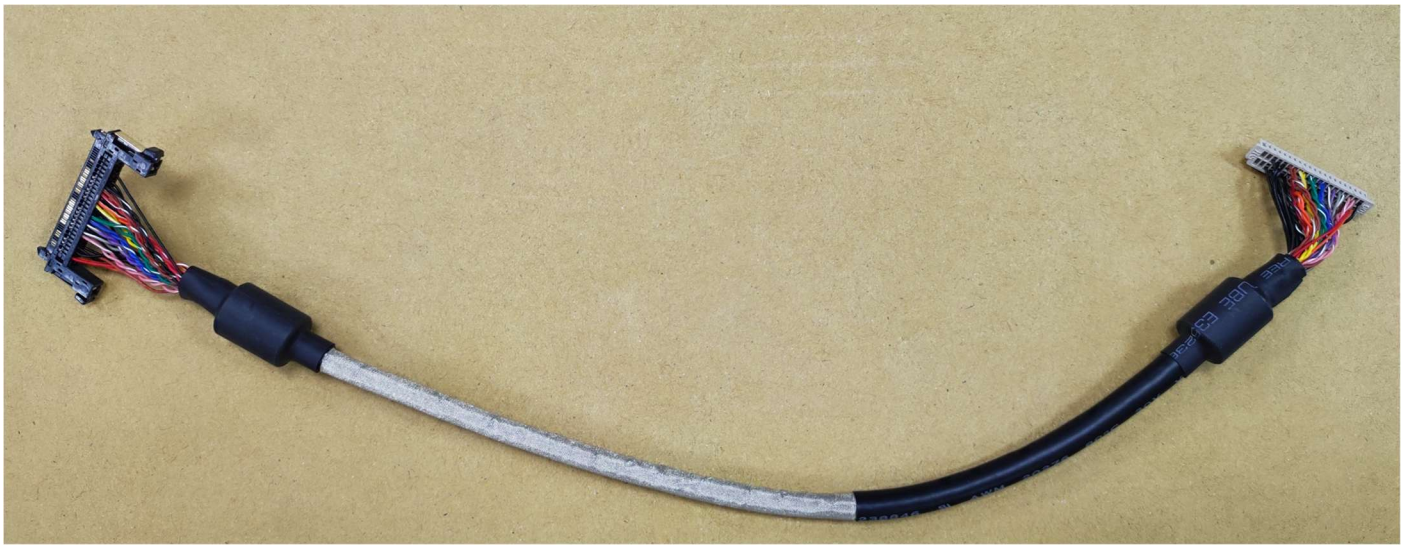
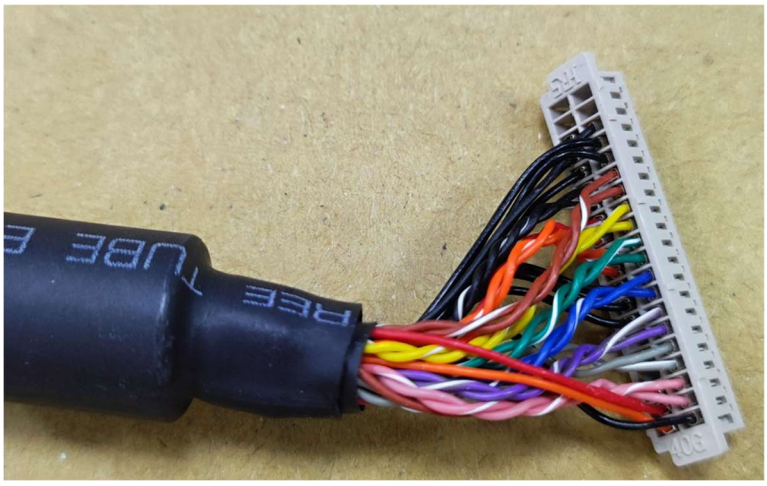
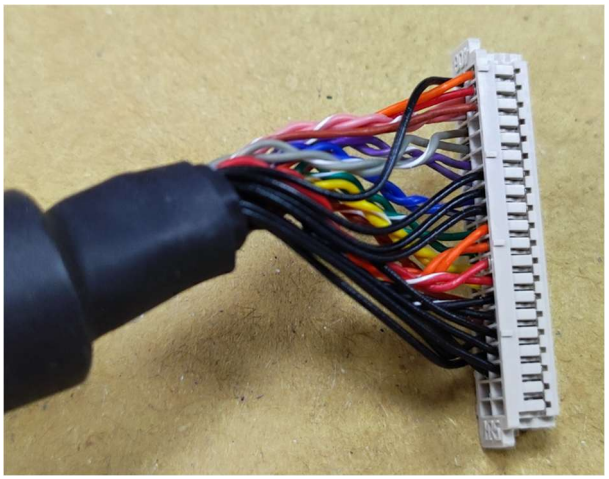
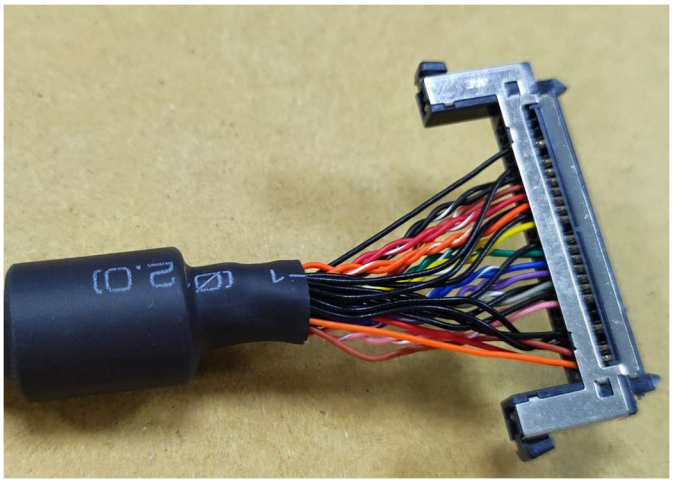
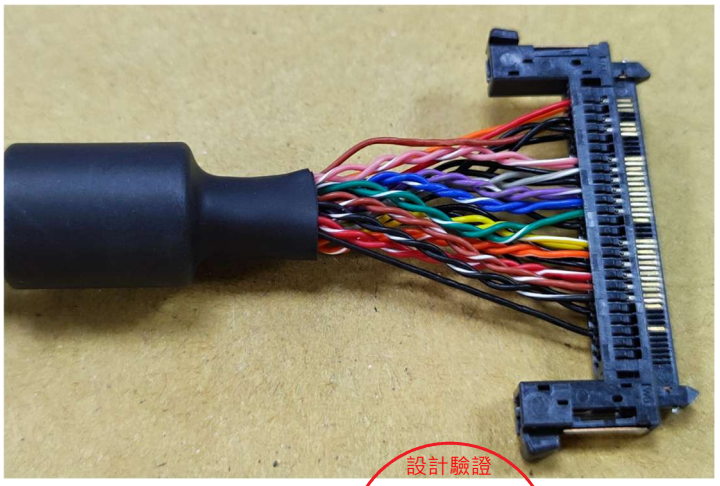










設計驗證
工程課
2025 -03- 31
發行
鈺緯科技開發股份有限公司

承　認　書

客戶名稱	鈺緯科技	品名規格	
客戶料號	3KH00308000(K1193)	稳德料号	
使用機型		成品單重	
認可日期	2025年03月13日	材料種類	

客戶簽認		
設計驗證 工程課 2025 -03- 31 發行 鈺緯科技開發股份有限公司		
核　准	核對	經辦

廠商簽認		
核　准	核 對	經 辦
	陳熙偉	曾貴梅

东莞穩德電子有限公司

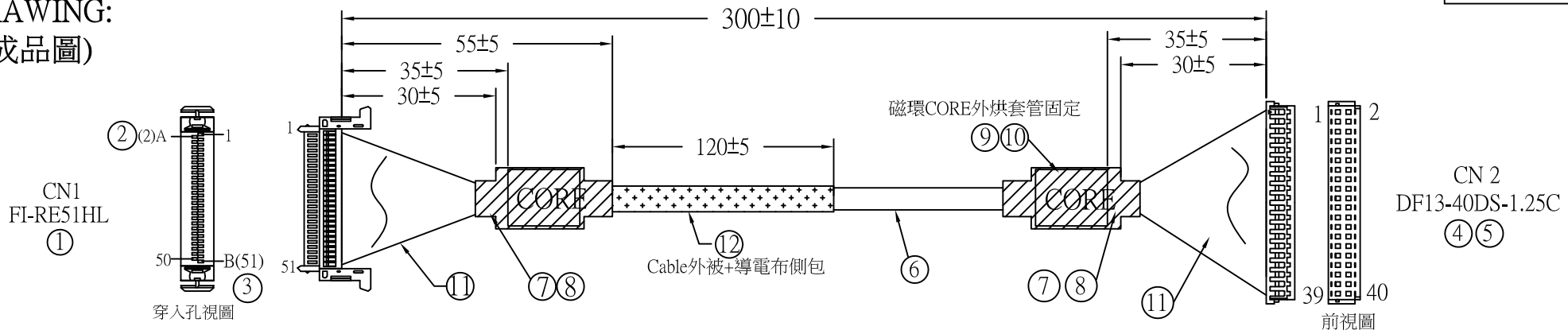
地址：廣東省東莞市虎門鎮新聯高科技工業區

TEL:(0769)85509740　　FAX:(0769)85504618

http://www.wentek.com.tw　　E-mail:sales@dgwender.com.cn

RoHS Compliant

DRAWING:
(成品圖)



CN 1	COLOR	CN 2	
1~6	x		
7	黑	5	
8~10	x		
11	黑+編織	7	G
12	黑/白	14	
13	黑	12	
14	棕/白	11	
15	棕	13	
16	紅/白	16	
17	紅	18	
18	黑+編織	9	G
19	橙	20	
20	橙/白	22	
21	黑+編織	39	G
22	黃/白	15	
23	黃	17	
24~26	x		

CN 1	COLOR	CN 2	
27	黑+編織	6	
28	綠/白	19	
29	綠	21	
30	藍/白	23	
31	藍	25	
32	紫/白	27	
33	紫	29	
34	黑+編織	8	G
35	灰	31	
36	灰/白	33	
37	黑+編織	10	G
38	粉/白	35	
39	粉	37	
40~43	x		
44	黑+編織	24	G
45	黑+編織	26	G
46	黑+編織	28	G
47~48	x		
49	棕	36	
50	紅	38	
51	橙	40	

對絞

備註：
1.裁線長度：1.5 x 315 x 1.3
1.5 x 38 x 4.0
4.0 x 38 x 1.3
脫皮長度：35 x 315 x 35
2.測試條件:
>測試電壓:300 V.DC.
>導通阻抗:2Ω(MAX).
>絕緣阻抗:20MΩ(MIN).

設計驗證
工程課
2025 -03- 31
發行
鈺緯科技開發股份有限公司

NO. 項次	Description 規格說明	Unit 單位	Q"TY 單用量	Remark 備注
12	導電布:W=25,L=120	PCS	1	
11	UL1571#28 OD:0.6 黑 L=38	PCS	18	眾達
10	磁環:12x15x7.3	PCS	2	鈞寶
9	黑色熱縮套管:∮12x35	PCS	2	領飛
8	黑色熱縮套管:∮3.0x10	PCS	2	領飛
7	黑色熱縮套管:∮8.0x20	PCS	2	領飛
6	UL20276#30(10P+10C)+AB OD:5.9 黑 L=315	PCS	1	慶龍
5	TER:DF13-2630SCF	PCS	33	HRS
4	HSG:DF13-40DS-1.25C	PCS	1	HRS
3	TER:FI-RC3-1B-1E-15000	PCS	18	JAE
2	TER:FI-RC3-1A-1E-15000	PCS	15	JAE
1	HSG:FI-RE51HL	PCS	1	JAE

No. 項次	Date 日期	Design Change Record 變更記錄	Confirm 確認

Approval 檢查規范			
Approve 核准	Check 复核	Confirm 確認	Draw By 繪圖

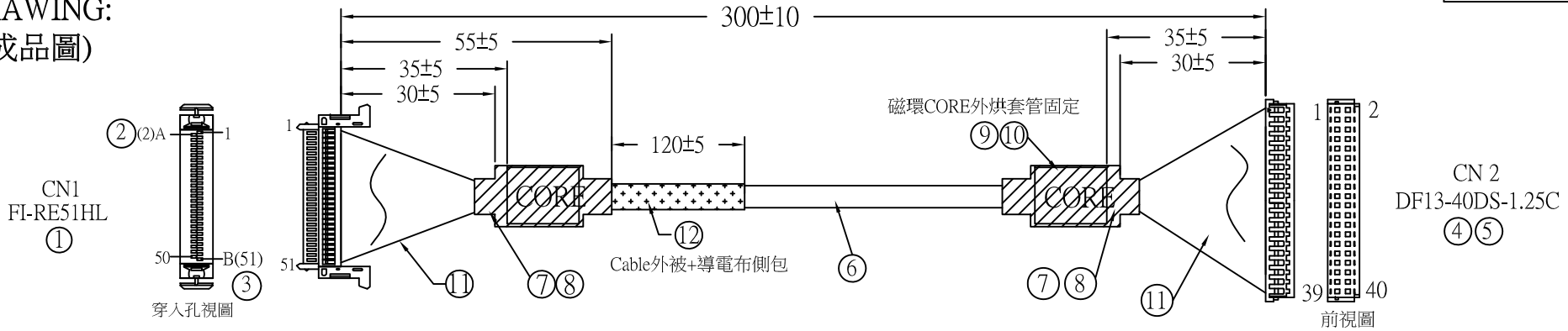
ISSUE NO. 版次	第三角畫法 3RD ANGLE PROJ	Customer 客戶名稱	鈺緯科技
	Unit : mm 單位	Drawing No. 品名	
A	Date of drawing : 製圖日期	PART NO. 料號	3KH00308000 (K1193)
	2024.12.11	DRAW NO. 繪圖編號	

WEN DE ELECTRONICS CO.,LTD.

Q-008B

RoHS Compliant

DRAWING:
(成品圖)



CN 1	COLOR	CN 2	
1~6	x		
7	黑	5	
8~10	x		
11	黑+編織	7	G
12	黑/白	14	
13	黑	12	
14	棕/白	11	
15	棕	13	
16	紅/白	16	
17	紅	18	
18	黑+編織	9	G
19	橙	20	
20	橙/白	22	
21	黑+編織	39	G
22	黃/白	15	
23	黃	17	
24~26	x		

對絞

CN 1	COLOR	CN 2	
27	黑+編織	6	G
28	綠/白	19	
29	綠	21	
30	藍/白	23	
31	藍	25	
32	紫/白	27	
33	紫	29	
34	黑+編織	8	G
35	灰	31	
36	灰/白	33	
37	黑+編織	10	G
38	粉/白	35	
39	粉	37	
40~43	x		
44	黑+編織	24	G
45	黑+編織	26	G
46	黑+編織	28	G
47~48	x		
49	棕	36	
50	紅	38	
51	橙	40	

對絞

備註：
1.裁線長度：1.5 x 315 x 1.3
1.5 x 38 x 4.0
4.0 x 38 x 1.3
脫皮長度：35 x 315 x 35
2.測試條件:
>測試電壓:300 V.DC.
>導通阻抗:2Ω(MAX).
>絕緣阻抗:20MΩ(MIN).

硬體課
2024.12.12
Daniel

NO. 項次	Description 規格說明	Unit 單位	Q"TY 單用量	Remark 備注
12	導電布:W=25,L=120	PCS	1	
11	UL1571#28 OD:0.6 黑 L=38	PCS	18	眾達
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9	黑色熱縮套管: ∮12x35	PCS	2	領飛
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7	黑色熱縮套管: ∮8.0x20	PCS	2	領飛
6	UL20276#30(10P+10C)+AB OD:5.9 黑 L=315	PCS	1	慶龍
5	TER:DF13-2630SCF	PCS	33	HRS
4	HSG:DF13-40DS-1.25C	PCS	1	HRS
3	TER:FI-RC3-1B-1E-15000	PCS	18	JAE
2	TER:FI-RC3-1A-1E-15000	PCS	15	JAE
1	HSG:FI-RE51HL	PCS	1	JAE

No. 項次	Date 日期	Design Change Record 變更記錄	Confirm 確認

Approval 檢查規范			
Approve 核准	Check 复核	Confirm 確認	Draw By 繪圖

ISSUE NO. 版次	第三角畫法 3RD ANGLE PROJ / Unit : mm 單位	Customer 客戶名稱	鈺緯科技
		Drawing No. 品名	
A	Date of drawing : 製圖日期	PART NO. 料號	DIVA2024121001
	2024.12.11	DRAW NO. 繪圖編號	

WEN DE ELECTRONICS CO.,LTD.

Q-008B

品 名 構 成　圧着ﾊｳｼﾞﾝｸﾞﾒｶﾆｶﾙﾛｯｸ及びShellﾀｲﾌﾟ 単品 (SJ103279)

命名法

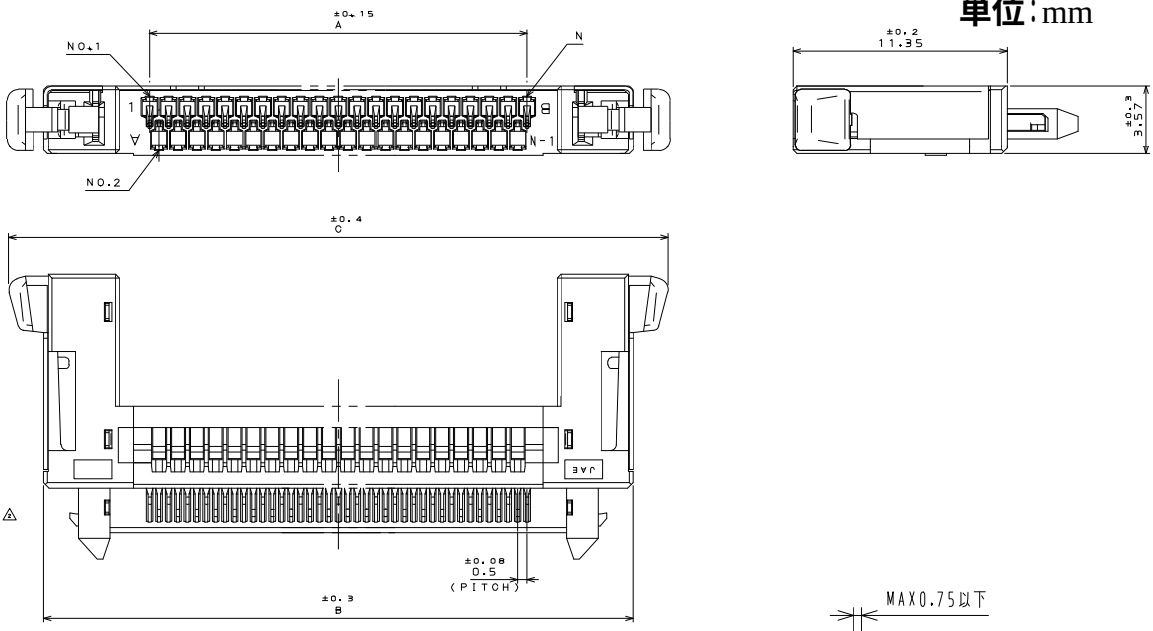
FI-R　E　**　H　L

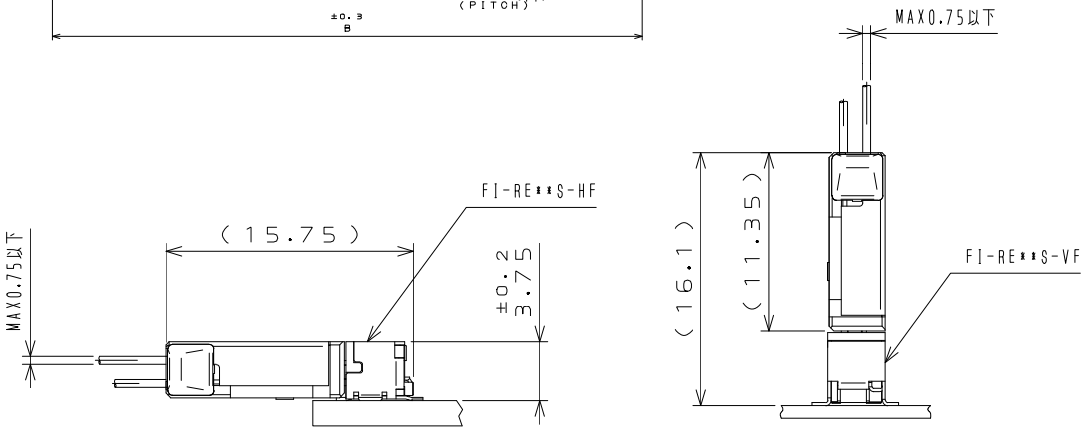
- FI-R：ｼﾘｰｽﾞ名
- E：ｼｪﾙﾀｲﾌﾟ
- **：極数：21,31,41,51芯
- H：ｹｰﾌﾞﾙ側圧着ﾀｲﾌﾟ
- L　：ﾒｶﾆｶﾙﾛｯｸあり



B1

単位：mm





嵌合状態図 (参考)

寸法表

NO.OF CONTACTS(N) \ DEMENSION	A	B	C
21	10	21.25	24.95
31	15	26.25	29.95
41	20	31.25	34.95
51	25	36.25	39.95

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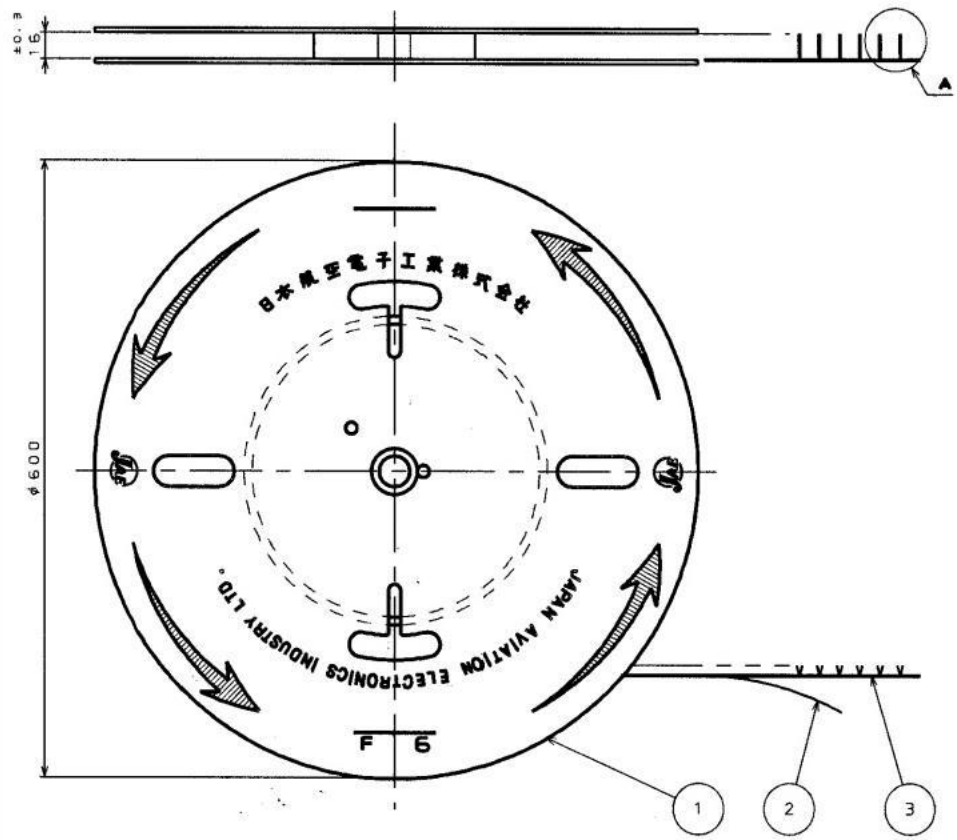
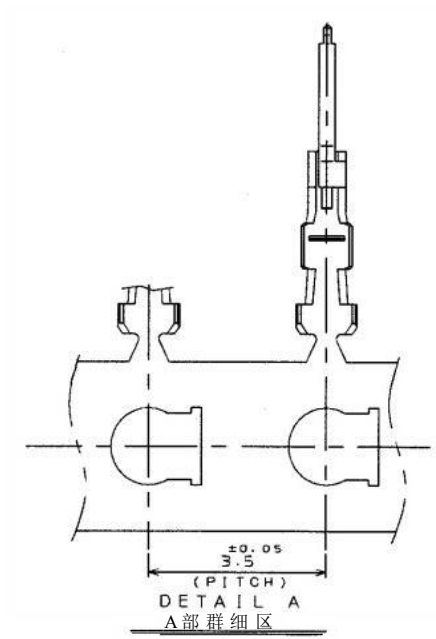
E0-60601-lldS
(ON ONIMva0)台要里因

盛		ON NO	C 岛 意		想	系	本品





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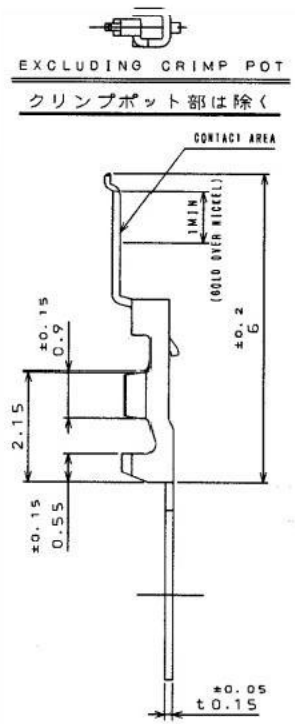

(尺 度 1 0 : 1)

3	CONTAOT a>92卜	15000	纳含金	T OONTACT AAEA:GOLD OVER NICKEL NI上AuXv≠	TCRIMP AREA:TIN PLATING Snx丰	
2	PAPEA TAPE 抵丁一 心	1	PAPEA 板			
1	MA③AZINE 又力之	1	PAPER 纸			
符号 NO.	名 称	個数 QTY.	材 FA	什 FINISH		MAAk

NOTE1.APPLICABLE WIRE:#30～#36 AWG.STANDERD
2.INSULATION OUTER DIA. φ0.75～0.27mm

注１．使用電線は、AWG#30～#36の 撚線とする
2. 被覆外径はゅ0．75～0．27mmとする.

仕様害(SPECIFICATTON)	1版(ORIOINAL OATE) 3. Feb. 2012	尺崖(SCALE) —	列-x(SERIES) FI-A
	裂园 DR		
公是(GENEHAL TOLERANCE) 寸法(DIMENSION) | 角度(ANGLES)	担当 CHK	K. HISAMATSU	名称(TITLE) F[-RNC3-1A-1E —15000-H MAGAZINE ASSEMBLY
±0.8 × *0.4 xx ×××* XX″±	查随 APPo	—	
	承露 APPD	K. 18AAAKI	
			量(MASS) ◎

日本航空電子工業株式会社
JAPAN AVIATION ELECTRONICS AE [NDUSTRY, LTD

区面番号(DRAWING NO.) SP11-10909-03

s 12EA3

隧敌 1

JAE CONNECTOH DIV. PROPRIETARY
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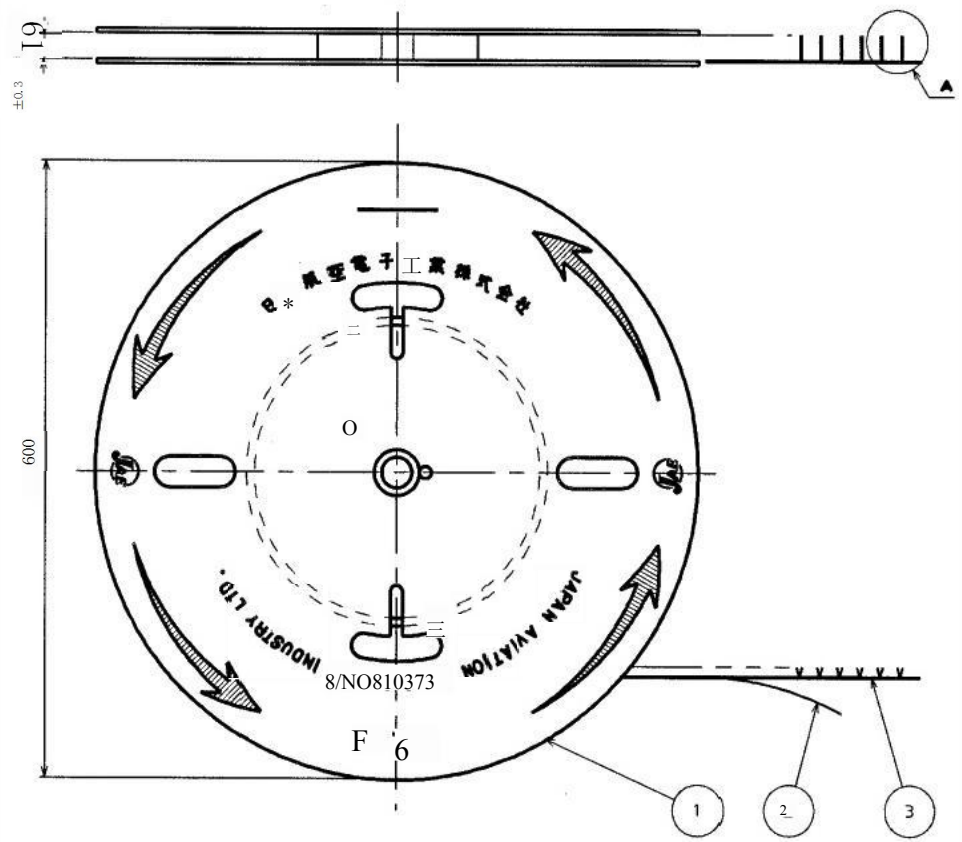
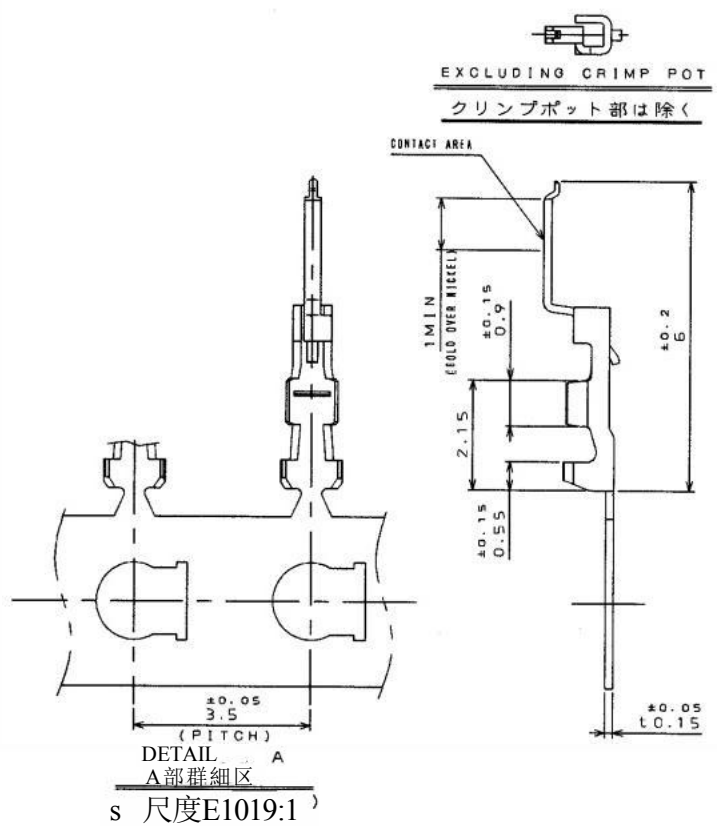
DGF-C-2120(11.08)

40-60601-llds
(ON 9NIMVA0)台嬰里図

悠数		CN NO	内 容 DESCAIPriON		想		





DETAIL A
A部群細区
s 尺度E1019:1)

NOTE1.APPLICABLE WIRE:#30～#36 AWOSTANDERD
2.INSULAT1ON OUTER DIA. φ0.75～0.27mm

注1．使用電線は．AWG#30～#36の 撼線とする.
2．被覆外径はゅ0．75～0．27mmとする.

3	CONTAOT a>22k	15000	钢合金	OONTACT AREA :GOLD	CRIMP AREA:TIN PLATING Sny丰
2	PAPEA TAPE	1	PAPE 抵		
1	MAGAZINE	1	PAPER 抵		
符号 NO.	名 称	個 数 QTY	材 料 TFRIAL	仕 上 F 1NISH	REMARKS

仕様害(SPECIFICATION)		1版(OAIG INAL DATE) 3. Feb. 2012		尺度(SCALE) ——	9-x(SERIES) FI-A
		裂区 DA		名称(TITLE)	日本航空雷子工業株式会社 JAPAN AV[ATION ELECTRONICS INDUSTRY. LTD.
一收公(GENEAAL TO 寸法(DIMENS1ON))	LERANCE) 角度(ANOLES)	担当 CHK.	K.H[SAMATSU	F【-RNC3-1B-1E -15000-H MAGAZINE ASSEMBLY	
・ ±0.8 + 文 士 ・×××±	×±	查团 APPD	——		
		承露 APPD	K．1日ARAKI	需量(MASS) ①C	区面番号(DRAWING NO.) SP11-10909-04

3 A 3 z 1 0 盛憨 1

JAE CONNECTOA D1V. PROPRIETARY.
CoPYRIBHT(C)2012JAPAN AVIATION ELECTRONICS INDUSTAY,LTD.

DCF-6-2120(11.08)

■Single Row Socket

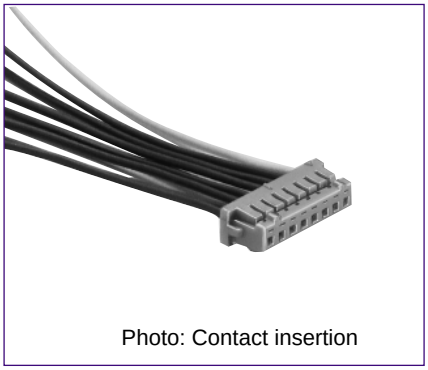
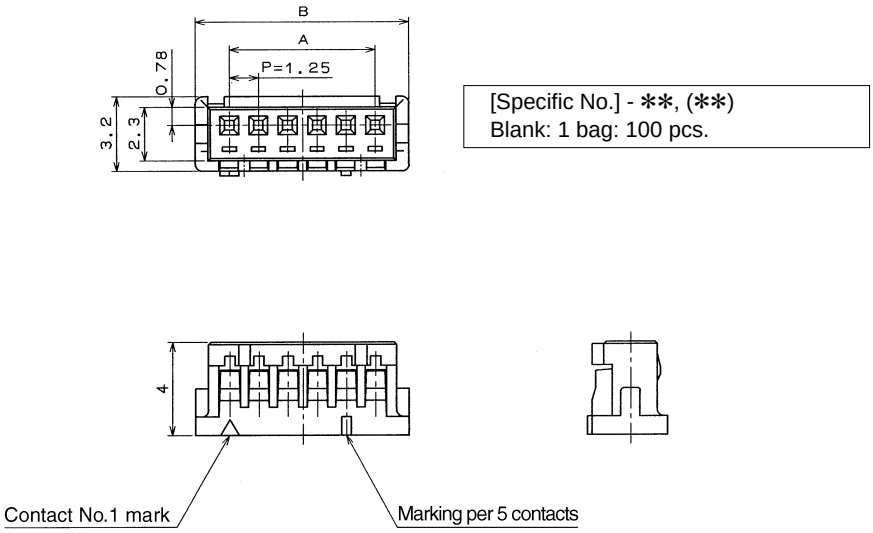


Photo: Contact insertion



[Specific No.] - **, (**)
Blank: 1 bag: 100 pcs.

Unit: mm

Part Number	CL No.	Number of Contacts	A	B
DF13-2S-1.25C(**)	536-0001-4-**	2	1.25	4.15
DF13-3S-1.25C(**)	536-0002-7-**	3	2.50	5.40
DF13-4S-1.25C(**)	536-0003-0-**	4	3.75	6.65
DF13-5S-1.25C(**)	536-0004-2-**	5	5.00	7.90
DF13-6S-1.25C(**)	536-0005-5-**	6	6.25	9.15
DF13-7S-1.25C(**)	536-0006-8-**	7	7.50	10.40
DF13-8S-1.25C(**)	536-0007-0-**	8	8.75	11.65

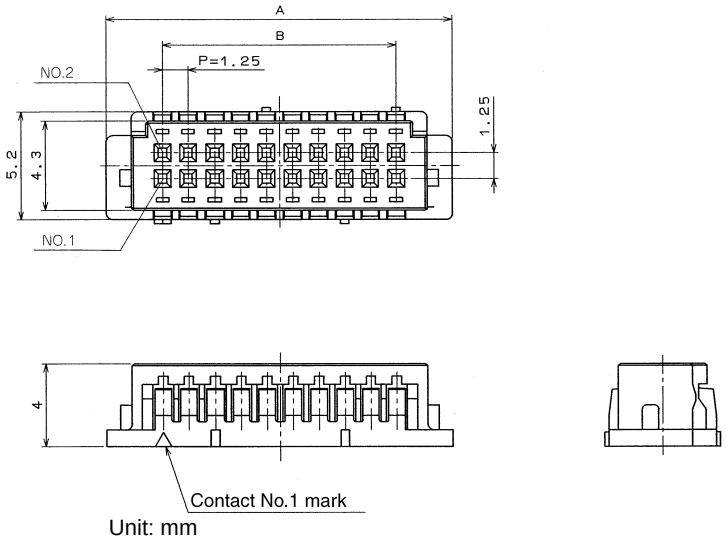
Part Number	CL No.	Number of Contacts	A	B
DF13- 9S-1.25C(**)	536-0008-3-**	9	10.00	12.90
DF13-10S-1.25C(**)	536-0009-6-**	10	11.25	14.15
DF13-11S-1.25C(**)	536-0010-5-**	11	12.50	15.40
DF13-12S-1.25C(**)	536-0011-8-**	12	13.75	16.65
DF13-14S-1.25C(**)	536-0013-3-**	14	16.25	19.15
DF13-15S-1.25C(**)	536-0014-6-**	15	17.50	20.40

Note 1.The quantity at the specific No. "None" is delivered per bag (100 pcs.). If needed, please select and order the products per bag.

■Double Row Socket



Photo: Contact insertion state



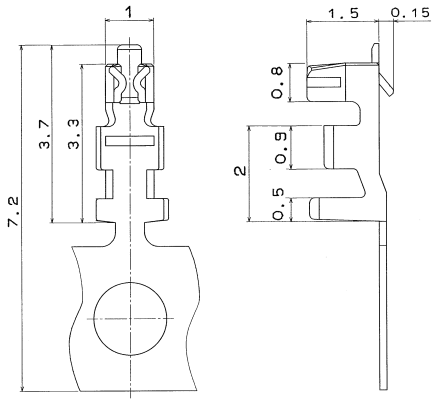
Unit: mm

Part Number	CL No.	Number of Contacts	A	B
DF13-10DS-1.25C(**)	536-0550-2-**	10	10.40	5.00
DF13-20DS-1.25C(**)	536-0555-6-**	20	16.65	11.25
DF13-30DS-1.25C(**)	536-0560-6-**	30	22.90	17.50
DF13-40DS-1.25C(**)	536-0565-0-**	40	29.15	23.75

[Specific No.] – **, (**)
Blank: 1 bag: 100 pcs.

Note:The quantity at the specific No. "Blank" is delivered per bag (100pcs). If needed, please select and order the products per bag.

■Crimping Contact



Part Number	CL No.	Packaging Type	Quantity	Finish
DF13-2630SCF	536-0300-5	Reel	10,000	Tin plating
DF13-2630SCFA	536-0298-5	Reel	10,000	Gold plating

●Applicable Cable (Tin Plating Annealed Copper Wire)

Conductor Size (Wire construction)	Jacket Diameter
AWG26(7 cores./0.16mm)	ϕ0.65 to ϕ1.0mm
AWG28(7 cores./0.127mm)	
AWG30(7 cores./0.1mm)	

Note:If other cables are used instead of the applicable cable, please contact the Hirose sales department.

●Recommended Cable

UL1571

●Strip Length

1.2 to 1.9mm

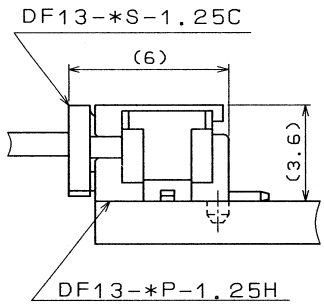
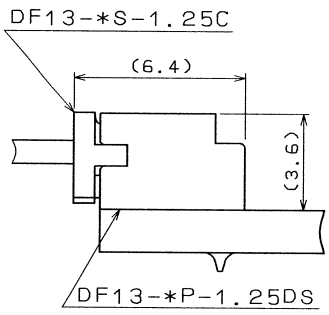
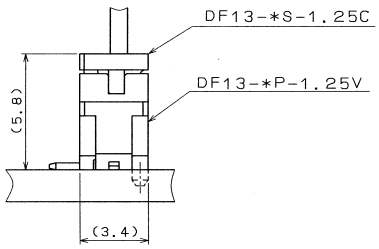
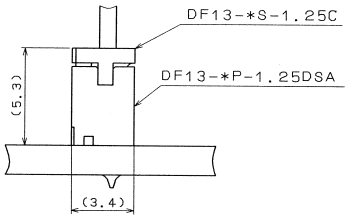
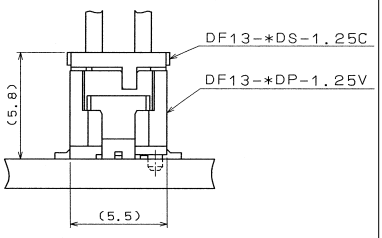
◆Applicable Crimping Tool

Type	Part Number	CL No.	Applicable Contact
Applicator	AP105-DF13-2630S	901-4531-9	DF13-2630SCF/SCFA
Press Main Unit	CM-105	901-0005-4	————
Manual Crimping Tool	DF13-TB2630HC	550-0256-1	DF13-2630SCF
Extraction Tool	DF-C-PO(B)	550-0179-2	DF13-2630SCF

Note 1.If a trouble has occurred due to other tools, which are not designated by Hirose, Hirose won't guarantee any product.

Note 2.The manual crimping tool is used to sequentially cut the reel contact with carrier.

◆Application Pattern

	SMT (Single Row Product)	Through hole (Single Row Product)	SMT (Double Row Product)
Right Angle			
Straight			

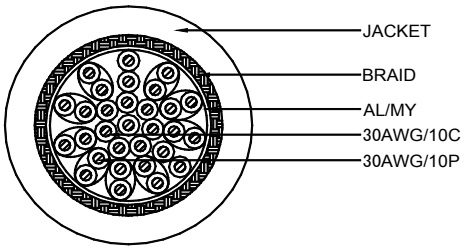
東莞市廣蒲電子有限公司

SPECIFCATION	UL20276 30AWG/10P+30AWG/10C+AL/MY+BRAID+JACKET		
ITEM		SPECIFCATION	
CONDUCTOR	AWG	30AWG/10P	30AWG/10C
	MATERIAL	TINNED COPPER	TINNED COPPER
	COND.SIZE	7/0.10mm	7/0.10mm
INSULATION	AVG.THICK	0.14mm	0.14mm
	MATERIAL	PP+HD-PE	PP+HD-PE
	OD	0.58±0.05mm	0.58±0.05mm
SHIELD	MATERIAL	AL/MY (Face Outside)	
	COVERAGE	100%	
	OVERLAP	25%	
BRAID	MATERIAL	TINNED COPPER	
	COND.SIZE	16/10/0.10mm	
	COVERAGE	90%	
JACKET	AVG.THICK	0.50mm	
	MATERIAL	80℃ 70P PVC	
	COLOR	BLACK/HALF MATT (CUL01001)	
	OD	5.90±0.15mm	

30AWG/10P芯线对绞绞距为5～6mm

芯线材质为PP+HD-PE,比例为：30%PP+70%HD-PE

CROSS SECTION



COLOR CODE

30AWG/10P:

1.BLACK-BLACK/WHITE 2.BROWN-BROWN/WHITE 3.RED-RED/WHITE
4.ORANGE-ORANGE/WHITE 5.YELLOW-YELLOW/WHITE 6.GREEN-GREEN/WHITE
7.BLUE-BLUE/WHITE 8.PURPLE-PURPLE/WHITE 9.GRAY-GRAY/WHITE 10.PINK-PINK/WHITE

30AWG/10C:

1.BLACK 2.BROWN 3.RED 4.ORANGE 5.YELLOWN 6.GREEN
7.BLUE 8.PURPLE 9.GRAY 10.WHITE

MARKING

E238846 AWM 20276 80℃ 30V VW-1
CHINGLUNG

PRINTING COLOR		WHITE	
APPROVED		CUSTOMER	稳德
CHECKED		REV	0994-30001-B
DRAWING	王应祥	DATE	8-Sep-15

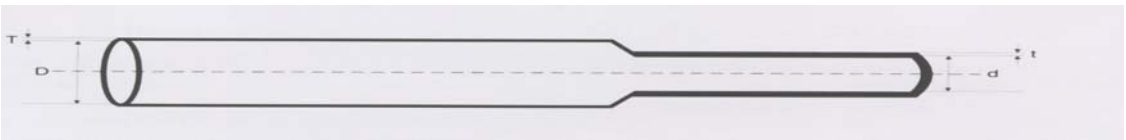
ELECTRICAL CHARACTERISTICS	PHYSICAL PROPERTIES
1.Rating: TEMP 80℃ Rating voltage:30V 2.Conductor Resistance: AT 20℃ MAX 30AWG:376.96Ω/KM 3.Impedance:100±10Ω	

TEL: 0769-83665661 83665662 FAX: 83665663

标准型(S-901)热缩套管尺寸检验标准

产品规格	收缩前尺寸(mm)		完全收缩后尺寸(mm)		包装长度 M
	内径(D)	壁厚(T)	内径(D)	壁厚(T)	
Φ0.8	0.9±0.2	0.15±0.08	≤0.4	0.30±0.06	400±2
Φ1.0	1.5±0.2	0.15±0.08	≤0.6	0.36±0.06	400±2
Φ1.5	2.0±0.2	0.18±0.08	≤0.8	0.40±0.08	400±2
Φ2.0	2.5±0.2	0.18±0.08	≤1.00	0.42±0.08	400±2
Φ2.5	3.0±0.2	0.18±0.08	≤1.25	0.42±0.08	400±2
Φ3.0	3.5±0.3	0.22±0.10	≤1.5	0.46±0.08	400±2
Φ3.5	4.0±0.3	0.25±0.10	≤1.75	0.46±0.08	400±2
Φ4.0	4.5±0.3	0.25±0.10	≤2.0	0.48±0.08	400±2
Φ4.5	5.0±0.3	0.25±0.10	≤2.25	0.50±0.10	400±1
Φ5.0	5.5±0.4	0.25±0.10	≤2.5	0.50±0.10	200±1
Φ6.0	6.5±0.4	0.28±0.12	≤3.0	0.56±0.10	200±1
Φ6.5	7.0±0.4	0.28±0.12	≤3.25	0.56±0.10	200±1
Φ7.0	7.5±0.4	0.28±0.12	≤3.5	0.58±0.10	100±1
Φ8.0	8.5±0.5	0.28±0.12	≤4.0	0.60±0.10	100±1
Φ9.0	9.5±0.5	0.30±0.12	≤4.5	0.60±0.10	100±1
Φ10	10.5±0.5	0.30±0.12	≤5.0	0.60±0.10	100±1
Φ11	11.5±0.5	0.30±0.12	≤5.5	0.60±0.10	100±1
Φ12	12.5±0.5	0.30±0.12	≤6.0	0.60±0.10	100±1
Φ13	13.5±0.5	0.35±0.12	≤6.5	0.65±0.12	100±1
Φ14	14.5±0.5	0.35±0.12	≤7.0	0.65±0.12	100±1
Φ15	15.5±0.5	0.40±0.12	≤7.5	0.65±0.12	100±1
Φ16	16.5±0.5	0.36±0.12	≤8.0	0.65±0.12	50±0.5
Φ17	17.5±0.5	0.36±0.12	≤8.5	0.65±0.12	50±0.5
Φ18	18.7±0.6	0.40±0.15	≤9.0	0.70±0.12	50±0.5
Φ20	20.6±0.6	0.40±0.15	≤10.0	0.75±0.15	50±0.5
Φ22	22.7±0.6	0.40±0.15	≤11.0	0.80±0.15	50±0.5
Φ25	25.5±0.7	0.40±0.15	≤12.5	0.90±0.15	50±0.5
Φ28	29.0±0.7	0.45±0.20	≤14.0	0.95±0.15	50±0.5
Φ30	31.0±0.7	0.45±0.20	≤15.0	0.95±0.15	50±0.5
Φ35	36.0±1.0	0.50±0.22	≤17.5	1.00±0.20	50±0.5
Φ40	41.0±1.0	0.55±0.25	≤20.0	1.10±0.25	50±0.5
Φ45	46.0±1.0	0.55±0.25	≤22.5	1.10±0.25	50±0.5
Φ50	51.5±1.5	0.60±0.25	≤26.0	1.20±0.25	50±0.5
Φ55	≥55	0.60±0.25	≤28.0	1.20±0.25	50±0.5
Φ60	≥60	0.60±0.25	≤30.0	1.20±0.25	50±0.5
Φ70	≥70	0.70±0.30	≤35.0	1.45±0.25	50±0.5
Φ80	≥80	0.70±0.30	≤40.0	1.45±0.25	50±0.5
Φ95	≥95	0.70±0.30	≤45.0	1.45±0.25	50±0.5
Φ100	≥100	0.70±0.30	≤50.0	1.45±0.25	50±0.5

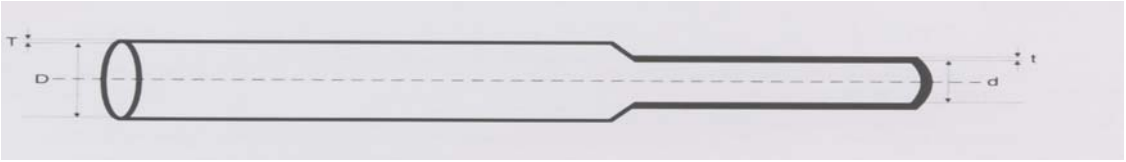
附产品图示:



薄壁型(S-901A)热缩套管尺寸检验标准

产品规格	收缩前尺寸(mm)		完全收缩后尺寸(mm)		包装长度 M
	内径(D)	壁厚(T)	内径(D)	壁厚(T)	
Φ0.5	0.7±0.2	0.09±0.05	≤0.4	0.22±0.06	400±2
Φ0.6	0.8±0.2	0.12±0.05	≤0.4	0.22±0.06	400±2
Φ0.8	0.9±0.2	0.12±0.05	≤0.4	0.25±0.06	400±2
Φ1.0	1.5±0.2	0.10±0.05	≤0.6	0.25±0.06	400±2
Φ1.5	2.0±0.2	0.10±0.05	≤0.8	0.25±0.06	400±2
Φ2.0	2.5±0.2	0.13±0.06	≤1.00	0.28±0.06	400±2
Φ2.5	3.0±0.2	0.15±0.06	≤1.25	0.28±0.06	400±2
Φ3.0	3.5±0.3	0.15±0.06	≤1.5	0.30±0.06	400±2
Φ3.5	4.0±0.3	0.15±0.06	≤1.75	0.30±0.06	400±2
Φ4.0	4.5±0.3	0.15±0.06	≤2.0	0.30±0.06	400±2
Φ4.5	5.0±0.3	0.15±0.06	≤2.25	0.30±0.06	400±1
Φ5.0	5.5±0.4	0.15±0.06	≤2.5	0.30±0.06	200±1
Φ6.0	6.5±0.4	0.15±0.06	≤3.0	0.30±0.06	200±1
Φ7.0	7.5±0.4	0.18±0.08	≤3.5	0.36±0.08	200±1
Φ8.0	8.5±0.5	0.18±0.08	≤4.0	0.36±0.08	200±1
Φ9.0	9.5±0.5	0.18±0.08	≤4.5	0.36±0.08	200±1
Φ10	10.5±0.5	0.18±0.08	≤5.0	0.36±0.08	200±1
Φ11	11.5±0.5	0.18±0.08	≤5.5	0.36±0.08	200±1
Φ12	12.5±0.5	0.18±0.08	≤6.0	0.36±0.08	100±1
Φ13	13.5±0.5	0.20±0.08	≤6.5	0.40±0.10	100±1
Φ14	14.5±0.5	0.20±0.08	≤7.0	0.40±0.10	100±1
Φ15	15.5±0.5	0.20±0.08	≤7.5	0.40±0.10	100±1

附产品图示:



说明：我公司生产的热缩套管**产品铅、镉、汞、六价铬、PBB、PBDE等环境管理物质含量**符合欧盟 **RoHS** 指令和 **SONY SS-00259** 环境技术标准，其中黑色热缩套管是无卤环保产品。

UL 热缩套管性能特性表

阻燃、柔软、绝缘、低温收缩
收缩比率：2：1
纵向收缩率：≤5%
最低收缩温度：90℃
连续使用温度：-55℃~125℃

性能 Properties

性能 Properties	测试条件 Condition	指标 Value
物理性能：抗张强度 Physical: Tensile strength		≥10.4Mpa
断裂伸长率 Elongation		≥200%
老化后抗张强度 Tensile strength afrer aging	158±1℃,168hr	不小于老化前的 70% ≥70% of original
老化后断裂伸长率 Elongation after aging		≥100%
热冲击 Heat shock	250℃,1hr	无裂纹 No cracking
冷弯曲 Cold bend	-30℃,1hr	无裂纹 No cracking
电性能： 绝缘耐压 Electrical: DielectricVoltage withstan	60sec	≥2500V
体积电阻率 Volume resistivity		$\geq 10^{14}$ Ω·cm
化学性能：铜腐蚀 Corrosion	158±1℃,168hr	Pass
Chemical: 铜稳定性 Copper stability	158±1℃,168hr	伸长率≥100%
阻燃性 Flammability	VW-1	Pass
电压等级 Voltage rating	600V/300V	
温度等级 Temperature rating	125℃	

材 质 说 明

我司热缩环保热缩套管是一种阻燃型的热收缩套管，组成材料为聚烯烃材料附加适量助剂，具体组成如下，

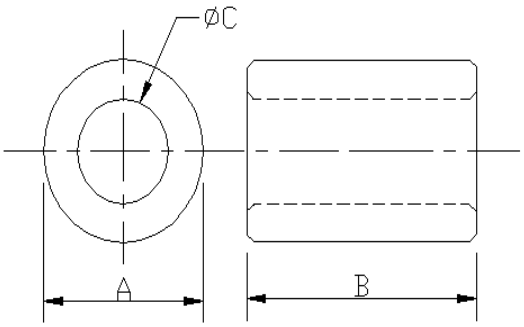
产品铅、镉、汞、六价铬、PBB、PBDE 等环境管理物质含量符合 SONY 及欧盟 RoHS 法令环保要求。

原料名称			使用目的	含量	CAS No.
中文	ENGLISH	分子式			
乙烯醋酸乙烯酯	EVA	（CH_2-CH_2）m -(CH_2-CH-$COOCH_3$)n	主剂	50%	24937-78-7
氢氧化镁	ATH	$Mg(OH)_2$	阻燃剂	40%	1309-42-8
磷系阻燃剂	MP	$P_mN_nH_xO_y$	阻燃剂	6%	7723-14-0
色母	pigment	色粉+EVA+填充剂	着色剂	4%	

SPECIFICATION FOR APPROVAL

CUSTOMER:		**CUST.P/N:**	
ITEM:	K5B RH 12x15x7.3	**K.C.P/N:**	PS1204IA

(1) SHAPE :



A	12.0±0.3	m/m
B	15.0±0.4	m/m
C	7.3±0.3	m/m
D		m/m
E		m/m
F		m/m
G		m/m

(2)ELECTRICAL REQUIREMENTS:

Z_1= 30 $^{-0}$ OHM AT 25 MHz

Z_2= 60 $^{-0}$ OHM AT 100 MHz

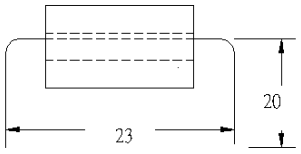
(3) TEST CONDITIONS:

1 IMPEDANCE ANALYZE] HP4191A

TEST FIXTURE: HP16092A

2.WIRE: Φ0.65 T.C.W*63m/m1/2Ts

3.DRAWING:



(4)PACKING

☐ IN BULK ☐ VACUUM ☐ INSERTION

200 PCS/BAGS* 3 BAG/INNER BOX* 4 BOXES/CARTON = 2400 PCS

PCS/PLATE* PLATES/CARTON= PCS

PCS/TRAY* TRAYS/CARTON= PCS

(5) APPEARANCE

(1)AREA OF BREAK : ＜3 m/m^2

(2)SUM OF BREAKING AREA :＜4 m/m^2

(3)DEPTH OF BREAK :＜1 m/m

(6)REMARK:

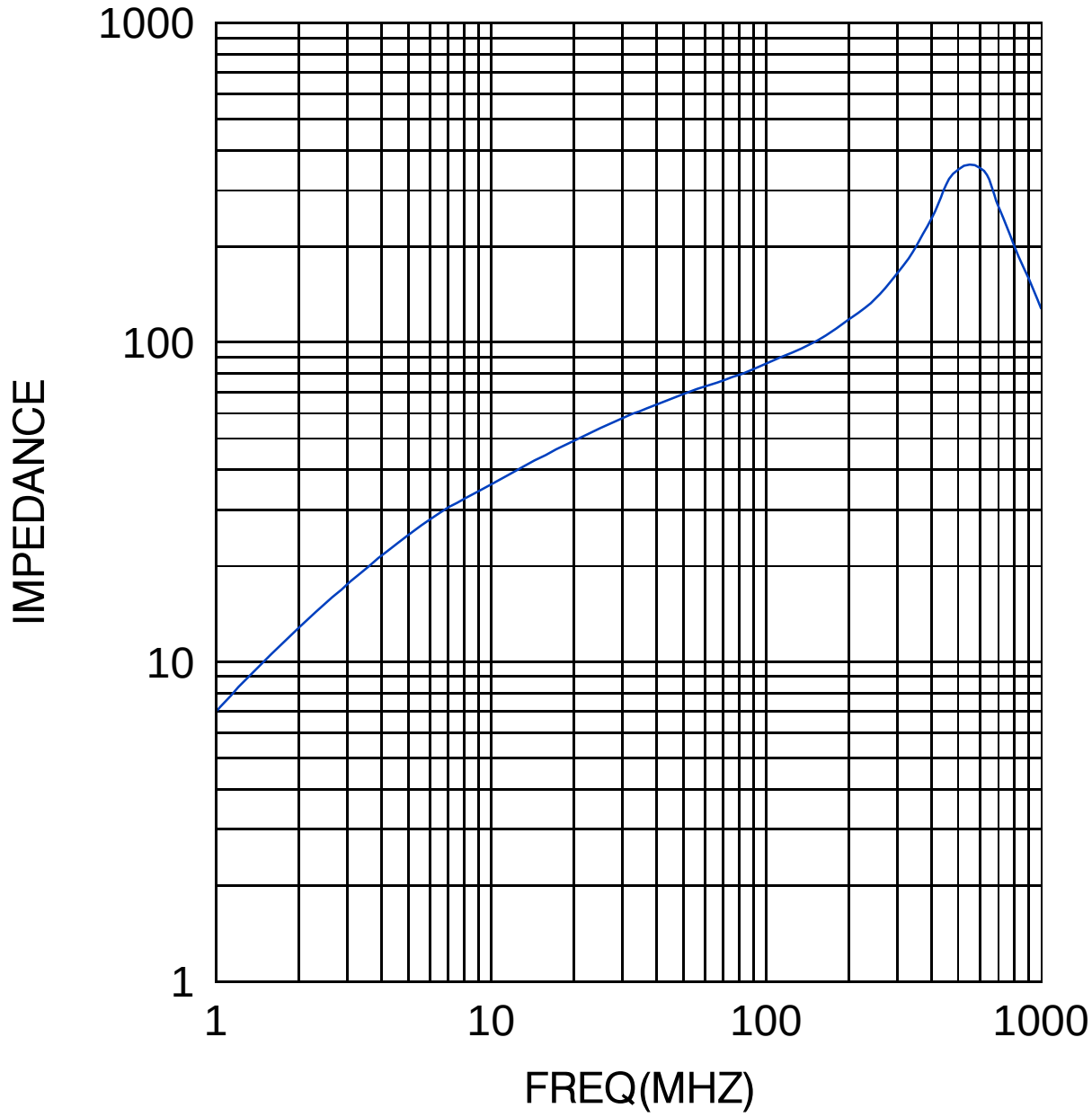
Approved by
Checked by
Drawn by
DWG.NO.

TEST DATA FOR PREPRODUCTION SAMPLES

CUSTOMER				CUST. P/N		
ITEM	*K5B RH 12x15x7.3*			K.C. P/N	*PS1204IA*	
TEMP.	*24* °C	RH	*69* %	DWG.NO.		
WIRE	*0.65x63m/m T.C.W*	WINDING	*1/2* Ts	Q'TY		
Test Instruments						
Meas. Item.	*Z (OHM)*	*Z (OHM)*	*A m/m*	*B m/m*	*C m/m*	
Spec./ Yours.						
Spec./Suggest.	30^{-0}	60^{-0}	12.0±0.3	15.0±0.4	7.3±0.3	
Test Freq.	25 MHZ	100 MHZ				
1	54	86	11.80	14.98	7.32	
2	54	87	11.86	15.00	7.40	
3	53	87	11.88	15.10	7.38	
4	54	87	11.80	14.90	7.30	
5	54	86	11.80	14.90	7.28	
6						
7						
8						
9						
10						
$\overline{X}$	54	87	11.83	14.98	7.34	
R	1	1	0.08	0.2	0.12	
Your Sample.						
REMARK:					Approved by:	
					Checked by:	
					Drawn by:	

KING CORE ELECTRONICS INC.

K5B RH 12x15x7.3



鈞寶工程部

UL 1571 HOOK-UP WIRE
80℃ 30V PVC 電子線

UL Subject 758

UL FILE NO：E309338

▲說明：

- 導體使用單條或絞線最少至 50AWG 裸銅或鍍錫銅
- PVC 絕緣
- 額定溫度：80℃，額定電壓：30 Volts
- 使用標準厚度,易剝,截斷容易
- 可通過 UL 垂直型耐燃測試

Product Description:

- Tinned,annealed,stranded or Solid copper conductor,MIN,50AWG
- Color-coded PVC insulation
- Rated temperature: 80℃,Rated voltage: 30 Volts
- Uniform thickness of wire to ensure easy stripping and cutting
- Passed UL VW-1 vertical flame test

▲ 應用：

- 電子設備二次回路中內部連接用線。

Applications:

- Internal wiring of class 2circuits electronic epuipment

構造和電氣性能

Structure & electric properties



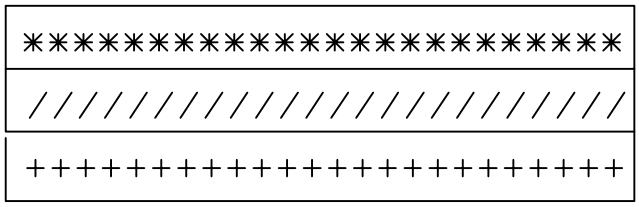
UL 1571	額 定 Range		導 體 Conducor		絕 緣 體 Insulation		公差值 Tolerance mm	最大導體阻抗 Maximum Conductor Resistance Ω/km	最小絕緣阻抗 Minimum Insulation Resistance Ω/km	絕緣耐電壓 (VAC/min) Insulation Potential Strength
	溫度 Temp °C	電壓 Voltage V	線號 AWG	構成 No./mm	厚度 Thickness mm	外徑 O.D. mm				
多芯線 Stranded	80°C	30V	28	7/0.127	0.10	0.60	±0.05	248	15	500

UL 1571 HOOK-UP WIRE
80℃ 30V PVC 電子線

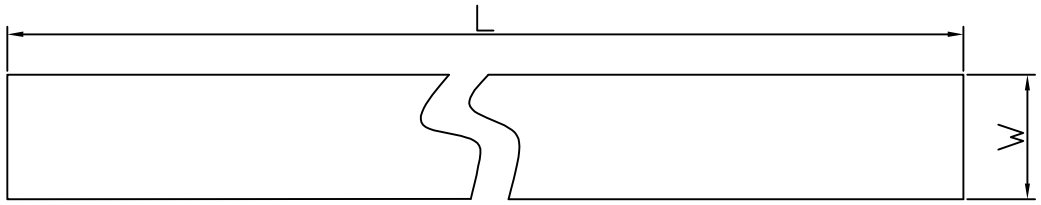
UL Subject 758 UL FILE NO：E309338

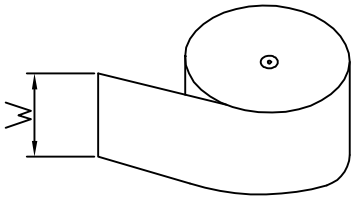
STYLE			UL 1571		CSA
RATING TEMP / VOLT			80℃/30V		
CONDUCTOR	SIZE		AWG	28	
	NUMBER		NO.	7	
	DIAMETER		MM	0.127	
	MIN.DIAMETER		MM	0.120	
	CROSS SEC AREA OF COND	AVG.	CM	253	
		MIN		248	
	LAY OF BUNCH		INCH	0.50	
	MAX.RESISTANCE		Ω/KM	248	
INSULATION	O.D.(±0.05)		MM	0.60	
	INSULATION THICKNESS	AVG	MIL	4	
		MIN		3	
	JACKET THICKNESS	AVG	MIL		
		MI			
ADHESIVE TEST			KG		
INSULATION RESISTANCE			MΩ/KM	15	
SPARK TEST			KV	2	
ELONGATION			%	100	
TENSIL STRENGTH			PSI	1500	
ELO.(AFTER AGING)			%	OF UNAGED 65	
TEN.ST.(AFTER AGING)			%	OF UNAGED 70	
AGING TEMP TIME				113℃/168HRS	
OIL LMMERSION TEST					
FIAME TEST				VW-1	
HEAT SHOCK TEST				121℃/1HR 1.60MM MANDREL	
DEFORMATION TEST				113℃/1HR 50%	
COLD BEND TEST				-10℃/1HR 0.4MM MANDREL	
INSULATION POTENTIALST				500VAC/MIN	

印 字 內 容： 不印字



产品构成图





備註：

1.符合本公司及客戶環保要求

2.公差：宽±0.5mm 长±0.3M

3.成卷

4.材質：導電布,厚度=0.12±0.015mm

5.粘著力：1.2kgf/inch

6.初粘：≦28CM

7.保持力：≧1440minute

8.膠帶應用之理想溫度範圍是23℃±５℃，濕度範圍是55%±5%,建議使用時黏貼表面不低於10℃,否則容易因膠體太硬,而無法牢固地貼合被貼物,減低膠帶粘著力.高於35℃以上時,膠體會軟化,破坏性能,黏貼較容易張口.膠帶儲存於低溫環境下,需將膠帶回溫至室溫(約23℃)三小時以上再行使用.膠帶於高溫加熱環境狀態下使用時,瞬間溫度勿超過180℃.

9.膠帶應放置恒溫恒濕之環境,避免高溫濕或日曬,以妥爲保管條件下,品質證期間爲製造出廠三個月內.



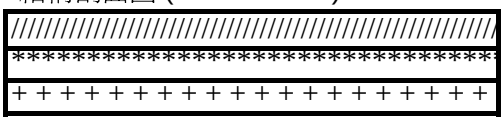
客戶确认盖章	版次	版次說明	日期	東莞市信名寬電子科技有限公司			
	A1	新承認	20201113				
				規格	W mmXL M	單位	mm
				品名料號	平織導電布(5683Z23-SN)	客戶	穩德
				客戶料號	系列	繪圖	
				圖檔號	BY0026-20201113-W XL	審核	葉樹明

東莞市信名寬電子科技有限公司

廣東省東莞市石碣鎮新風中路下一村工業區 TEL:0769-87337737/8 FAX:0769-87337739

Hotech-5683Z導電布膠帶 (Conductive Fabric Tape)

結構剖面圖 (Constructure)



1.材質說明 (Material Data)

項目 (Item)	材質 (Material)	厚度 (Thickness)	說明 (Description)
基材 (Base Material)	導電布 (Conductive Fabric)	0.080±0.01mm	平織布面(Flexible Taffeta)
膠體 (Adhesive)	導電膠(Conductive Acrylic	0.040±0.005mm	感壓性膠 (Pressure Sensitive Adhesive)

2.特性(Characteristics)

項目 (Item)	單位 (Unit)	測試值 (Value)	說明 (Description)
粘著力 (Adhesive Strength with 180° Peel)	Kg/inch	≧1.2	在25℃以2Kg/inch貼合測試貼合後靜置20分鐘，再以180°反向拉張速度300mm/min
保持力(Holding Power)	minute	≧1440	對SUS 304 Plate以2Kg/inch貼合測試
布面阻抗 (Surface Resistance)	Ω/inch	≦0.05	25.4mmX25.4mm Mitsubishi Loresta阻抗測試機
屏蔽效果 (Shielding Effectiveness)	dB	78~88	100MHz~1000MHz
單位重量 (Material Weight)	g/㎡	85	

3.導電膠成分(Conductive Adhesive Resin Composition)

膠體成分：熱感壓導電性壓克力膠混合型接著劑

導電份子：Silver, Nickel, Copper

溶　　劑 ：醋酸乙脂 / 甲苯

背膠阻抗值： ≦0.2 ohms/sq inch(at 1Kg壓力下架橋測試，以GOM-801G阻抗測試機測試)

4.使用條件:

4.1.線材包覆需考量粘着面積,一般最好能有寬度3mm以上粘着面積,布种厚度增加寬度相對增加.

4.2.包覆鐵氟龔線材粘着寬度在5mm以上面積.

4.3.包覆線材須對折捆扎時,粘著寬度最好能在5mm以上面積或選用薄且柔軟佈种.

4.4.線材越細選用的布种要能越薄越柔軟.

4.5.由於粘合膠屬於感壓性壓克力膠在粘著時須有一定力量去做壓合動作,使其黏膠完全附著被貼物上,一般都需要在(0.5~1)kg以上力道在終端處做壓合,可參考我司出貨檢驗標准壓合力道.

4.6.感壓型壓克力膠會因被貼物，被貼面（粗細）壓克力的不同有不同的粘著效果（剝離力）。

5.高/底溫狀況下之使用條件:

膠帶應用之理想溫度範圍是23℃±５℃，濕度範圍是55%±5%,建議使用時黏貼表面不低於10℃,否則容易因膠體太硬,而無法牢固地貼合被貼物,減低膠帶粘著力.高於35℃以上時,膠體會軟化,破坏性能,黏貼較容易張口.膠帶儲存於低溫環境下,需將膠帶回溫至室溫(約23℃)三小時以上再行使用.膠帶於高溫加熱環境狀態下使用時,瞬間溫度勿超過180℃.

6.以客戶需求有分輕重離型,輕在(4-15)克,重在(25-35)克

6.1.輕型紙(4-15)克適合沖大規格及基材厚度薄、軟的產品上,小於10cm*10cm以下且又是直條式產品會有容易剝落現象.

6.2.重型紙(25-35)克適合沖10cm*10cm直條式規格產品,若超出這範圍時會造成離型過重難撕開或膠有略拉絲現象

7.包裝:

膠帶卷料成品以熱縮膜包裝,片狀成品以包裝袋完成包裝,並裝於適當之紙箱內.

8.膠帶之保管及品質保證期間:

膠帶應放置恒溫恒濕之環境,避免高溫濕或日曬,以妥爲保管條件下,品質證期間爲製造出廠三個月內.

9.提示說明:

由於壓敏膠系列的膠水與鐵氟龍、PVC材質的材料不相溶,故壓敏膠系列的產品不適用於此類產品.

以上數據之取得是透過多次測試所得之平均值,使用者須確定此產品是否適用於某一特定用途及是否適用者的應用方式很多因不會影響產品在特定用途中的性能,若對本公司產品尚有疑問，敬請聯絡本公司人員,以便爲您提供更詳細的說明與服務.谢谢！

Test Report

No.: CANEC25000722302 **Date:** Jan 15, 2025

Client Name: DONGGUAN LUCKY FLY CONDUCTOR CO.,LTD.

Client Address: QIAO ZI REGION CHANGPING TOWN DONGGUAN CITY GUANGDONG PROVINCE

Sample Name: TINNED COPPER WIRE

The above sample(s) and information were provided by the client.

SGS Job No.: SZP25-001389

Sample Receiving Date: Jan 09, 2025

Testing Period: Jan 09, 2025 ~ Jan 15, 2025

Test Requested: Select test(s) as requested by the client.

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

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

Test Requirement	Conclusion
EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU - Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBB), Polybrominated diphenyl ethers (PBDE), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)	Pass
AfPS GS 2019:01 PAK-Polycyclic Aromatic Hydrocarbons (PAHs)	See Results
Element(s)	See Results
Perfluorooctane sulfonic acid (PFOS) and its derivatives	See Results

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

Arsene Ye

Arsene Ye
Approved Signatory

scan to see the report
7DF1B45B

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中国·广东·广州高新技术产业开发区科学城科珠路198号 邮编: 510663 t (86-20) 82155555 sgs.china@sgs.com

Test Result(s):

Test Part Description：

SN ID	Sample No.	SGS Sample ID	Description
SN1	A2	CAN25-0007223-0001.C002	Silvery plated metal wire

Remarks:

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

EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU - Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBB), Polybrominated diphenyl ethers (PBDE), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)

Test Method: With reference to IEC 62321-4:2013+AMD1:2017, IEC 62321-5:2013, IEC 62321-7-1:2015, IEC 62321-6:2015 and IEC62321-8:2017, analysis was performed by ICP-OES/AAS, UV-Vis and GC-MS.

Test Item(s)	Limit	Unit(s)	MDL	A2
Lead (Pb)	1000	mg/kg	2	ND
Mercury (Hg)	1000	mg/kg	2	ND
Cadmium (Cd)	100	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))▼	-	μg/cm²	0.10	ND
Polybromobiphenyl (PBB)	1000	mg/kg	-	ND
Monobrominated biphenyl (MonoBB)	-	mg/kg	5	ND
Dibrominated biphenyl (DiBB)	-	mg/kg	5	ND
Tribrominated biphenyl (TriBB)	-	mg/kg	5	ND
Tetrabrominated biphenyl (TetraBB)	-	mg/kg	5	ND
Pentabrominated biphenyl (PentaBB)	-	mg/kg	5	ND
Hexabrominated biphenyl (HexaBB)	-	mg/kg	5	ND
Heptabrominated biphenyl (HeptaBB)	-	mg/kg	5	ND
Octabrominated biphenyl (OctaBB)	-	mg/kg	5	ND
Nonabrominated biphenyl (NonaBB)	-	mg/kg	5	ND
Decabrominated biphenyl (DecaBB)	-	mg/kg	5	ND
Polybromodiphenyl ether(PBDE)	1000	mg/kg	-	ND
Monobrominated diphenyl ether (MonoBDE)	-	mg/kg	5	ND
Dibrominated diphenyl ether (DiBDE)	-	mg/kg	5	ND
Tribrominated diphenyl ether (TriBDE)	-	mg/kg	5	ND
Tetrabrominated diphenyl ether (TetraBDE)	-	mg/kg	5	ND
Pentabrominated diphenyl ether (PentaBDE)	-	mg/kg	5	ND
Hexabrominated diphenyl ether (HexaBDE)	-	mg/kg	5	ND
Heptabrominated diphenyl ether (HeptaBDE)	-	mg/kg	5	ND

SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch Technical Services Co., Ltd. Chemical Laboratory. 检验检测专用章 Inspection & Testing Services

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Test Item(s)	Limit	Unit(s)	MDL	A2
Octabrominated diphenyl ether (OctaBDE)	-	mg/kg	5	ND
Nonabrominated diphenyl ether (NonaBDE)	-	mg/kg	5	ND
Decabrominated diphenyl ether (DecaBDE)	-	mg/kg	5	ND
Bis(2-ethylhexyl) phthalate (DEHP)	1000	mg/kg	50	ND
Butyl benzyl phthalate (BBP)	1000	mg/kg	50	ND
Dibutyl phthalate (DBP)	1000	mg/kg	50	ND
Diisobutyl phthalate (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.
(3) ▼ = a. The sample is positive for Cr(VI) if the Cr(VI)concentration is greater than 0.13 μg/cm^2. The sample coating is considered to contain Cr(VI).
b. The sample is negative for Cr(VI) if Cr(VI) is ND (concentration less than 0.10 μg/cm^2). The coating is considered a non-Cr(VI) based coating.
c. The result between 0.10 μg/cm^2 and 0.13 μg/cm^2 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.

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(s)	MDL	A2
Benzo(a)pyrene(BaP)	50-32-8	mg/kg	0.1	ND
Benzo(e)pyrene(BeP)	192-97-2	mg/kg	0.1	ND
Benzo(a)anthracene(BaA)	56-55-3	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
Chrysene(CHR)	218-01-9	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
Indeno(1,2,3-c,d)pyrene(IPY)	193-39-5	mg/kg	0.1	ND
Phenanthrene(PHE)	85-01-8	mg/kg	0.1	ND
Pyrene(PYR)	129-00-0	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
Sum of Phenanthrene(PHE), Pyrene(PYR), Anthracene(ANT), Fluoranthene(FLT)	-	mg/kg	-	ND
Naphthalene(NAP)	91-20-3	mg/kg	0.1	ND

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Test Item(s)	CAS No.	Unit(s)	MDL	A2
Sum of 15 PAHs	-	mg/kg	-	ND
Material Category	-	-	-	-

Notes:

AfPS（German commission for Product Safety）: PAHs requirements

Parameter	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) mg/kg	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo(e)pyrene (BeP) mg/kg	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo(a)anthracene (BaA) mg/kg	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo(b)fluoranthene (BbF) mg/kg	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo(j)fluoranthene (BjF) mg/kg	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo(k)fluoranthene (BkF)mg/kg	< 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) mg/kg	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo(g,h,i)perylene (BPE) mg/kg	< 0.2	< 0.2	< 0.5	< 0.5	< 1

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Indeno(1,2,3-cd)pyrene (IPY) mg/kg	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Phenanthrene (PHE), pyrene (PYR), anthracene (ANT), fluoranthene (FLT), mg/kg	< 1 Sum	< 5 Sum	< 10 Sum	< 20 Sum	< 50 Sum
Naphthalene (NAP) mg/kg	< 1	< 2		< 10	
Sum of 15 PAHs	<1	< 5	< 10	< 20	< 50

Notes:
[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.

Element(s)

Test Method: With reference to US EPA 3050B:1996, analysis was performed by ICP-OES/AAS.

Test Item(s)	Unit(s)	MDL	A2
Beryllium(Be)	mg/kg	5	ND

Perfluorooctane sulfonic acid (PFOS) and its derivatives

Test Method: Modified EN 17681-1:2022, analysis was performed by LC-MS or LC-MS/MS.

Test Item(s)	CAS No.	Unit(s)	MDL	A2
PFOS, its salts and related compounds				
Perfluorooctane sulfonic acid (PFOS), its salts^	1763-23-1	mg/kg	0.010	ND
N-ethylperfluoro-1-octanesulfonamide (N-EtFOSA)	4151-50-2	mg/kg	0.010	ND
N-methylperfluoro-1-octanesulfonamide (N-MeFOSA)	31506-32-8	mg/kg	0.010	ND
2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol (N-EtFOSE)	1691-99-2	mg/kg	0.010	ND
2-(N-methylperfluoro-1-octanesulfonamido)-ethanol (N-MeFOSE)	24448-09-7	mg/kg	0.010	ND

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Test Item(s)	CAS No.	Unit(s)	MDL	A2
Perfluorooctane Sulfonamide (PFOSA), its salts^	754-91-6	mg/kg	0.010	ND
Perfluorooctane sulfonamidoacetic Acid (FOSAA), its salts^	2806-24-8	mg/kg	0.010	ND
N-Methylperfluoro-1-octanesulfonamidoacetic Acid (N-MeFOSAA), its salts^	2355-31-9	mg/kg	0.010	ND
N-Ethylperfluorooctane sulfonamidoacetic Acid (N-EtFOSAA), its salts^	2991-50-6	mg/kg	0.010	ND
Sum of Perfluorooctane sulfonic acid (PFOS) and its derivatives	-	mg/kg	-	ND

Notes:
1. ^=Substances refer to its salts/derivative listed in below table.

Substance Name	**CAS No.**
PFOS, its salts & derivatives	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1
Potassium Perfluorooctanesulfonate (PFOS-K)	2795-39-3
Perfluorooctanesulfonic acid, lithium salt (PFOS-Li)	29457-72-5
Sodium perfluorooctanesulfonate (PFOS-Na)	4021-47-0
Ammonium perfluorooctanesulfonate (PFOS-NH_4)	29081-56-9
Perfluorooctane sulfonate diethanolamine salt (PFOS-$NH_2(C_2H_4OH)_2$)	70225-14-8
Perfluorooctanesulfonic acid,tetraethylammonium salt (PFOS-$N(C_2H_5)_4$)	56773-42-3
N-decyl-N,N-dimethyldecan-1-aminium 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluorooctane-1-sulfonate (PFOS-$N(C_{10}H_{21})_2(CH_3)_2$)	251099-16-8
TetrabutylAmmonium perfluorooctanesulfonate (PFOS-$N(C_4H_9)_4$)	111873-33-7
Perfluorooctane Sulfonyl fluoride (PFOS-F)	307-35-7
Magnesium bis(heptadecafluorooctanesulphonate) (PFOS-Mg)	91036-71-4
Piperidine 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluorooctanesulfonate	71463-74-6
Perfluorooctanesulfonate	45298-90-6
Triethylammonium perfluorooctane sulfonate (PFOS-$N(C_2H_5)_3$)	54439-46-2
Tetramethylammonium perfluorooctane sulfonate (PFOS-$N(CH_3)_4$)	56773-44-5
N,N,N-Tripropylpentan-1-aminium heptadecafluorooctane-1-sulfonate (PFOS-$N(C_3H_7)_3(C_5H_{11})$)	56773-56-9
N,N-Dibutyl-N-methylbutan-1-aminium heptadecafluorooctane-1-sulfonate (PFOS-$N(C_4H_9)_3(CH_3)$)	124472-68-0
Iodonium, bis[4-(1,1-dimethylethyl)phenyl]-, salt with perfluoro-1-octanesulfonic acid (1:1)	213740-80-8
Diphenyl(2,4,6-trimethylphenyl)sulfonium perfluoro-1-octanesulfonate	258341-99-0

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1-Hexadecylpyridinium perfluoro-1-octanesulfonate	334529-63-4
N,N,N-Triethyldecan-1-aminium heptadecafluorooctane-1-sulfonate	773895-92-4
Tetrabutylphosphonium perfluorooctane sulfonate (PFOS-P (C_4H_9)$_4$))	2185049-59-4
Perfluorooctanesulfonic acid diethylamine salt (PFOS-$C_4H_{11}N$)	2205029-08-7
heptyldimethyl{2-[(2-methylprop-2-enoyl)oxy]ethyl}azanium heptadecafluorooctane-1-sulfonate (PFOS-$C_{15}H_{30}NO_2$)	1203998-97-3
Perfluorooctane sulfonic anhydride (PFOSAN)	423-92-7
FOSAA, its salts	
Perfluorooctane sulfonamidoacetic Acid (FOSAA)	2806-24-8
N-[(Perfluorooctyl)sulfonyl]glycinate (FOSAA(anion))	909405-47-6
N-[(Perfluorooctyl)sulfonyl]glycine potassium salt (1:1) (FOSAA-K)	75260-69-4
N-[(Perfluorooctyl)sulfonyl]glycine sodium salt (1:1) (FOSAA-Na)	115716-87-5
N-MeFOSAA, its salts	
N-Methylperfluoro-1-octanesulfonamidoacetic Acid (N-MeFOSAA)	2355-31-9
2-(N-Methylperfluorooctanesulfonamido)acetate (N-Me-FOSAA(anion))	909405-48-7
Potassium N-((heptadecafluorooctyl)sulphonyl)-N-methylglycinate (N-Me-FOSAA-K)	70281-93-5
N-EtFOSAA, its salts	
N-Ethylperfluorooctane sulfonamidoacetic Acid (N-EtFOSAA)	2991-50-6
Glycine, N-ethyl-N-[(heptadecafluorooctyl)sulfonyl]-, potassium salt (N-Et-FOSAA-K)	2991-51-7
2-(N-Ethyl-perfluorooctanesulfonamido)acetate (N-Et-FOSAA(anion))	909405-49-8
Ammonium 2-(N-ethylperfluorooctanesulfonamido)acetate (N-Et-FOSAA-NH_4)	2991-52-8
Sodium 2-(N-ethylperfluorooctanesulfonamido)acetate (N-Et-FOSAA-Na)	3871-50-9
PFOSA, its salts	
Perfluorooctane Sulfonamide (PFOSA)	754-91-6
Perfluorooctanesulfonamide lithium salt (1:1) (PFOSA-Li)	76752-79-9
Perfluorooctanesulfonamide Sodium salt (1:1) (PFOSA-Na)	76752-78-8
Perfluorooctanesulfonamide Potassium salt (1:1) (PFOSA-K)	76752-70-0
Perfluorooctanesulfonamide Ammonium salt (1:1) (PFOSA-NH_4)	76752-72-2
Heptadecafluorooctane-1-sulphonamide, compound with triethylamine (1:1) (PFOSA-$C_6H_{15}N$)	76752-82-4

Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (*w*=0) stated in ILAC-G8:09/2019.

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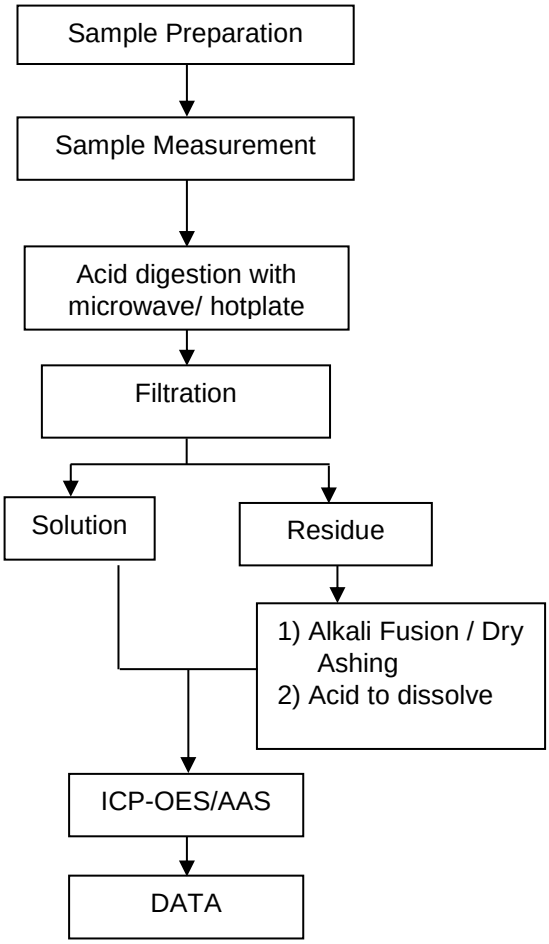
Elements Testing Flow Chart

These samples were dissolved totally by pre-conditioning method according to below flow chart.



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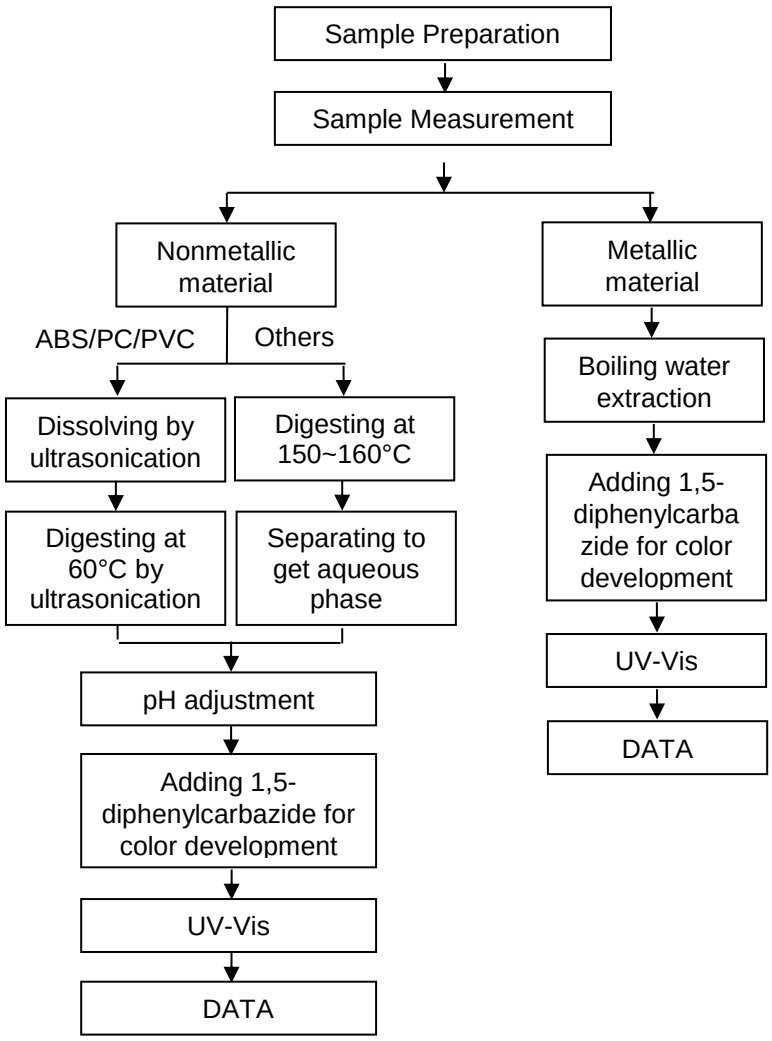
Hexavalent Chromium (Cr(VI)) Testing Flow Chart



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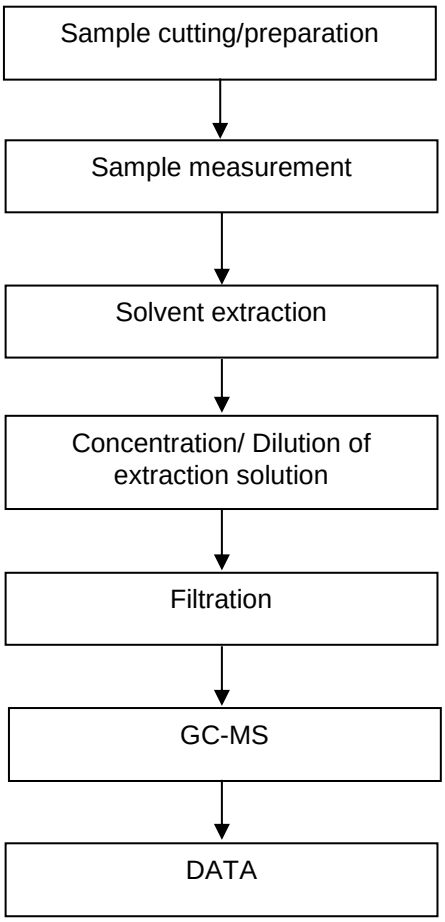
PBB/PBDE Testing Flow Chart



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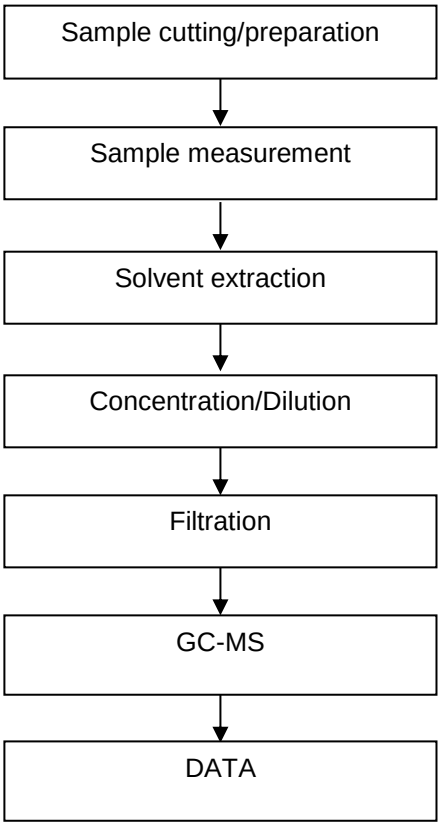
Phthalates Testing Flow Chart



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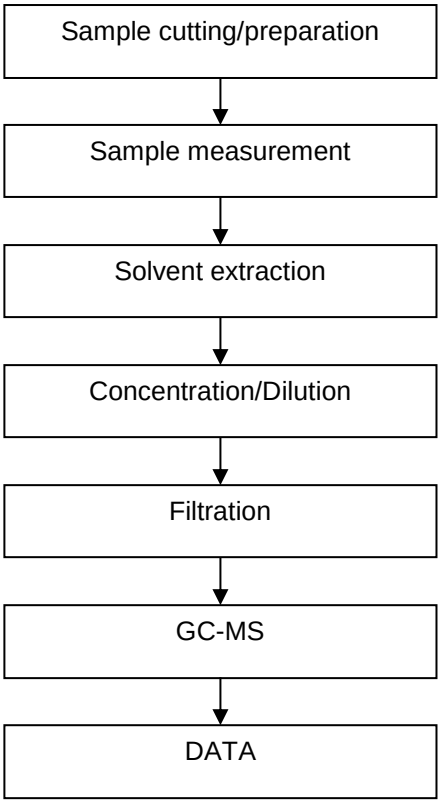
PAHs Testing Flow Chart



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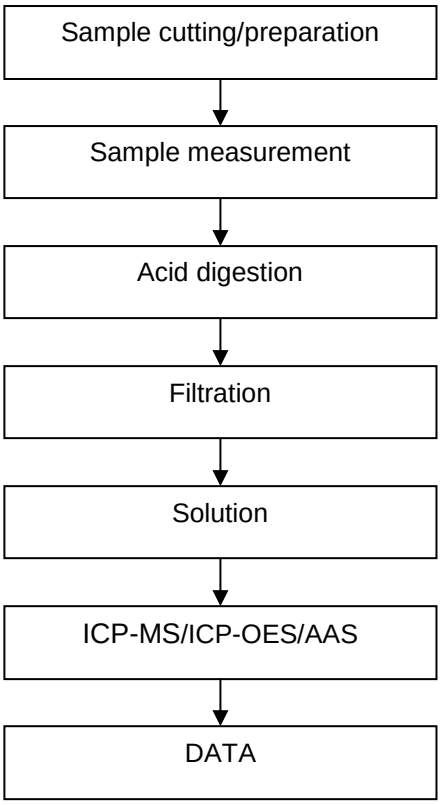
Elements Testing Flow Chart



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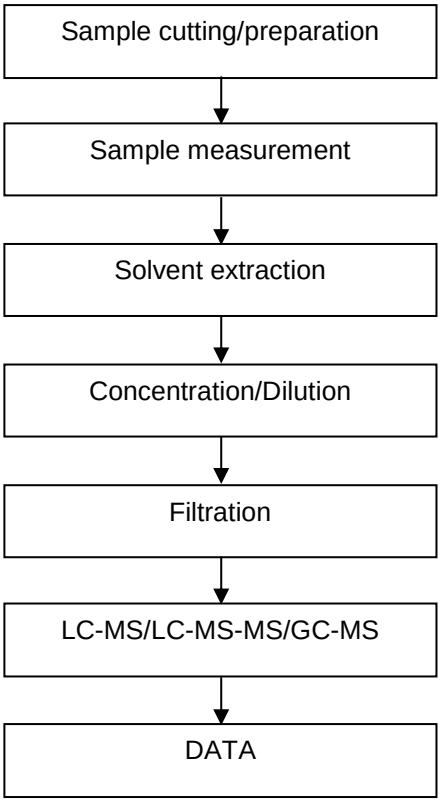
PFASs/ PFOS/PFOA Testing Flow Chart



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Sample Photo:



CAN25-0007223-0001.C002

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*** End of Report ***

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Test Report

No.: CANEC23001447709_1 **Date:** Apr 18, 2023

Client Name: SINWA LASER TECHNOLOGY CO.,LTD

Client Address: 50.WU KONG 5 TH RD,.WU KU INDUSTRIAL PARK .TAIPEI TAIWAN CHINA

Sample Name: INK WHITE FOR WIRE &CABLE PRINTING

Model No.: I-PVC-01

The above sample(s) and information were provided by the client.

THIS REPORT IS TO SUPERSEDE TEST REPORT NO.CANEC23001447709, DATE: Apr 11, 2023.

SGS Job No.: CP23-015924

Sample Receiving Date: Apr 04, 2023

Testing Period: Apr 04, 2023 ~ Apr 11, 2023

Test Requested: Select test(s) as requested by the client.

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

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

Test Requirement	Conclusion
EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU- Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)	Pass

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

Zm Guan
Approved Signatory

scan to see the report
2A4182A9

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Test Result(s):

Test Part Description：

SN ID	Sample No.	SGS Sample ID	Description
SN1	A2	CAN23-0014477-0001.C002	White liquid

Remarks:

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

EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU- Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)

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

Test Item(s)	Limit	Unit(s)	MDL	A2
Cadmium(Cd)	100	mg/kg	2	ND
Lead(Pb)	1000	mg/kg	2	ND
Mercury(Hg)	1000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))	1000	mg/kg	8	ND
Polybromobiphenyl (PBBs)	1000	mg/kg	-	ND
Monobromobiphenyl (MonoBB)	-	mg/kg	5	ND
Dibromobiphenyl (DiBB)	-	mg/kg	5	ND
Tribromobiphenyl (TriBB)	-	mg/kg	5	ND
Tetrabromobiphenyl (TetraBB)	-	mg/kg	5	ND
Pentabromobiphenyl (PentaBB)	-	mg/kg	5	ND
Hexabromobiphenyl (HexaBB)	-	mg/kg	5	ND
Heptabromobiphenyl (HeptaBB)	-	mg/kg	5	ND
Octabromobiphenyl (OctaBB)	-	mg/kg	5	ND
Nonabromobiphenyl (NonaBB)	-	mg/kg	5	ND
Decabromobiphenyl (DecaBB)	-	mg/kg	5	ND
Polybromodiphenyl ether(PBDEs)	1000	mg/kg	-	ND
Monobromodiphenylether (MonoBDE)	-	mg/kg	5	ND
Dibromodiphenylether (DiBDE)	-	mg/kg	5	ND
Tribromodiphenylether (TriBDE)	-	mg/kg	5	ND
Tetrabromodiphenylether (TetraBDE)	-	mg/kg	5	ND
Pentabromodiphenylether (PentaBDE)	-	mg/kg	5	ND
Hexabromodiphenylether (HexaBDE)	-	mg/kg	5	ND
Heptabromodiphenylether (HeptaBDE)	-	mg/kg	5	ND
Octabromodiphenylether (OctaBDE)	-	mg/kg	5	ND
Nonabromodiphenylether (NonaBDE)	-	mg/kg	5	ND
Decabromodiphenylether (DecaBDE)	-	mg/kg	5	ND
Dibutyl Phthalate(DBP)	1000	mg/kg	50	ND
Benzyl Butyl Phthalate(BBP)	1000	mg/kg	50	ND

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检验检测专用章 Inspection & Testing Services

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Test Item(s)	Limit	Unit(s)	MDL	A2
Bis-(2-ethylhexyl) Phthalate(DEHP)	1000	mg/kg	50	ND
Diisobutyl Phthalate(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.
(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.
This report updates Test Part Description.
Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (*w*=0) stated in ILAC-G8:09/2019.

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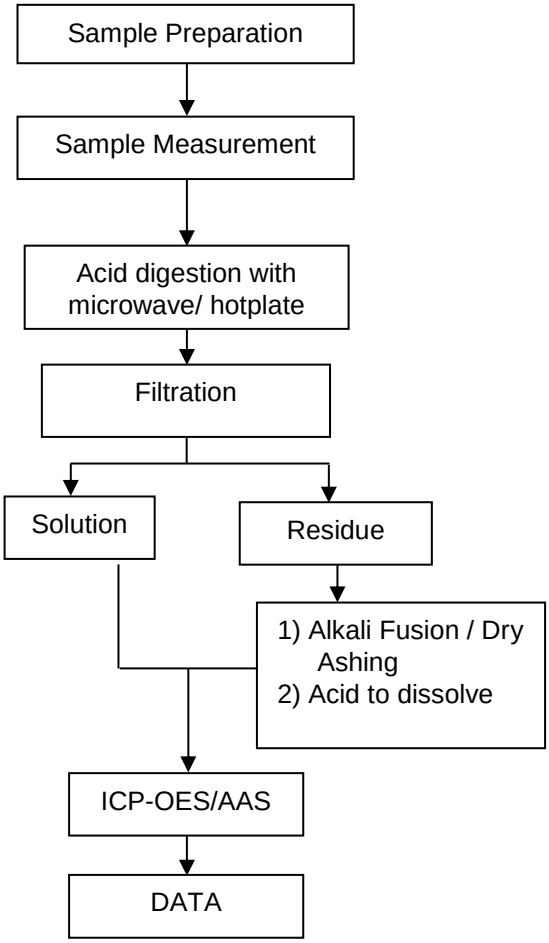
Elements Testing Flow Chart

These samples were dissolved totally by pre-conditioning method according to below flow chart.



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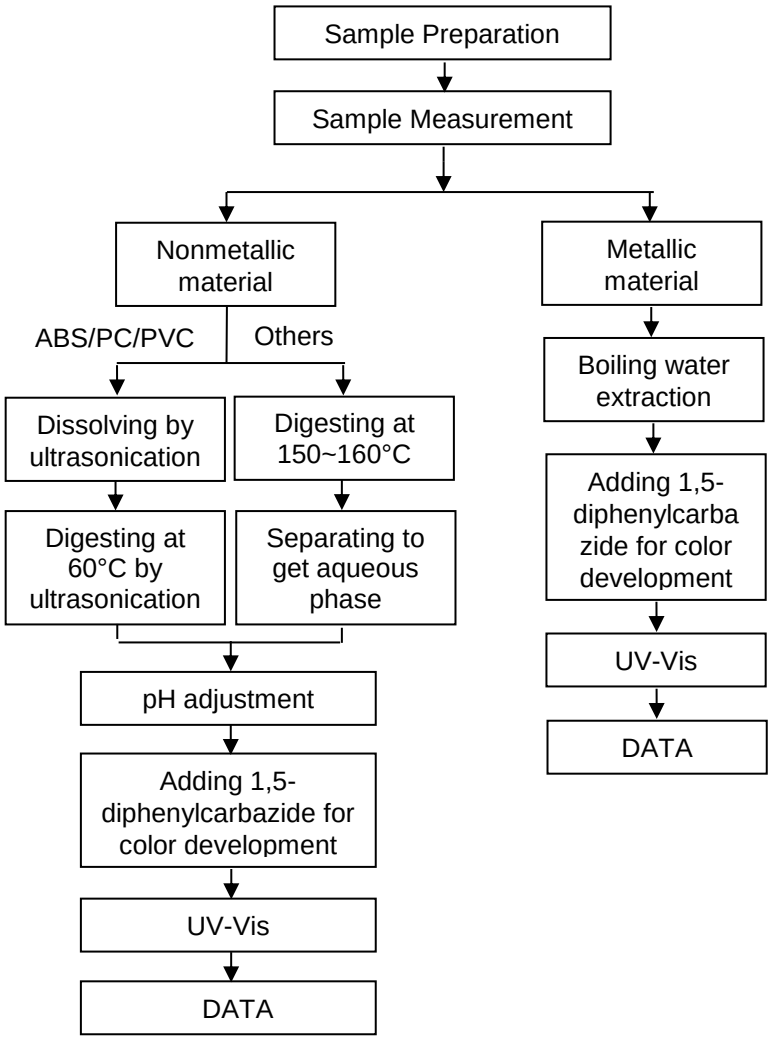
Hexavalent Chromium (Cr(VI)) Testing Flow Chart



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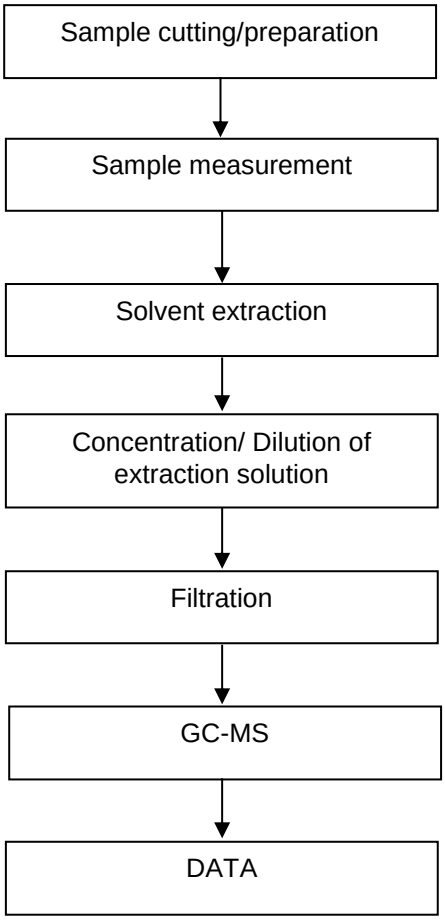
PBBs/PBDEs Testing Flow Chart



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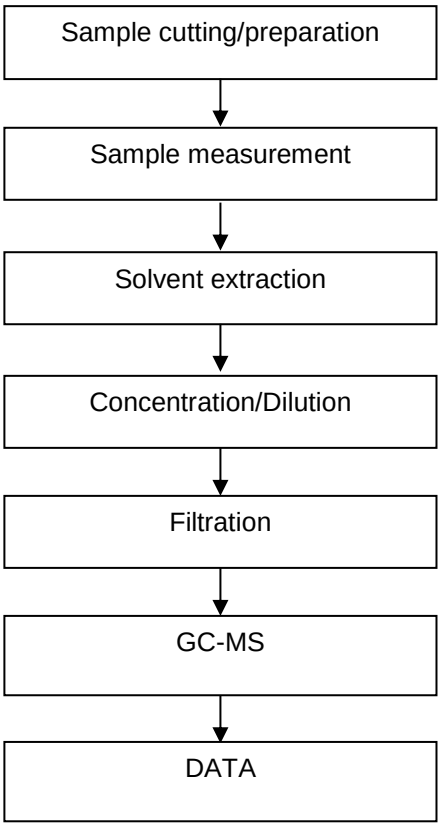
Phthalates Testing Flow Chart



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Sample Photo:



CAN23-0014477-0001.C002

SGS authenticate the photo on original report only

*** End of Report ***

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检测报告
Test Report

****

结论 Conclusion

测试样品 Tested Sample	依据标准/指令 According to standard/directive	结果 Result
提交样品 Submitted Sample	欧盟RoHS指令2011/65/EU及其修订指令(EU) 2015/863 RoHS Directive 2011/65/EU with amendment (EU) 2015/863	符合 PASS

****

符合表示检测结果满足欧盟RoHS指令2011/65/EU及其修订指令(EU) 2015/863要求的限值。
PASS means that the results shown on the report comply with the limits set by RoHS Directive 2011/65/EU with amendment (EU) 2015/863.

检测报告
Test Report

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 62321-7-2:2017和/或IEC 62321-5:2013测试总铬含量 IEC 62321-7-2:2017 and/or determination of Total Chromium by IEC 62321-5:2013	UV-Vis/ICP-OES
多溴联苯 Polybrominated Biphenyls (PBBs)	IEC 62321-12:2023	GC-MS
多溴二苯醚 Polybrominated Diphenyl Ethers (PBDEs)	IEC 62321-12:2023	GC-MS
邻苯二甲酸酯 Phthalates (DBP, BBP, DEHP, DIBP)	IEC 62321-12:2023	GC-MS

检测报告
Test Report

检测结果 Test Result(s)

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL	限值 Limit
	003		
铅 Lead (Pb)	N.D.	2 mg/kg	1000 mg/kg
镉 Cadmium (Cd)	N.D.	2 mg/kg	100 mg/kg
汞 Mercury (Hg)	N.D.	2 mg/kg	1000 mg/kg
六价铬 Hexavalent Chromium (Cr(VI))	N.D.	8 mg/kg	1000 mg/kg

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL	限值 Limit
	003		
多溴联苯 Polybrominated Biphenyls (PBBs)			
一溴联苯 Monobromobiphenyl	N.D.	25 mg/kg	1000 mg/kg
二溴联苯 Dibromobiphenyl	N.D.	25 mg/kg	
三溴联苯 Tribromobiphenyl	N.D.	25 mg/kg	
四溴联苯 Tetrabromobiphenyl	N.D.	25 mg/kg	
五溴联苯 Pentabromobiphenyl	N.D.	25 mg/kg	
六溴联苯 Hexabromobiphenyl	N.D.	25 mg/kg	
七溴联苯 Heptabromobiphenyl	N.D.	25 mg/kg	
八溴联苯 Octabromobiphenyl	N.D.	25 mg/kg	
九溴联苯 Nonabromobiphenyl	N.D.	25 mg/kg	
十溴联苯 Decabromobiphenyl	N.D.	25 mg/kg	

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL	限值 Limit
	003		
多溴二苯醚 Polybrominated Diphenyl Ethers (PBDEs)			
一溴二苯醚 Monobromodiphenyl ether	N.D.	25 mg/kg	1000 mg/kg
二溴二苯醚 Dibromodiphenyl ether	N.D.	25 mg/kg	
三溴二苯醚 Tribromodiphenyl ether	N.D.	25 mg/kg	
四溴二苯醚 Tetrabromodiphenyl ether	N.D.	25 mg/kg	
五溴二苯醚 Pentabromodiphenyl ether	N.D.	25 mg/kg	
六溴二苯醚 Hexabromodiphenyl ether	N.D.	25 mg/kg	
七溴二苯醚 Heptabromodiphenyl ether	N.D.	25 mg/kg	
八溴二苯醚 Octabromodiphenyl ether	N.D.	25 mg/kg	
九溴二苯醚 Nonabromodiphenyl ether	N.D.	25 mg/kg	
十溴二苯醚 Decabromodiphenyl ether	N.D.	25 mg/kg	

检测报告
Test Report

检测结果 Test Result(s)

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL	限值 Limit
	003		
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	1000 mg/kg
邻苯二甲酸丁基苄基酯 Butyl benzyl phthalate (BBP) CAS#:85-68-7	N.D.	50 mg/kg	1000 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	1000 mg/kg
邻苯二甲酸二异丁酯 Diisobutyl phthalate (DIBP) CAS#:84-69-5	N.D.	50 mg/kg	1000 mg/kg

样品/部位描述 Sample/Part Description

序号 No.	CTI样品ID CTI Sample ID	描述 Description
1	003	黑色塑料套管 Black plastic tube

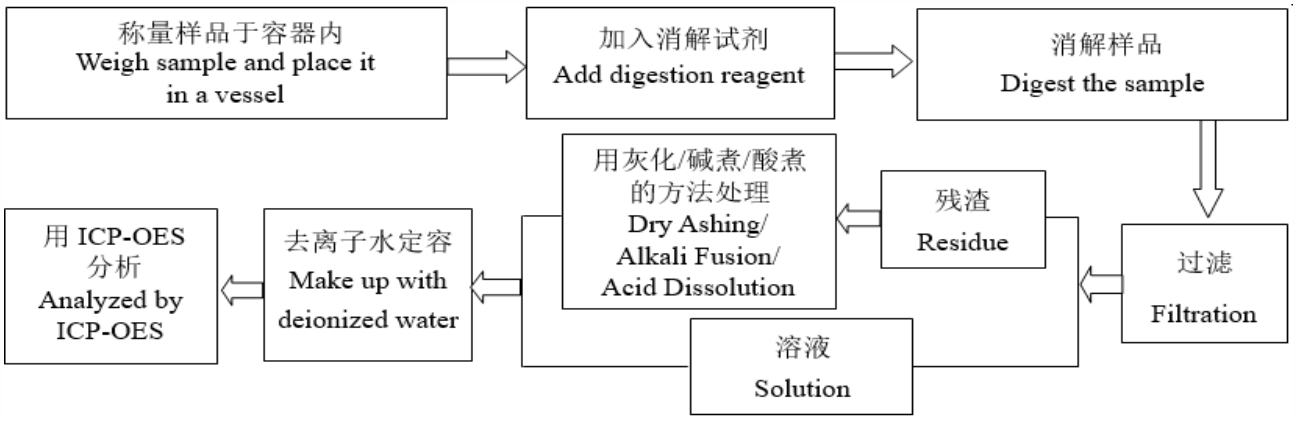
备注: **对于检测铅，镉，汞之样品已消解完全。**
-根据客户声明，本报告中的报告抬头公司名称与报告A2250059567101003E中的报告抬头公司名称为集团公司和子（附属）公司关系，本报告的测试结果引用自报告A2250059567101003E。
-N.D. = 未检出（小于方法检出限）
-mg/kg = ppm = 百万分之一
-1000 mg/kg = 0.1%

Remark: **The sample(s) had been dissolved totally tested for Lead, Cadmium, Mercury.**
-According to the client's statement, the Company Name shown on Report in this report and the Company Name shown on Report in the report A2250059567101003E are the Group-subsidiary relations, the test result(s) of this report is/are presented in reference to the result(s) that reported in A2250059567101003E.

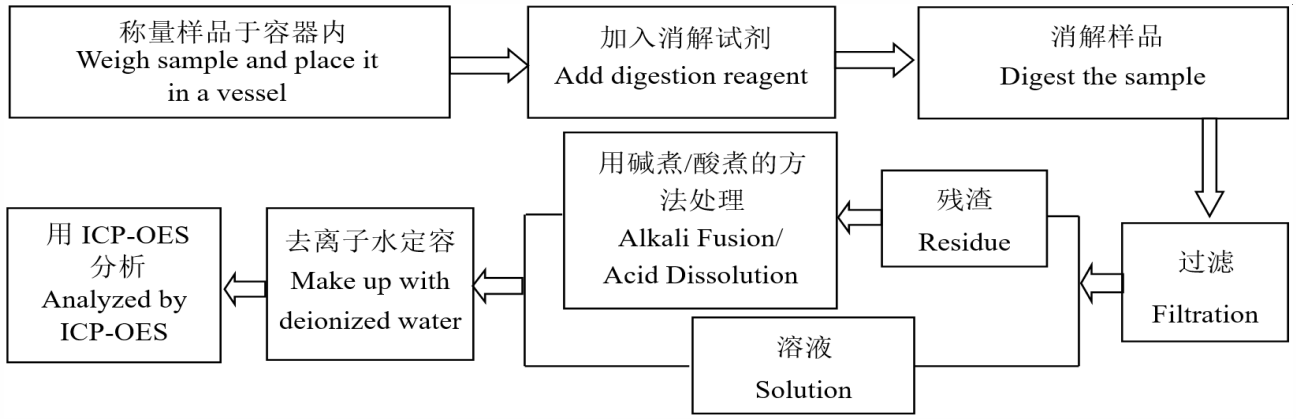
-MDL = Method Detection Limit
-N.D. = Not Detected (<MDL)
-mg/kg = ppm = parts per million
-1000 mg/kg = 0.1%

检测流程 Test Process

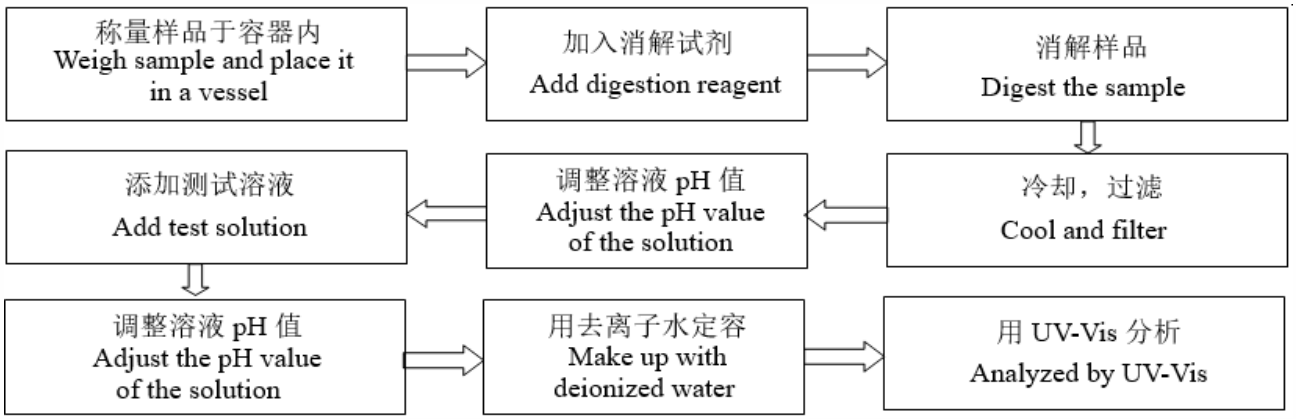
1. 铅(Pb)，镉(Cd)，铬(Cr)
   Lead (Pb), Cadmium (Cd), Chromium (Cr)



2. 汞(Hg)
   Mercury (Hg)

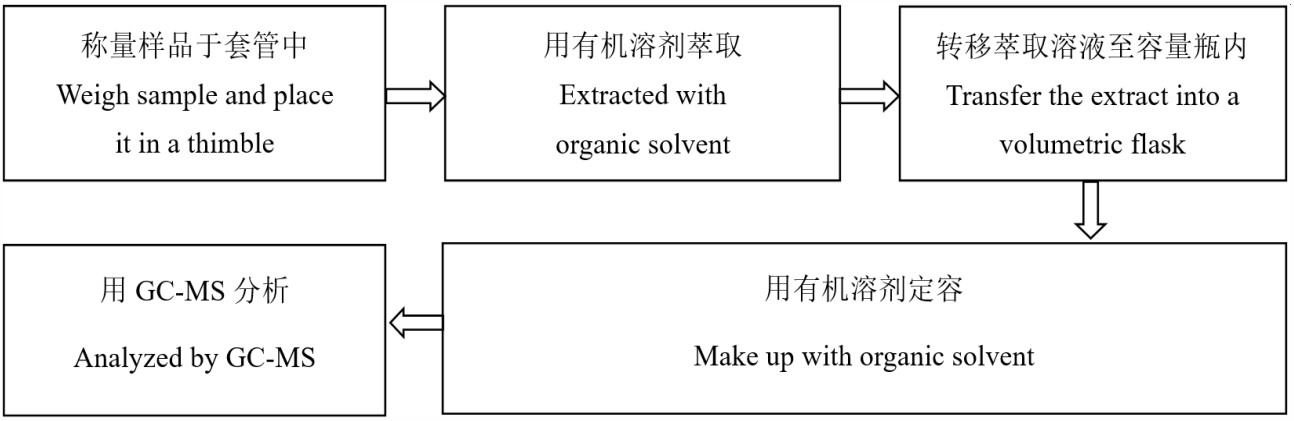


3. 六价铬(Cr(VI))
   Hexavalent Chromium (Cr(VI))

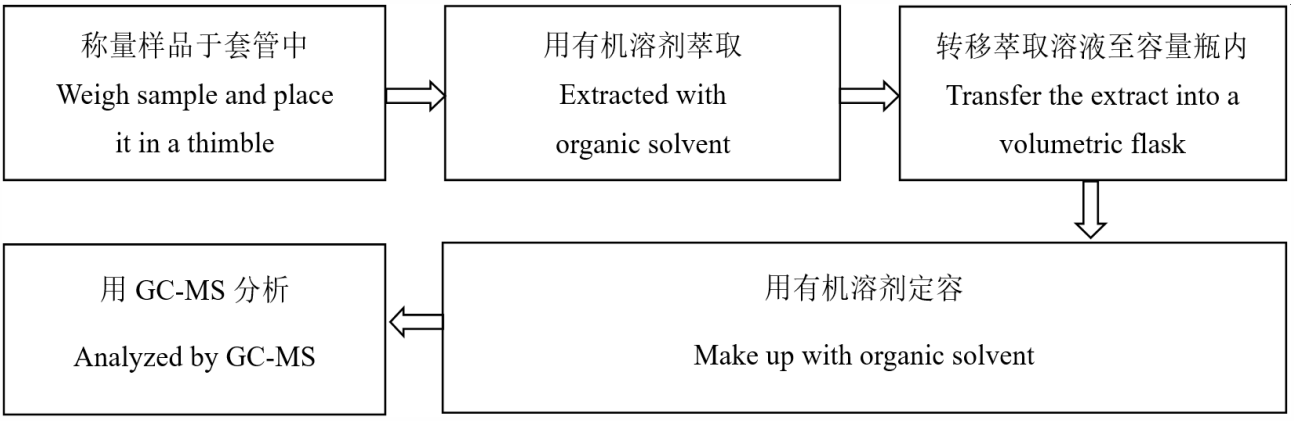


检测报告
Test Report

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)



检测报告
Test Report

样品图片
Photo(s) of the sample(s)



声明Statement：

1. 检测报告无批准人签字、“专用章”及报告骑缝章无效；
   This report is considered invalid without approved signature, special seal and the seal on the perforation;
2. 报告抬头公司名称及地址、样品及样品信息由申请者提供，申请者应对其真实性负责，CTI未核实其真实性；
   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. 本报告检测结果仅对受测样品负责；
   The result(s) shown in this report refer(s) only to the sample(s) tested;
4. 除非另有说明，报告参照ILAC-G8:09/2019 / CNAS-GL015:2022使用简单接受(w=0)二元判定规则进行符合性判定;
   Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (w=0) stated in ILAC-G8:09/2019 / CNAS-GL015:2022;
5. 未经CTI书面同意，不得部分复制本报告；
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   In case of any discrepancy between the English version and Chinese version of the testing reports (if generated), the Chinese version shall prevail.

报告结束

*** End of report ***

測試報告
Test Report

號碼(No.): ETR25200206　　日期(Date): 08-Feb-2025　　頁數(Page): 1 of 17

鈞寶電子工業股份有限公司 (KING CORE ELECTRONICS INC.)
桃園市平鎮區南豐路269號(平鎮工業區) (NO. 269, NANFONG RD., PINGJHEN DIST., TAOYUAN CITY 324, TAIWAN)

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 the applicant as)：

送樣廠商(Sample Submitted By)	:	鈞寶電子工業股份有限公司 (KING CORE ELECTRONICS INC.)
樣品名稱(Sample Name)	:	FERRITE CORE
樣品型號(Style/Item No.)	:	K5B

==========

收件日(Sample Receiving Date)	:	03-Feb-2025
測試期間(Testing Period)	:	03-Feb-2025 to 08-Feb-2025

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.)

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

PIN CODE: E0CF6923

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測試報告
Test Report

鈞寶電子工業股份有限公司 (KING CORE ELECTRONICS INC.)
桃園市平鎮區南豐路269號(平鎮工業區) (NO. 269, NANFONG RD., PINGJHEN DIST., TAOYUAN CITY 324, TAIWAN)

測試部位敘述 (Test Part Description)

No.1 : FERRITE CORE

測試結果 (Test Results)

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

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測試報告
Test Report

號碼(No.): ETR25200206 日期(Date): 08-Feb-2025

鈞寶電子工業股份有限公司 (KING CORE ELECTRONICS INC.)
桃園市平鎮區南豐路269號(平鎮工業區) (NO. 269, NANFONG RD., PINGJHEN DIST., TAOYUAN CITY 324, TAIWAN)

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
一溴聯苯醚 (Monobromodiphenyl ether)	參考IEC 62321-6: 2015，以氣相層析儀/質譜儀分析。(With reference to IEC 62321-6: 2015, analysis was performed by GC/MS.)	mg/kg	5	n.d.	-
二溴聯苯醚 (Dibromodiphenyl ether)		mg/kg	5	n.d.	-
三溴聯苯醚 (Tribromodiphenyl ether)		mg/kg	5	n.d.	-
四溴聯苯醚 (Tetrabromodiphenyl ether)		mg/kg	5	n.d.	-
五溴聯苯醚 (Pentabromodiphenyl ether)		mg/kg	5	n.d.	-
六溴聯苯醚 (Hexabromodiphenyl ether)		mg/kg	5	n.d.	-
七溴聯苯醚 (Heptabromodiphenyl ether)		mg/kg	5	n.d.	-
八溴聯苯醚 (Octabromodiphenyl ether)		mg/kg	5	n.d.	-
九溴聯苯醚 (Nonabromodiphenyl ether)		mg/kg	5	n.d.	-
十溴聯苯醚 (Decabromodiphenyl ether)		mg/kg	5	n.d.	-
多溴聯苯醚總和 (Sum of PBDEs)		mg/kg	-	n.d.	1000
鄰苯二甲酸丁苯甲酯 (BBP) (Butyl benzyl phthalate (BBP))	參考IEC 62321-8: 2017，以氣相層析儀/質譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	1000
鄰苯二甲酸二丁酯 (DBP) (Dibutyl phthalate (DBP))		mg/kg	50	n.d.	1000
鄰苯二甲酸二(2-乙基己基)酯 (DEHP) (Di-(2-ethylhexyl) phthalate (DEHP))		mg/kg	50	n.d.	1000
鄰苯二甲酸二異丁酯 (DIBP) (Diisobutyl phthalate (DIBP))		mg/kg	50	n.d.	1000
六溴環十二烷及所有主要被辨別出的異構物(HBCDD) (α- HBCDD, β- HBCDD, γ- HBCDD) (Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified (α- HBCDD, β- HBCDD, γ- HBCDD)) (CAS No.: 25637-99-4, 3194-55-6 (134237-51-7, 134237-50-6, 134237-52-8))	參考IEC 62321: 2008，以氣相層析儀/質譜儀分析。(With reference to IEC 62321: 2008, analysis was performed by GC/MS.)	mg/kg	5	n.d.	-

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測試報告
Test Report

號碼(No.): ETR25200206 日期(Date): 08-Feb-2025

鈞寶電子工業股份有限公司 (KING CORE ELECTRONICS INC.)
桃園市平鎮區南豐路269號(平鎮工業區) (NO. 269, NANFONG RD., PINGJHEN DIST., TAOYUAN CITY 324, TAIWAN)

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
氟 (F) (Fluorine (F)) (CAS No.: 14762-94-8)	參考BS EN 14582: 2016，以離子層析儀分析。(With reference to BS EN 14582: 2016, analysis was performed by IC.)	mg/kg	50	n.d.	-
氯 (Cl) (Chlorine (Cl)) (CAS No.: 22537-15-1)		mg/kg	50	n.d.	-
溴 (Br) (Bromine (Br)) (CAS No.: 10097-32-2)		mg/kg	50	n.d.	-
碘 (I) (Iodine (I)) (CAS No.: 14362-44-8)		mg/kg	50	n.d.	-
全氟辛烷磺酸及其鹽類 (PFOS and its salts) (Perfluorooctane sulfonates and its salts (PFOS and its salts)) (CAS No.: 1763-23-1 and its salts)	參考CEN/TS 15968: 2010，以液相層析串聯質譜儀分析。(With reference to CEN/TS 15968: 2010, analysis was performed by LC/MS/MS.)	mg/kg	0.01	n.d.	-
全氟辛酸及其鹽類 (PFOA and its salts) (Perfluorooctanoic acid and its salts (PFOA and its salts)) (CAS No.: 335-67-1 and its salts)	參考CEN/TS 15968: 2010，以液相層析串聯質譜儀分析。(With reference to CEN/TS 15968: 2010, analysis was performed by LC/MS/MS.)	mg/kg	0.01	n.d.	-
銻 (Sb) (Antimony (Sb)) (CAS No.: 7440-36-0)	參考US EPA 3052: 1996，以感應耦合電漿發射光譜儀分析。(With reference to US EPA 3052: 1996, analysis was performed by ICP-OES.)	mg/kg	2	n.d.	-
鈹 (Be) (Beryllium (Be)) (CAS No.: 7440-41-7)	參考US EPA 3052: 1996，以感應耦合電漿發射光譜儀分析。(With reference to US EPA 3052: 1996, analysis was performed by ICP-OES.)	mg/kg	2	n.d.	-
砷 (As) (Arsenic (As)) (CAS No.: 7440-38-2)	參考US EPA 3052: 1996，以感應耦合電漿發射光譜儀分析。(With reference to US EPA 3052: 1996, analysis was performed by ICP-OES.)	mg/kg	2	n.d.	-

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備註(Note)：

1. mg/kg = ppm；0.1wt% = 0.1% = 1000ppm
2. MDL = Method Detection Limit (方法偵測極限值)
3. n.d. = Not Detected (未檢出)；小於MDL / Less than MDL
4. "-" = Not Regulated (無規格值)
5. 除非另有說明，參照ILAC-G8:09/2019決定規則，採用簡單允收規則之二分法(w=0)進行符合性判定；根據此規則，符合性結果之判定係以測試結果與限值做比較。(Unless otherwise stated , the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (w=0) stated in ILAC-G8:09/2019. According to this rule, the judgement of conformity is based on the comparing test results with limits.)

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PFAS Remark：

現有PFAS定量技術是分析PFAS物質的特定結構，但同碳數族群之PFAS酸及鹽類物質，其可被辨識的特定結構相同，因此無法區別所分析的特定結構是來自酸或者鹽類，故測試結果為同碳數族群之PFAS之酸及鹽類物質的濃度總合。下表PFAS物質濃度皆已包含在測試結果中，相關資訊請參見下表：(下表列舉PFAS物質僅為範例，並不包含所有同碳數族群之PFAS鹽類。)
(The quantitative technology of PFAS is to analyze the specific structure of PFAS substances. However, PFAS acid and its salts with the same carbon number group have the same specific structure that can be identified. The tested results of the analyzed specific structure cannot be distinguished to identify the contribution from PFAS acid or its salts. Therefore, the tested results display the sum of concentrations of PFAS acids and its salts with the same carbon number group. The concentration of PFAS substances in the below table have been included in the tested results, please refer to the table for relevant information: (The listed PFAS substances are examples only, it do not include all PFAS salts with the same carbon number group.))

群組名稱 (Group Name)	物質名稱 (Substance Name)	CAS No.
PFOS, 及其鹽&衍生物 (PFOS, its salts & derivatives)	全氟辛烷磺酸 (Perfluorooctane sulfonates) (PFOS)	1763-23-1
	全氟辛基磺酸鉀 (PFOS-K) Potassium perfluorooctanesulfonate (PFOS-K)	2795-39-3
	全氟辛基磺酸鋰 (PFOS-Li) Perfluorooctanesulfonic acid, lithium salt (PFOS-Li)	29457-72-5
	全氟辛基磺酸銨 (PFOS-NH_4) Perfluorooctanesulfonic acid, ammonium salt (PFOS-NH_4)	29081-56-9
	全氟辛基磺酸二乙醇銨 (PFOS-$NH(OH)_2$) Perfluorooctane sulfonate diethanolamine salt (PFOS-$NH(OH)_2$)	70225-14-8
	全氟辛基磺酸四乙基銨 (PFOS-$N(C_2H_5)_4$) Perfluorooctanesulfonic acid,tetraethylammonium salt (PFOS-$N(C_2H_5)_4$)	56773-42-3
	全氟辛基磺酸二癸二甲基銨 (PFOS-DDA) N-decyl-N,N-dimethyldecan-1-aminium 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluorooctane-1-sulfonate (PFOS-DDA)	251099-16-8
	全氟辛基磺酸四丁基銨 (PFOS-$N(C_4H_9)_4$) TetrabutylAmmonium perfluorooctanesulfonate (PFOS-$N(C_4H_9)_4$)	111873-33-7
	全氟辛基磺醯氟 (POSF) Perfluorooctane sulfonyl fluoride (POSF)	307-35-7
	全氟辛基磺酸鎂 (PFOS-Mg) Perfluorooctanesulfonic acid, magnesium salt (PFOS-Mg)	91036-71-4
	全氟辛基磺酸鈉 (PFOS-Na) Perfluorooctanesulfonic acid, sodium salt (PFOS-Na)	4021-47-0

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群組名稱 (Group Name)	物質名稱 (Substance Name)	CAS No.
PFOS, 及其鹽&衍生物 (PFOS, its salts & derivatives)	全氟辛烷磺酸哌啶 Piperidine 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluorooctanesulfonate	71463-74-6
	全氟辛烷磺酸鹽 Perfluorooctanesulfonate (anion)	45298-90-6
	全氟辛烷磺酸與 N,N-二乙基乙胺 (1:1) (PFOS-N(C_2H_5)$_3$) 1-Octanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, compd. with N,N-diethylethanamine (1:1) (PFOS-N(C_2H_5)$_3$)	54439-46-2
	N,N,N-三甲基-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-十七氟-1-辛烷磺酸甲銨(1:1) (PFOS-N(CH_3)$_4$) Methanaminium, N,N,N-trimethyl-, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1-octanesulfonate (1:1) (PFOS-N(CH_3)$_4$)	56773-44-5
	1-五胺，N,N,N-三丙基-, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-十七氟-1-辛烷磺酸鹽(1:1) (PFOS-N(C_3H_7)$_3$(C_5H_{11})) 1-Pentanaminium, N,N,N-tripropyl-, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1-octanesulfonate (1:1) (PFOS-N(C_3H_7)$_3$(C_5H_{11}))	56773-56-9
	1-丁銨，N,N-二丁基-N-甲基-，1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8 ,8-十七氟-1-辛烷磺酸鹽 (1:1) (PFOS-N(C_4H_9)$_3$(CH_3)) 1-Butanaminium, N,N-dibutyl-N-methyl-, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1-octanesulfonate (1:1) (PFOS-N(C_4H_9)$_3$(CH_3))	124472-68-0
	碘鎓，雙[4-(1,1-二甲基乙基)苯基]-，1,1,2,2,3,3,4,4,5,5,6,6,7,7 ,8,8,8 -十七氟-1-辛烷磺酸鹽 (1:1) Iodonium, bis[4-(1,1-dimethylethyl)phenyl]-, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1-octanesulfonate (1:1)	213740-80-8
	二苯基鋶(2,4,6-三甲基苯基)-, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8 ,8-十七氟-1-辛烷磺酸鹽 (1:1) Sulfonium, diphenyl(2,4,6-trimethylphenyl)-, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1-octanesulfonate (1:1)	258341-99-0
	吡啶鎓，1-十六烷基-，1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-十七氟-1-辛烷磺酸鹽 (1:1) Pyridinium, 1-hexadecyl-, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1-octanesulfonate (1:1)	334529-63-4

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鈞寶電子工業股份有限公司 (KING CORE ELECTRONICS INC.)
桃園市平鎮區南豐路269號(平鎮工業區) (NO. 269, NANFONG RD., PINGJHEN DIST., TAOYUAN CITY 324, TAIWAN)

群組名稱 (Group Name)	物質名稱 (Substance Name)	CAS No.
PFOS, 及其鹽&衍生物 (PFOS, its salts & derivatives)	1-癸胺，N,N,N-三乙基-，1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-十七氟-1 -辛烷磺酸鹽(1:1) 1-Decanaminium, N,N,N-triethyl-, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1-octanesulfonate (1:1)	773895-92-4
	全氟辛烷磺酸四丁基鏻 (PFOS-P(C_4H_9)$_4$)) Tetrabutylphosphonium perfluorooctane sulfonate (PFOS-P(C_4H_9)$_4$))	2185049-59-4
	全氟辛烷磺酸二乙胺鹽 (PFOS-$C_4H_{11}N$) Perfluorooctanesulfonic acid diethylamine salt (PFOS-$C_4H_{11}N$)	2205029-08-7
	庚基二甲基{2-[(2-甲基丙-2-烯酰基)氧基]乙基}全氟辛烷磺酸氮紮鹽 (PFOS-$C_{15}H_{30}NO_2$) Heptyldimethyl{2-[(2-methylprop-2-enoyl)oxy]ethyl}azanium perfluorooctanesulfonate (PFOS-$C_{15}H_{30}NO_2$)	1203998-97-3
	1-辛烷磺酸，1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-十七氟-,1,1' -酸酐 (PFOSAN) 1-Octanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, 1,1'-anhydride (PFOSAN)	423-92-7
PFOA, 及其鹽&衍生物 (PFOA, its salts & derivatives)	全氟辛酸 (Perfluorooctanoic acid) (PFOA)	335-67-1
	全氟辛酸鈉 (PFOA-Na) Sodium perfluorooctanoate (PFOA-Na)	335-95-5
	全氟辛酸鉀 (PFOA-K) Potassium perfluorooctanoate (PFOA-K)	2395-00-8
	全氟辛酸銀 (PFOA-Ag) Silver perfluorooctanote (PFOA-Ag)	335-93-3
	全氟辛氟 (PFOA-F) Perfluorooctanoyl fluoride (PFOA-F)	335-66-0
	全氟辛酸銨 (APFO) Ammonium pentadecafluorooctanoate (APFO)	3825-26-1
	全氟辛酸鋰 (PFOA-Li) Lithium perfluorooctanoate (PFOA-Li)	17125-58-5
	全氟辛酸鈷 (PFOA-Co) Cobalt perfluorooctanoate (PFOA-Co)	35965-01-6
	全氟辛酸銫 (PFOA-Cs) Cesium perfluorooctanoate (PFOA-Cs)	17125-60-9
	全氟辛酸鉻 (PFOA-Cr(3^+)) Octanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-, chromium(3+) (PFOA-Cr(3^+))	68141-02-6

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桃園市平鎮區南豐路269號(平鎮工業區) (NO. 269, NANFONG RD., PINGJHEN DIST., TAOYUAN CITY 324, TAIWAN)

群組名稱 (Group Name)	物質名稱 (Substance Name)	CAS No.
PFOA, 及其鹽&衍生物 (PFOA, its salts & derivatives)	全氟辛酸-哌嗪(2:1) PFOA-NH($C_4H_{10}N$) Pentadecafluorooctanoic acid--piperazine (2/1)PFOA-NH($C_4H_{10}N$)	423-52-9
	全氟辛酸鹽 Pentadecafluorooctanoate (anion)	45285-51-6
	全氟辛酸酐 Perfluorooctanoic Anhydride	33496-48-9
	乙銨，N,N,N-三乙基-, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-十五氟辛酸(1:1) Ethanaminium, N,N,N-triethyl-, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluorooctanoate (1:1)	98241-25-9
	全氟辛酸四甲銨鹽 Tetramethylammoniumperfluoroctanoat	32609-65-7
	1-丙銨，N,N,N-三丙基-, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-十五氟辛酸(1:1) 1-Propanaminium, N,N,N-tripropyl-, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluorooctanoate (1:1)	277749-00-5
	辛酸，2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-十五氟-鉀鹽，水合物 (1:1:2) (PFOA-K(H_2O)$_2$) Octanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-, potassium salt, hydrate (1:1:2) (PFOA-K(H_2O)$_2$)	98065-31-7
	辛酸，2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-十五氟-，化合物。與乙胺 (1:1) (PFOA-C_2H_7N) Octanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-, compd. with ethanamine (1:1) (PFOA-C_2H_7N)	1376936-03-6
	十五氟辛酸化合物與吡啶 (1:1) (9Cl) (PFOA-C_5H_5N) Octanoic acid, pentadecafluoro-, compd. with pyridine (1:1) (9Cl) (PFOA-C_5H_5N)	95658-47-2
	十五氟辛酸-1-苯基哌嗪(1:1) (PFOA-$C_{10}H_{14}N_2$) Pentadecafluorooctanoic acid- 1-phenylpiperazine(1:1) (PFOA-$C_{10}H_{14}N_2$)	1514-68-7
	1-辛胺，N,N,N-三甲基-，2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-十五氟辛酸(1:1) (PFOA- $C_{11}H_{26}N$) 1-Octanaminium, N,N,N-trimethyl-, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluorooctanoate (1:1) (PFOA- $C_{11}H_{26}N$)	927835-01-6

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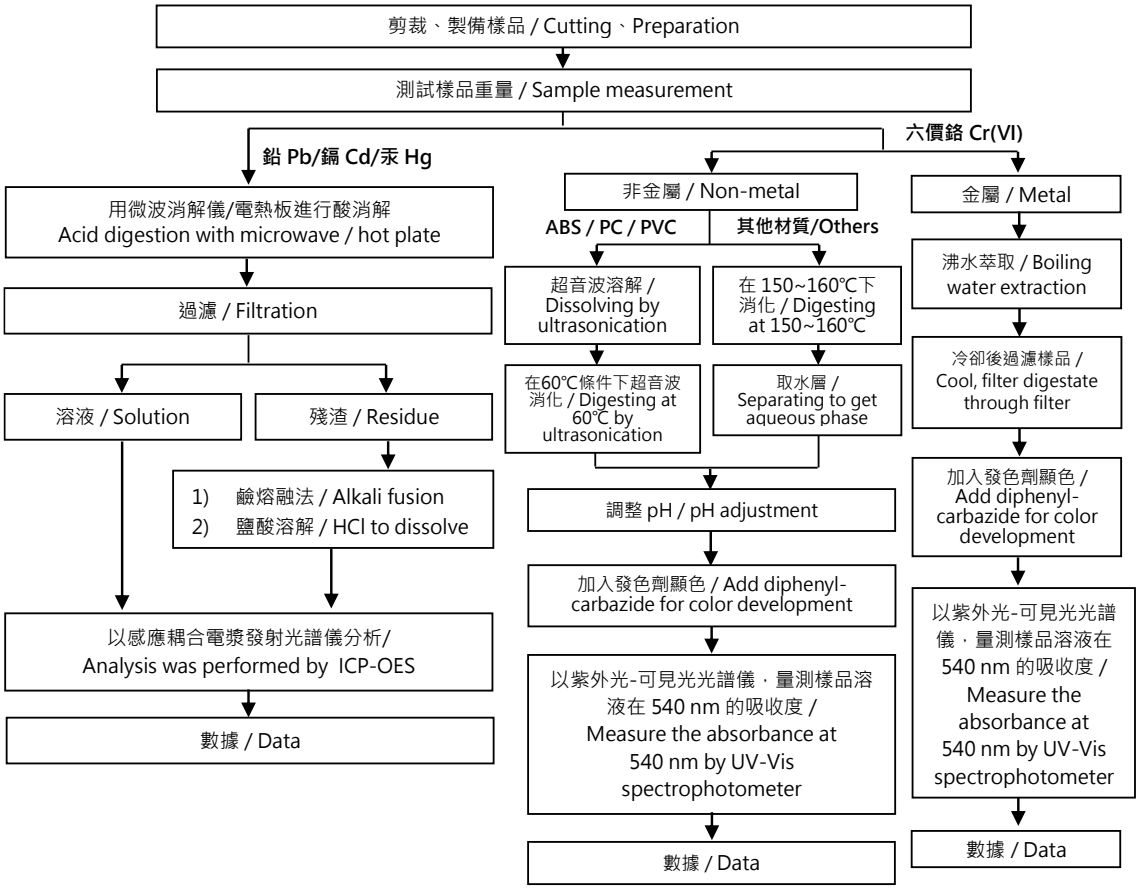
桃園市平鎮區南豐路269號(平鎮工業區) (NO. 269, NANFONG RD., PINGJHEN DIST., TAOYUAN CITY 324, TAIWAN)

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.
（Cr^{6+} test method excluded）



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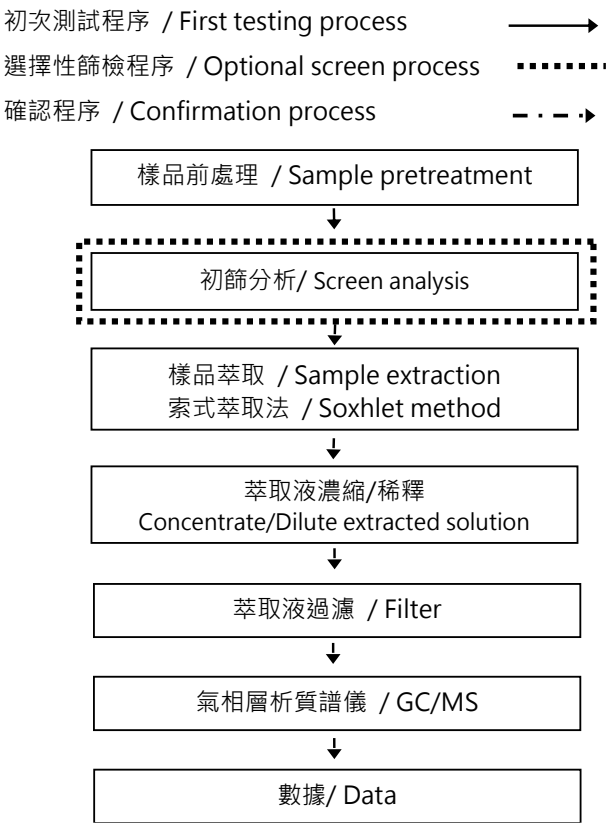
多溴聯苯/多溴聯苯醚分析流程圖 / Analytical flow chart - PBBs/PBDEs



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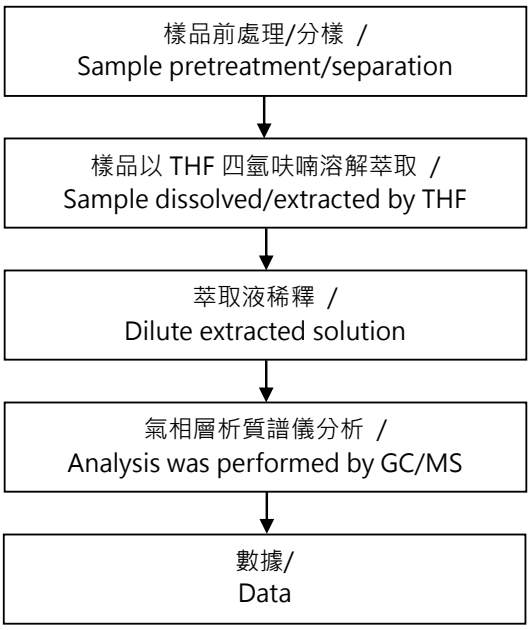
可塑劑分析流程圖 / Analytical flow chart - Phthalate

【測試方法/Test method: IEC 62321-8】



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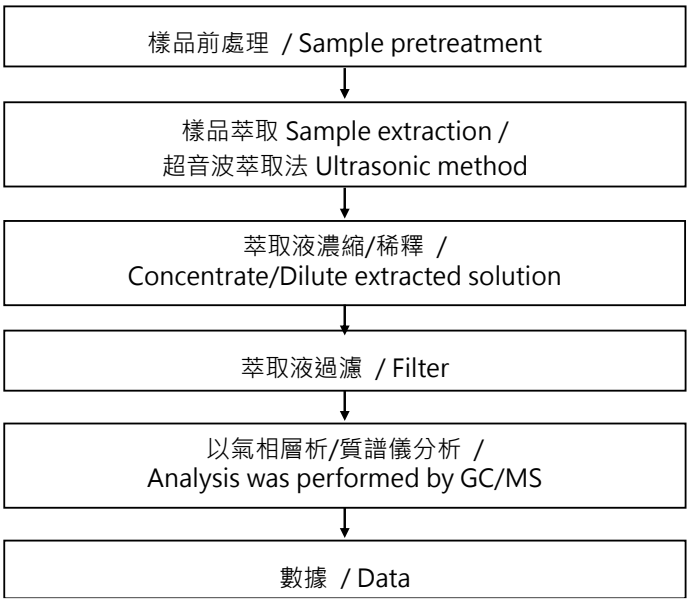
六溴環十二烷分析流程圖 / Analytical flow chart - HBCDD



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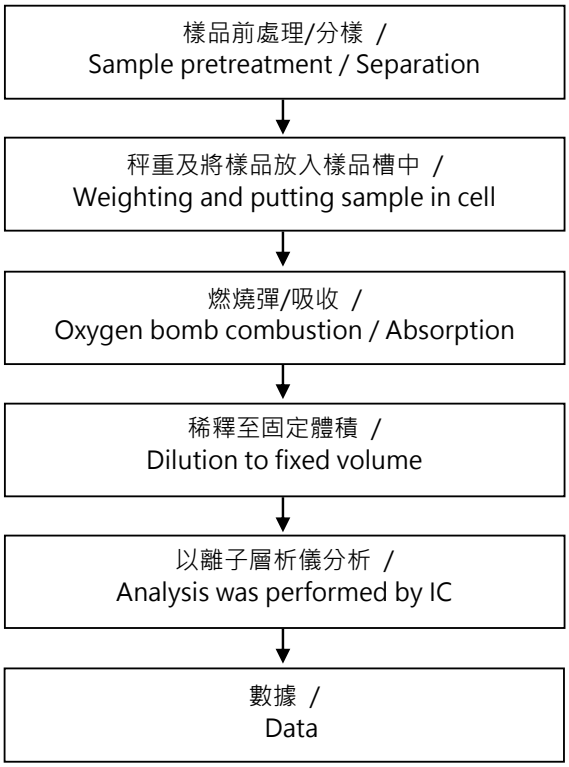
鹵素分析流程圖 / Analytical flow chart - Halogen



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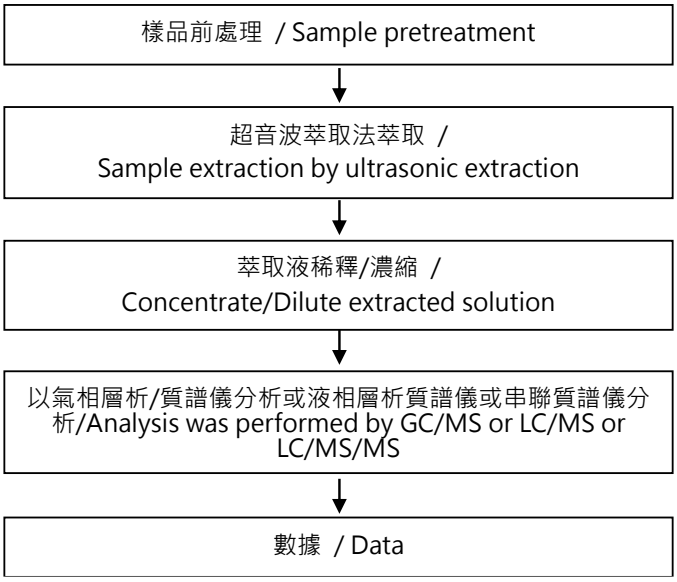
全氟化合物(包含全氟辛酸/全氟辛烷磺酸/其相關化合物等等)分析流程圖 / Analytical flow chart – PFAS (including PFOA/PFOS/its related compound, etc.)



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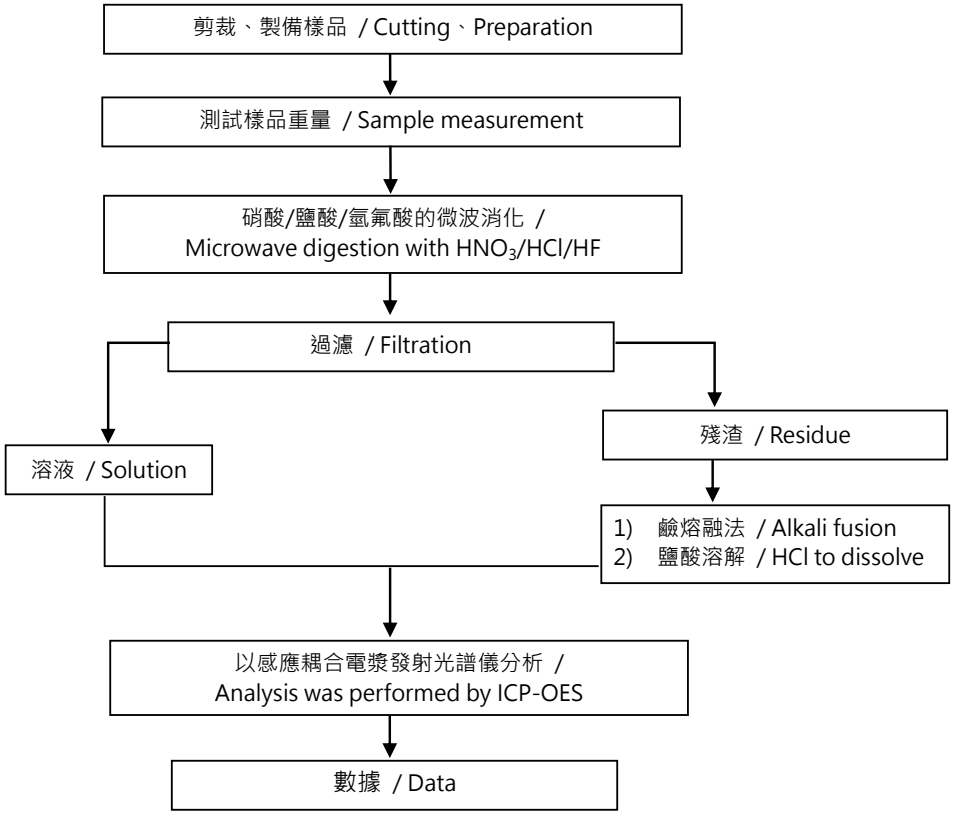
桃園市平鎮區南豐路269號(平鎮工業區) (NO. 269, NANFONG RD., PINGJHEN DIST., TAOYUAN CITY 324, TAIWAN)

元素(含重金屬)分析流程圖 / Analytical flow chart of elements (Heavy metal included)

根據以下的流程圖之條件，樣品已完全溶解。

These samples were dissolved totally by pre-conditioning method according to below flow chart.

【參考方法/Reference method：US EPA 3051A、US EPA 3052】



* US EPA 3051A 方法未添加氫氟酸 / US EPA 3051A method does not add HF.

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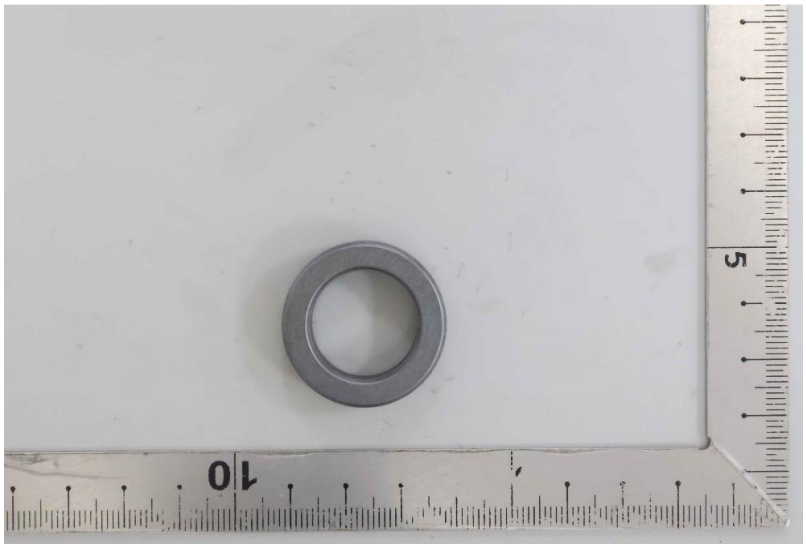
測試報告
Test Report

鈞寶電子工業股份有限公司 (KING CORE ELECTRONICS INC.)
桃園市平鎮區南豐路269號(平鎮工業區) (NO. 269, NANFONG RD., PINGJHEN DIST., TAOYUAN CITY 324, TAIWAN)

*** 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.)

ETR25200206



** 報告結尾 (End of Report) **

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Test Report

No.: CANEC25000722302 **Date:** Jan 15, 2025

Client Name: DONGGUAN LUCKY FLY CONDUCTOR CO.,LTD.

Client Address: QIAO ZI REGION CHANGPING TOWN DONGGUAN CITY GUANGDONG PROVINCE

Sample Name: TINNED COPPER WIRE

The above sample(s) and information were provided by the client.

SGS Job No.: SZP25-001389

Sample Receiving Date: Jan 09, 2025

Testing Period: Jan 09, 2025 ~ Jan 15, 2025

Test Requested: Select test(s) as requested by the client.

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

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

Test Requirement	Conclusion
EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU - Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBB), Polybrominated diphenyl ethers (PBDE), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)	Pass
AfPS GS 2019:01 PAK-Polycyclic Aromatic Hydrocarbons (PAHs)	See Results
Element(s)	See Results
Perfluorooctane sulfonic acid (PFOS) and its derivatives	See Results

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

Arsene Ye

Arsene Ye
Approved Signatory

scan to see the report
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Test Result(s):

Test Part Description：

SN ID	Sample No.	SGS Sample ID	Description
SN1	A2	CAN25-0007223-0001.C002	Silvery plated metal wire

Remarks:

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

EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU - Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBB), Polybrominated diphenyl ethers (PBDE), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)

Test Method: With reference to IEC 62321-4:2013+AMD1:2017, IEC 62321-5:2013, IEC 62321-7-1:2015, IEC 62321-6:2015 and IEC62321-8:2017, analysis was performed by ICP-OES/AAS, UV-Vis and GC-MS.

Test Item(s)	Limit	Unit(s)	MDL	A2
Lead (Pb)	1000	mg/kg	2	ND
Mercury (Hg)	1000	mg/kg	2	ND
Cadmium (Cd)	100	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))▼	-	μg/cm²	0.10	ND
Polybromobiphenyl (PBB)	1000	mg/kg	-	ND
Monobrominated biphenyl (MonoBB)	-	mg/kg	5	ND
Dibrominated biphenyl (DiBB)	-	mg/kg	5	ND
Tribrominated biphenyl (TriBB)	-	mg/kg	5	ND
Tetrabrominated biphenyl (TetraBB)	-	mg/kg	5	ND
Pentabrominated biphenyl (PentaBB)	-	mg/kg	5	ND
Hexabrominated biphenyl (HexaBB)	-	mg/kg	5	ND
Heptabrominated biphenyl (HeptaBB)	-	mg/kg	5	ND
Octabrominated biphenyl (OctaBB)	-	mg/kg	5	ND
Nonabrominated biphenyl (NonaBB)	-	mg/kg	5	ND
Decabrominated biphenyl (DecaBB)	-	mg/kg	5	ND
Polybromodiphenyl ether(PBDE)	1000	mg/kg	-	ND
Monobrominated diphenyl ether (MonoBDE)	-	mg/kg	5	ND
Dibrominated diphenyl ether (DiBDE)	-	mg/kg	5	ND
Tribrominated diphenyl ether (TriBDE)	-	mg/kg	5	ND
Tetrabrominated diphenyl ether (TetraBDE)	-	mg/kg	5	ND
Pentabrominated diphenyl ether (PentaBDE)	-	mg/kg	5	ND
Hexabrominated diphenyl ether (HexaBDE)	-	mg/kg	5	ND
Heptabrominated diphenyl ether (HeptaBDE)	-	mg/kg	5	ND

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Test Item(s)	Limit	Unit(s)	MDL	A2
Octabrominated diphenyl ether (OctaBDE)	-	mg/kg	5	ND
Nonabrominated diphenyl ether (NonaBDE)	-	mg/kg	5	ND
Decabrominated diphenyl ether (DecaBDE)	-	mg/kg	5	ND
Bis(2-ethylhexyl) phthalate (DEHP)	1000	mg/kg	50	ND
Butyl benzyl phthalate (BBP)	1000	mg/kg	50	ND
Dibutyl phthalate (DBP)	1000	mg/kg	50	ND
Diisobutyl phthalate (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.
(3) ▼ = a. The sample is positive for Cr(VI) if the Cr(VI)concentration is greater than 0.13 μg/cm^2. The sample coating is considered to contain Cr(VI).
b. The sample is negative for Cr(VI) if Cr(VI) is ND (concentration less than 0.10 μg/cm^2). The coating is considered a non-Cr(VI) based coating.
c. The result between 0.10 μg/cm^2 and 0.13 μg/cm^2 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.

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(s)	MDL	A2
Benzo(a)pyrene(BaP)	50-32-8	mg/kg	0.1	ND
Benzo(e)pyrene(BeP)	192-97-2	mg/kg	0.1	ND
Benzo(a)anthracene(BaA)	56-55-3	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
Chrysene(CHR)	218-01-9	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
Indeno(1,2,3-c,d)pyrene(IPY)	193-39-5	mg/kg	0.1	ND
Phenanthrene(PHE)	85-01-8	mg/kg	0.1	ND
Pyrene(PYR)	129-00-0	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
Sum of Phenanthrene(PHE), Pyrene(PYR), Anthracene(ANT), Fluoranthene(FLT)	-	mg/kg	-	ND
Naphthalene(NAP)	91-20-3	mg/kg	0.1	ND

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Test Item(s)	CAS No.	Unit(s)	MDL	A2
Sum of 15 PAHs	-	mg/kg	-	ND
Material Category	-	-	-	-

Notes:

AfPS（German commission for Product Safety）: PAHs requirements

Parameter	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) mg/kg	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo(e)pyrene (BeP) mg/kg	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo(a)anthracene (BaA) mg/kg	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo(b)fluoranthene (BbF) mg/kg	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo(j)fluoranthene (BjF) mg/kg	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo(k)fluoranthene (BkF)mg/kg	< 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) mg/kg	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo(g,h,i)perylene (BPE) mg/kg	< 0.2	< 0.2	< 0.5	< 0.5	< 1

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Indeno(1,2,3-cd)pyrene (IPY) mg/kg	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Phenanthrene (PHE), pyrene (PYR), anthracene (ANT), fluoranthene (FLT), mg/kg	< 1 Sum	< 5 Sum	< 10 Sum	< 20 Sum	< 50 Sum
Naphthalene (NAP) mg/kg	< 1	< 2		< 10	
Sum of 15 PAHs	<1	< 5	< 10	< 20	< 50

Notes:
[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.

Element(s)

Test Method: With reference to US EPA 3050B:1996, analysis was performed by ICP-OES/AAS.

Test Item(s)	Unit(s)	MDL	A2
Beryllium(Be)	mg/kg	5	ND

Perfluorooctane sulfonic acid (PFOS) and its derivatives

Test Method: Modified EN 17681-1:2022, analysis was performed by LC-MS or LC-MS/MS.

Test Item(s)	CAS No.	Unit(s)	MDL	A2
PFOS, its salts and related compounds				
Perfluorooctane sulfonic acid (PFOS), its salts^	1763-23-1	mg/kg	0.010	ND
N-ethylperfluoro-1-octanesulfonamide (N-EtFOSA)	4151-50-2	mg/kg	0.010	ND
N-methylperfluoro-1-octanesulfonamide (N-MeFOSA)	31506-32-8	mg/kg	0.010	ND
2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol (N-EtFOSE)	1691-99-2	mg/kg	0.010	ND
2-(N-methylperfluoro-1-octanesulfonamido)-ethanol (N-MeFOSE)	24448-09-7	mg/kg	0.010	ND

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Test Item(s)	CAS No.	Unit(s)	MDL	A2
Perfluorooctane Sulfonamide (PFOSA), its salts^	754-91-6	mg/kg	0.010	ND
Perfluorooctane sulfonamidoacetic Acid (FOSAA), its salts^	2806-24-8	mg/kg	0.010	ND
N-Methylperfluoro-1-octanesulfonamidoacetic Acid (N-MeFOSAA), its salts^	2355-31-9	mg/kg	0.010	ND
N-Ethylperfluorooctane sulfonamidoacetic Acid (N-EtFOSAA), its salts^	2991-50-6	mg/kg	0.010	ND
Sum of Perfluorooctane sulfonic acid (PFOS) and its derivatives	-	mg/kg	-	ND

Notes:
1. ^=Substances refer to its salts/derivative listed in below table.

Substance Name	**CAS No.**
PFOS, its salts & derivatives	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1
Potassium Perfluorooctanesulfonate (PFOS-K)	2795-39-3
Perfluorooctanesulfonic acid, lithium salt (PFOS-Li)	29457-72-5
Sodium perfluorooctanesulfonate (PFOS-Na)	4021-47-0
Ammonium perfluorooctanesulfonate (PFOS-NH_4)	29081-56-9
Perfluorooctane sulfonate diethanolamine salt (PFOS-$NH_2(C_2H_4OH)_2$)	70225-14-8
Perfluorooctanesulfonic acid,tetraethylammonium salt (PFOS-$N(C_2H_5)_4$)	56773-42-3
N-decyl-N,N-dimethyldecan-1-aminium 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluorooctane-1-sulfonate (PFOS-$N(C_{10}H_{21})_2(CH_3)_2$)	251099-16-8
TetrabutylAmmonium perfluorooctanesulfonate (PFOS-$N(C_4H_9)_4$)	111873-33-7
Perfluorooctane Sulfonyl fluoride (PFOS-F)	307-35-7
Magnesium bis(heptadecafluorooctanesulphonate) (PFOS-Mg)	91036-71-4
Piperidine 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluorooctanesulfonate	71463-74-6
Perfluorooctanesulfonate	45298-90-6
Triethylammonium perfluorooctane sulfonate (PFOS-$N(C_2H_5)_3$)	54439-46-2
Tetramethylammonium perfluorooctane sulfonate (PFOS-$N(CH_3)_4$)	56773-44-5
N,N,N-Tripropylpentan-1-aminium heptadecafluorooctane-1-sulfonate (PFOS-$N(C_3H_7)_3(C_5H_{11})$)	56773-56-9
N,N-Dibutyl-N-methylbutan-1-aminium heptadecafluorooctane-1-sulfonate (PFOS-$N(C_4H_9)_3(CH_3)$)	124472-68-0
Iodonium, bis[4-(1,1-dimethylethyl)phenyl]-, salt with perfluoro-1-octanesulfonic acid (1:1)	213740-80-8
Diphenyl(2,4,6-trimethylphenyl)sulfonium perfluoro-1-octanesulfonate	258341-99-0

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1-Hexadecylpyridinium perfluoro-1-octanesulfonate	334529-63-4
N,N,N-Triethyldecan-1-aminium heptadecafluorooctane-1-sulfonate	773895-92-4
Tetrabutylphosphonium perfluorooctane sulfonate (PFOS-P (C_4H_9)$_4$))	2185049-59-4
Perfluorooctanesulfonic acid diethylamine salt (PFOS-$C_4H_{11}N$)	2205029-08-7
heptyldimethyl{2-[(2-methylprop-2-enoyl)oxy]ethyl}azanium heptadecafluorooctane-1-sulfonate (PFOS-$C_{15}H_{30}NO_2$)	1203998-97-3
Perfluorooctane sulfonic anhydride (PFOSAN)	423-92-7
FOSAA, its salts	
Perfluorooctane sulfonamidoacetic Acid (FOSAA)	2806-24-8
N-[(Perfluorooctyl)sulfonyl]glycinate (FOSAA(anion))	909405-47-6
N-[(Perfluorooctyl)sulfonyl]glycine potassium salt (1:1) (FOSAA-K)	75260-69-4
N-[(Perfluorooctyl)sulfonyl]glycine sodium salt (1:1) (FOSAA-Na)	115716-87-5
N-MeFOSAA, its salts	
N-Methylperfluoro-1-octanesulfonamidoacetic Acid (N-MeFOSAA)	2355-31-9
2-(N-Methylperfluorooctanesulfonamido)acetate (N-Me-FOSAA(anion))	909405-48-7
Potassium N-((heptadecafluorooctyl)sulphonyl)-N-methylglycinate (N-Me-FOSAA-K)	70281-93-5
N-EtFOSAA, its salts	
N-Ethylperfluorooctane sulfonamidoacetic Acid (N-EtFOSAA)	2991-50-6
Glycine, N-ethyl-N-[(heptadecafluorooctyl)sulfonyl]-, potassium salt (N-Et-FOSAA-K)	2991-51-7
2-(N-Ethyl-perfluorooctanesulfonamido)acetate (N-Et-FOSAA(anion))	909405-49-8
Ammonium 2-(N-ethylperfluorooctanesulfonamido)acetate (N-Et-FOSAA-NH_4)	2991-52-8
Sodium 2-(N-ethylperfluorooctanesulfonamido)acetate (N-Et-FOSAA-Na)	3871-50-9
PFOSA, its salts	
Perfluorooctane Sulfonamide (PFOSA)	754-91-6
Perfluorooctanesulfonamide lithium salt (1:1) (PFOSA-Li)	76752-79-9
Perfluorooctanesulfonamide Sodium salt (1:1) (PFOSA-Na)	76752-78-8
Perfluorooctanesulfonamide Potassium salt (1:1) (PFOSA-K)	76752-70-0
Perfluorooctanesulfonamide Ammonium salt (1:1) (PFOSA-NH_4)	76752-72-2
Heptadecafluorooctane-1-sulphonamide, compound with triethylamine (1:1) (PFOSA-$C_6H_{15}N$)	76752-82-4

Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (*w*=0) stated in ILAC-G8:09/2019.

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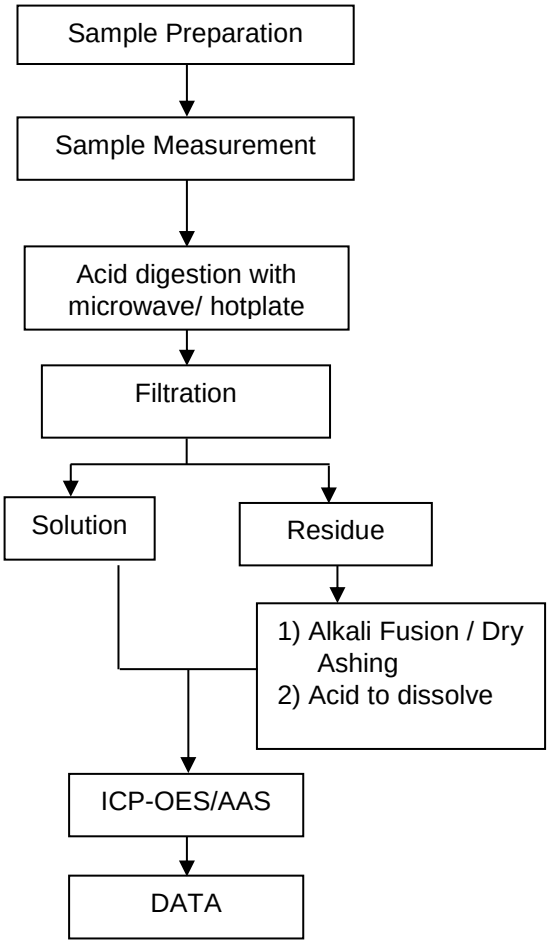
Elements Testing Flow Chart

These samples were dissolved totally by pre-conditioning method according to below flow chart.



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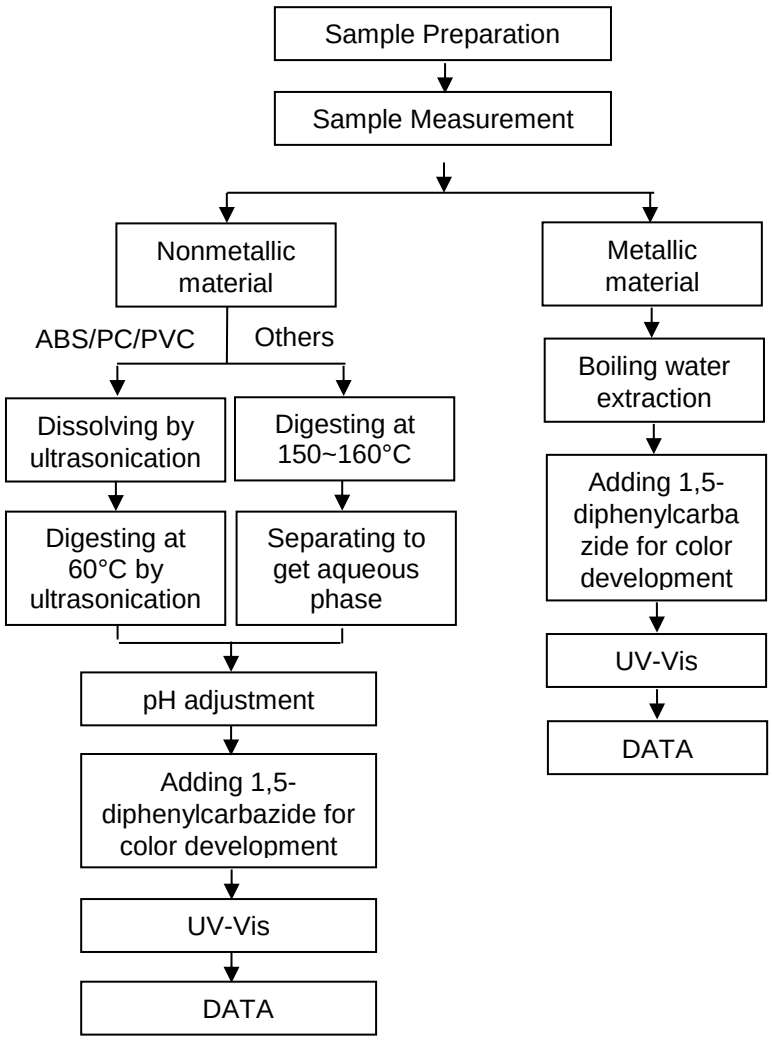
Hexavalent Chromium (Cr(VI)) Testing Flow Chart



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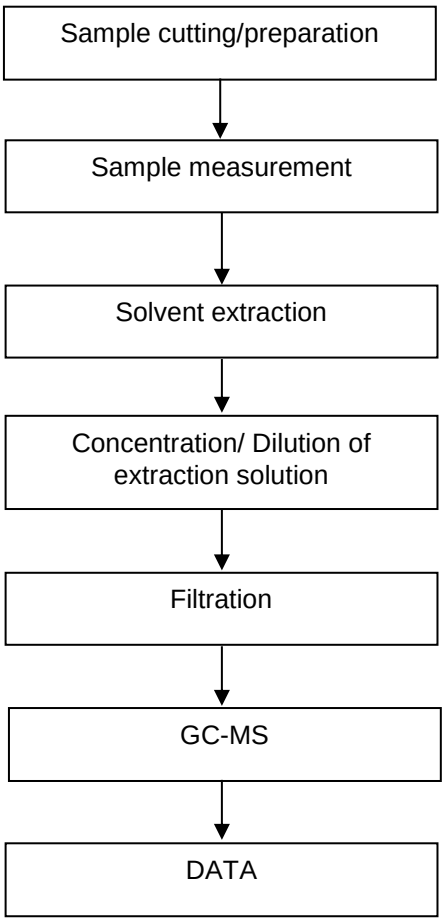
PBB/PBDE Testing Flow Chart



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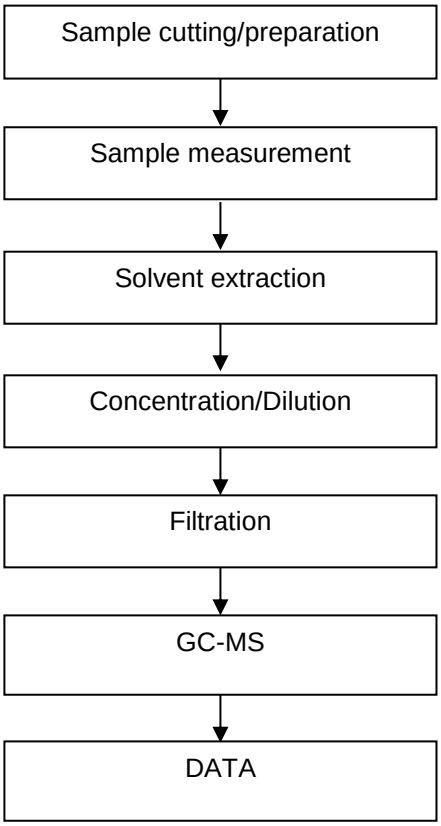
Phthalates Testing Flow Chart



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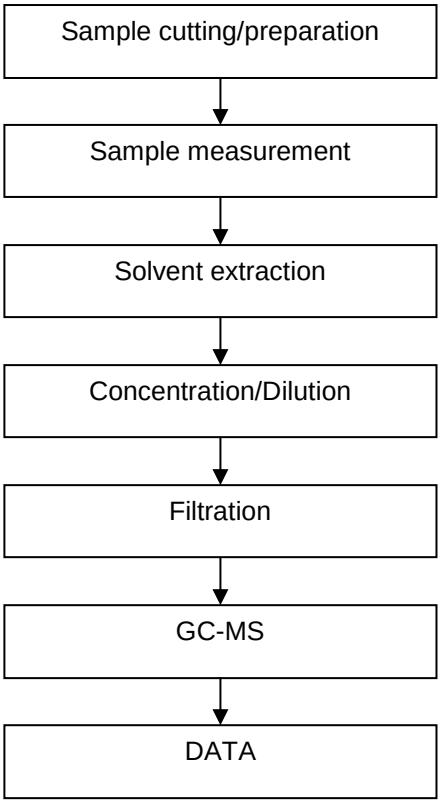
PAHs Testing Flow Chart



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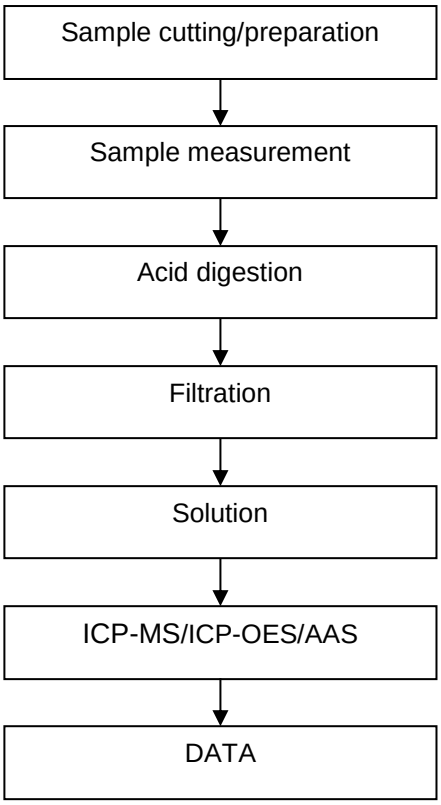
Elements Testing Flow Chart



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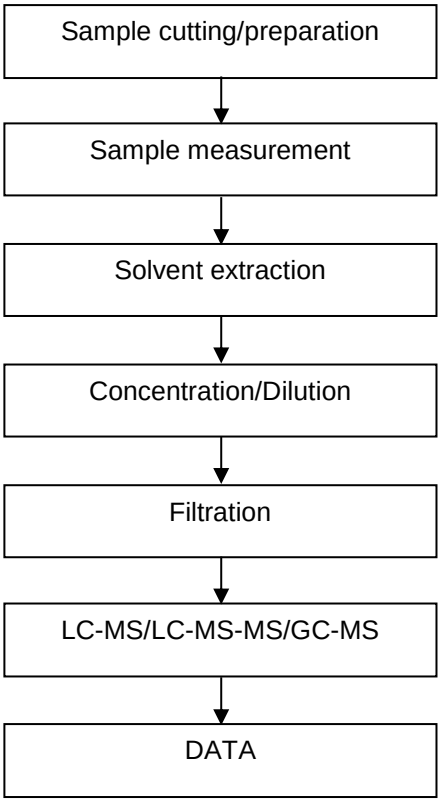
PFASs/ PFOS/PFOA Testing Flow Chart



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Sample Photo:



CAN25-0007223-0001.C002

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*** End of Report ***

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Test Report

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)	IEC 62321-9:2021	GC-MS
Phthalates*	Refer to EN 14372:2004(E)	GC-MS

Test Report

Report No. A2240282836101018

Test Result(s)

Tested Item(s)	Result	MDL	Limit
	018		
Lead (Pb)	N.D.	2 mg/kg	1000 mg/kg
Cadmium (Cd)	N.D.	2 mg/kg	100 mg/kg
Mercury (Hg)	N.D.	2 mg/kg	1000 mg/kg
Hexavalent Chromium (Cr(VI))	N.D.	8 mg/kg	1000 mg/kg

Tested Item(s)	Result	MDL	Limit
	018		
Polybrominated Biphenyls (PBBs)			
Monobromobiphenyl	N.D.	5 mg/kg	1000 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	Limit
	018		
Polybrominated Diphenyl Ethers (PBDEs)			
Monobromodiphenyl ether	N.D.	5 mg/kg	1000 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

Test Result(s)

Tested Item(s)	Result	MDL	Limit
	018		
Phthalates (DBP, BBP, DEHP, DIBP)			
Dibutyl phthalate (DBP) CAS#:84-74-2	N.D.	50 mg/kg	1000 mg/kg
Butyl benzyl phthalate (BBP) CAS#:85-68-7	N.D.	50 mg/kg	1000 mg/kg
Di-(2-ethylhexyl) phthalate (DEHP) CAS#:117-81-7	N.D.	50 mg/kg	1000 mg/kg
Diisobutyl phthalate (DIBP) CAS#:84-69-5	N.D.	50 mg/kg	1000 mg/kg

Tested Item(s)	Result	MDL
	018	
Hexabromocyclododecane (HBCDD)	N.D.	20 mg/kg

Tested Item(s)	Result	MDL
	018	
Phthalates*		
Di-2-propylheptyl phthalate (DPHpP) CAS#:53306-54-0	N.D.	30 mg/kg

Sample/Part Description

No.	CTI Sample ID	Description
1	018	Black wire jacket

Remark: **-The sample(s) had been dissolved totally tested for Lead, Cadmium, Mercury.**
-Information Statement: Different Model No. with different buyer, Products are sold to different countries or regions, with different model rules.

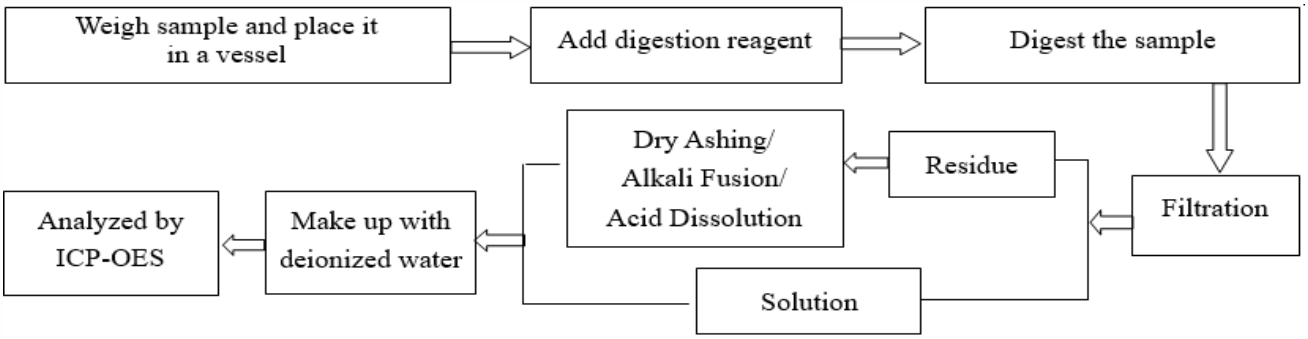
-MDL = Method Detection Limit
-N.D. = Not Detected (<MDL)
-mg/kg = ppm = parts per million
-1000 mg/kg = 0.1%

Note: ***indicates the item(s)/method(s) is (are) not in CNAS accreditation scope.**

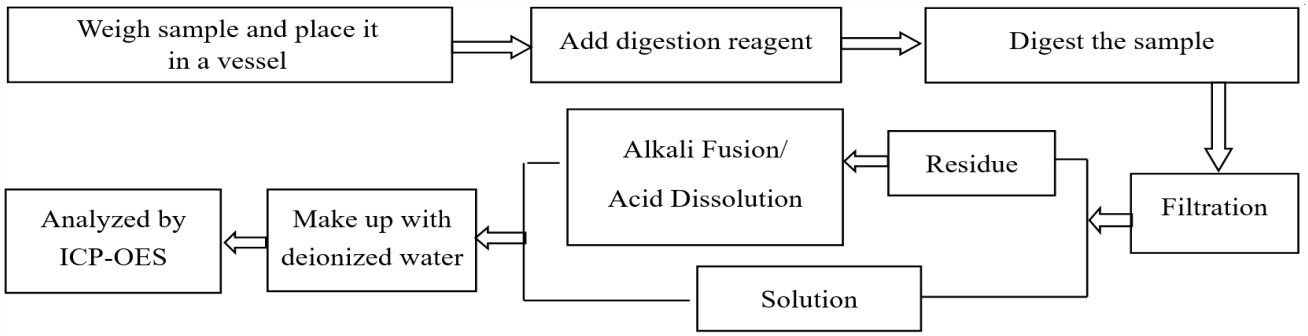
Test Report

Test Process

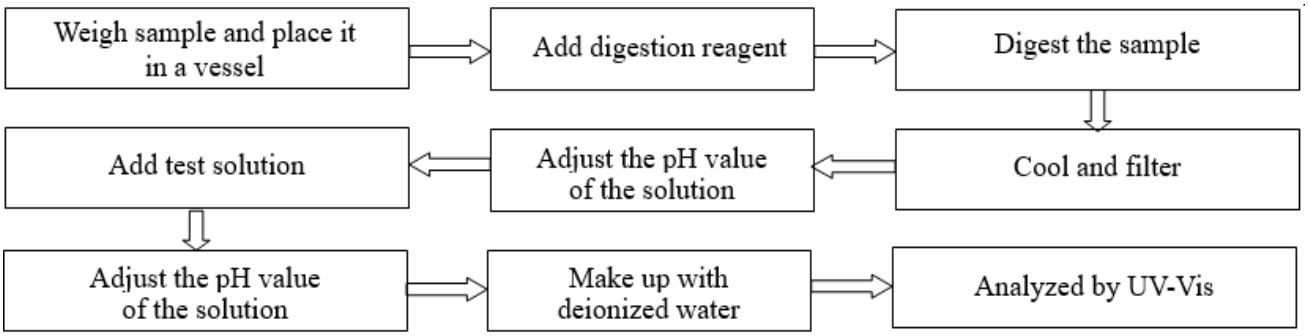
1. Lead (Pb), Cadmium (Cd), Chromium (Cr)



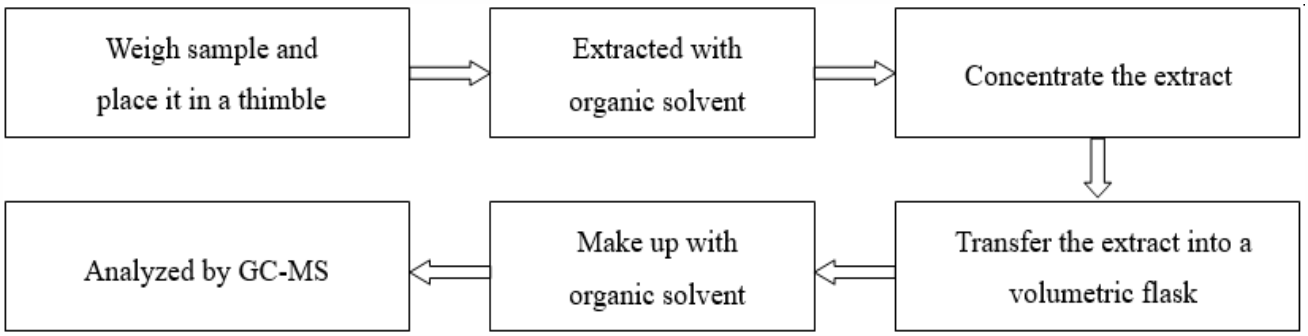
2. Mercury (Hg)



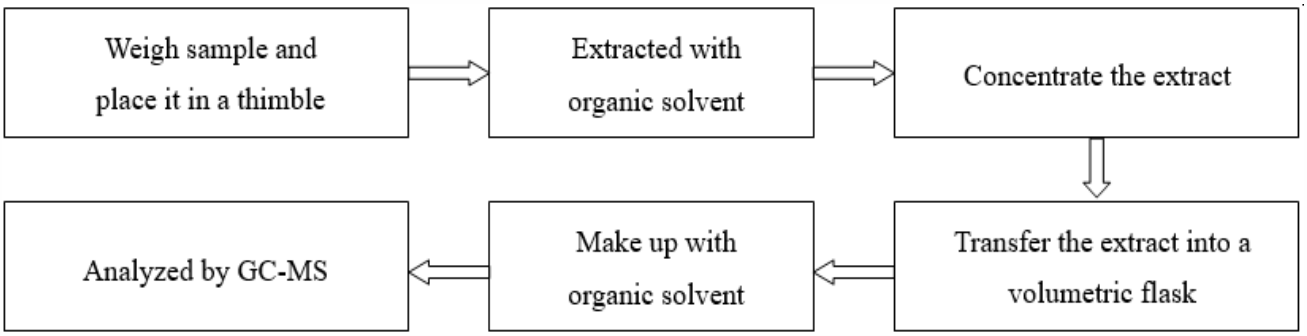
3. Hexavalent Chromium (Cr(VI))



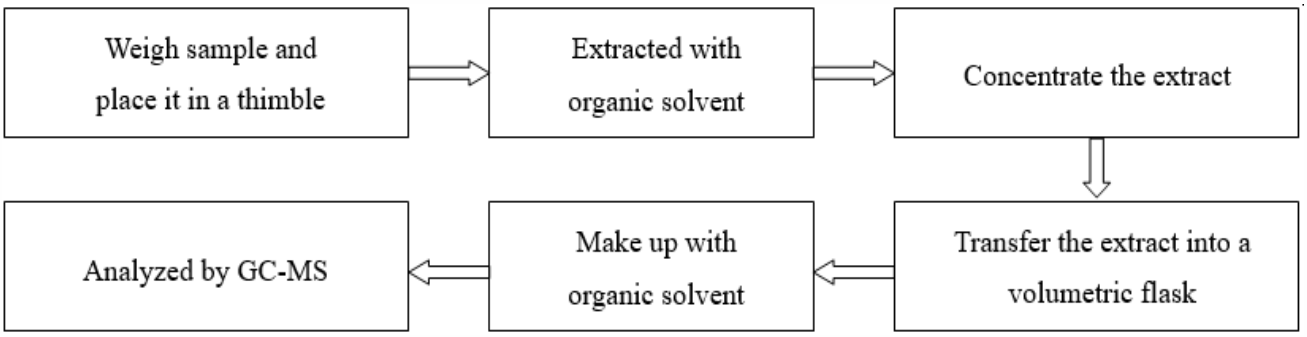
4. Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs)



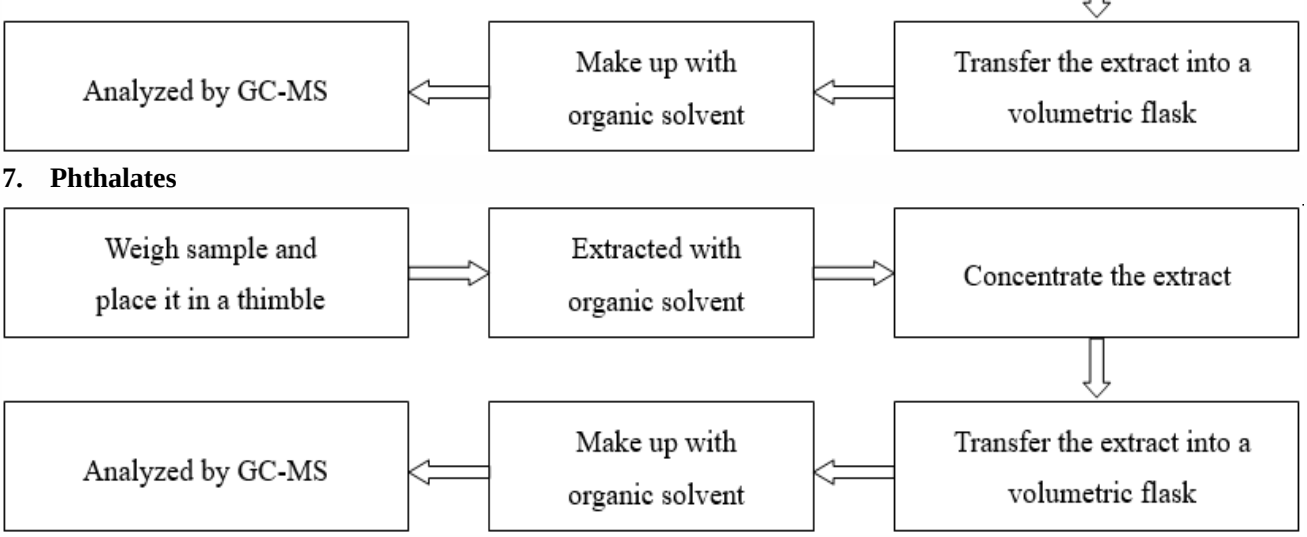
5. Phthalates (DBP, BBP, DEHP, DIBP)



6. Hexabromocyclododecane (HBCDD)



7. Phthalates



Test Report

Report No. A2240282836101018

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. Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (w=0) stated in ILAC-G8:09/2019 / CNAS-GL015:2022;
5. Without written approval of CTI, this report can't be reproduced except in full;
6. 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.: SHAEC24021919009 **Date:** Oct 08, 2024

Client Name: Kunshan Daqiuxing Electronic Technology Co., Ltd

Client Address: Fengguan Industrial Park, No. 88 Dongqiu Road, Zhangpu Town, Kunshan City

Sample Name: Conductive Adhesive

The above sample(s) and information were provided by the client.

SGS Job No.: SHP24-031363

Sample Receiving Date: Sep 24, 2024

Testing Period: Sep 24, 2024 ~ Oct 08, 2024

Test Requested: Select test(s) as requested by the client.

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

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

Test Requirement	Conclusion
EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU - Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBB), Polybrominated diphenyl ethers (PBDE), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)	Pass
Halogen	See Results

Signed for and on behalf of
SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

Annie Liu

Annie Liu
Approved Signatory

scan to see the report

01A040C7

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Test Result(s):

Test Part Description：

SN ID	Sample No.	SGS Sample ID	Description
SN1	A3	SHA24-0219190-0001.C003	Black liquid

Remarks:

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

EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU - Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBB), Polybrominated diphenyl ethers (PBDE), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)

Test Method: With reference to IEC 62321-4:2013+AMD1:2017, IEC 62321-5:2013, IEC 62321-7-2:2017 and IEC 62321-12:2023, analysis was performed by ICP-OES/AAS, UV-Vis and GC-MS.

Test Item(s)	Limit	Unit(s)	MDL	A3
Lead (Pb)	1000	mg/kg	2	ND
Mercury (Hg)	1000	mg/kg	2	ND
Cadmium (Cd)	100	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))	1000	mg/kg	8	ND
Polybrominated biphenyls (PBB)	1000	mg/kg	-	ND
Monobrominated biphenyl (MonoBB)	-	mg/kg	25	ND
Dibrominated biphenyl (DiBB)	-	mg/kg	25	ND
Tribrominated biphenyl (TriBB)	-	mg/kg	25	ND
Tetrabrominated biphenyl (TetraBB)	-	mg/kg	25	ND
Pentabrominated biphenyl (PentaBB)	-	mg/kg	25	ND
Hexabrominated biphenyl (HexaBB)	-	mg/kg	25	ND
Heptabrominated biphenyl (HeptaBB)	-	mg/kg	25	ND
Octabrominated biphenyl (OctaBB)	-	mg/kg	25	ND
Nonabrominated biphenyl (NonaBB)	-	mg/kg	25	ND
Decabrominated biphenyl (DecaBB)	-	mg/kg	25	ND
Polybrominated diphenyl ethers (PBDE)	1000	mg/kg	-	ND
Monobrominated diphenyl ether (MonoBDE)	-	mg/kg	25	ND
Dibrominated diphenyl ether (DiBDE)	-	mg/kg	25	ND
Tribrominated diphenyl ether (TriBDE)	-	mg/kg	25	ND
Tetrabrominated diphenyl ether (TetraBDE)	-	mg/kg	25	ND
Pentabrominated diphenyl ether (PentaBDE)	-	mg/kg	25	ND
Hexabrominated diphenyl ether (HexaBDE)	-	mg/kg	25	ND
Heptabrominated diphenyl ether (HeptaBDE)	-	mg/kg	25	ND
Octabrominated diphenyl ether (OctaBDE)	-	mg/kg	25	ND

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Test Item(s)	Limit	Unit(s)	MDL	A3
Nonabrominated diphenyl ether (NonaBDE)	-	mg/kg	25	ND
Decabrominated diphenyl ether (DecaBDE)	-	mg/kg	25	ND
Di-2-Ethyl Hexyl Phthalate (DEHP)	1000	mg/kg	50	ND
Benzyl Butyl Phthalate (BBP)	1000	mg/kg	50	ND
Dibutyl Phthalate (DBP)	1000	mg/kg	50	ND
Diisobutyl Phthalate (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.
(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.

Test Item(s)	Unit(s)	MDL	A3
Fluorine(F)	mg/kg	20	ND
Chlorine(Cl)	mg/kg	50	ND
Bromine(Br)	mg/kg	50	ND
Iodine(I)	mg/kg	50	ND

Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (*w*=0) stated in ILAC-G8:09/2019.

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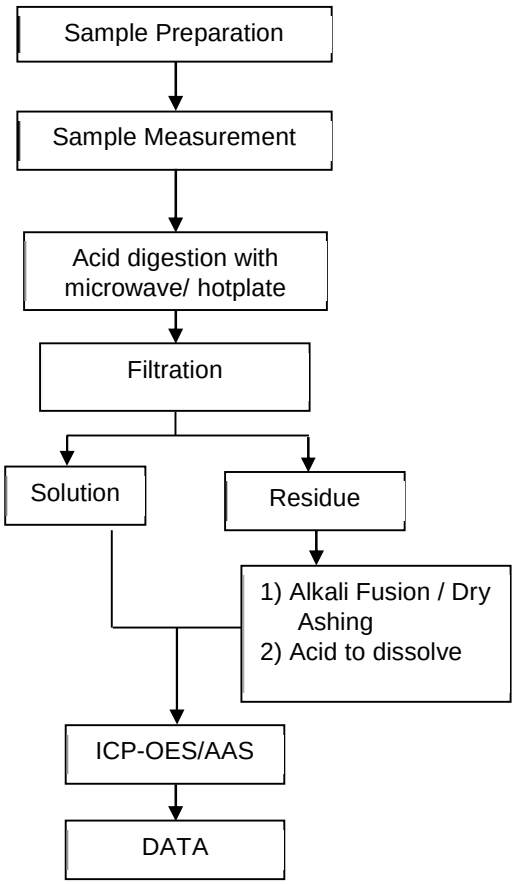
Elements Testing Flow Chart

These samples were dissolved totally by pre-conditioning method according to below flow chart.



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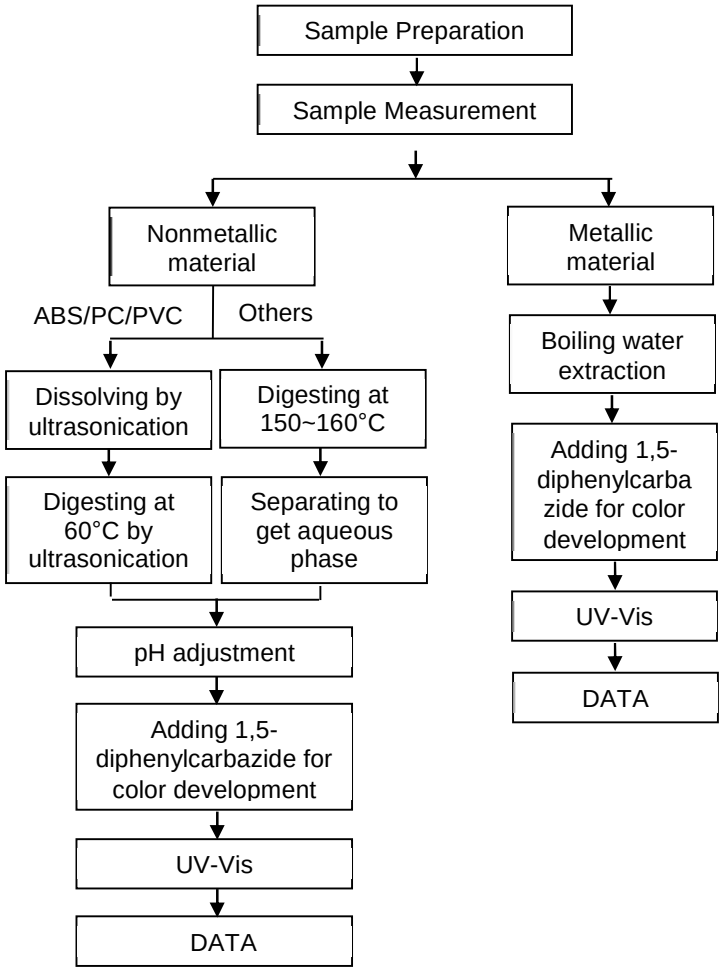
Hexavalent Chromium (Cr(VI)) Testing Flow Chart



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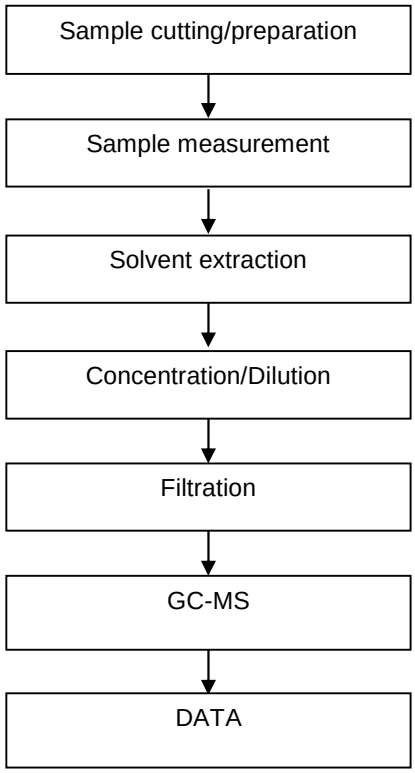
PBB/PBDE/Phthalates Testing Flow Chart



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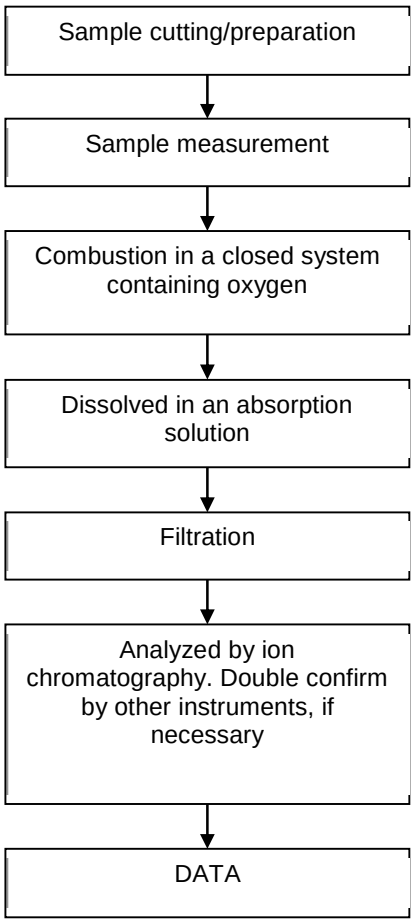
Halogen Testing Flow Chart



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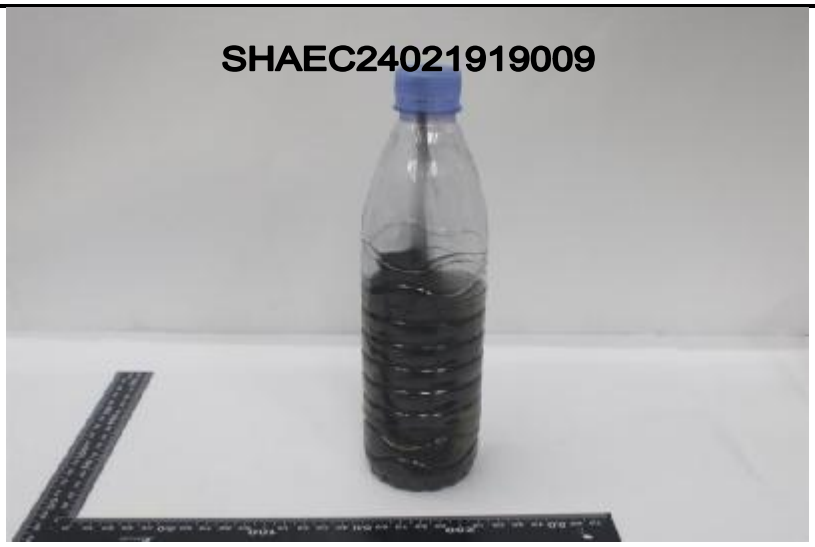
Sample Photo:



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