ø8.0	1.5	0.9
2	Fig. II	Hexagonal	M6×P0.5	Brass	Nickel	8.0	1.5	-
3	Fig. III	Round	M8×P0.5	Brass	Nickel	Ø10.0	2.0	1.2



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6	NUT	1.5T Brass	1	Nickel Plated
5	Housing	POM	1	Black Color
4	Barrel	Brass	1	Nickel Plated
3	Ring Spring	0.2T Phosphor Bronze	1	Silver Plated
2	Tip Spring	0.2T Phosphor Bronze	1	Silver Plated
1	Earth Terminal	0.3T Brass	1	Silver Plated
NO.	Description	Material	Q'TY	Finish

 S.C.PRECISION INDUSTRIAL CO., LTD	DATE	DWN	CHKD	APVD	MANAGER
	06.11.2020	王平華	張文輝	張文輝	張文輝

PART NAME : 3.5 \varnothing PHONE JACK	PART NUMBER : SCJ311M1NXS1B00G	VERSION : 4.0
TOLERANCE : ± 0.3 mm UNLESS OTHERWISE SPECIFIED	UNIT : mm	SCALE : 1/1

SPECIFICATIONS:
 Contact Resistance : 30m Ω max
 Insulation Resistance : 100M Ω min. at DC 500V
 Remark : \blacktriangle : The Most Important Dimension

RoHS
 Compliant

DURACON POM

M90-44

产品描述

制造商	宝理塑料(中国)有限公司
材料标示	>POM Copolymer<
颜色	本色
UL档案号	E45034
材料形状	颗粒状
加工方式	注射成型



物理性能	条件	测试标准	数据	单位
比重		ISO 1183	1.41	g/cm ³
吸水率	(23°C, 24 hr)	ISO 62	0.5	%
硬度	条件	测试标准	数据	单位
洛氏硬度		ISO 2039-2	80	M(Scale)
机械性能	条件	测试标准	数据	单位
拉伸强度	23°C	ISO 527-2	62	MPa
断裂伸长率	23°C	ISO 527-2	35	%
弯曲强度	23°C	ISO 178	87	MPa
弯曲模量	23°C	ISO 178	2500	MPa
简支梁缺口冲击强度	23°C	ISO 179/1eA	6	kJ/m ²
热性能	条件	测试标准	数据	单位
热变形温度	1.80MPa 未退火	ISO 75-2/Af	95	°C
线膨胀系数	MD	ISO 11359-2	1.2E-4	cm/cm/°C
线膨胀系数	TD	ISO 11359-2	1.2E-4	cm/cm/°C
电气性能	条件	测试标准	数据	单位
体积电阻		IEC 60093	1.0E+15	Ω.cm
表面电阻		IEC 60093	1.0E+16	Ω.cm
绝缘强度		IEC 60243-1	29	KV/mm
绝缘强度	3m m	IEC 60243-1	19	KV/mm
阻燃性	条件	测试标准	数据	单位
防火等级	All	UL-94	0.75mm	HB
防火等级	All	UL-94	1.50mm	HB
防火等级	All	UL-94	3.00mm	HB
注塑成型条件	条件	测试标准	数据	单位
干燥温度			60-80	°C
干燥时间			2.0-6.0	Hr
建议水份含量			<=0.20	%
料筒后部温度			170-190	°C
料筒中部温度			180-200	°C
料筒前部温度			190-210	°C
喷嘴温度			200-220	°C
模具温度			40-80	°C

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試驗報告

號碼(No.) : KA/2020/30459 日期(Date) : 2020/03/09

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Test Report

台灣寶理塑膠股份有限公司大發廠

POLYPLASTICS TAIWAN CO., LTD.

高雄市大寮區潮寮里建業路13號

NO. 13, JIANYE RD., DALIAO DIST., KAOHSIUNG CITY 831, TAIWAN (R.O.C.)

以下測試樣品係由申請廠商所提供及確認 (The following sample(s) was/were submitted and identified by/on behalf of the applicant as):

送樣廠商(Sample Submitted By) : 台灣寶理塑膠股份有限公司大發廠 (POLYPLASTICS TAIWAN CO., LTD.)
 樣品名稱(Sample Description) : POM
 樣品型號(Style/Item No.) : M90-44 CF2001 / Lot No. 9B1013
 樣品色號(Color No.) : CF2001
 收件日期(Sample Receiving Date) : 2020/03/03
 測試期間(Testing Period) : 2020/03/03 to 2020/03/09

測試需求(Test Requested) :

(1) 依據客戶指定, 參考RoHS 2011/65/EU Annex II及其修訂指令(EU) 2015/863測試鎘、鉛、汞、六價鉻、多溴聯苯、多溴聯苯醚, DBP, BBP, DEHP, DIBP. (As specified by client, with reference to RoHS 2011/65/EU Annex II and amending Directive (EU) 2015/863 to determine Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP contents in the submitted sample(s).)

(2) 其他測試項目請見下一頁. (Please refer to next pages for the other item(s).)

測試方法(Test Method) : 請參閱下一頁 (Please refer to following pages).

測試結果(Test Results) : 請參閱下一頁 (Please refer to following pages).

結論(Conclusion) : (1) 根據客戶所提供的樣品, 其鎘、鉛、汞、六價鉻、多溴聯苯、多溴聯苯醚, DBP, BBP, DEHP, DIBP的測試結果符合RoHS 2011/65/EU Annex II暨其修訂指令(EU) 2015/863之限值要求. (Based on the performed tests on submitted sample(s), the test results of Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.)

報告簽署人/張伯書/博士/技術經理

Ray Chang, Ph.D./Manager -Tech

Signed for and on behalf of

SGS Taiwan Limited

化學實驗室-高雄/Chemical Laboratory Kaohsiung



PIN CODE: 31444136

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Test Report

號碼(No.) : KA/2020/30459 日期(Date) : 2020/03/09

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台灣寶理塑膠股份有限公司大發廠

POLYPLASTICS TAIWAN CO., LTD.

高雄市大寮區潮寮里建業路13號

NO. 13, JIANYE RD., DALIAO DIST., KAOHSIUNG CITY 831, TAIWAN (R. O. C.)

測試結果(Test Results)

測試部位(PART NAME)No. 1 : CF2001 POM

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	MDL	結果 (Result)	限值 (Limit)
				No. 1	
鎘 / Cadmium (Cd)	mg/kg	參考IEC 62321-5: 2013方法, 以感應耦合電漿發射光譜儀檢測. / With reference to IEC 62321-5: 2013 and performed by ICP-OES.	2	n. d.	100
鉛 / Lead (Pb)	mg/kg	參考IEC 62321-5: 2013方法, 以感應耦合電漿發射光譜儀檢測. / With reference to IEC 62321-5: 2013 and performed by ICP-OES.	2	n. d.	1000
汞 / Mercury (Hg)	mg/kg	參考IEC 62321-4:2013+AMD1:2017, 以感應耦合電漿發射光譜儀檢測. / With reference to IEC 62321-4:2013+AMD1:2017 and performed by ICP-OES.	2	n. d.	1000
六價鉻 / Hexavalent Chromium Cr(VI)	mg/kg	參考IEC 62321-7-2:2017, 以UV-VIS檢測. / With reference to IEC 62321-7-2:2017 and performed by UV-VIS.	8	n. d.	1000
多溴聯苯總和 / Sum of PBBs	mg/kg	參考IEC 62321-6: 2015方法, 以氣相層析/質譜儀檢測. / With reference to IEC 62321-6: 2015 and performed by GC/MS.	-	n. d.	1000
一溴聯苯 / Monobromobiphenyl			5	n. d.	-
二溴聯苯 / Dibromobiphenyl			5	n. d.	-
三溴聯苯 / Tribromobiphenyl			5	n. d.	-
四溴聯苯 / Tetrabromobiphenyl			5	n. d.	-
五溴聯苯 / Pentabromobiphenyl			5	n. d.	-
六溴聯苯 / Hexabromobiphenyl			5	n. d.	-
七溴聯苯 / Heptabromobiphenyl			5	n. d.	-
八溴聯苯 / Octabromobiphenyl			5	n. d.	-
九溴聯苯 / Nonabromobiphenyl			5	n. d.	-
十溴聯苯 / Decabromobiphenyl	5	n. d.	-		

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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	MDL	結果 (Result)	限值 (Limit)
				No. 1	
多溴聯苯醚總和 / Sum of PBDEs	mg/kg	參考IEC 62321-6: 2015方法, 以氣相層析/ 質譜儀檢測. / With reference to IEC 62321-6: 2015 and performed by GC/MS.	-	n. d.	1000
一溴聯苯醚 / Monobromodiphenyl ether			5	n. d.	-
二溴聯苯醚 / Dibromodiphenyl ether			5	n. d.	-
三溴聯苯醚 / Tribromodiphenyl ether			5	n. d.	-
四溴聯苯醚 / Tetrabromodiphenyl ether			5	n. d.	-
五溴聯苯醚 / Pentabromodiphenyl ether			5	n. d.	-
六溴聯苯醚 / Hexabromodiphenyl ether			5	n. d.	-
七溴聯苯醚 / Heptabromodiphenyl ether			5	n. d.	-
八溴聯苯醚 / Octabromodiphenyl ether			5	n. d.	-
九溴聯苯醚 / Nonabromodiphenyl ether			5	n. d.	-
十溴聯苯醚 / Decabromodiphenyl ether	5	n. d.	-		
鄰苯二甲酸二異丁酯 / DIBP (Di-isobutyl phthalate) (CAS No. : 84-69-5)	mg/kg	參考IEC 62321-8:2017, 以氣相層析儀/ 質譜儀檢測. / With reference to IEC 62321-8:2017. Analysis was performed by GC/MS.	50	n. d.	1000
鄰苯二甲酸二丁酯 / DBP (Dibutyl phthalate) (CAS No. : 84-74-2)	mg/kg		50	n. d.	1000
鄰苯二甲酸丁苄甲酯 / BBP (Butyl Benzyl phthalate) (CAS No. : 85-68-7)	mg/kg		50	n. d.	1000
鄰苯二甲酸二(2-乙基己基)酯 / DEHP (Di-(2-ethylhexyl) phthalate) (CAS No. : 117-81-7)	mg/kg		50	n. d.	1000

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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	MDL	結果 (Result)	限值 (Limit)
				No. 1	
鹵素 / Halogen					
鹵素 (氟) / Halogen-Fluorine (F) (CAS No. : 14762-94-8)	mg/kg	參考BS EN 14582:2016, 以離子層析儀檢測. / With reference to BS EN 14582:2016. Analysis was performed by IC.	50	n. d.	-
鹵素 (氯) / Halogen-Chlorine (Cl) (CAS No. : 22537-15-1)	mg/kg		50	n. d.	-
鹵素 (溴) / Halogen-Bromine (Br) (CAS No. : 10097-32-2)	mg/kg		50	n. d.	-
鹵素 (碘) / Halogen-Iodine (I) (CAS No. : 14362-44-8)	mg/kg		50	n. d.	-

備註(Note) :

1. mg/kg = ppm ; 0.1wt% = 1000ppm
2. n. d. = Not Detected (未檢出)
3. MDL = Method Detection Limit (方法偵測極限值)
4. "-" = Not Regulated (無規格值)

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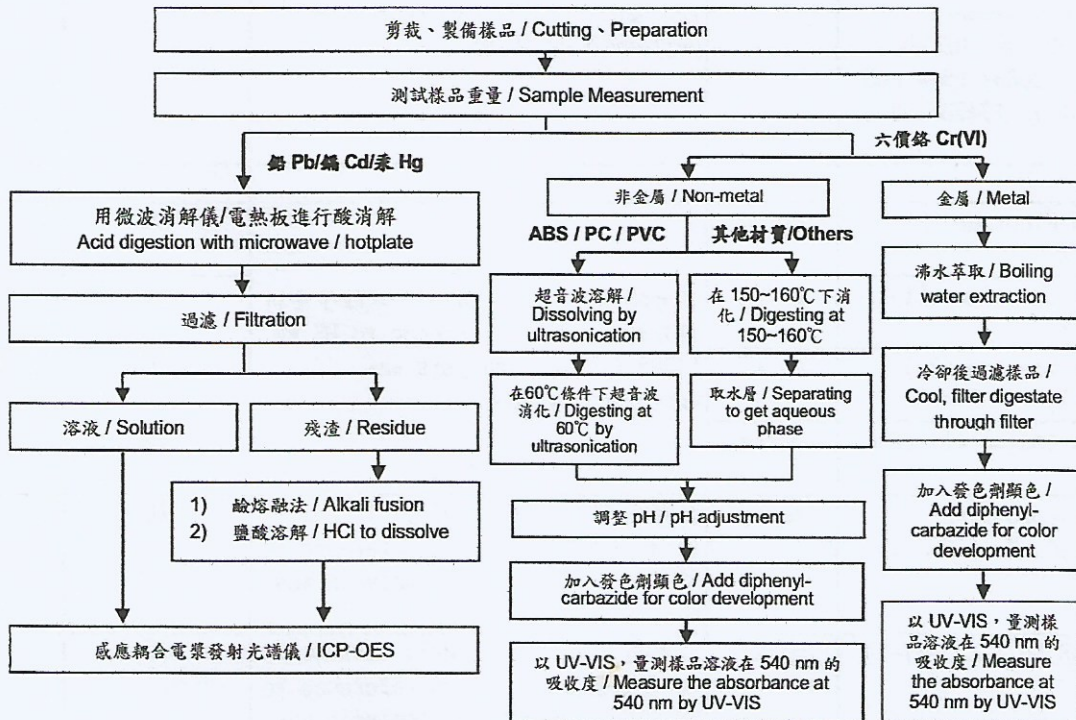
高雄市大寮區潮寮里建業路13號

NO. 13, JIANYE RD., DALIAO DIST., KAOHSIUNG CITY 831, TAIWAN (R.O.C.)

重金屬流程圖 / Analytical flow chart of Heavy Metal

根據以下的流程圖之條件，樣品已完全溶解。(六價鉻測試方法除外)

These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ test method excluded)



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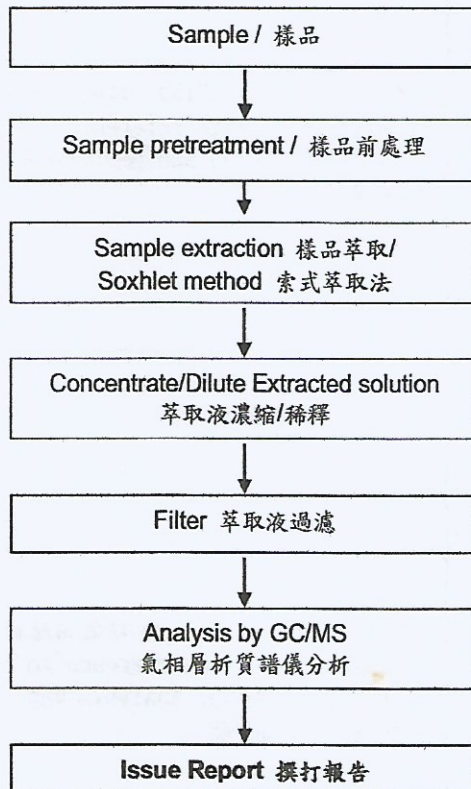
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多溴聯苯/多溴聯苯醚 分析流程圖 / PBB/PBDE analytical FLOW CHART



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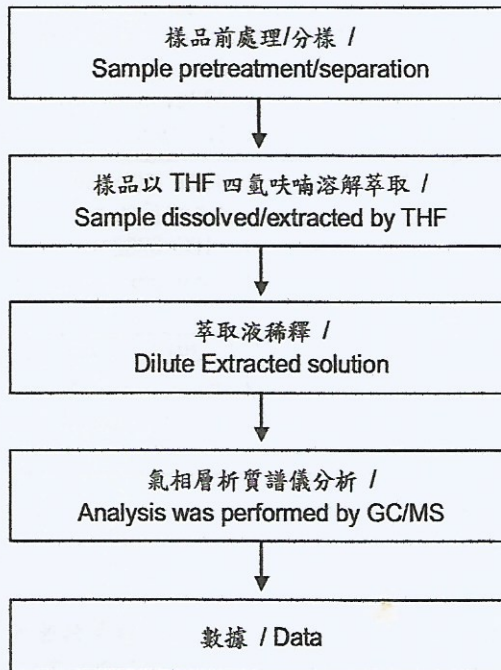
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可塑劑分析流程圖 / Analytical flow chart of phthalate content

【測試方法/Test method: IEC 62321-8】



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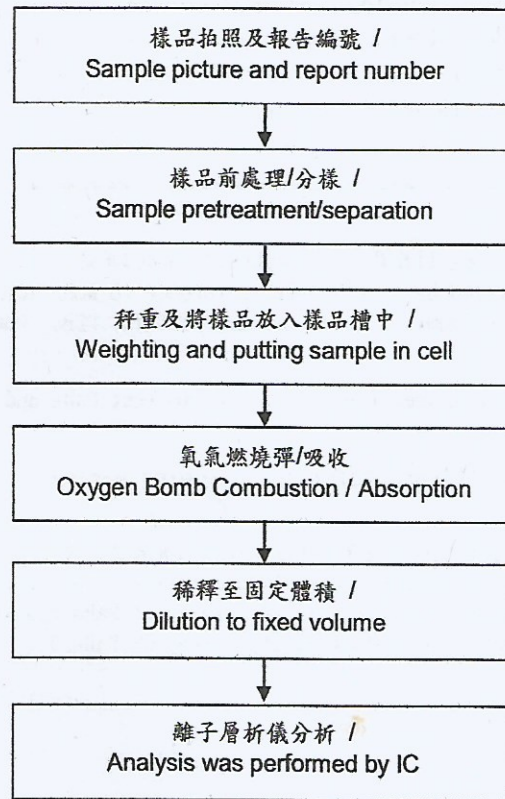
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鹵素分析流程圖 / Analytical flow chart of halogen content



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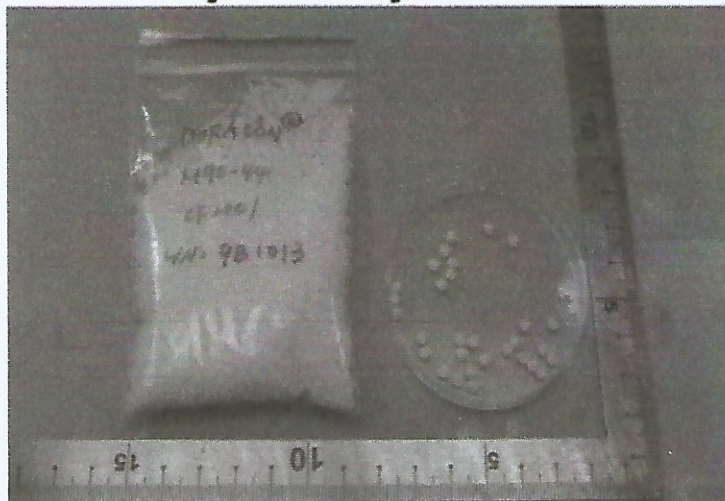
NO. 13, JIANYE RD., DALIAO DIST., KAOHSIUNG CITY 831, TAIWAN (R. O. C.)



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* 照片中如有箭頭標示，則表示為實際檢測之樣品/部位。 *
(The tested sample / part is marked by an arrow if it's shown on the photo.)

KA/2020/30459



** 報告結尾 (End of Report) **

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检测报告

编号: EG191202052C04X01ZVer.1

日期: 2019年12月17日

第1页共7页

委托单位 : 旭全精密工业(深圳)有限公司
Applicant : XuQuan Precise Industry(ShenZhen)Co.,LTD
地址 : 广东省深圳市龙华区观澜镇新田村观平路154号
Address : No.154,Guan Ping Road,Xin Tian Village,Guan Lan Town,Long Hua District,ShenZhen City,Guang Dong Province,China

样品名称 : 黑色色粉
Sample Name : Black toner
型号 : /
Model : /

接收日期 : 2019年12月02日
Received Date : Dec. 02, 2019
检测日期 : 2019年12月02日~2019年12月13日
Test Period : Dec. 02, 2019 ~ Dec. 13, 2019

检测概要 :
Test Summary :

检测项目/Test Item	结论/Conclusion
欧盟指令 2011/65/EU (RoHS)及其修订指令(EU)2015/863、(EU) 2017/2102 Directive 2011/65/EU (RoHS) and commission delegated Directive (EU)2015/863、 (EU)2017/2102	Pass

注: Pass: 符合要求; Fail: 不符合要求; N/A: 不评价或仅提供检测结果

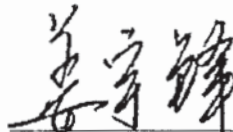
Remark: Pass: Meet the requirement; Fail: Doesn't meet the requirement; N/A: Without conclusions or provide test results only.

编制:




徐异文, Candy
助理工程师

审核:



姜宇锋, Jason
测试主管

签发:

谨代表
苏州市信测标准技术服务股份有限公司

 授权签字人

2019年12月17日

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检测报告

编号: EG191202052C04X01ZVer.1

日期: 2019年12月17日

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样品描述 Sample Description

样品序号 Sample No.	样品编号 Sample Number	数量 Quantity
01	EG19120205204	1pc

检测结果汇总 Summary of Test Results

1. RoHS

1.1 检测方法 Test Method

Test Item 检测项目	测试方法 Test Method
镉 Cadmium (Cd), 铅 Lead (Pb)	IEC 62321-5:2013
汞 Mercury (Hg)	IEC 62321-4:2013+A1:2017
六价铬 Hexavalent Chromium (Cr ⁶⁺)	IEC 62321-7-2:2017
PBBs & PBDEs	IEC 62321-6:2015
DEHP, BBP, DBP, DIBP	IEC 62321-8:2017

1.2 检测设备 Test Instrument

设备名称 Instrument Name	厂家 Manufacturer	型号 Model
ICP-OES	Agilent	720
UV-Vis	SHIMADZU	UV-2600
GC-MS	Agilent	7890B-5977A
GC-MS	SHIMADZU	QP2010 Ultra

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检测报告

编号: EG191202052C04X01ZVer.1

日期: 2019年12月17日

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1.3 检测结果 Test Result: 限值依照欧盟指令 2011/65/EU (RoHS)及其修订指令(EU)2015/863、(EU)2017/2102/Limit according to Directive 2011/65/EU (RoHS) and commission delegated Directive (EU)2015/863、(EU)2017/2102

检测项目 Test Item	结果 Result (mg/kg)	MDL (mg/kg)	限值 Limit(mg/kg)
	01		
镉 Cadmium (Cd)	N.D.	2	100
铅 Lead (Pb)	N.D.	2	1000
汞 Mercury(Hg)	N.D.	2	1000
六价铬 Hexavalent Chromium (Cr ⁶⁺)	N.D.	8	1000

检测项目 Test Item	结果 Result (mg/kg)	MDL (mg/kg)	限值 Limit(mg/kg)
	01		
多溴联苯 (1 - 10) Polybrominated Biphenyls(Mono - Deca) (PBBs)	N.D.	--	1000
单溴联苯 Monobromobiphenyl	N.D.	5	--
二溴联苯 Dibromobiphenyl	N.D.	5	--
三溴联苯 Tribromobiphenyl	N.D.	5	--
四溴联苯 Tetrabromobiphenyl	N.D.	5	--
五溴联苯 Pentabromobiphenyl	N.D.	5	--
六溴联苯 Hexabromobiphenyl	N.D.	5	--
七溴联苯 Heptabromobiphenyl	N.D.	5	--
八溴联苯 Octabromobiphenyl	N.D.	5	--
九溴联苯 Nonabromobiphenyl	N.D.	5	--
十溴联苯 Decabromobiphenyl	N.D.	5	--
多溴二苯醚 (1 - 10) Polybrominated Diphenylethers(Mono - Deca)(PBDEs)	N.D.	--	1000
单溴二苯醚 Monobromodiphenyl ether	N.D.	5	--
二溴二苯醚 Dibromodiphenyl ether	N.D.	5	--
三溴二苯醚 Tribromodiphenyl ether	N.D.	5	--

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检测报告

编号: EG191202052C04X01ZVer.1

日期: 2019年12月17日

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检测项目 Test Item	结果 Result (mg/kg)	MDL (mg/kg)	限值 Limit(mg/kg)
	01		
四溴二苯醚 Tetrabromodiphenyl ether	N.D.	5	--
五溴二苯醚 Pentabromodiphenyl ether	N.D.	5	--
六溴二苯醚 Hexabromodiphenyl ether	N.D.	5	--
七溴二苯醚 Heptabromodiphenyl ether	N.D.	5	--
八溴二苯醚 Octabromodiphenyl ether	N.D.	5	--
九溴二苯醚 Nonabromodiphenyl ether	N.D.	5	--
十溴二苯醚 Decabromodiphenyl ether	N.D.	5	--

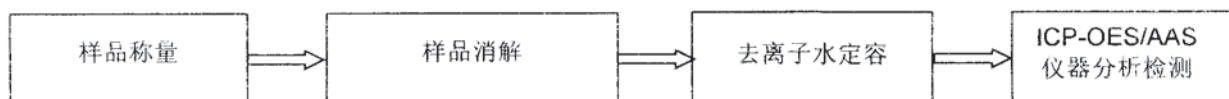
检测项目 Test Item	结果 Result (mg/kg)	MDL (mg/kg)	限值 Limit(mg/kg)	检测项目 Test Item
		01		
邻苯二甲酸二(2-乙基)己酯 Bis(2-ethylhexyl) phthalate(DEHP)	117-81-7	N.D.	30	1000
邻苯二甲酸丁苄酯 Butyl benzyl phthalate (BBP)	85-68-7	N.D.	30	1000
邻苯二甲酸二丁酯 Dibutyl phthalate (DBP)	84-74-2	N.D.	30	1000
邻苯二甲酸二异丁酯 Diisobutyl phthalate (DIBP)	84-69-5	N.D.	30	1000

备注 Note

- 1) N.D. =未检测到 (小于 MDL)/ Not Detected (Less than MDL)
- 2) MDL=方法检出限/ Method Detection Limit
- 3) 对于检测铅、镉、汞的样品已完全溶解/Specimens, which requested to determine Lead, Cadmium and Mercury content, have been dissolved completely.

1.4 检测流程图 Test Flowchart

Pb, Cd, Hg 检测流程/Pb, Cd, Hg Test Process:



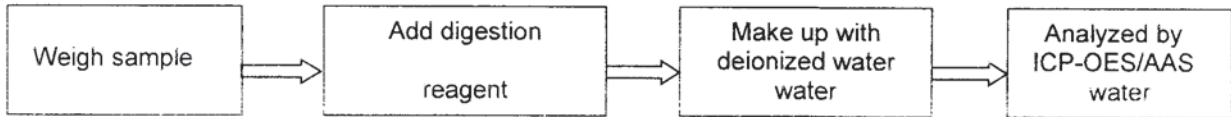
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检测报告

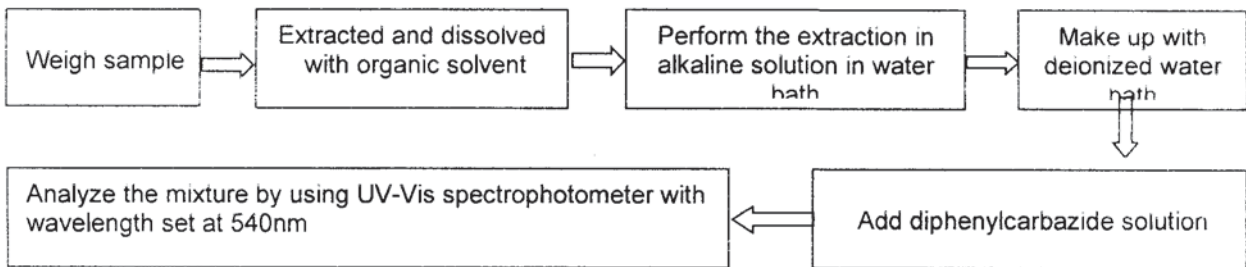
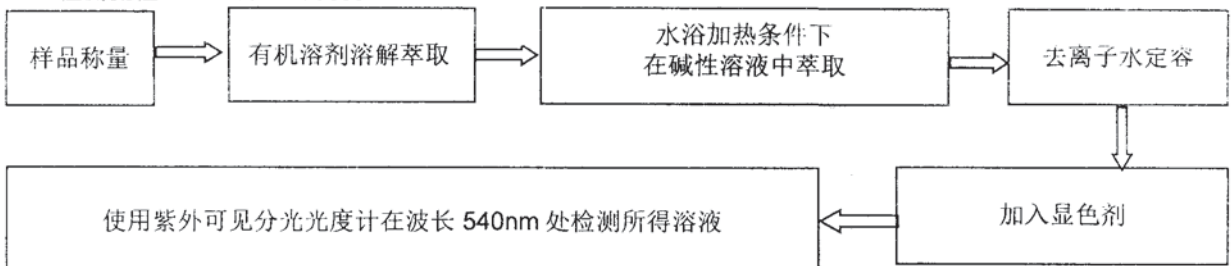
编号: EG191202052C04X01ZVer.1

日期: 2019年12月17日

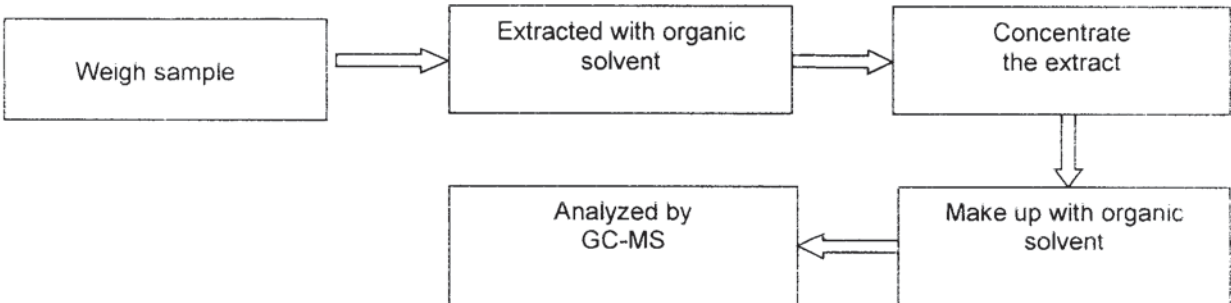
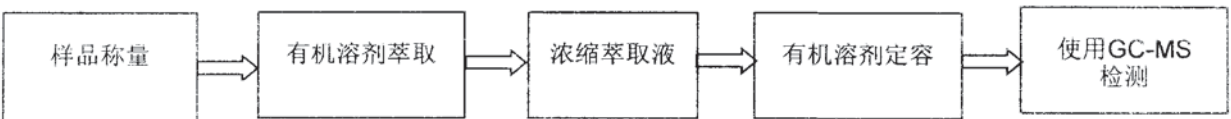
第5页共7页



Cr⁶⁺ 检测流程/ Cr⁶⁺ Test Process:



PBBs & PBDEs, DEHP, BBP, DBP, DIBP 检测流程/ PBBs & PBDEs, DEHP, BBP, DBP, DIBP Test Process:



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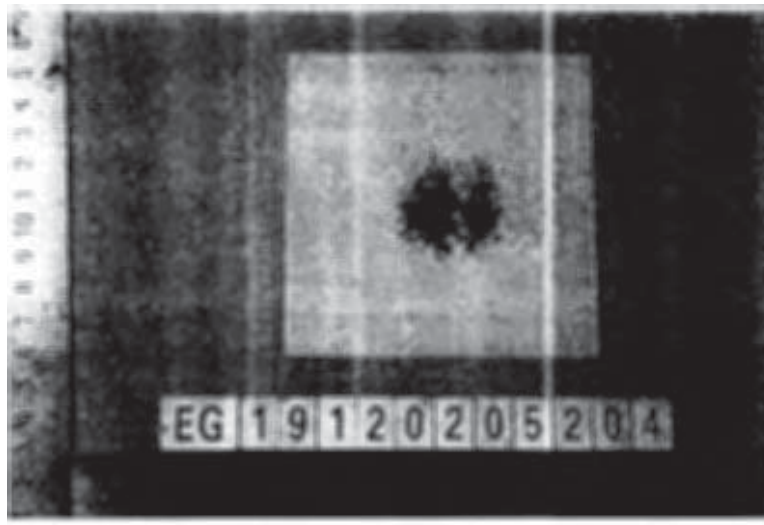
检测报告

编号: EG191202052C04X01ZVer.1

日期: 2019年12月17日

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样品照片 Sample Photo



*** 报告结束 ***
*** End of Report ***

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检测报告

编号: EG191202052C04X01ZVer.1

日期: 2019年12月17日

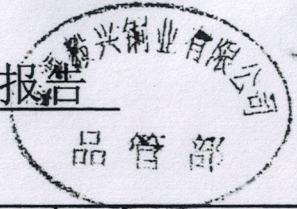
第7页共7页

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- 1.本检测报告首页所列信息中除样品来源、接样日期、检测日期、检测结果和检测结论外,均由委托方提供,委托方对样品的代表性和资料的真实性负责。本实验室不承担任何相关责任。
The information as listed on the first page of this test report was all provided by the client except the sample from, date received, test period, test results and test conclusion. The client shall be responsible for the representativeness of sample and authenticity of materials, for which EMTEK shall bear no responsibilities.
- 2.本检测报告以实测值进行符合性判定,未考虑不确定度所带来的风险,特别约定、标准或规范中有明确规定的除外。此种判定方式所带来的风险由客户自行承担,本实验室不承担相关责任。
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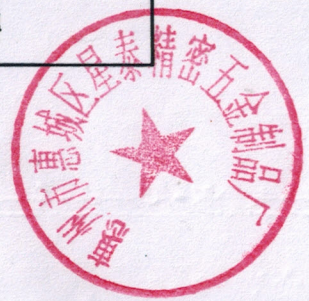
南海毅兴铜业有限公司化学成份测试报告及物理性能测试报告



客户名称		订单号(PO.NO)		出货日期	
国际标准	JIS H3250--2006	试材品名	C3604	试材规格	φ 10
化学试验	CHEMICAL TESTING				
仪器名称	瑞士ARLMA Cu直读光谱仪				

元素名称	铜(Cu)	锌(Zn)	铅(Pb)	铁(Fe)	锡(Sn)	铝(Al)	锰(Mn)	硅 (Si)	锑(Sb)	镉(Cd)	铋(Bi)	磷(P)	镍(Ni)
试片含量	58.04	37.9264	3.2182	0.3131	0.3088	0.0826	0.0055	0.0059	0.0062	0.0036	0.0047	0.0030	0.0819

机械试验	MECHANICAL TESTING												
仪器名称	WD-50B电子式万能试验机												
物理性质	抗拉强度				延伸率				硬度				
实际数值	429		[Mpa]		8		$\delta_{10} \geq [\%]$		128		HV1.0		
单位主管	蒋国飞				分析员				胡艳				





测试报告

No. CANEC2008422204

日期: 2020年06月04日 第1页,共6页

佛山市南海毅兴铜业有限公司
中国广东省佛山市南海区狮山镇南海经济开发区北园北园中路18号

以下测试之样品是由申请者所提供及确认: 黄铜棒

SGS工作编号: CF20-026040 - GZ
型号: C3604
样品接收日期: 2020年06月01日
测试周期: 2020年06月01日 - 2020年06月04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、六价铬、多溴联苯(PBBs)、多溴二苯醚(PBDEs)、邻苯二甲酸酯(如邻苯二甲酸二丁酯(DBP)、邻苯二甲酸丁苯酯(BBP)、邻苯二甲酸二(2-乙基己基)酯(DEHP)和邻苯二甲酸二异丁酯(DIBP))的测试结果符合欧盟RoHS指令2011/65/EU附录II的修正指令(EU) 2015/863的限值要求。

通标标准技术服务有限公司广州分公司
授权签名

李嘉欣

Jessie Li 李嘉欣
批准签署人



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测试报告

No. CANEC2008422204

日期: 2020年06月04日 第2页,共6页

测试结果:

测试样品描述:

样品编号	SGS样品ID	描述
SN1	CAN20-084222.002	黄铜色金属

备注:

- (1) 1 mg/kg = 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附录II的修正指令(EU) 2015/863

测试方法: 参考IEC 62321-4:2013+A1:2017, IEC 62321-5:2013, IEC 62321-7-1:2015, IEC 62321-6:2015 和 IEC 62321-8:2017, 采用 ICP-OES, UV-Vis 和 GC-MS 进行分析。

测试项目	限值	单位	MDL	002
镉 (Cd)	100	mg/kg	2	22
铅 (Pb)	1,000	mg/kg	2	33795 ^A
汞 (Hg)	1,000	mg/kg	2	ND
六价铬(Cr(VI))▼	-	µg/cm ²	0.10	ND
多溴联苯之和(PBBs)	1,000	mg/kg	-	ND
一溴联苯	-	mg/kg	5	ND
二溴联苯	-	mg/kg	5	ND
三溴联苯	-	mg/kg	5	ND
四溴联苯	-	mg/kg	5	ND
五溴联苯	-	mg/kg	5	ND
六溴联苯	-	mg/kg	5	ND
七溴联苯	-	mg/kg	5	ND
八溴联苯	-	mg/kg	5	ND
九溴联苯	-	mg/kg	5	ND
十溴联苯	-	mg/kg	5	ND
多溴二苯醚之和(PBDEs)	1,000	mg/kg	-	ND
一溴二苯醚	-	mg/kg	5	ND
二溴二苯醚	-	mg/kg	5	ND
三溴二苯醚	-	mg/kg	5	ND
四溴二苯醚	-	mg/kg	5	ND
五溴二苯醚	-	mg/kg	5	ND



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测试报告

No. CANEC2008422204

日期: 2020年06月04日 第3页,共6页

测试项目	限值	单位	MDL	002
六溴二苯醚	-	mg/kg	5	ND
七溴二苯醚	-	mg/kg	5	ND
八溴二苯醚	-	mg/kg	5	ND
九溴二苯醚	-	mg/kg	5	ND
十溴二苯醚	-	mg/kg	5	ND
邻苯二甲酸二丁酯 (DBP)	1000	mg/kg	50	ND
邻苯二甲酸丁苄酯(BBP)	1000	mg/kg	50	ND
邻苯二甲酸二(2-乙基己基)酯(DEHP)	1000	mg/kg	50	ND
邻苯二甲酸二异丁酯(DIBP)	1000	mg/kg	50	ND

备注:

(1)最大允许限值引用自RoHS指令(EU) 2015/863。IEC 62321系列等同于 EN 62321 系列
https://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25

(2) ▽=a. 当六价格的浓度高于0.13 μg/cm²时, 样品为阳性, 即含有六价格;

b. 当六价格的浓度为ND(低于0.10 μg/cm²)时, 样品为阴性, 即未检测到六价格;

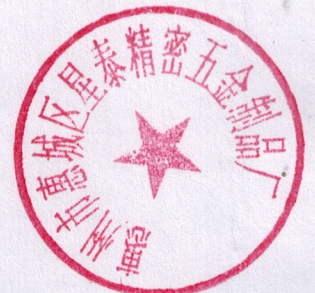
c. 当六价格的浓度介于0.10 μg/cm²与0.13 μg/cm²之间时, 无法直接判定是否检测到六价格, 因不同个体的样品表面差异可能会影响测定结果;

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▲: 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) [ANNEX III 6(c)]: 铜合金中的铅含量不得超过4%。

除非另有说明, 此报告结果仅对测试的样品负责。本报告未经本公司书面许可, 不可部分复制。

检测报告仅用于客户科研、教学、内部质量控制、产品研发等目的, 仅供内部参考。



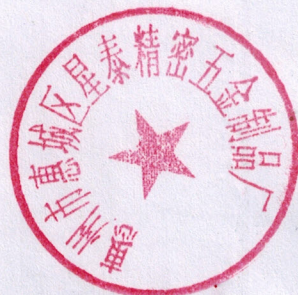
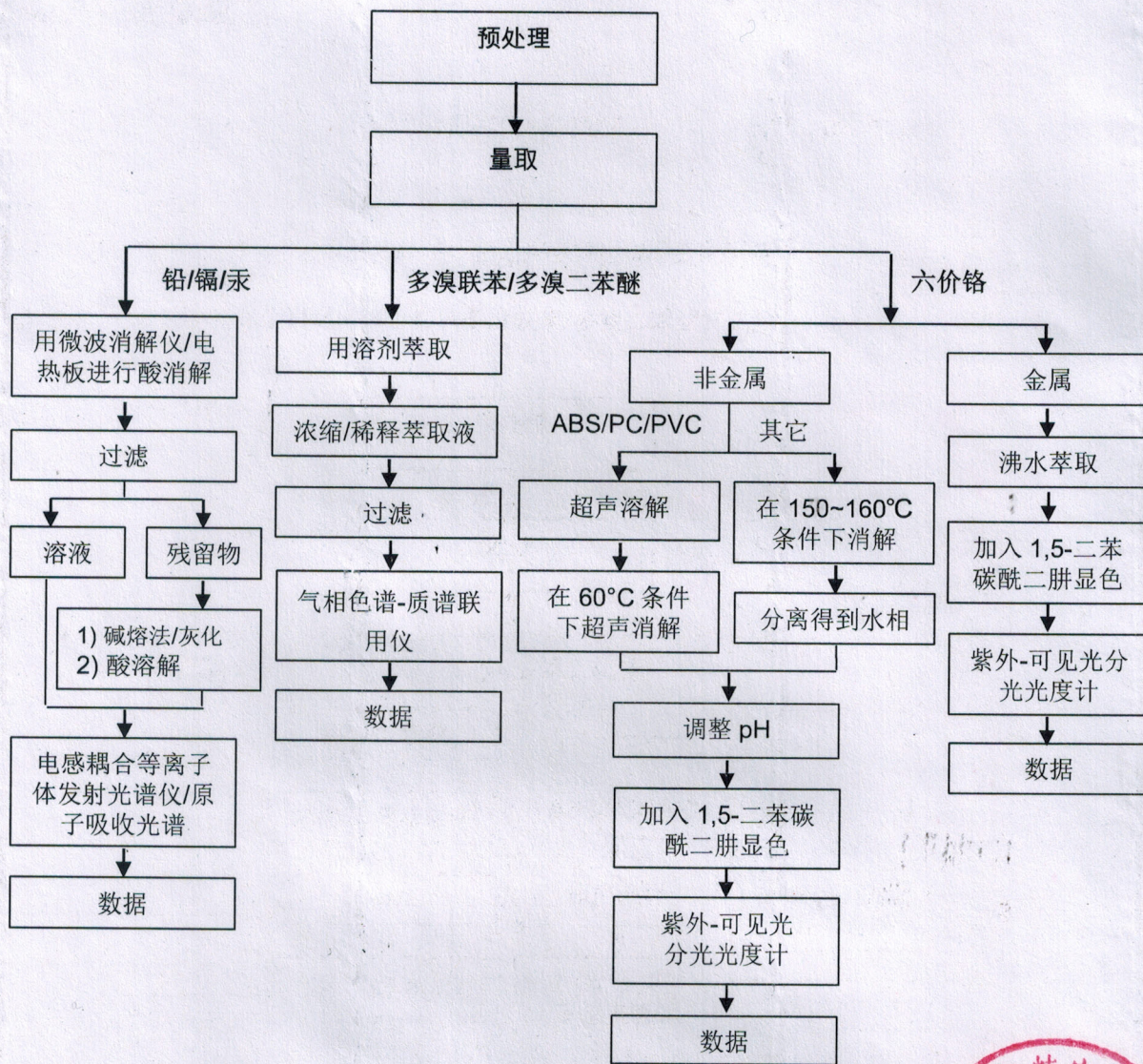
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附件

Pb/Cd/Hg/Cr⁶⁺/PBBs/PBDEs 测试流程图

1) 样品按照下述流程被完全消解（六价铬和多溴联苯/多溴二苯醚测试除外）。

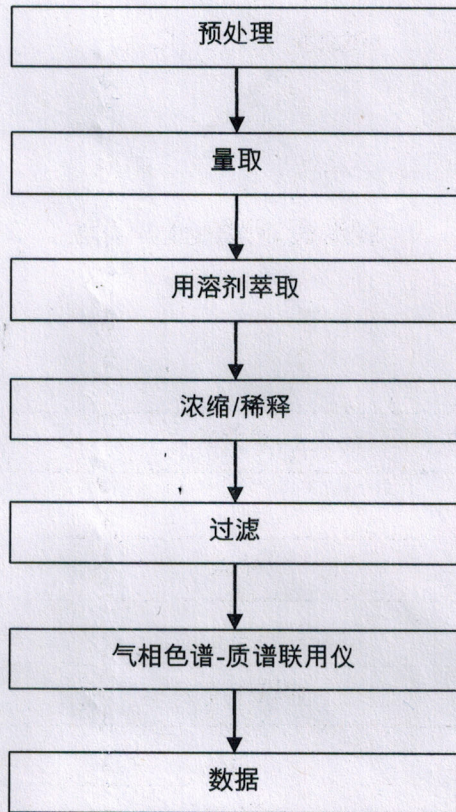


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附件

Phthalates 测试流程图



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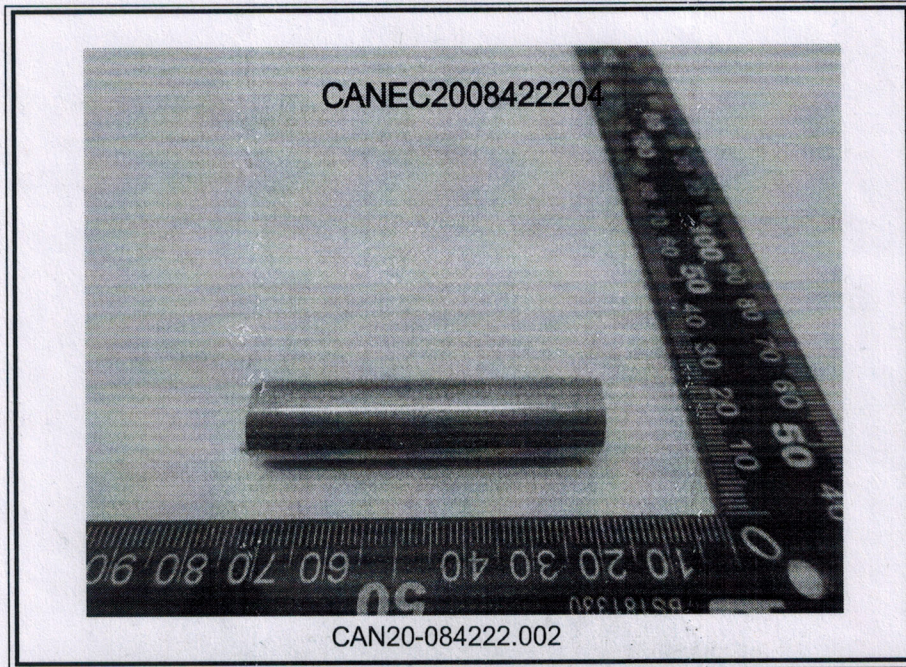


测试报告

No. CANEC2008422204

日期: 2020年06月04日 第6页,共6页

样品照片:



此照片仅限于随SGS正本报告使用

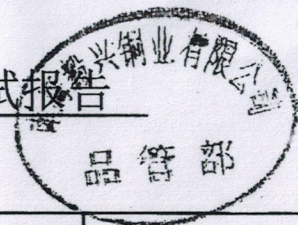
*** 报告完 ***



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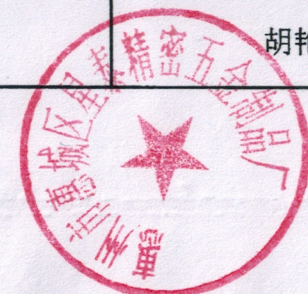
南海毅兴铜业有限公司化学成份测试报告及物理性能测试报告



客户名称		订单号(PO.NO)		出货日期	
国际标准	B16M-2005	试材品名	C3602	试材规格	φ6
化学试验	CHEMICAL TESTING				
仪器名称	瑞士ARLMA Cu直读光谱仪				

元素名称	铜(Cu)	锌(Zn)	铅(Pb)	铁(Fe)	锡(Sn)	铝(Al)	锰(Mn)	硅(Si)	锑(Sb)	镉(Cd)	铋(Bi)	磷(P)	镍(Ni)
标准值	59-63	余量	1.8-3.7	<0.5	<0.5	-	-	-	-	<0.01	-	-	-
试片含量	60.56	36.5710	2.0801	0.3080	0.3199	0.0764	0.0064	0.0035	0.0081	0.0030	0.0049	0.0038	0.0547

机械试验	MECHANICAL TESTING												
仪器名称	WD-50B电子式万能试验机												
物理性质	抗拉强度				延伸率				硬度				
实际数值	429		[Mpa]		9		$\delta_{10} \geq [\%]$		128		HV1.0		
单位主管	蒋国飞						分析员				胡艳		



测试报告

No. CANEC2008422202

日期: 2020年06月04日 第1页,共6页

佛山市南海毅兴铜业有限公司

中国广东省佛山市南海区狮山镇南海经济开发区北园北园中路18号

以下测试之样品是由申请者所提供及确认: 黄铜棒

SGS工作编号: CP20-026040 - GZ
型号: C3602
样品接收日期: 2020年06月01日
测试周期: 2020年06月01日 - 2020年06月04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、六价铬、多溴联苯(PBBs)、多溴二苯醚(PBDEs)、邻苯二甲酸酯(如邻苯二甲酸二丁酯(DBP)、邻苯二甲酸丁苄酯(BBP)、邻苯二甲酸二(2-乙基己基)酯(DEHP)和邻苯二甲酸二异丁酯(DIBP))的测试结果符合欧盟RoHS指令2011/65/EU附录II的修正指令(EU) 2015/863的限值要求。

通标标准技术服务有限公司广州分公司
授权签名

李嘉欣

Jessie Li 李嘉欣
批准签署人



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测试报告

No. CANEC2008422202

日期: 2020年06月04日 第2页,共6页

测试结果:

测试样品描述:

样品编号	SGS样品ID	描述
SN1	CAN20-084222.001	黄铜色金属

备注:

- (1) 1 mg/kg = 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附录II的修正指令(EU) 2015/863

测试方法: 参考IEC 62321-4:2013+A1:2017, IEC 62321-5:2013, IEC 62321-7-1:2015, IEC 62321-6:2015 和 IEC 62321-8:2017, 采用 ICP-OES, UV-Vis 和 GC-MS 进行分析。

测试项目	限值	单位	MDL	001
镉 (Cd)	100	mg/kg	2	17
铅 (Pb)	1,000	mg/kg	2	23398 [▲]
汞 (Hg)	1,000	mg/kg	2	ND
六价铬(Cr(VI))▼	-	µg/cm ²	0.10	ND
多溴联苯之和(PBBs)	1,000	mg/kg	-	ND
一溴联苯	-	mg/kg	5	ND
二溴联苯	-	mg/kg	5	ND
三溴联苯	-	mg/kg	5	ND
四溴联苯	-	mg/kg	5	ND
五溴联苯	-	mg/kg	5	ND
六溴联苯	-	mg/kg	5	ND
七溴联苯	-	mg/kg	5	ND
八溴联苯	-	mg/kg	5	ND
九溴联苯	-	mg/kg	5	ND
十溴联苯	-	mg/kg	5	ND
多溴二苯醚之和(PBDEs)	1,000	mg/kg	-	ND
一溴二苯醚	-	mg/kg	5	ND
二溴二苯醚	-	mg/kg	5	ND
三溴二苯醚	-	mg/kg	5	ND
四溴二苯醚	-	mg/kg	5	ND
五溴二苯醚	-	mg/kg	5	ND



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测试报告

No. CANEC2008422202

日期: 2020年06月04日 第3页,共6页

测试项目	限值	单位	MDL	001
六溴二苯醚	-	mg/kg	5	ND
七溴二苯醚	-	mg/kg	5	ND
八溴二苯醚	-	mg/kg	5	ND
九溴二苯醚	-	mg/kg	5	ND
十溴二苯醚	-	mg/kg	5	ND
邻苯二甲酸二丁酯 (DBP)	1000	mg/kg	50	ND
邻苯二甲酸丁苄酯(BBP)	1000	mg/kg	50	ND
邻苯二甲酸二(2-乙基己基)酯(DEHP)	1000	mg/kg	50	ND
邻苯二甲酸二异丁酯(DIBP)	1000	mg/kg	50	ND

备注:

(1)最大允许极限值引用自RoHS指令(EU) 2015/863。IEC 62321系列等同于 EN 62321 系列
https://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25

- (2) ▽a. 当六价铬的浓度高于0.13 μg/cm²时, 样品为阳性, 即含有六价铬;
 b. 当六价铬的浓度为ND(低于0.10 μg/cm²)时, 样品为阴性, 即未检测到六价铬;
 c. 当六价铬的浓度介于0.10 μg/cm²与0.13 μg/cm²之间时, 无法直接判定是否检测到六价铬, 因不同个体的样品表面差异可能会影响测定结果;
 由于未获知样品的存储条件和生产日期, 样品的六价铬测试结果仅能代表测试时样品含六价铬的状态。

备注▲: 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) [ANNEX III 6(c)]: 铜合金中的铅含量不得超过4%。

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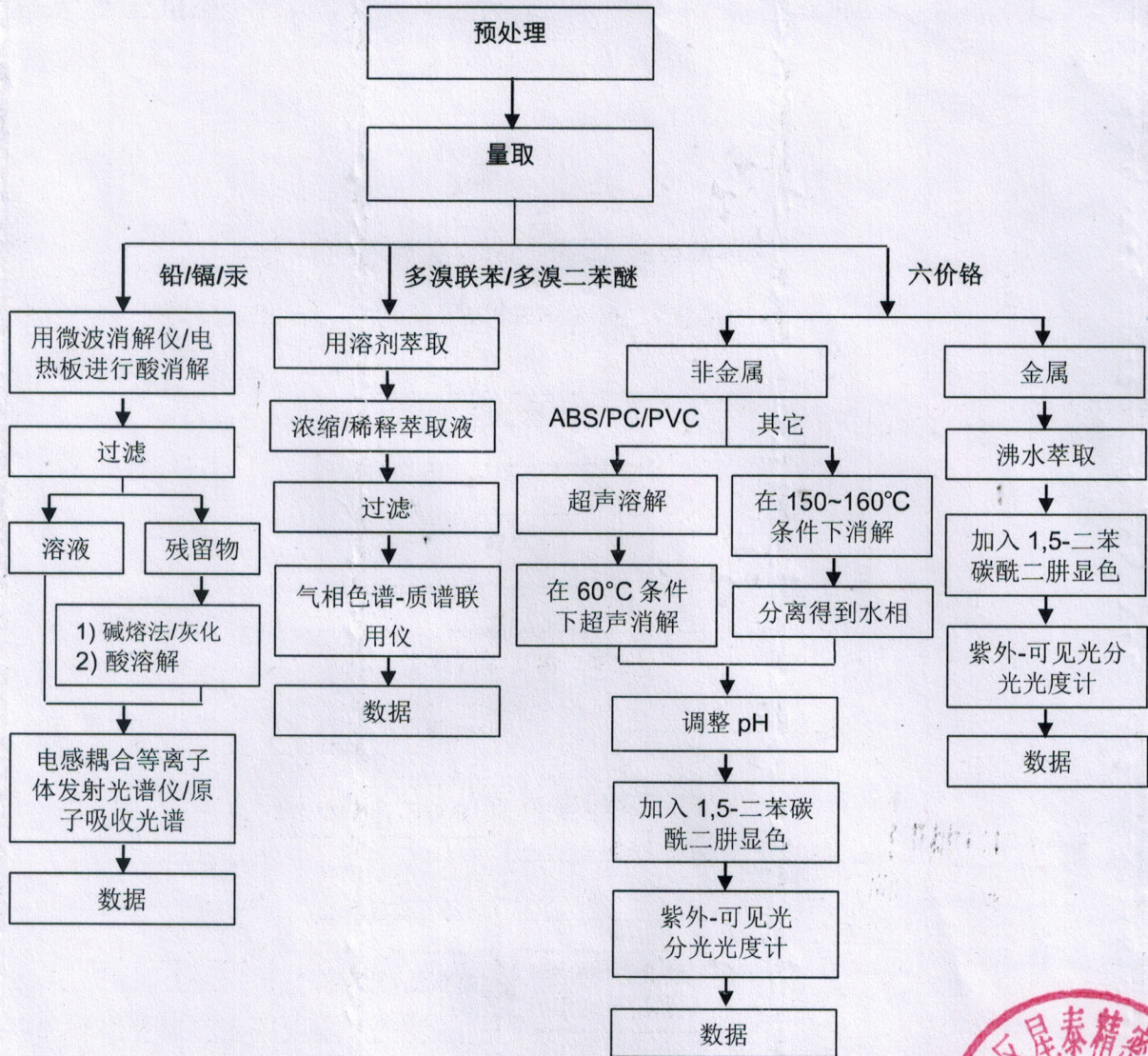
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附件

Pb/Cd/Hg/Cr⁶⁺/PBBs/PBDEs 测试流程图

1) 样品按照下述流程被完全消解(六价铬和多溴联苯/多溴二苯醚测试除外)。

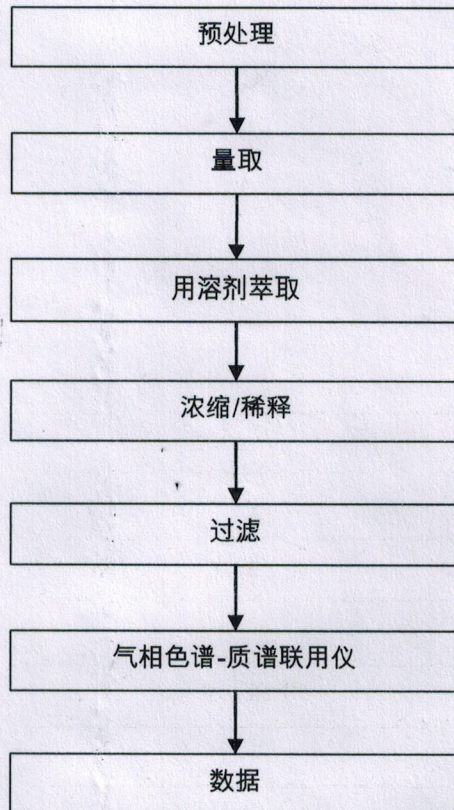


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附件

Phthalates 测试流程图



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测试报告

No. CANEC2008422202

日期: 2020年06月04日 第6页,共6页

样品照片:



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*** 报告完 ***



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SHENZHEN MINGSCHIN INDUSTRIAL MATERIAL CO., LTD.

深圳市明鑫工业材料有限公司

产品检测单

客户：旭全

产品名称	磷铜	产品规格	0.20mm
产品牌号	C5210 鑫科料	产品状态	SH
厚度公差	+0/-0.01	宽度公差	+0,-0.1

化学成份 (%)

执行标准：JIS H 3130:2012

化学元素	CAS.NO	实测含量	标准含量	化学元素	CAS.NO	实测含量	标准含量	化学元素	CAS.NO	实测含量	标准含量
铜 Cu	7440-50-8	余量	余量	锌 Zn	7440-66-6	0.15	≤0.2	铁 Fe	7439-89-6	0.017	≤0.1
锡 Sn	7440-31-5	7.46	7.0-9.0	磷 P	12185-10-3	0.15	0.03-0.35	铅 Pb	7439-92-1	0.002	≤0.02
锑 Sb	7440-36-0	-----	-----	硅 Si	7440-21-3	-----	-----	铋 Bi	7440-69-9	-----	-----
镍 Ni	7440-02-0	-----	-----	锰 Mn	7439-96-5	-----	-----	铝 Al	7429-90-5	-----	-----
银 Ag	7440-22-4	-----	-----	砷 As	13826-64-7	-----	-----	镉 Cd	7440-43-9	-----	-----
硫 S	7704-34-9	-----	-----	钴 Co	7440-48-4	-----	-----	铍 Be	7440-41-7	-----	-----
镁 Mg	7439-95-4	-----	-----	铬 Cr	7440-47-3	-----	-----	Cu+Sn+P	-----	99.77	≥99.7

物理性能：

测试项目	实测值	标准值	测试项目	实测值	标准值
抗拉强度 N/mm2	757	735-835	延伸率 (%)	/	
杯突值	—	—	维氏硬度 HV	239	* 230-250



生产日期：20180814

检验员：奉小勇

确认：靳云涛



Test Report

No. CANEC2003916107

Date: 03 Apr 2020

Page 1 of 7

SHENZHEN MINGSCHIN INDUSTRIAL MATERIAL CO.,LTD.

NO.4,FURONG THIRD ROAD,XINQIAO FURONG INDUSTRIAL ZONE,SHAJING TOWN,BAO'AN DISTRICT,SHENZHEN

The following sample(s) was/were submitted and identified on behalf of the clients as : C5210

SGS Job No. : CP20-011537 - SZ

Date of Sample Received : 27 Mar 2020

Testing Period : 27 Mar 2020 - 03 Apr 2020

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, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs) and Phthalates such as Bis(2-ethylhexyl) phthalate (DEHP) , Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) , and Diisobutyl phthalate (DIBP) comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

Signed for and on behalf of
SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch

Jessie Li

Jessie Li
Approved Signatory



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Member of the SGS Group (SGS SA)

Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	CAN20-039161.007	Copper-colored 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 (EU) 2015/863 amending Annex II to Directive 2011/65/EU

Test Method : With reference to IEC 62321-4:2013+A1:2017, IEC 62321-5:2013, IEC 62321-7-1:2015, IEC 62321-6:2015 and IEC 62321-8:2017, analyzed by ICP-OES, UV-Vis and GC-MS.

Test Item(s)	Limit	Unit	MDL	007
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1,000	mg/kg	2	17
Mercury (Hg)	1,000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))▼	-	µg/cm ²	0.10	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
Dibromodiphenyl ether	-	mg/kg	5	ND
Tribromodiphenyl ether	-	mg/kg	5	ND
Tetrabromodiphenyl ether	-	mg/kg	5	ND
Pentabromodiphenyl ether	-	mg/kg	5	ND



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Test Report

No. CANEC2003916107

Date: 03 Apr 2020

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<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>007</u>
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
Dibutyl phthalate (DBP)	1000	mg/kg	50	ND
Butyl benzyl phthalate (BBP)	1000	mg/kg	50	ND
Bis (2-ethylhexyl) phthalate (DEHP)	1000	mg/kg	50	ND
Diisobutyl Phthalates (DIBP)	1000	mg/kg	50	ND

Notes :

- (1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.IEC 62321 series is equivalent to EN 62321 series
https://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25
- (2) ▽ = a. The sample is positive for CrVI if the CrVI concentration is greater than 0.13 µg/cm². The sample coating is considered to contain CrVI
 - b. The sample is negative for CrVI if CrVI is ND (concentration less than 0.10 µg/cm²). The coating is considered a non-CrVI based coating
 - c. The result between 0.10 µg/cm² and 0.13 µg/cm² is considered to be inconclusive - unavoidable coating variations may influence the determination
 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.

Elementary Analysis

Test Method : SGS In-house method (GZTC CHEM-TOP-009-01, with reference to EPA 3050B:1996), analysis was performed by ICP-OES.

<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>007</u>
Beryllium (Be)	mg/kg	5	ND



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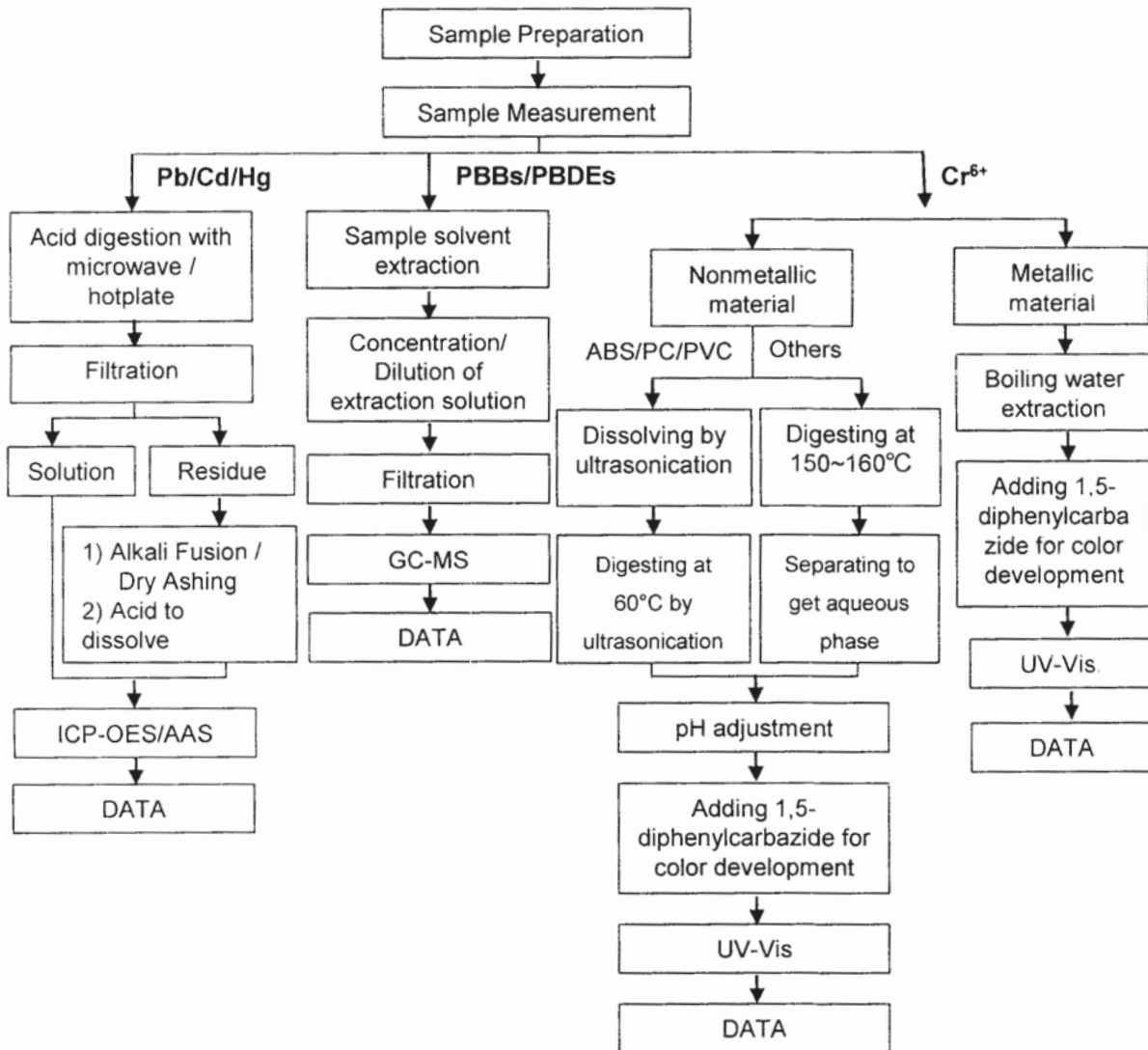
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Pb/Cd/Hg/Cr⁶⁺/PBBs/PBDEs Testing Flow Chart

1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ and PBBs/PBDEs test method excluded).



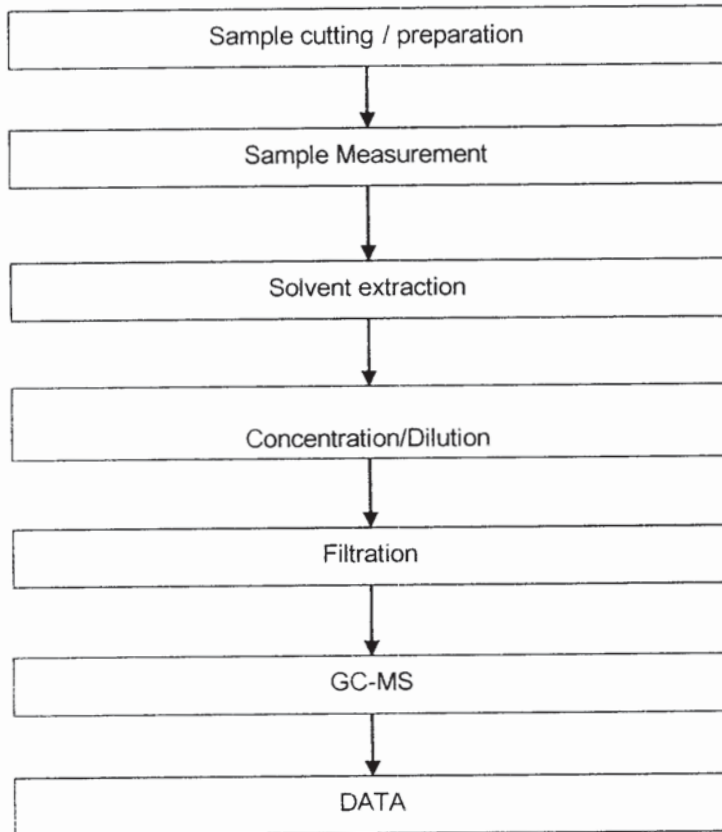
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Phthalates Testing Flow Chart



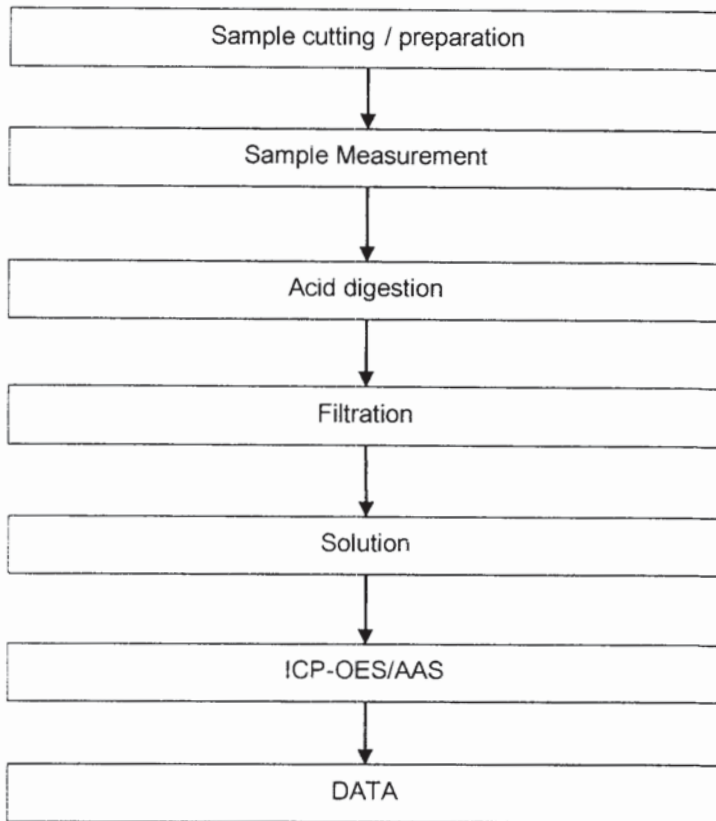
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Elementary Testing Flow Chart

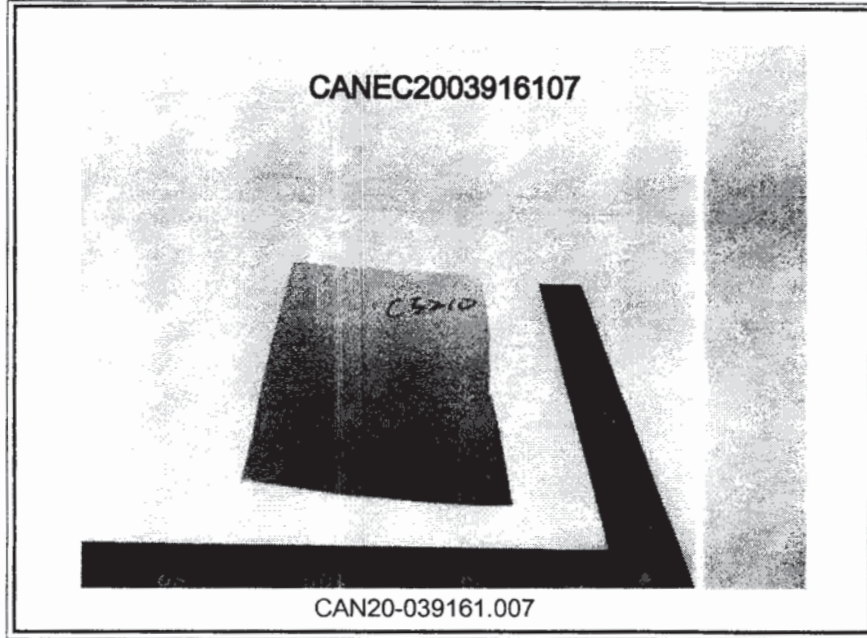


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Sample photo:



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SHENZHEN MINGSCHIN INDUSTRIAL MATERIAL CO., LTD.

深圳市明鑫工业材料有限公司

产品检测单

客户：旭全

产品名称	黄铜	产品规格	0.30mm
产品牌号	C2680 兴业料	产品状态	H
厚度公差	+0/-0.015	宽度公差	+0/-0.1

化学成份 (%)

执行标准：JIS H 3100:2012

化学元素	CAS.NO	实测含量	标准含量	化学元素	CAS.NO	实测含量	标准含量	化学元素	CAS.NO	实测含量	标准含量
铜 Cu	7440-50-8	65.37	64.0-68.0	锌 Zn	7440-66-6	余量	余量	铁 Fe	7439-89-6	0.007	≤0.05
锡 Sn	7440-31-5	-----	-----	磷 P	12185-10-3	-----	-----	铅 Pb	7439-92-p1	0.002	≤0.05
锑 Sb	7440-36-0	-----	-----	硅 Si	7440-21-3	-----	-----	铋 Bi	7440-69-9	-----	-----
镍 Ni	7440-02-0	-----	-----	锰 Mn	7439-96-5	-----	-----	铝 Al	7429-90-5	-----	-----
银 Ag	7440-22-4	-----	-----	砷 As	13826-64-7	-----	-----	镉 Cd	7440-43-9	-----	-----
硫 S	7704-34-9	-----	-----	钴 Co	7440-48-4	-----	-----	碳 C	7440-44-0	-----	-----
镁 Mg	7439-95-4	-----	-----	铬 Cr	7440-47-3	-----	-----	杂质总和	-----	-----	-----

物理性能：

测试项目	实测值	标准值	测试项目	实测值	标准值
抗拉强度 N/mm2	463	410-540	延伸率 (%)	/	/
杯突值	—	—	维氏硬度 HV	145	140-160



生产日期：20180814

检验员：奉小勇

确认：靳云涛

Test Report

No. CANEC2002040001

Date: 09 Mar 2020

Page 1 of 7

SHENZHEN MINGSCHIN INDUSTRIAL MATERIAL CO.,LTD.

NO.4,FURONG THIRD ROAD,XINQIAO FURONG INDUSTRIAL ZONE,SHAJING TOWN,BAO'AN DISTRICT,SHENZHEN

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

SGS Job No. : CP20-004988 - SZ

Date of Sample Received : 03 Mar 2020

Testing Period : 03 Mar 2020 - 09 Mar 2020

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, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs) and Phthalates such as Bis(2-ethylhexyl) phthalate (DEHP) , Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) , and Diisobutyl phthalate (DIBP) comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

Signed for and on behalf of
SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch



Zm guan
Approved Signatory



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Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	CAN20-020400.001	Brassy 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 (EU) 2015/863 amending Annex II to Directive 2011/65/EU

Test Method : With reference to IEC 62321-4:2013+A1:2017, IEC 62321-5:2013, IEC 62321-7-1:2015, IEC 62321-6:2015 and IEC 62321-8:2017, analyzed by ICP-OES, UV-Vis and GC-MS.

Test Item(s)	Limit	Unit	MDL	001
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1,000	mg/kg	2	61
Mercury (Hg)	1,000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))▼	-	µg/cm ²	0.10	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
Dibromodiphenyl ether	-	mg/kg	5	ND
Tribromodiphenyl ether	-	mg/kg	5	ND
Tetrabromodiphenyl ether	-	mg/kg	5	ND
Pentabromodiphenyl ether	-	mg/kg	5	ND



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Test Report

No. CANEC2002040001

Date: 09 Mar 2020

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<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
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
Dibutyl phthalate (DBP)	1000	mg/kg	50	ND
Butyl benzyl phthalate (BBP)	1000	mg/kg	50	ND
Bis (2-ethylhexyl) phthalate (DEHP)	1000	mg/kg	50	ND
Diisobutyl Phthalates (DIBP)	1000	mg/kg	50	ND

Notes :

- (1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.IEC 62321 series is equivalent to EN 62321 series
https://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25
- (2) ▽= a. The sample is positive for CrVI if the CrVI concentration is greater than 0.13 µg/cm². The sample coating is considered to contain CrVI
 b. The sample is negative for CrVI if CrVI is ND (concentration less than 0.10 µg/cm²). The coating is considered a non-CrVI based coating
 c. The result between 0.10 µg/cm² and 0.13 µg/cm² is considered to be inconclusive - unavoidable coating variations may influence the determination
 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.

Elementary Analysis

Test Method : SGS In-house method (GZTC CHEM-TOP-009-01, with reference to EPA 3050B:1996), analysis was performed by ICP-OES.

<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Beryllium (Be)	mg/kg	5	ND



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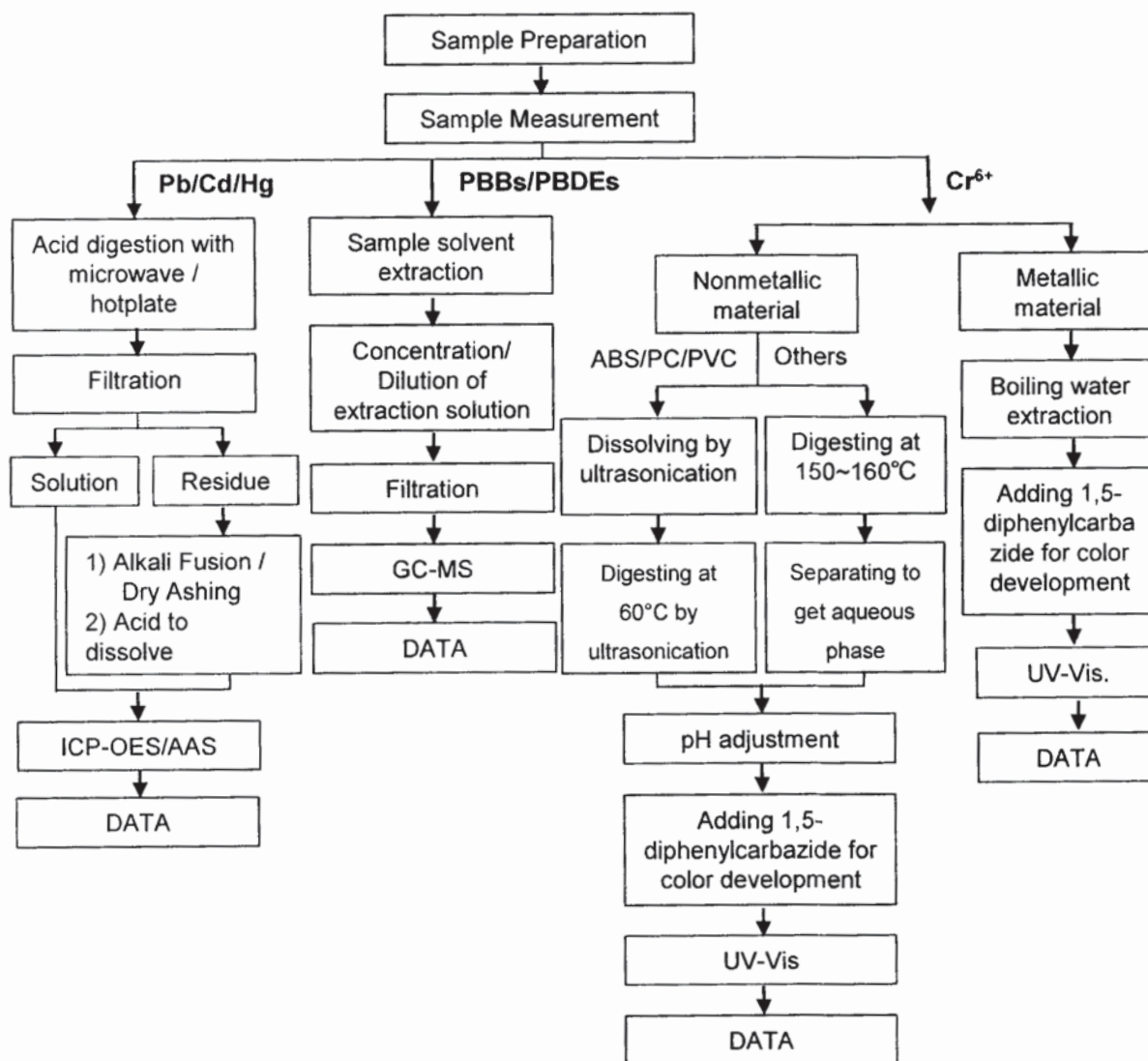
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Pb/Cd/Hg/Cr⁶⁺/PBBs/PBDEs Testing Flow Chart

1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ and PBBs/PBDEs test method excluded).



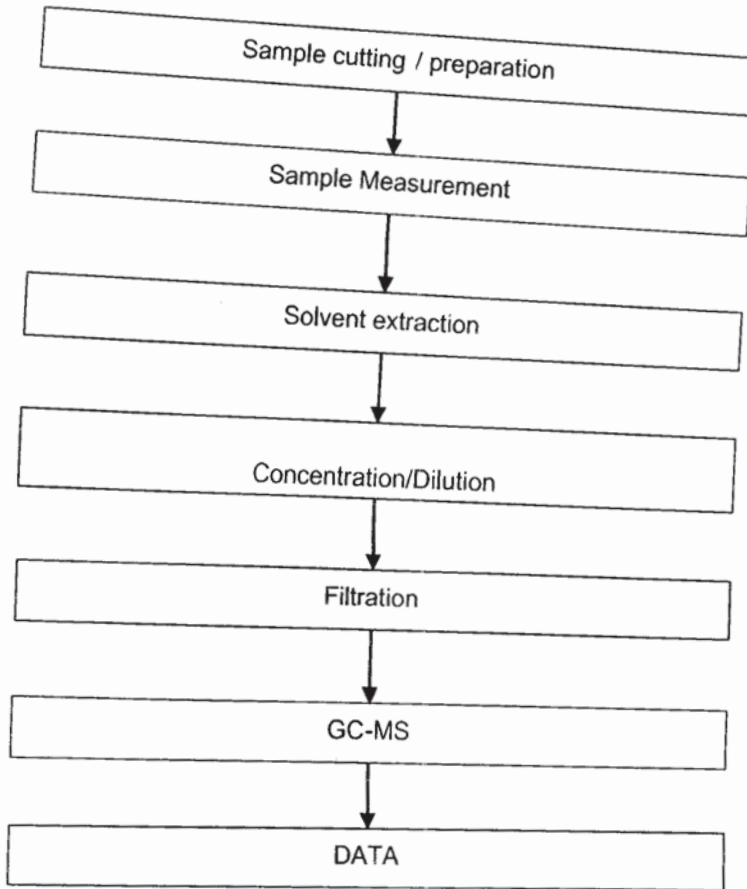
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Phthalates Testing Flow Chart



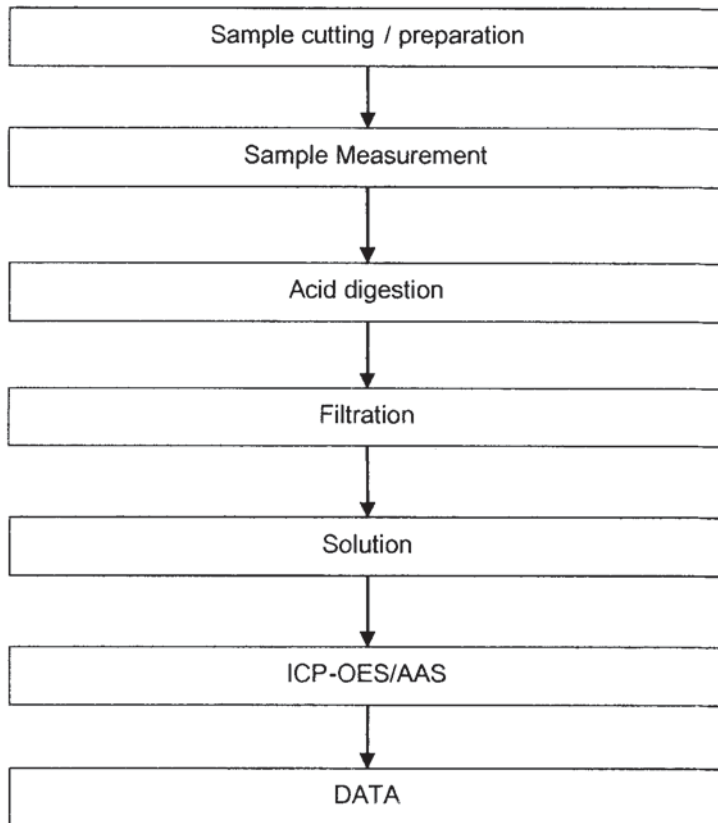
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Elementary Testing Flow Chart

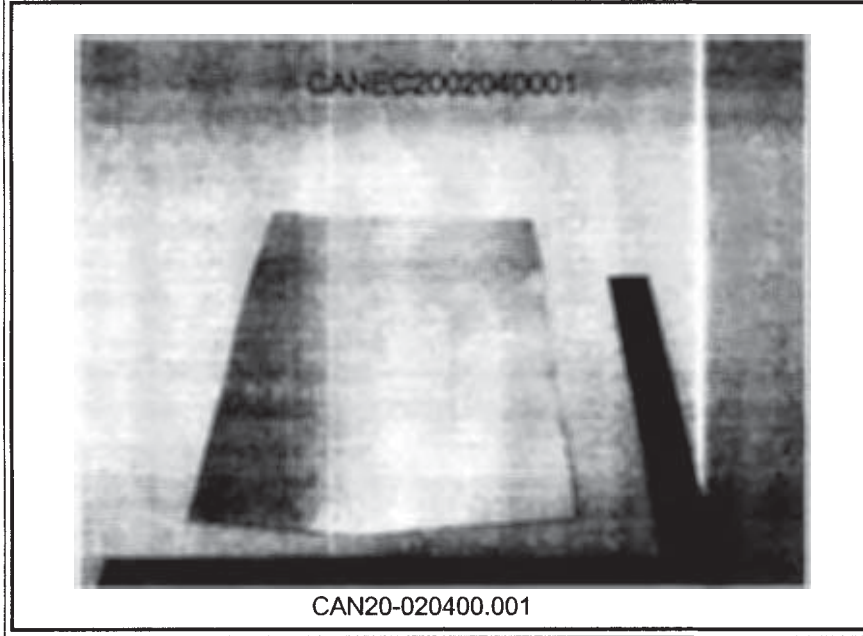


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检测报告 Test Report



报告编号 A2200360964101002E
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报告抬头公司名称 深圳市和美科技有限公司
Company Name SHENZHEN HEMEI TECHNOLOGY CO.,LTD.
shown on Report
地 址 深圳市龙岗区坪地街道四方埔村1号银台和美工业园二期一栋
Address HEMEI INDUSTRIAL PARK ,SIFANGPU VILLAGE 1ST, PINGDI STREET ,
LONGGANG DISTRICT , SHENZHEN , PR. CHINA

以下测试之样品及样品信息由申请者提供并确认
The following sample(s) and sample information was/were submitted and identified by/on the behalf of the applicant

样品名称 氨基磺酸镍电镀层
Sample Name Nickel sulfamate plating
材料名称 氨基磺酸镍镀层
Material Nickel sulfamate coating
样品接收日期 2020.10.16
Sample Received Date Oct. 16, 2020
样品检测日期 2020.10.16-2020.10.21
Testing Period Oct. 16, 2020 to Oct. 21, 2020

检测要求 根据客户要求, 对所提交样品中的铅(Pb), 镉(Cd), 汞(Hg), 六价铬(Cr(VI)), 多溴联苯(PBBs), 多溴二苯醚(PBDEs), 邻苯二甲酸酯(DBP, BBP, DEHP, DIBP), 铍(Be), 锑(Sb), 氟(F), 氯(Cl), 溴(Br), 碘(I), 全氟辛酸磺酸(PFOS), 全氟辛酸(PFOA)进行测试。

Test Requested As specified by client, to test Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)), Polybrominated Biphenyls(PBBs), Polybrominated Diphenyl Ethers (PBDEs), Phthalates (DBP, BBP, DEHP, DIBP), Beryllium(Be), Antimony(Sb), Fluorine (F), Chlorine (Cl), Bromine (Br), Iodine (I), Perfluorooctane Sulfonates(PFOS) Perfluorooctanoic Acid(PFOA) in the submitted sample(s).

检测依据/检测结果 请参见下页。
Test Method/Test Result(s) Please refer to the following page(s).



主 检 赵超男
郑晴涛
技术经理 Technical Manager

审 核 尹丹娜
Reviewed by
日 期 2020.10.21
Date

No. R338851387
广东省深圳市宝安区新安街道兴东社区华测检测大楼

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检测依据 Test Method

测试项目 Test Item(s)	测试方法 Test Method	测试仪器 Measured Equipment(s)
铅 Lead(Pb)	IEC 62321-5:2013	ICP-OES
镉 Cadmium(Cd)	IEC 62321-5:2013	ICP-OES
汞 Mercury(Hg)	IEC 62321-4:2013+AMD1:2017 CSV	ICP-OES
六价铬 Hexavalent Chromium(Cr(VI))	IEC 62321-7-1:2015	UV-Vis
多溴联苯 Polybrominated Biphenyls(PBBs)	IEC 62321-6:2015	GC-MS
多溴二苯醚 Polybrominated Diphenyl Ethers (PBDEs)	IEC 62321-6:2015	GC-MS
邻苯二甲酸酯 Phthalates (DBP, BBP, DEHP, DIBP)	IEC 62321-8:2017	GC-MS
铍 Beryllium(Be)	参考US EPA 3050B:1996 & US EPA 6010D:2018 Refer to US EPA 3050B:1996 & US EPA 6010D:2018	ICP-OES
锑 Antimony(Sb)	参考US EPA 3050B:1996 & US EPA 6010D:2018 Refer to US EPA 3050B:1996 & US EPA 6010D:2018	ICP-OES
氟 Fluorine (F)	参考EN 14582:2016 Refer to EN 14582:2016	IC
氯 Chlorine (Cl)	参考EN 14582:2016 Refer to EN 14582:2016	IC
溴 Bromine (Br)	参考EN 14582:2016 Refer to EN 14582:2016	IC
碘 Iodine (I)	参考EN 14582:2016 Refer to EN 14582:2016	IC
全氟辛酸磺酸 Perfluorooctane Sulfonates(PFOS)	参考DIN CEN/TS 15968:2010 Refer to DIN CEN/TS 15968:2010	LC-MS-MS
全氟辛酸 Perfluorooctanoic Acid(PFOA)	参考DIN CEN/TS 15968:2010 Refer to DIN CEN/TS 15968:2010	LC-MS-MS

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检测结果 Test Result(s)

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
铅 Lead(Pb)	N.D.	2 mg/kg
镉 Cadmium(Cd)	N.D.	2 mg/kg
汞 Mercury(Hg)	N.D.	2 mg/kg
六价铬 Hexavalent Chromium(Cr(VI))	N.D. ▼	0.10 µg/cm ² (LOQ)

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
多溴联苯 Polybrominated Biphenyls(PBBs)		
一溴联苯 Monobromobiphenyl	N.D.	5 mg/kg
二溴联苯 Dibromobiphenyl	N.D.	5 mg/kg
三溴联苯 Tribromobiphenyl	N.D.	5 mg/kg
四溴联苯 Tetrabromobiphenyl	N.D.	5 mg/kg
五溴联苯 Pentabromobiphenyl	N.D.	5 mg/kg
六溴联苯 Hexabromobiphenyl	N.D.	5 mg/kg
七溴联苯 Heptabromobiphenyl	N.D.	5 mg/kg
八溴联苯 Octabromobiphenyl	N.D.	5 mg/kg
九溴联苯 Nonabromobiphenyl	N.D.	5 mg/kg
十溴联苯 Decabromobiphenyl	N.D.	5 mg/kg

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
多溴二苯醚 Polybrominated Diphenyl Ethers (PBDEs)		
一溴二苯醚 Monobromodiphenyl ether	N.D.	5 mg/kg
二溴二苯醚 Dibromodiphenyl ether	N.D.	5 mg/kg
三溴二苯醚 Tribromodiphenyl ether	N.D.	5 mg/kg
四溴二苯醚 Tetrabromodiphenyl ether	N.D.	5 mg/kg
五溴二苯醚 Pentabromodiphenyl ether	N.D.	5 mg/kg
六溴二苯醚 Hexabromodiphenyl ether	N.D.	5 mg/kg
七溴二苯醚 Heptabromodiphenyl ether	N.D.	5 mg/kg
八溴二苯醚 Octabromodiphenyl ether	N.D.	5 mg/kg
九溴二苯醚 Nonabromodiphenyl ether	N.D.	5 mg/kg
十溴二苯醚 Decabromodiphenyl ether	N.D.	5 mg/kg

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检测结果 Test Result(s)

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
邻苯二甲酸酯 Phthalates (DBP, BBP, DEHP, DIBP)		
邻苯二甲酸二丁酯 Dibutyl phthalate(DBP) CAS#:84-74-2	N.D.	50 mg/kg
邻苯二甲酸丁基苯基酯 Butyl benzyl phthalate(BBP) CAS#:85-68-7	N.D.	50 mg/kg
邻苯二甲酸二(2-乙基)己酯 Di-(2-ethylhexyl) phthalate(DEHP) CAS#:117-81-7	N.D.	50 mg/kg
邻苯二甲酸二异丁酯 Diisobutyl phthalate(DIBP) CAS#:84-69-5	N.D.	50 mg/kg
测试项目 Tested Item(s)		
铍 Beryllium(Be)	N.D.	2 mg/kg
锑 Antimony(Sb)	N.D.	5 mg/kg
测试项目 Tested Item(s)		
氟 Fluorine(F)	N.D.	10 mg/kg
氯 Chlorine(Cl)	N.D.	10 mg/kg
溴 Bromine(Br)	N.D.	10 mg/kg
碘 Iodine(I)	N.D.	10 mg/kg
测试项目 Tested Item(s)		
全氟辛酸 Perfluorooctanoic Acid(PFOA)	N.D.	0.01 mg/kg
测试项目 Tested Item(s)		
全氟辛烷磺酸 Perfluorooctane Sulfonates(PFOS)	N.D.	0.01 mg/kg

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样品/部位描述 银色金属
Sample/Part Description Silvery metal

备注: 对于检测铅, 镉, 汞, 铍, 锑之样品已完全溶解。
-N.D. = 未检出 (小于方法检出限或定量限)
-mg/kg = ppm = 百万分之一
-LOQ = 定量限, 六价铬的定量限为0.10 $\mu\text{g}/\text{cm}^2$
-√六价铬浓度小于0.10 $\mu\text{g}/\text{cm}^2$, 样品未检出六价铬。

Remark: The sample(s) had been dissolved totally tested for Lead, Cadmium, Mercury, Beryllium, Antimony.

-MDL = Method Detection Limit

-N.D. = Not Detected (<MDL or LOQ)

-mg/kg = ppm = parts per million

-LOQ = Limit of Quantification, The LOQ of Hexavalent chromium is 0.10 $\mu\text{g}/\text{cm}^2$

-√The sample is negative for Cr(VI) – The Cr(VI) concentration is below 0.10 $\mu\text{g}/\text{cm}^2$. The coating is considered a non-Cr(VI) based coating.

注释: 本报告中的数据结果供科研、教学、企业内部质量控制、企业产品研发等目的用。

Note: The testing data and result(s) in this report is(are) just for scientific research, education, internal quality control and product development etc.

1/2/2010 07:10:00

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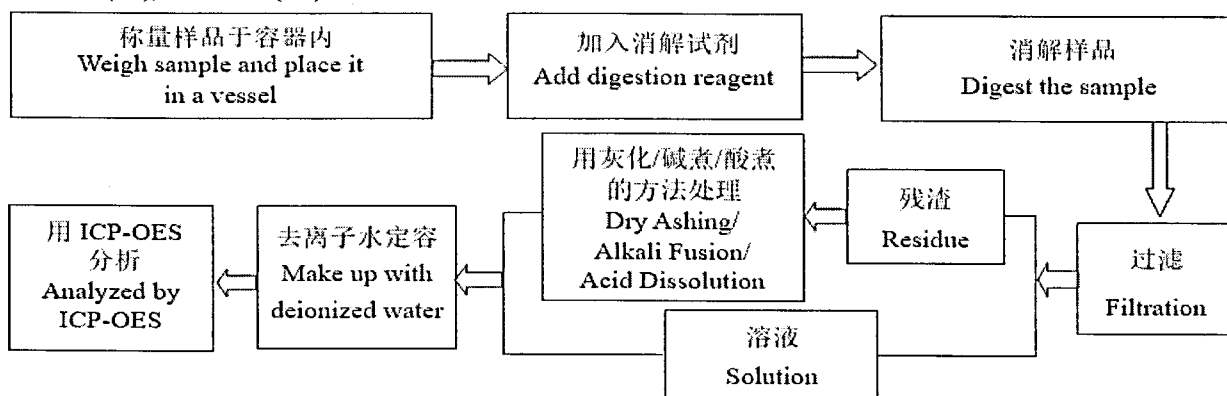
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检测流程 Test Process

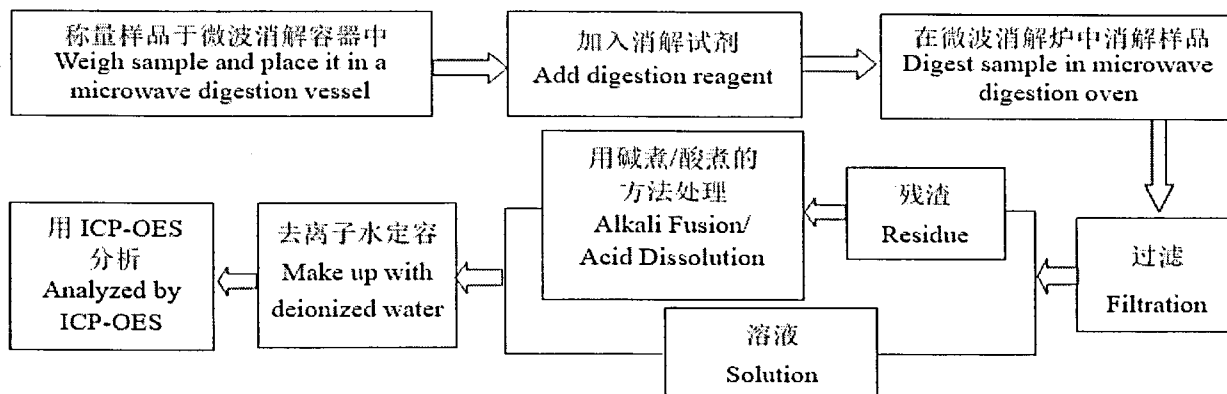
1. 铅(Pb), 镉(Cd)

Lead(Pb), Cadmium(Cd)



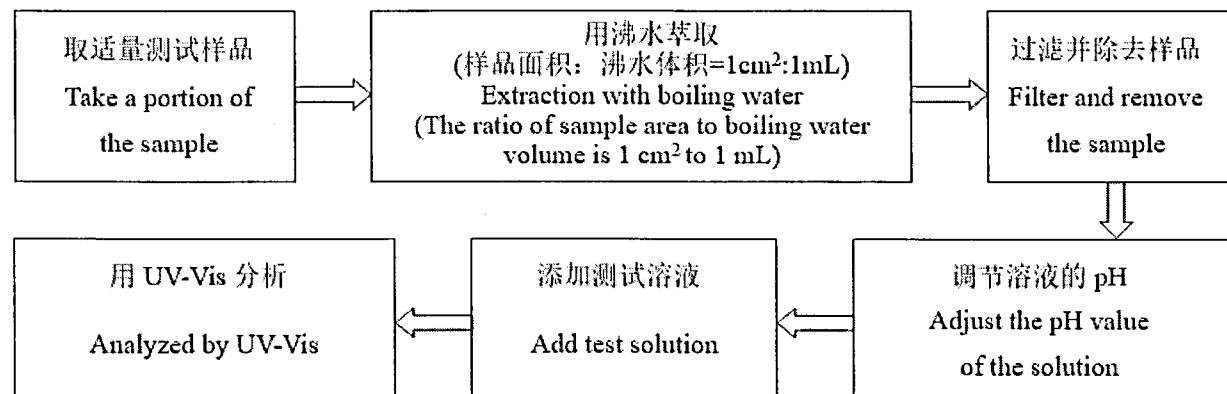
2. 汞(Hg)

Mercury(Hg)



3. 六价铬(Cr(VI))

Hexavalent Chromium(Cr(VI))



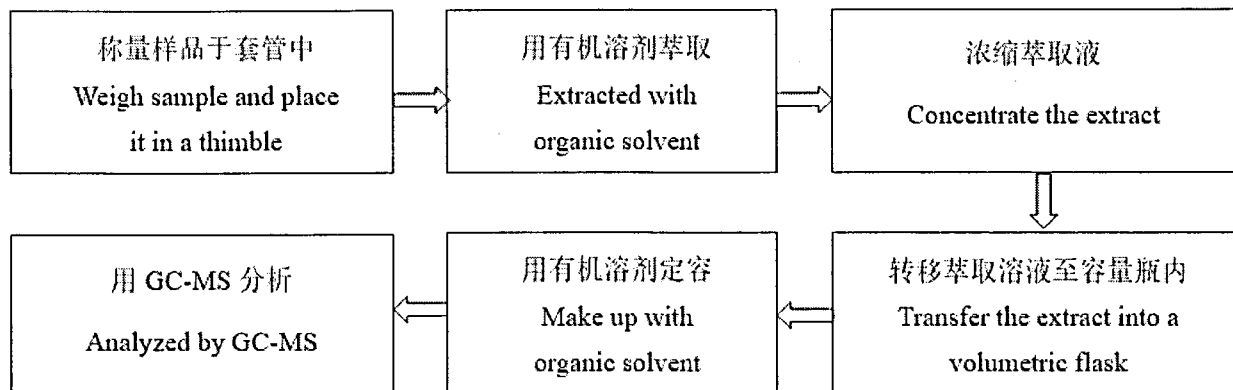
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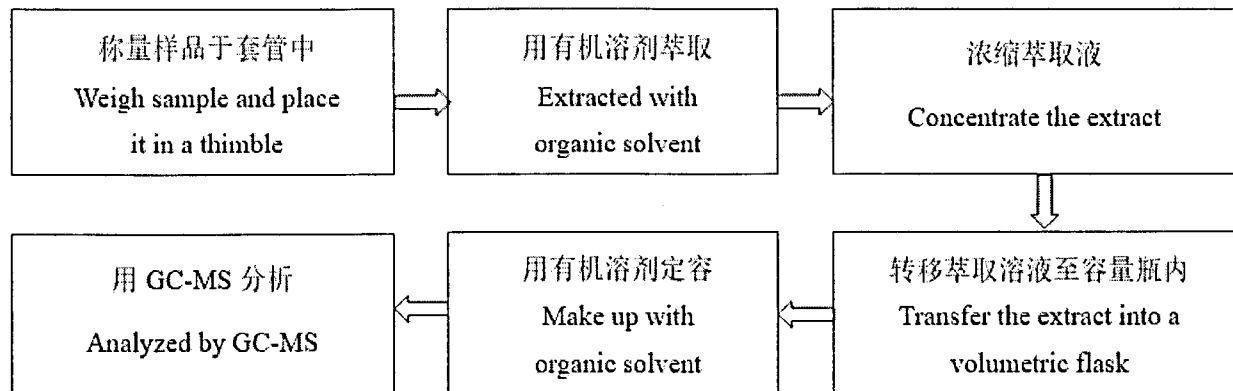
4. 多溴联苯(PBBs), 多溴二苯醚(PBDEs)

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



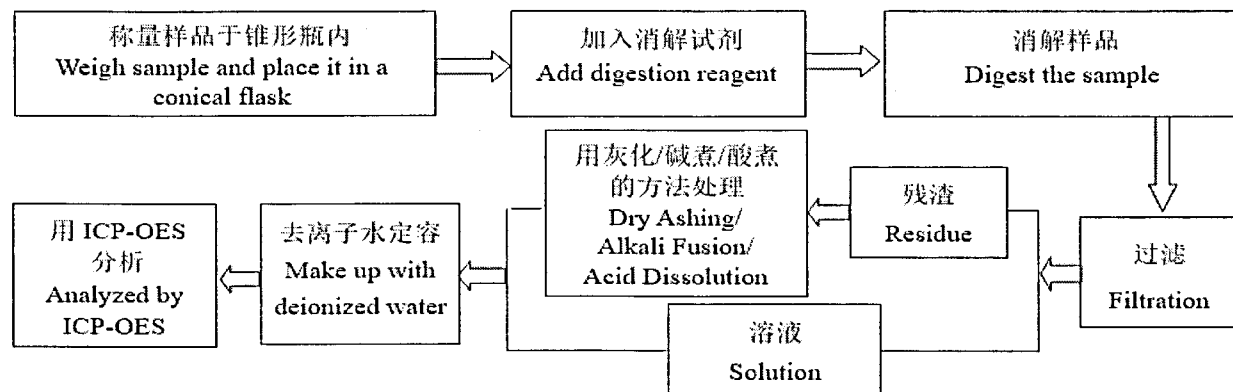
5. 邻苯二甲酸酯(DBP, BBP, DEHP, DIBP)

Phthalates (DBP, BBP, DEHP, DIBP)



6. 铍(Be), 锑(Sb)

Beryllium(Be), Antimony(Sb)



AWA 4/1

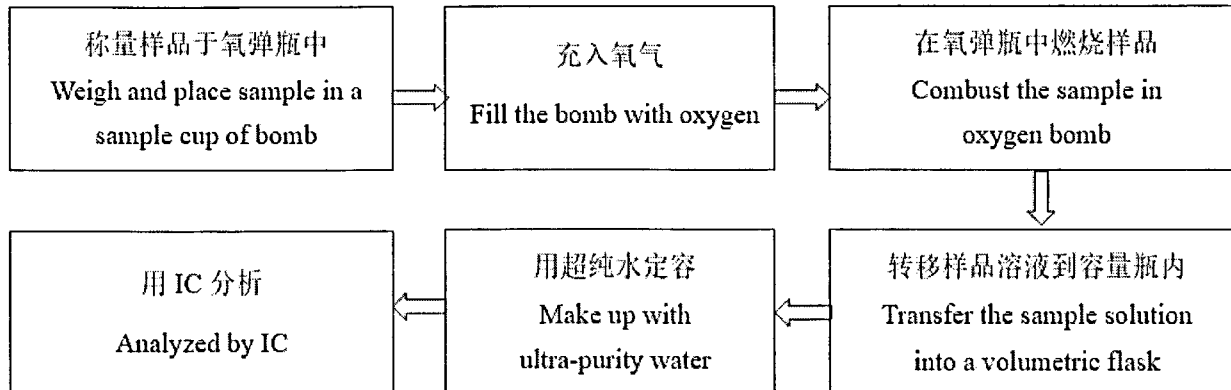
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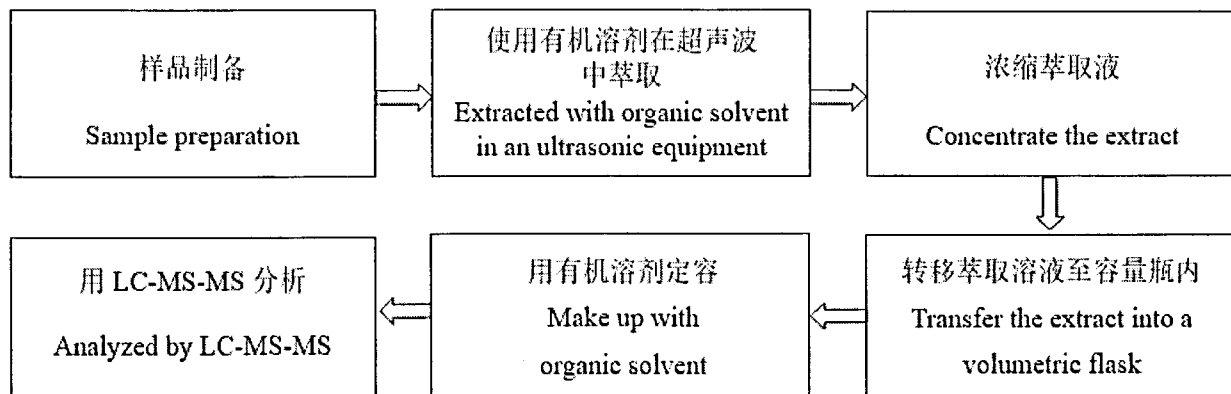
7. 氟(F), 氯(Cl), 溴(Br), 碘(I)

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



8. 全氟辛酸(PFOA), 全氟辛烷磺酸(PFOS)

Perfluorooctanoic Acid(PFOA), Perfluorooctane Sulfonates(PFOS)



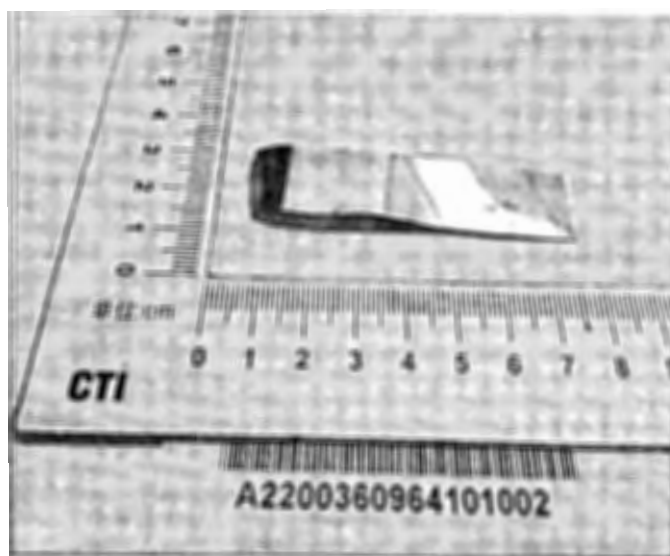
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样品图片 Photo(s) of the sample(s)



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Test Report

No. CANEC2003673608

Date: 30 Apr 2020

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DONGGUAN CHENGXU HRDWARE PRODUCTS CO.,LTD

LINHAI INDUSTRIAL ZONE FENGHUANG MOUNTAIN SHAJIAO HUMEN TOWN DONGGUAN CITY

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

SGS Job No. : CP20-010732 - GZ

Manufacturer : DONGGUAN CHENGXU HRDWARE PRODUCTS CO.,LTD

Date of Sample Received : 25 Mar 2020

Testing Period : 25 Mar 2020 - 24 Apr 2020

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, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs) and Phthalates such as Bis(2-ethylhexyl) phthalate (DEHP) , Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) , and Diisobutyl phthalate (DIBP) comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

Signed for and on behalf of
SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch

Violet, Shi
Approved Signatory



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Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	CAN20-036736.015	Silver-white 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 (EU) 2015/863 amending Annex II to Directive 2011/65/EU

Test Method : With reference to IEC 62321-4:2013+A1:2017, IEC 62321-5:2013, IEC 62321-7-1:2015, IEC 62321-6:2015 and IEC 62321-8:2017, analyzed by ICP-OES , UV-Vis and GC-MS .

Test Item(s)	Limit	Unit	MDL	015
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1,000	mg/kg	2	ND
Mercury (Hg)	1,000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))▼	-	µg/cm ²	0.10	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
Dibromodiphenyl ether	-	mg/kg	5	ND
Tribromodiphenyl ether	-	mg/kg	5	ND
Tetrabromodiphenyl ether	-	mg/kg	5	ND
Pentabromodiphenyl ether	-	mg/kg	5	ND



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Test Report

No. CANEC2003673608

Date: 30 Apr 2020

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Test Item(s)	Limit	Unit	MDL	015
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
Dibutyl phthalate (DBP)	1000	mg/kg	50	ND
Butyl benzyl phthalate (BBP)	1000	mg/kg	50	ND
Bis (2-ethylhexyl) phthalate (DEHP)	1000	mg/kg	50	ND
Diisobutyl Phthalates (DIBP)	1000	mg/kg	50	ND

Notes :

- (1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.IEC 62321 series is equivalent to EN 62321 series
https://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25
- (2) ▽= a. The sample is positive for CrVI if the CrVI concentration is greater than 0.13 µg/cm². The sample coating is considered to contain CrVI
 b. The sample is negative for CrVI if CrVI is ND (concentration less than 0.10 µg/cm²). The coating is considered a non-CrVI based coating
 c. The result between 0.10 µg/cm² and 0.13 µg/cm² is considered to be inconclusive - unavoidable coating variations may influence the determination
 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.

Perfluorooctanoic acid (PFOA) & Perfluorooctane sulfonates (PFOS)

Test Method : With reference to CEN/TS15968:2010, analysis was performed by LC-MS or LC-MS/MS.

Test Item(s)	CAS NO.	Unit	MDL	015
Perfluorooctanoic acid (PFOA) and its salts+	-	mg/kg	0.01	ND
Perfluorooctane sulfonates (PFOS) and its derivatives	-	mg/kg	0.01	ND

Notes :

^ PFOS refer to Perfluorooctanesulfonic acid and its derivatives including Perfluorooctanesulfonic acid, Perfluorooctane sulfonamide, N-Methylperfluorooctane sulfonamide, N-Ethylperfluorooctane sulfonamide, N-Methylperfluorooctane sulfonamidoethanol and N-Ethylperfluorooctane sulfonamidoethanol.



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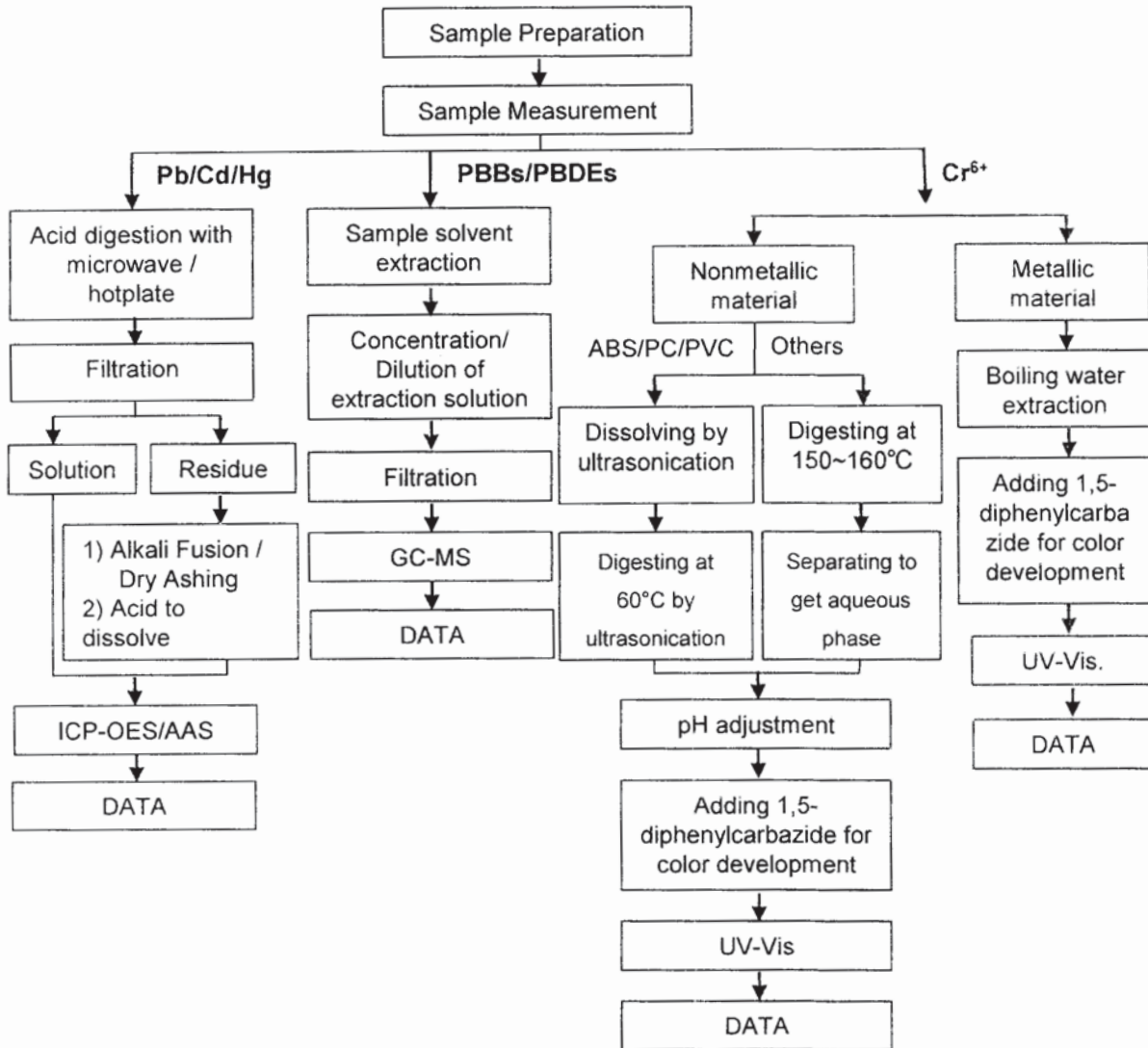
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Pb/Cd/Hg/Cr⁶⁺/PBBs/PBDEs Testing Flow Chart

1) These samples were dissolved totally by pre-conditioning method according to below flow chart.
(Cr⁶⁺ and PBBs/PBDEs test method excluded).

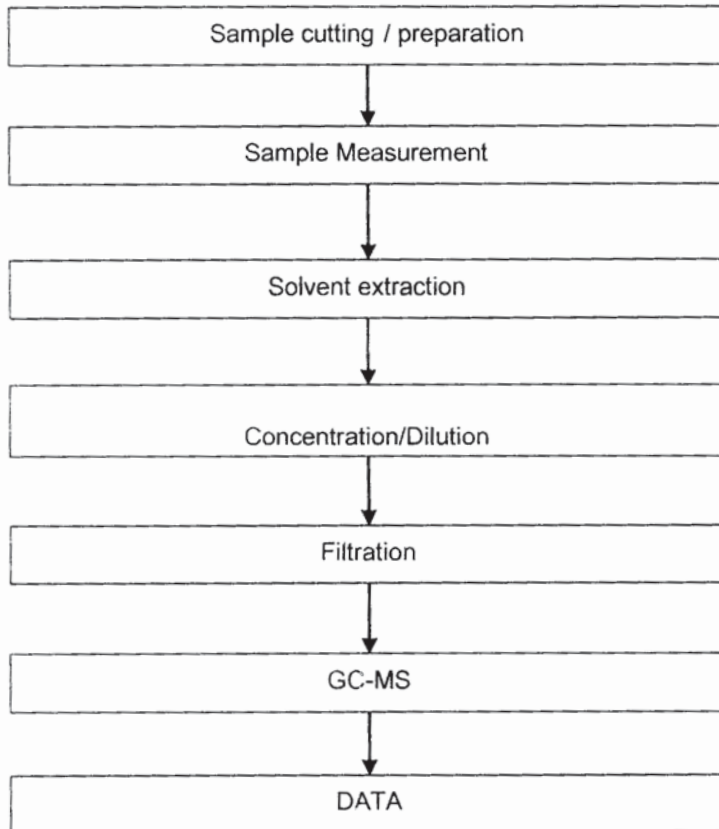


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Phthalates Testing Flow Chart



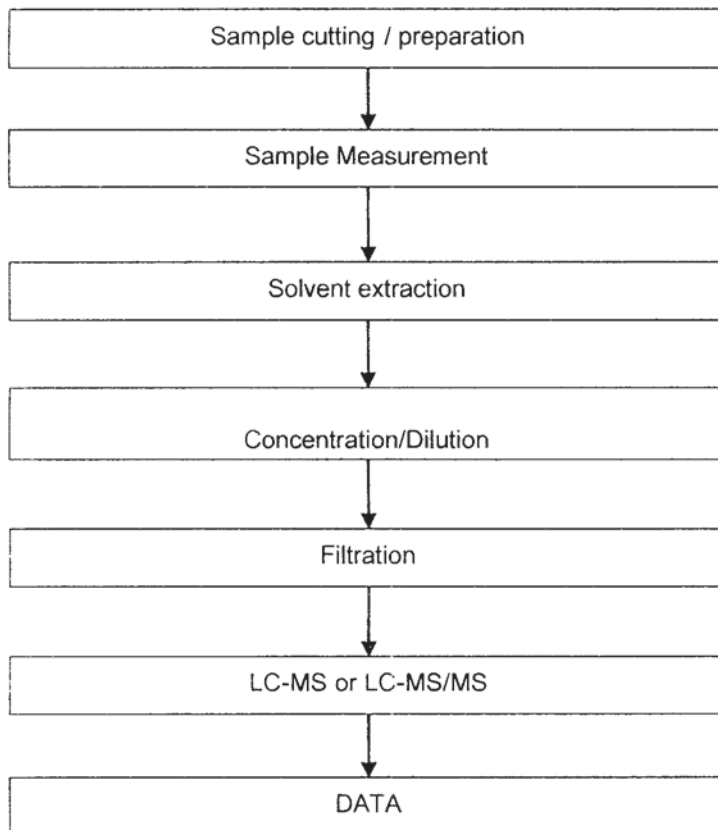
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PFOA / PFOS Testing Flow Chart

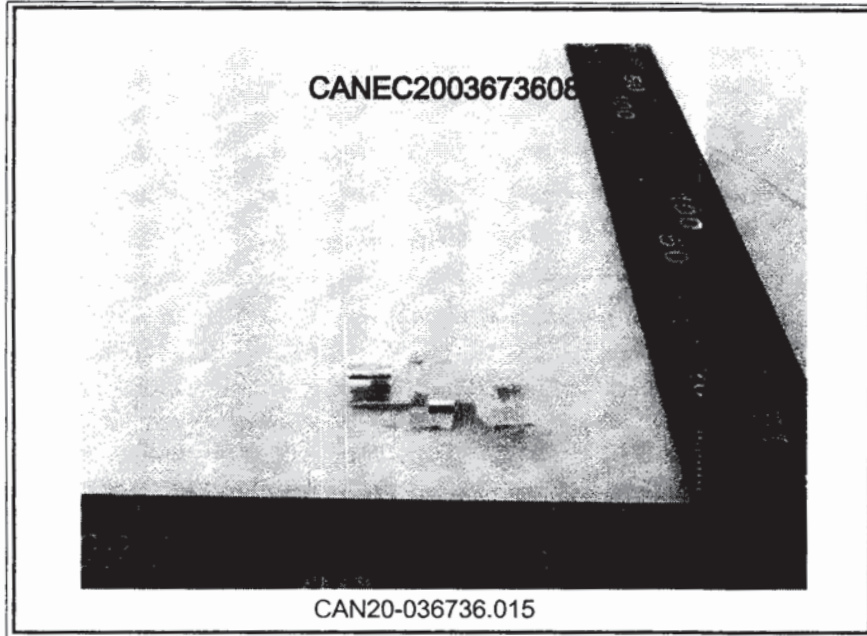


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*** End of Report ***



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TSCA PBT 符合性聲明書

TSCA PBT Declaration of Conformance



敬請 貴公司 知悉與回應如下：

因應美國環保署(EPA)於 2020 年 12 月更新美國 TSCA(Toxic Substances Control Act)毒性物質管理法第 6(h) 節 5 項具有 PBT(Persistent、Bio-accumulative and Toxic) 毒性的化學物質管理要求，請貴公司配合回應：交貨與研揚的材料，成品，須符合此法規更新。

物質名稱	限制要求	豁免要求
Decabromodiphenyl ether (DecaBDE) 十溴二苯醚 CAS No. 1163-19-5	<ul style="list-style-type: none"> - 2022 年 7 月 6 日之後，禁止用於酒店業的添加 DecaBDE 窗簾的製造、加工和商業分銷 - 2021 年 3 月 8 日之後，禁止製造和加工其他含 DecaBDE 的物品 - 2022 年 1 月 6 日之後，禁止進行商業分銷 	商業上用於從物品中回收含 DecaBDE 的塑料以及由這種回收塑料製成的含 DecaBDE 的製品的商業加工和分銷，在回收或生產過程中未添加新的 DecaBDE
Phenol, isopropylated phosphate (3:1) [PIP (3:1)] 異丙基化磷酸三苯酯 CAS No. 68937-41-7	<ul style="list-style-type: none"> - 2022 年 1 月 1 日之後，禁止含 PIP (3:1) 照相印 刷物品的商業加工和分銷 - 2021 年 3 月 8 日之後，禁止其他含 PIP (3:1)物 品的商業加工和分銷 	<ul style="list-style-type: none"> - 用於從含 PIP (3:1)的物品中回收的塑料，其中在回收過程中未添加新的 PIP (3:1) - 從包含 PIP (3:1)的產品或物品中回收的塑料製成的成品，其中在生產由再生塑料製成的物品時未添加新的 PIP (3:1)
Pentachlorothiophenol (PCTP) 五氯硫酚 CAS No. 133-49-3	<ul style="list-style-type: none"> - 2021 年 3 月 8 日之後，禁止製造和加工 PCTP 含量超過 1%的物品 - 2022 年 1 月 6 日之後，禁止進行商業分銷 	--

TSCA PBT 符合性聲明書
TSCA PBT Declaration of Conformance

Hexachlorobutadiene (HCBD) 六氯丁二烯 CAS No. 87-68-3	- 2021年3月8日之後，禁止製造、加工 和銷售 含六氯丁二烯的物品	--
2,4,6-tris(tert-butyl) phenol (2,4,6-TTBP) 2,4,6 三-叔丁基苯酚 CAS No. 732-26-3	- 與成品使用無關	--

美國環保署(EPA) TSCA(Toxic Substances Control Act)毒性物質管理法第 6(h)網
址：

<https://www.epa.gov/assessing-and-managing-chemicals-under-tsca/persistent-bioaccumulative-and-toxic-pbt-chemicals-under>

美國環保署(EPA) TSCA(Toxic Substances Control Act)毒性物質管理法第 6(h) 節 5
項具有 PBT 毒性的化學物質管理要求，

 V 符合； 不符合

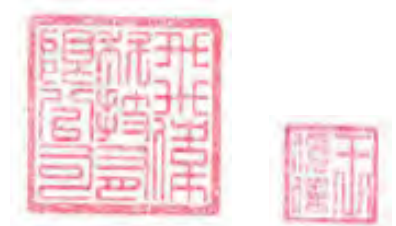
公司名稱 Company name： 飛偉科技有限公司

公司負責人 Company Responsible Person： 王俊偉

立書人： 王俊偉

立書人職稱： 業務經理

本聲明書聲明日期： 2021/03/25



不使用限用物質聲明書

Non-use of restricted substances statement

請填寫相關資訊

Please fill in the relevant information :

公司名稱 Company name : 飛偉科技有限公司

公司負責人 Company Responsible Person : 王俊偉

立書人 Declarant : 王俊偉

立書人職稱 Declarant's Title : 負責人

本聲明書生效日期 Effective Date of this Declaration : 2021/03/19



請勾選本聲明書適用範圍

Please Select the Scope of this Declaration :

提供給研揚的全部產品 All Products provided to AAEON

研揚料號 AAEON Part Number :

原廠料號 Manufacturer Part Number :



_____ (填寫公司名稱) 響應全球綠色環保法規或其他法律，保證如下事項：

_____ (Fill in Company name) Response to global green environmental protection regulations or other laws, guarantee the following matters:

一、產品符合歐盟 RoHS (2011/65/EU & (EU) 2015/863) 規範。

The product complies with EU RoHS (2011/65/EU & (EU) 2015/863) norms.

- i. 當作為包材類的材料，也須符合歐盟包裝指令(94/62/EC) 與修訂指令(2013/2/EU)
When used as package material, it also needs to comply with EU package directive (94/62/EC) and amendment (2013/2/EU)
Note: Pb+Cd+Hg+Cr⁶⁺ <100 ppm
- ii. 若為電池零件，也須符合電池指令 2006/66/EC 與修訂指令 2013/56/EU
For battery components, it also needs to comply with EU battery directive (2006/66/EC) and amendment (2013/56/EU)
Note: Cd<20ppm; Hg <5ppm

不使用限用物質聲明書

Non-use of restricted substances statement

- 二、產品符合衝突金屬(Conflict Metal)規範，並確認銷售產品若有含錫、鉭、鎢、金這四種礦產，來源並非來自剛果民主共和國及其周邊國家剛果、烏干達、蘇丹、坦桑尼亞、盧旺達、安哥拉、贊比亞、布隆迪。

The product complies with the conflict metal norms, and confirm that your company selling products contain tin、tantalum、tungsten、gold four mineral, those sources are not come from Democratic Republic of the Congo and its neighboring countries of Congo、Uganda、San、Tanzania、Rwanda、Angola, Zambia, Burundi.

- 三、產品符合歐盟最新REACH (EC 1907/2006) 規範。
高關注物質(SVHC)，不超過 0.1%上限，以重量計算。
備註：請參照歐盟化學總署(ECHA)網站，最新的高關注物質清單。

This product complies with latest EU REACH (EC 1907/2006) norms.

The SVHC, are not over 0.1% threshold by weight.

Note: Please check ECHA website for latest SVHC list:

<https://echa.europa.eu/candidate-list-table>

- 四、產品符合美國環保署 TSCA 毒性物質管理法第 6(h)節五項 PBT 毒性物質管理要求
This product complies with USA EPA Toxic Substances Control Act (TSCA) Persistent, Bioaccumulative, and Toxic (PBT) 5 Chemicals requirement under Section 6(h)

立書人提供給研揚的所有文件（含測試報告、聲明書、調查表等文件），均正確屬實並且完整。
All documents (including test reports, declarations, survey forms, etc.) provided by Declarant to AAEON shall be correct, true and complete.