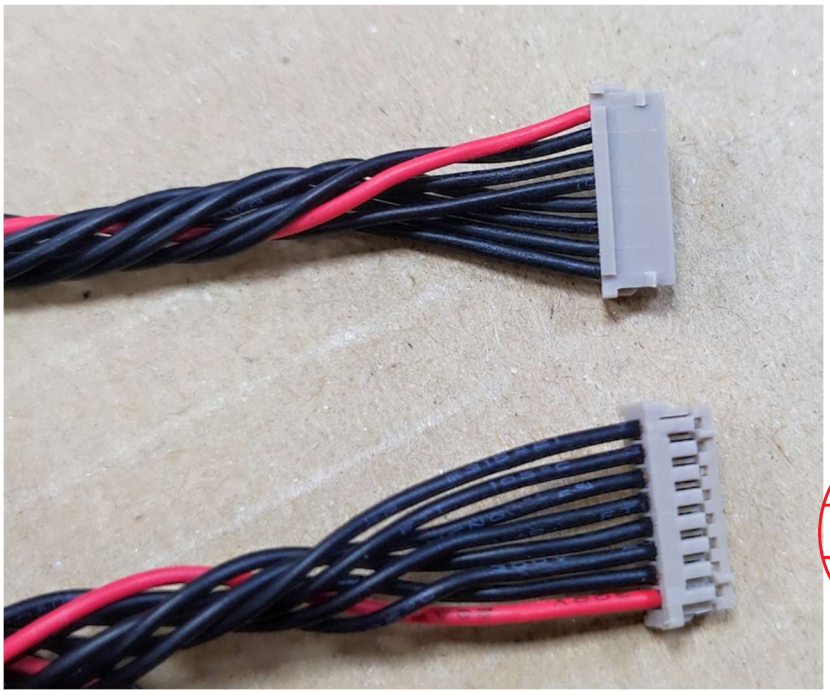
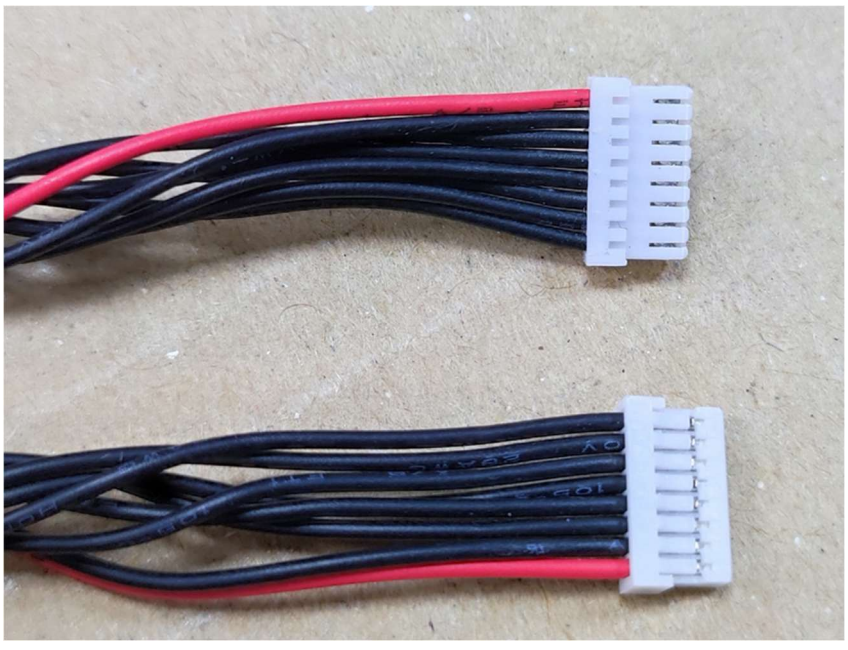




設計驗證
工程課
2025 -05- 20
發行
鈺緯科技開發股份有限公司



Xya 新亚 Electric Communication

SPECIFICATION FOR APPROVAL

承認書

客户名称 Customer Name	钰纬科技
产品描述 Description	H WIRE*8 (A1252H00-8P&24033P8,450mm)
客户料号 Customer P/N	3KH00310000(K1194)
机种 Model	
新亚料号 Xya P/N	X25JGW-4110-P
制作 Designed by	张拙
审核 Checked by	汪小龙
核准 Approved by	孙玉宝

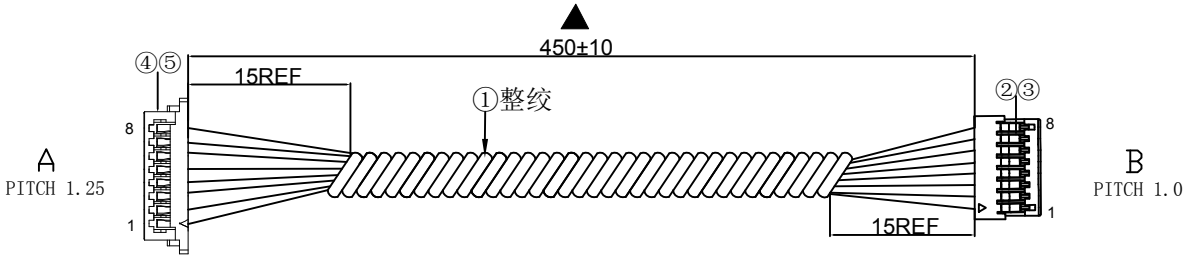
設計驗證 工程課 2025-05-20 發行 钰緯科技開發股份有限公司

客户确认 CUSTOMER SIGNATURE		
制作 Prepared By	审核 Checked By	核准 Approved By
请签字确认回签。 PLEASE RETURN TO US ONE COPY OF SPECIFICATION FOR APPROVAL WITH YOUR APPROVED SIGNATURES.		

苏州新亚电通股份有限公司
SUZHOU XINYA ELECTRIC COMMUNICATION CO., LTD.

单重： 克 整绞： REF圈	HARNESS图号DRAWING NO. H4110F

版本 REV.	日 期 DATE	变更单号 ECO NO.	变更内容 DESCRIPTION	制图 DRAWN
⚠2	2025-03-26		变更电线型号,客户料号	ZZ



設計驗證
工程課
2025 -05- 20
發行
钰纬科技開發股份有限公司

打▲的为重点检测尺寸

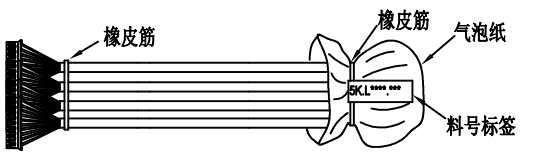
⚠						
8	UL10368 28#TS	红	490±1	1.5	1.5	1
7	UL10368 28#TS	黑	490±1	1.5	1.5	2
6	UL10368 28#TS	黑	490±1	1.5	1.5	3
5	UL10368 28#TS	黑	490±1	1.5	1.5	4
4	UL10368 28#TS	黑	490±1	1.5	1.5	5
3	UL10368 28#TS	黑	490±1	1.5	1.5	6
2	UL10368 28#TS	黑	490±1	1.5	1.5	7
1	UL10368 28#TS	黑	490±1	1.5	1.5	8
A	线 规 SPEC.	颜色 COLOR	开线 CUT	A	B	B
				剥头 PEEL		

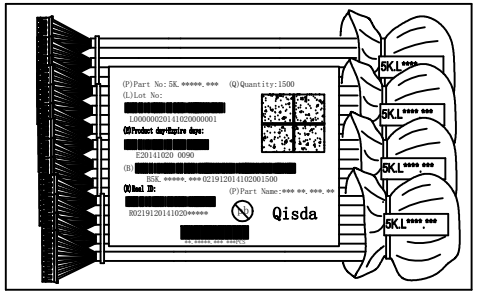
序号 NO.	料 号 PART NO.	数 量 Q'TY	材 料 MATERIAL	厂商 VENDOR
⑤	D1252-08P-*	1	HOUSING: A1252H00-8P-66/TU1257HN0-1X8P	JWT(JYC)/TANGYU
④	D1252-TOP.VA-*	8	TERMINGAL: A1252TOP-2/TU1257TPO-A	JWT(JYC)/TANGYU
③	D1004-08P-*-HF	1	HOUSING:STM-24033P8	信盛
②	D1004-TOP.VA-*	8	TERMINAL:STM-24033PS-2	信盛
⚠ ①	01S10368-28*0-*-HP	8	WIRE: 无卤无红磷UL10368 #28(7/0.127)OD=0.9mmVW-1	XINYA/HM

苏州新亚电通股份有限公司 SUZHOU XINYA ELECTRIC COMMUNICATION Co.,LTD.	制 表 (DR.)	校 对 (COL.)	审 核 (CHK.)	核 准 (APPD.)	通用公差 GENERL TOLERANCE		料 号 PART NO.	X25JGW-4110-P	客 户 CUSTOMER	钰纬科技	版 本 REV.	2
	张 2025-03-26 抽				X.±0.50	X.°±3°	客户料号 CUTM.NO.	3KH00310000 (K1194) ⚠	第1版 (OR.D.)	2025.02.12	页 次 SHEET	1/1
					.X±0.30	.X°±1°	机种号 MODEL.NO.	-	比例：无 SCALE: FREE		单 位 UNITS	MM

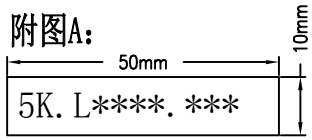
版本 REV.	日 期 DATE	变更单号 ECO NO.	变更内容 DESCRIPTION	制图 DRAWN

HARNESS图号DRAWING NO.

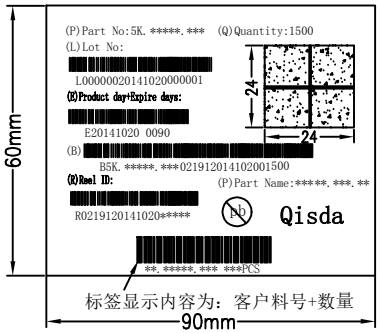


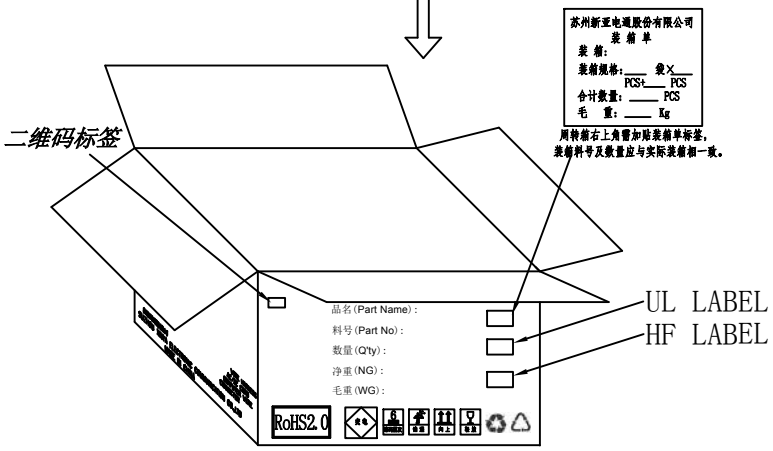


附图A：

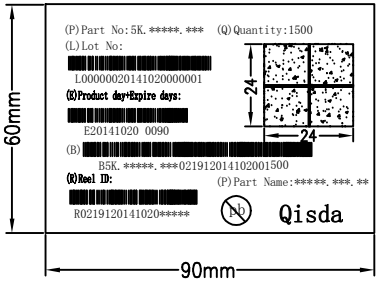


附图B：





附图C：



备注：

1 每***PCS用橡皮筋扎成一扎，加贴一料号标签(见附图A),有气泡袋包扎的料号标签贴在气泡袋上，无气泡袋包扎的料号标签贴在线体上。

2 如遇过板端子、磁环等易损构件，每扎包装时须加气泡纸。

3 将每扎产品依次装入一PE袋,PE袋上需加贴二维码标签(见附图B)。

4 箱体外必须贴上UL标签及二维码标签(见附图C)**(无卤料需加贴“HF”标签)**

5 外箱单重的信息，需要填写在对应位置上，书写工整，不可随意书写。

6 箱子不得有破损，用胶带密封好，且注意不可重压。。

	制 表 (DR.)	校 对 (COL.)	审 核 (CHK.)	核 准 (APPD.)	通用公差 GENERL TOLERANCE		料 号 PART NO.	LCD GP料包装图	客 户 CUSTOMER	佳世达	版 本 REV.	1
苏州新亚电通股份有限公司 SUZHOU XINYA ELECTRIC COMMUNICATION Co.,LTD.	范 2022-10-11 唯浩				X.±0.50	X.°±3°	客户料号 CUTM. NO.	–	第1版 (OR.D.)	2022.10.11	页 次 SHEET	1/1
					.X±0.30	.X°±1°	机种号 MODEL. NO.	–	比例：无 SCALE: FREE		单 位 UNITS	MM

苏州新亚电通股份有限公司

类　　别	料号编码原则 [线束成品料号编列]	文件编号	X001
工作指导书		机密等级	■ 机密 □ 一般
		版　　次	A
		页　　次	1 / 2

线束成品料号编列：

S □□ □ □□-□□□□-□□-□□-□□

1 2 3 4 5 6 7 8

1、销售模式码：S=外销(保税)　X=内销(非保税)

2、年度码：8 代表 2008 年开发的料件，16 代表 2016 年开发的料件

3、产品类别码：

A	镀锡FFC(扁铜线)		B	镀金FFC(扁铜线)
C	咪头		E	机外线(注塑成型类)
G	隔离线		H	一端HOUSING，一端沾锡
I	IDC类		J	两端HOUSING类单线
K	镀锡FFC(圆铜线)		L	Wire Harness LVDS
M	一端HOUSING，一端电源插头		N	NB CABLE
P	FPC		Q	原材料类
R	FFC G-TYPE		S	MINI SAS
T	外接端子类		V	Wire Harness排线类
W	Only Wire		Y	Wire Harness刺破式类

4、客户别码：详见客户识别码索引表

5、流水码：从 0001~9999，一个循环结束后，再从 0001~9999

6、特殊料件识别码：

无特殊要求时为空

产品类别码(Table 2)

C	FFC小线冲型类		CL	FFC LVDS冲型类
CV	FFC冲型+HOT-bar类		CF	FFC反折Pin冲型类
F	FFC反折Pin类		L	FFC LVDS类(无冲型、HOT-bar)
LF	FFC LVDS反折Pin类		VF	FFC HOT-bar反折Pin类
V	HOT-bar类		VL	FFC LVDS(HOT-bar类)
TSD	复杂的汽车线(2个以上组件)		TSE	简单的汽车线(2个组件)
ASD	复杂的组合线(2个以上组件，且非汽车线)		ASE	简单的组合线(2个组件，且非汽车线)
CD	低单价线束			

7、环保料件识别码：

HF	无卤类		Z	无DOP类
HZ	无卤、无DOP类		P	无红磷类
HP	无卤、无红磷类			

8、产品交货地点码：

正常此码省略

当同一个料号出不同产地时，增加产地后缀码，详细见客户识别码索引表

除先锋产品出海外，后缀增加“-E”以示区分

先锋产品出海外，后缀增加“-X”，切记，不是“-*”

若产品交往海外的不同地点国家，在”-E”和 ”-X”前增加 2 码地点码，

如” –HL-E”(出海外，交往荷兰)、” –BL-E”(出海外，交往波兰)

详见客户识别码索引表

苏州新亚电通股份有限公司

PRODUCTION NAME：WIRE HARNESS			
Designed：Jodie	APVD：Aviv	Edition：D	File Name：ML1001
		DATE：2019.07.01	Page：1/8

1. SCOPE 应用范围

This product specification contains the test method, the general performance and requirement for Flexible Flat Cable system.

2. REQUIREMENTS 必要条件

2.1. DESIGN AND CONSTRUCTION 设计规范

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

2.2. MATERIALS 材质

A、Housing：见零件规格书

B、Terminal：见零件规格书

C、Wire：见零件规格书

2.3. Wire RATINGS 线材规格

A、见零件规格书

3.Standard of Confidence Test 信赖性测试

3.1 TEST ENVIRONMENT 测试条件

A. Environment Temperature: 15~35℃

B. Humidity: 45~75%

3.2.TEST REQUIREMENTS AND PROCEDURES SUMMARY

PRODUCTION NAME：WIRE HARNESS			
Designed：Jodie	APVD：Aviv	Edition：D	File Name：ML1001
		DATE：2019.07.01	Page：2/8

Items 测试项目		Test conditions 测试条件	Criteria 判定标准
1	Appearance inspection 外观检查	1、without mechanical injure、deformation、denude 2、Connection terminal should be shining， no oxidization and scoring	PASS
ELECTRICAL 电气特性			
1	Contact Resistance 接触阻抗	20mV/10mA	Less than 20mΩ
2	Insulation Resistance 绝缘阻抗	DC500V /1min	More than 100MΩ
3	Dielectric Withstanding Voltage 耐电压	AC250V/0.5mA 1min	No breakdown
4	Continuity Test 导通测试	Continuity performance should be good， without short、wrong order	No Withoutshort wrong order
MECHANICAL 机械特性			
5	Terminal crimp tensile strength 抗张强度	Terminal crimp tensile strength (Excluding insulation of wire)：	Figure 1
6	Pull-out Test 插拔测试	With the corresponding conn is inserted in the 25± 3mm/min	Figure 2
7	Mechanical life 机械寿命	Insertion and withdrawal 50 times with speed of 100 times/ hour	More than 50 cycle
8	Plating Thickness Test 膜厚测试	Coating Thickness Tester	NA

ENVIRONMENTAL 环境特性			
9	Heat Resistance 耐高温	At the temperature of high temperature test box 85±2℃ is placed in a 96±1H，1H recovery room temperature after detection	PASS
10	Low temperature resistance 耐低温性	At the temperature of high temperature test box -25±2℃ is placed in a 96±1H，1H recovery room temperature after detection	PASS
11	Heat Cycle Test 冷热循环	The 1 cycles：-25℃~+25℃~+85℃~+25℃，5 consecutive cycles，1H recovery room temperature after detection	PASS
12	Humidity 恒温恒湿	Test temperature of 40 degrees, humidity 90～95%RH，the time of 96±1H，1H recovery room temperature after detection	PASS
13	Vibration Test 振动测试	Frequency：50HZ，Swing：1.52mm，each of X, Y, Z-axis directions for 12cycles，and every30 mins	The external appearance have no injury，onnection part has no loose or break
14	Salt Spray 盐雾试验	Temperature：35 ±2℃ Salt solution：5 ±1% Duration：16±1h (After the test，salt deposit shall be removed in running water) 符合国标 GB6461-2002 7 级判断标准	PASS
15	Characteristics 特性阻抗	The type of the equipment：DCA-J 86100C Test standard：NA	NA

4. Direction For Use 产品使用说明

4.1 保质期：包装好的产品在 20±10℃、:70%RH 湿度以下的环境中，可以储存 6 个月

4.2 该产品只适用开发段所对应机种/机型使用需求，不可以作为其它用途使用。若客户端延用到其它机种/机型，则需要向新亚确认是否能继续延用，若因没有通知新亚评估直接使用到其它机种/机型所造成的异常损失，苏州新亚电通有限公司不承担相应的异常责任

4.3 该产品符合制造国(中国)的法律法规要求，同时符合客户在开发段提供的交换目的国法律法规要求，若客户更改交换目的国，需要书面通知新亚，新亚评估是否符合对应国的法律法规要求，若客户在开发段不给予交换目的国的信息，则默认符合制造国的法律法规要求即可，若客户变更交换目的国没有书面通知苏州新亚，苏州新亚电通有限公司不承担因此造成的异常责任

Figure 1

导体规格	导体截面积	抗张强度判定标准
34#	0.02㎜²	＞0.3Kg
32#	0.03㎜²	＞0.5Kg
30#	0.05㎜²	＞1.2Kg
28#	0.08㎜²	＞1.5Kg
26#	0.13㎜²	＞2.5Kg
24#	0.21㎜²	＞4.0Kg
22#	0.33㎜²	＞5.0Kg
20#	0.5～0.55㎜²	＞7.0Kg
18#	0.82～1.0㎜²	＞10.0Kg
16#	1.3～1.5㎜²	＞15.0Kg
14#	2.0～2.5㎜²	＞17.0Kg
12#	3.3～4.0㎜²	＞22.0Kg
10#	5.3～6.0㎜²	＞33.0Kg
8#	8.3～9.0㎜²	＞40.0Kg
6#	13.3～14.0㎜²	＞44.5Kg
4#	21.1～21.5㎜²	＞62.3Kg
3#	26.6～26.8㎜²	＞71.2Kg
2#	33.6～33.8㎜²	＞80.1Kg
1#	42.4～42.7㎜²	＞89.0Kg

Figure 2

Items 测试项目	**Test conditions 测试条件**	**Criteria 判定标准**
Insertion force 插入力	With the corresponding conn is inserted in the 25±3mm/min	A端≤2.8Kg B 端≤2.8Kg
Pullout force 拔出力		A端≥0.8Kg B 端≥0.8Kg

PRODUCTION NAME：WIRE HARNESS			
Designed：Jodie	APVD：Aviv	Edition：D	File Name：ML1001
		DATE：2019.07.01	Page：6/8

线束使用注意事项

Wire Harness using Notes and Operation manual

由于线束产品的特殊性，在使用时，不正确的插入和拔出会使其端子易变形甚至可以导致产品功能失效，所以，线束产品在使用上要特别注意以下事项：

Due to the particularity of harness products, when in the using, Incorrect insertion and Pull out of the terminal is easy to deformation , even can to be lead to product function failure, so, Harness products in use should pay special attention to the following matters:

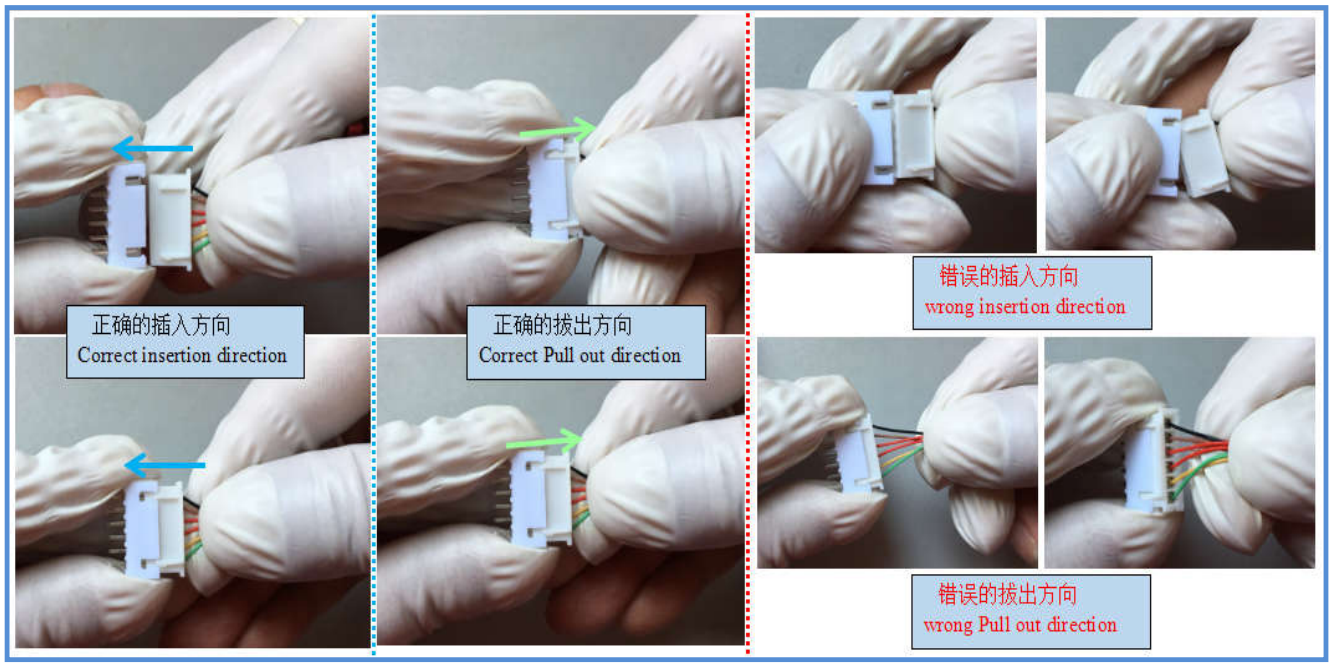
◆普通 LCD 线束/General LCD harness ：

1，在连接的 wafer 上插拔时，要水平向内插入。插入 housing 时需要捏住 housing 的底部或者距离线缆的 1-2mm 处水平的插入；不得向上、向下或者倾斜插拔，这样会使 housing PIN 口变形和端子功能区变形、扩孔。

When connecting to the wafer insertion and Pull out, need to Horizontal into insertion. When Insert housing you need to hold the bottom of the housing or distance in the cable 1-2mm location Horizontal into insertion, don’ t take up、take down or Tilt the insertion and Pull out, This will make housing PIN mouth deformation and terminal PIN mouth functional area deformation, reaming.

2，拔出 housing 时需要捏住 housing 的底部或者线缆的 1-2mm 处水平、均匀的拔出。不得使用蛮力拉拔、拉扯线缆使之拔出，这样会造成端子不定位或者线缆断裂等功能不良。

When Pull out the housing need to hold the bottom of the housing or distance in the cable 1-2mm location Horizontal Pull out, the Pull out power need Horizontal and uniform . do not use brute force drawing, pulling cable , this will cause the terminal is not positioning or cable breakage and other undesirable function.



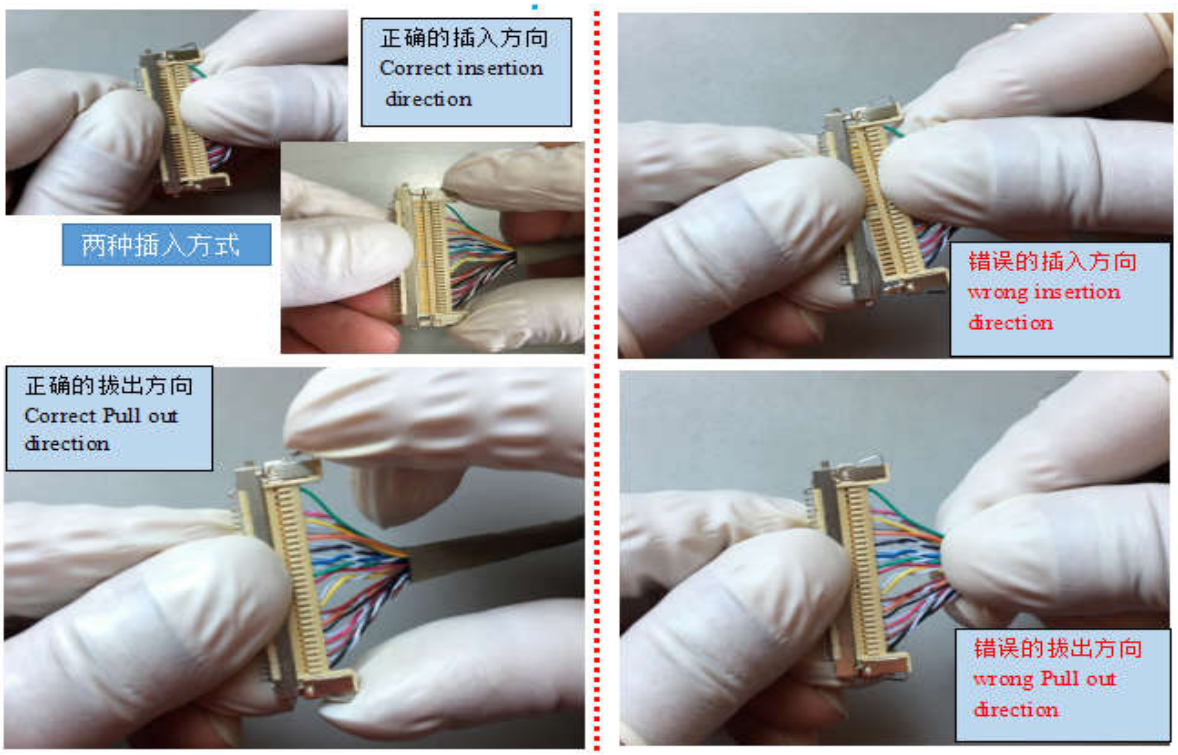
◆LVDS 线束/LVDS harness：

1，在连接的 wafer 上插拔时，要水平向内插入。插入 housing 时需要捏住 housing 的底部或者距离线缆的 1-2mm 处水平的插入或按压 housing 两侧的铁弹片插入；不得向上、向下或者倾斜插拔，这样会使 housing 塑胶体断裂或者端子的金手指变形、断 PIN。

When connecting to the wafer insertion and Pull out，need to Horizontal into insertion. When Insert housing you need to hold the bottom of the housing or distance in the cable 1-2mm location Horizontal into insertion or Press housing on both sides of the iron shrapnel，don’t take up、take down or Tilt the insertion and Pull out，this will break the housing plastic part or terminal finger deformation, broken PIN .

2，拔出 housing 时需要按压 housing 两侧的铁弹片处水平、均匀的拔出。不得使用蛮力拉拔、拉扯线缆受硬力使之拔出，这样会造成端子不定位或者线缆断裂等功能不良。

When Pull out the housing need to Press housing on both sides of the iron shrapnel ,the Pull out power need Horizontal and uniform .do not use brute force drawing, pulling cable ,this will cause the terminal is not positioning or cable breakage and other undesirable function.



NOTE(S)：

1，要避开同其它物体的某些物理物体的直接接触。
To avoid direct contact with certain physical objects of other objects.

2，在高温高湿的场合下连续使用时，事先请采用实装的评价(评估)。
In the high temperature and high humidity occasions for continuous use, Please evaluate the

implementation (assessment).

3，在使用过程中，如不慎跌落地上或者其它可能使其粘上异物的情况下，必须将导体露出处的脏污清除干净后才能使用（清除异物时要顺着导体的方向，向外清除）。

In the course of using, Such as accidentally fell on the ground Or other conditions that may cause it to stick to a

foreign body, Must be to remove dirt exposed conductor clean after to used (removal of foreign matter to follow the direction of the conductor, outward clearance).

XINYA ELECTRONIC CO.,LTD
TEL:86-0577-62866888 FAX:86-0577-62865999
http://www.xinya-cn.com

核准 APPROVED	审核 CHECKED	制作 DRAWING
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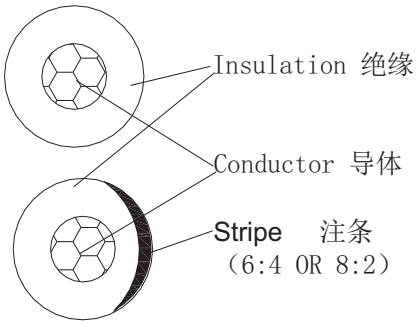
规格承认书 Product Specifications

REV:1.1

规格SPECIFICATION:		UL 10368 30#TS～16#TS							
项目ITEM		规 格 SPECIFICATION							
导体 CONDUCTOR	线规AWG	30	28	26	24	22	20	18	16
	材质MATERIAL	镀锡铜 TINNED COPPER							
	尺寸COND.SIZE	7/0.100± 0.008	7/0.127± 0.008	7/0.160± 0.009	7/0.20±0.009	7/0.254± 0.009	7/0.32±0.02	16/0.254± 0.009	26/0.254± 0.009
绝缘 INSULATION	标称厚度 Nominal Thickness	0.23㎜	0.23㎜	0.23㎜	0.23㎜	0.23㎜	0.23㎜	0.23㎜	0.23㎜
	最小厚度 Min. Thickness	0.20㎜	0.20㎜	0.20㎜	0.20㎜	0.20㎜	0.20㎜	0.20㎜	0.20㎜
	材质MATERIAL	阻燃交联聚乙烯 FR-XLPE							
	OD外径	0.80±0.10	0.90±0.10	1.00±0.10	1.10±0.15	1.30±0.15	1.50±0.15	1.80±0.15	2.10±0.15
	颜色COLOUR	任意Optional							
Conductor Resistance: Max(Ω/Km,20℃)		381	239	150	94.2	59.4	36.7	23.2	14.6
印 字 MARKING		AWM 10368 E170689 ××AWG 105℃ 300V XINYA CSA AWM I A LL109915 FT2 105℃ 300V ××AWG HF							

电气性能ELECTRICAL CHARACTERISTICS	物理性能PHYSICAL CHARACTERISTICS
1. 额定值Rating : 温度TEMP 105℃ ; 电压VOLTAGE 300V 2.浸水耐压Dielectric-Withstand Test:2000V 3.火花电压Spark Test:3000V	1.抗张强度Tensile Strength: 10.3MPa 2. 伸长率Elongation: Unaged: 100% min 3. 热冲击Heat shock test: 不开裂NO CRACKING 4. 冷弯Cold bend test: 不开裂NO CRACKING 5. 加热变形Deformation test: MAX 50% 6. 燃烧测试Flame test: PASS FT2

剖面图Cross - Sectional View :



备 注 REMARK

Cl<900ppm、Br<900ppm、Cl+Br<1500ppm

图号 PART NO.	SP1108172	客户承认 APPROVED BY	

XINYA ELECTRONIC CO.,LTD

新亚电子有限公司

MATERIAL CERTIFICATE（Cu）

材料成份分析表（铜）

COMPONENT: 成分	RATIO（%） 含量
COPPER 铜	98.5
BISMUTH 铋	0.0002
ANTIMONY 锑	0.0004
ARSENIC 砷	0.0005
IRON 铁	0.001
LEAD 铅	0.0005
TIN 锡	1.3
SULFUR 硫	0.0015
OXYGEN 氧	0.00 1
SELENIUM 硒	0.0002
ARGENTUM 银	0. 0025
TE 碲	0. 0002

Pb≤100ppm(According to EPA3050B),Cd≤5ppm(According EN1122:2001)

根据 EN1122 和 EPA3050B 参照 SOSY 标准、铅≤100ppm　隔≤5ppm

新亚电子有限公司

品保部

2010.4.22

Contact person 负责人：王宇峰

Company Chop 公司盖章：

无卤色母成分析表

序号	Color 颜色	Complete part NO. 产品型号	Part name 产品名称	Material name 组成产品原材料名称(英文)	Material Classification 原料分类	Amount(%) 原材料占产品百分比	Material Supplier 原料商	Basic Substance 原材料化学成分(英文)	CAS. NO. 化学成分摘要编号	Amount (%)
1	红色Red	4278-RD-EVA	Color Conceutrate	EVA	ISO1043	40%	DUPONT	(C4H6O2•C2H4)x	24937-78-8	100%
				色粉	EN12166	10%	BASF	C17H16N4O7S·1/2Ca	12286-66-7	100%
				色粉	ISO1043	40%	BASF	C26H22N4O4	2786-76-7	100%
				other	ISO1043	10%		not to declare		100%
2	白色White	4279-WT-EVA	Color Conceutrate	EVA	ISO1043	40%	DUPONT	(C4H6O2•C2H4)x	24937-78-8	100%
				钛白粉	EN12167	40%	DUPONT	TiO2	13463-67-7	100%
				other	ISO1043	20%		not to declare		100%
3	黄色Yellow	4283-YE-EVA	Color Conceutrate	EVA	ISO1043	40%	DUPONT	(C4H6O2•C2H4)x	24937-78-8	100%
				色粉	EN12166	10%	DUPONT	TiO2	13463-67-7	100%
				色粉	ISO1043	40%	BASF	C17H16N4O7S·1/2Ca	12286-66-7	100%
				other	ISO1043	10%		not to declare		100%
4	蓝色Blue	4285-BU-EVA	Color Conceutrate	EVA	ISO1043	40%	DUPONT	(C4H6O2•C2H4)x	24937-78-8	100%
				色粉	EN12166	10%	BASF	C.I.颜料蓝29	1317-97-1	100%
				色粉	ISO1043	40%	BASF	C32H16CuN8	147-14-8	100%
				other	ISO1043	10%		not to declare		100%
5	绿色Green	4281-GN-EVA	Color Conceutrate	EVA	ISO1043	40%	DUPONT	(C4H6O2•C2H4)x	24937-78-8	100%
				色粉	EN12166	10%	BASF	C32H16CuN8	147-14-8	100%
				色粉	ISO1043	40%	BASF	C17H16N4O7S·1/2Ca	12286-66-7	100%
				other	ISO1043	10%		not to declare		100%
6	橙色Orange	4284-OR-EVA	Color Conceutrate	EVA	ISO1043	40%	DUPONT	(C4H6O2•C2H4)x	24937-78-8	100%
				色粉	EN12166	10%	BASF	C17H16N4O7S·1/2Ca	12286-66-7	100%
				色粉	ISO1043	40%	BASF	C12H10N6O4	72102-84-2	100%
				other	ISO1043	10%		not to declare		100%
7	紫色Purple	4280-PU-EVA	Color Conceutrate	EVA	ISO1043	40%	DUPONT	(C4H6O2•C2H4)x	24937-78-8	100%
				色粉	EN12166	10%	BASF	C.I.颜料蓝29	1317-97-1	100%
				色粉	ISO1043	40%	BASF	颜料红R-122	16043-40-6	100%
				other	ISO1043	10%		not to declare		100%
8	黑色Black	4283-BK-EVA	Color Conceutrate	EVA	ISO1043	40%	DUPONT	(C4H6O2•C2H4)x	24937-78-8	100%
				色粉	EN12166	10%	DUPONT	TiO2	13463-67-7	100%
				色粉	ISO1043	40%	CABOT	C	1333-86-4	100%
				other	ISO1043	10%		not to declare		100%
9	灰色Gray	4290-GY-EVA	Color Conceutrate	EVA	ISO1043	40%	DUPONT	(C4H6O2•C2H4)x	24937-78-8	100%
				色粉	EN12166	40%	DUPONT	TiO2	13463-67-7	100%
				色粉	ISO1043	10%	CABOT	C	1333-86-4	100%
				other	ISO1043	10%		not to declare		100%
10	棕色Brown	4286-BN-EVA	Color Conceutrate	EVA	ISO1043	40%	DUPONT	(C4H6O2•C2H4)x	24937-78-8	100%
				色粉	EN12166	20%	BASF	C.I.颜料红101	8011-97-0	100%
				色粉	ISO1043	40%	CABOT	C	1333-86-4	100%
				other	ISO1043	10%		not to declare		100%

标准/规范供参考：金属类EN12166：ASTMB3：塑料类ISO1043：橡胶类ISO18064：ISO1629：

ONLINE CERTIFICATIONS DIRECTORY

AVLV2.E170689
Appliance Wiring Material - Component

Page Bottom

Appliance Wiring Material - Component

See General Information for Appliance Wiring Material - Component

XINYA ELECTRONIC CO LTD E170689
NO.2, CHANGJIANG RD., WENZHOU
BRIDGE IND. Z. NORTH BAIXIANG TOWN
YUEQING, WENZHOU 325603 CHINA

Table of Recognized Styles							
Single-conductor, thermoplastic insulation.							
1007	1108	1354	1569	1671	1867	10272	10800
1010	1185	1365	1571	1672	1887	10279	10913
1015	1316	1430	1589	1674	1901	10297	11027
1028	1330	1431	1617	1685	10059	10362	11030
1032	1331	1452	1618	1691	10064	10368	11079
1061	1332	1500	1631	1726	10071	10369	11303
1095	1333	1517	1637	1745	10125	10584	11304
1107	1347	1533	1640	1792	10231	10602	
Multiple-conductor, thermoplastic insulation.							
2095	2547	2725	2854	20251	20696	21143	21458
2096	2552	2733	2877	20276	20744	21149	21515
2405	2555	2734	2881	20288	20798	21307	21520
2408	2556	2789	2919	20295	20855	21311	21869
2464	2562	2791	2951	20346	21016	21445	
2468	2651	2835	2960	20379	21088	21451	
2474	2661	2845	2990	20574	21099	21452	
2476	2689	2851	20080	20624	21100	21455	
Single-conductor, thermoset insulation.							
3173	3271	3302	3347	3364	3443	3619	3918
3265	3272	3321	3348	3385	3485	3737	
3266	3289	3346	3363	3386	3567	3917	
Multiple-conductor, thermoset insulation.							
4478	4523						

Marking: Company name, voltage rating, temperature rating, conductor size, conductor material if other than copper, and use.
Last Updated on 2013-01-07

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Test Report

No.: CANEC24013073701 **Date:** Jun 24, 2024

Client Name: XINYA ELECTRONIC CO.,LTD

Client Address: NO. 1, PANZHUYANG ROAD, LAIZHAI INTELLIGENT INDUSTRIAL PARK, YUEQING ZHEJIANG

Sample Name: Tin plated copper

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

SGS Job No.: GZP24-019801

Sample Receiving Date: Jun 18, 2024

Testing Period: Jun 18, 2024 ~ Jun 24, 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
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)	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
5B0698B7

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t (86-20) 82155555 www.sgsgroup.com.cn
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Test Result(s):

Test Part Description：

SN ID	Sample No.	SGS Sample ID	Description
SN1	A1	CAN24-0130737-0001.C001	Silvery metal

Remarks:

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

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	A1
Lead (Pb)	600	mg/kg	2	ND
Mercury (Hg)	600	mg/kg	2	ND
Cadmium (Cd)	60	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))▼	-	μg/cm²	0.10	ND
Polybromobiphenyl (PBB)	600	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)	600	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
Octabrominated diphenyl ether (OctaBDE)	-	mg/kg	5	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	A1
Nonabrominated diphenyl ether (NonaBDE)	-	mg/kg	5	ND
Decabrominated diphenyl ether (DecaBDE)	-	mg/kg	5	ND
Bis(2-ethylhexyl) phthalate (DEHP)	600	mg/kg	50	ND
Butyl benzyl phthalate (BBP)	600	mg/kg	50	ND
Dibutyl phthalate (DBP)	600	mg/kg	50	ND
Diisobutyl phthalate (DIBP)	600	mg/kg	50	ND

Notes:

(1) The maximum permissible limit is quoted from the client requirement.

(2) ▼ =

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.

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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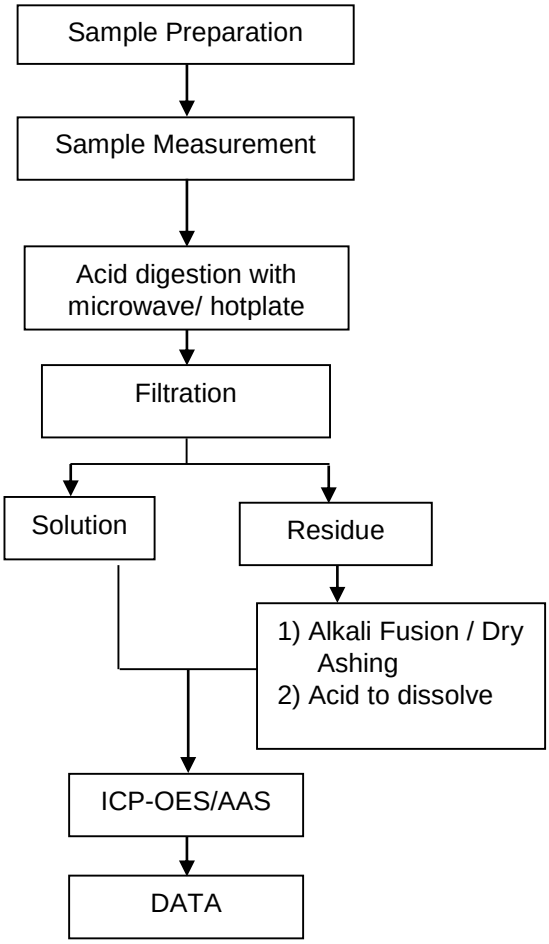
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Elements Testing Flow Chart

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

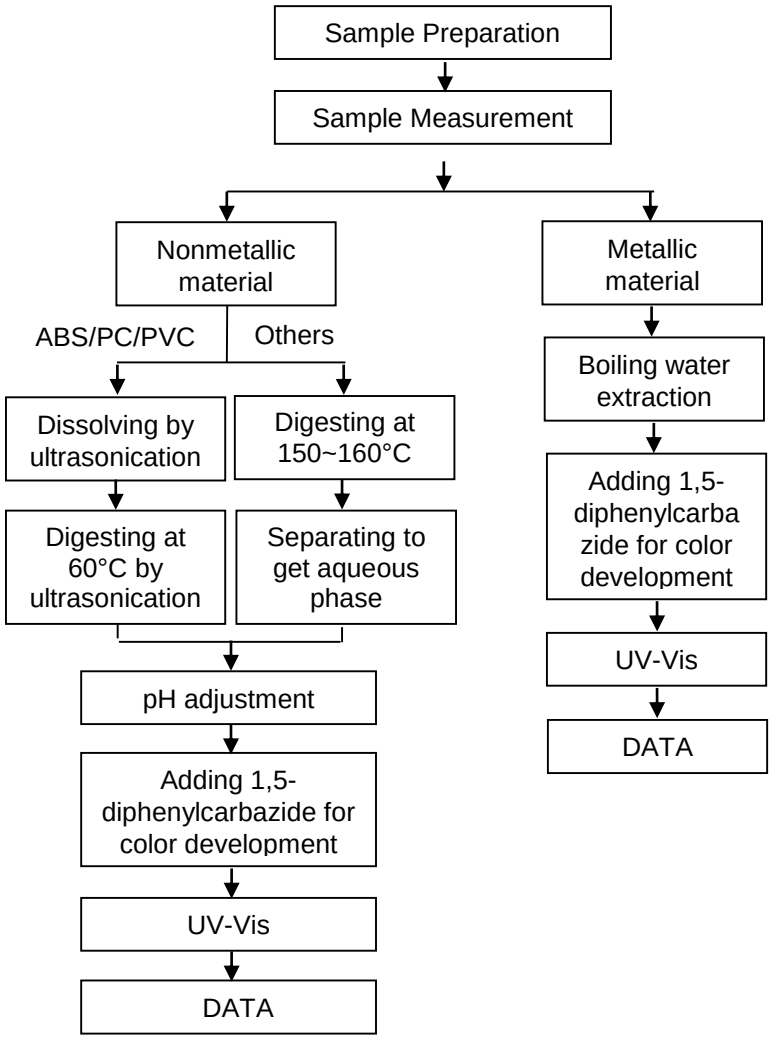


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Hexavalent Chromium (Cr(VI)) Testing Flow Chart

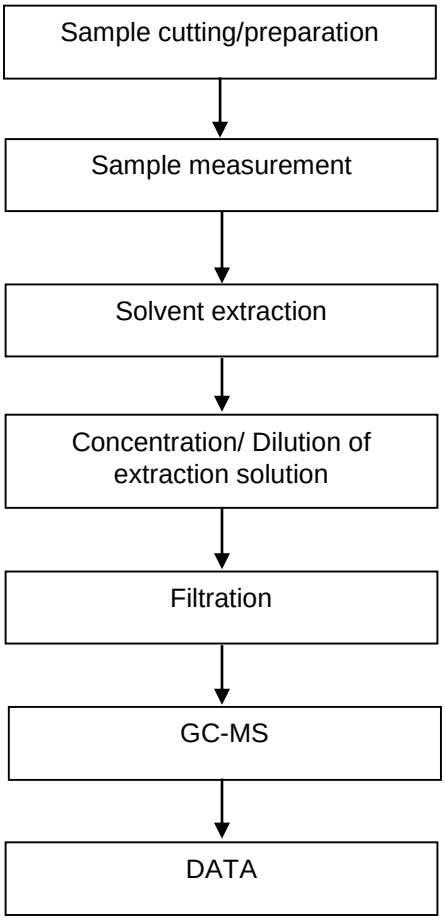


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PBB/PBDE Testing Flow Chart

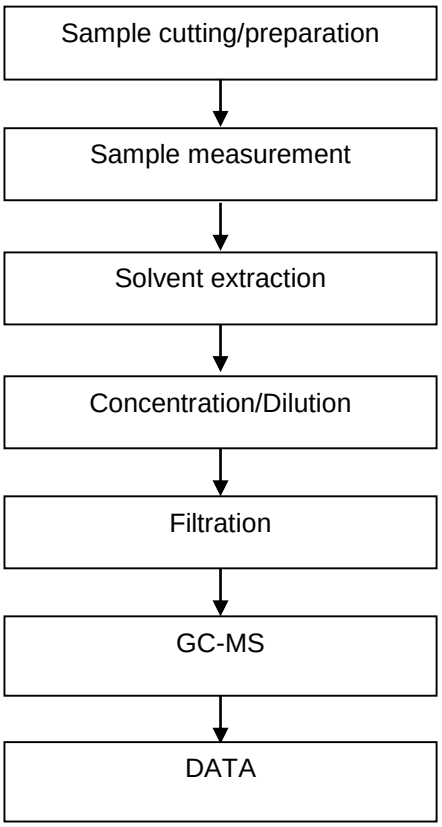


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Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

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No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86–20) 82155555 www.sgsgroup.com.cn
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

ATTACHMENTS

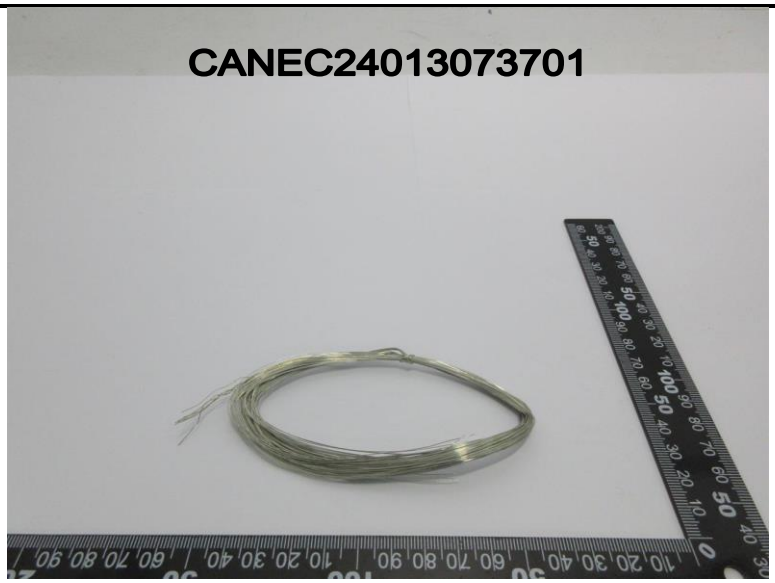
Phthalates Testing Flow Chart



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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
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Sample Photo:



CAN24-0130737-0001.C001

SGS authenticate the photo on original report only

*** End of Report ***

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

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Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86–20) 82155555 www.sgsgroup.com.cn
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

Member of the SGS Group (SGS SA)

检测报告
Test Report

报告编号 A2240808982104001E
Report No. A2240808982104001E

报告抬头公司名称 苏州中特电材有限公司/汉诺（苏州）聚合物科技有限公司/苏州汉诺材料科技有限公司
Company Name shown on Report SUZHOU ZHONGTE ELECTRIC MATERIAL CO., LTD. / HAMNOW (SUZHOU) POLYMER TECHNOLOGY CO., LTD. / HAMNOW MATERIAL SCIENCE AND TECHNOLOGY CO., LTD.

地 址 江苏省苏州市吴中区胥口镇长安路66号
Address NO.66, CHANGAN ROAD, XUKOU TOWN, WUZHONG ZONE, SUZHOU, CHINA

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

样品名称	黑色色母
Sample Name	Black Color Masterbatch
样品接收日期	2024.12.23
Sample Received Date	Dec. 23, 2024
样品检测日期	2024.12.23-2025.01.02
Testing Period	Dec. 23, 2024 to Jan. 2, 2025

检测要求
根据客户要求，对所提交样品中的铅(Pb)，镉(Cd)，汞(Hg)，六价铬(Cr(VI))，多溴联苯(PBBs)，多溴二苯醚(PBDEs)，邻苯二甲酸酯(DBP，BBP，DEHP，DIBP)进行测试。

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

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

批 准
Approved by

陈凯敏
实验室经理 Lab Manager

日 期
Date 2025.01.02

上海华测品标检测技术有限公司
Centre Testing International Pinbiao(Shanghai) Co., Ltd.
No. G508471906
上海市闵行区万芳路1351号
No.1351, Wanfang Road, Minhang District, Shanghai, China

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
	001		
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
	001		
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
	001		
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
	001		
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

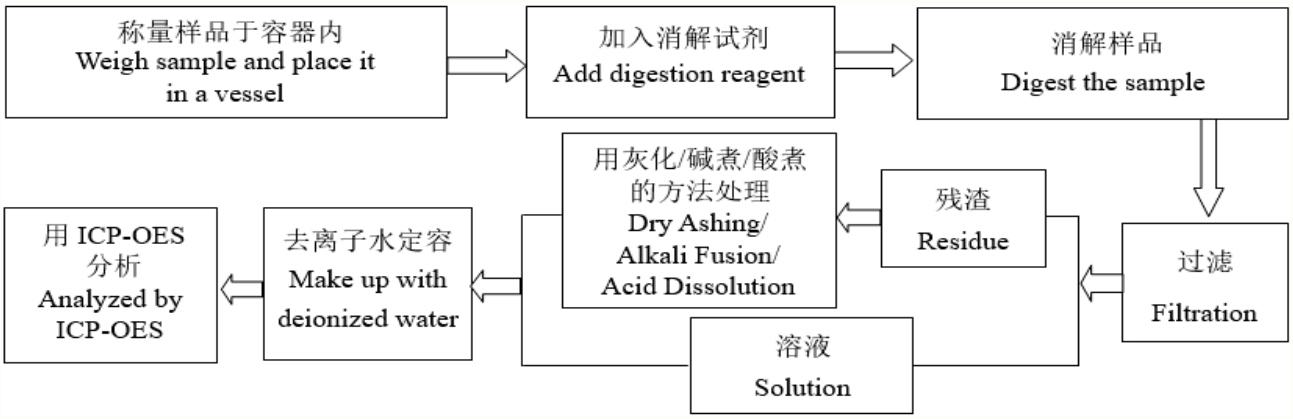
序号 No.	CTI样品ID CTI Sample ID	描述 Description
1	001	黑色固体 Black solid

备注: **对于检测铅，镉，汞之样品已消解完全。**
-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%

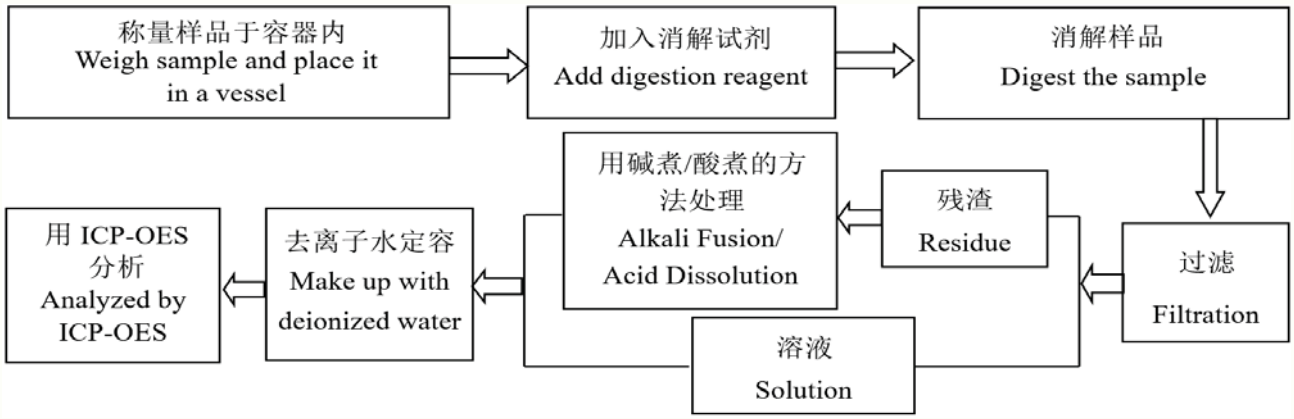
Remark: **The sample(s) had been dissolved totally tested for Lead, Cadmium, Mercury.**
-MDL = Method Detection Limit
-N.D. = Not Detected (<MDL)
-mg/kg = ppm = parts per million
-1000 mg/kg = 0.1%

检测流程 Test Process

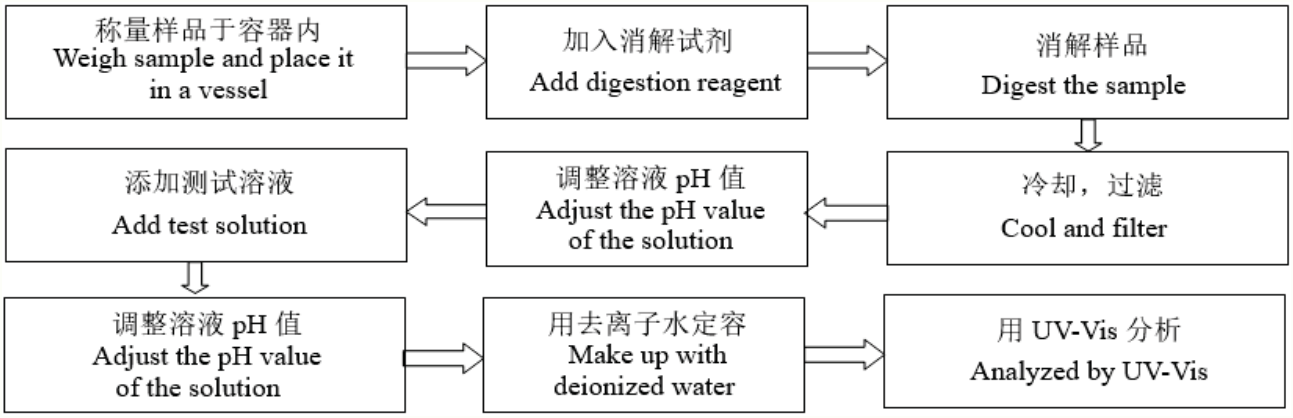
1. 铅(Pb)，镉(Cd)，铬(Cr)
   Lead (Pb), Cadmium (Cd), Chromium (Cr)



2. 汞(Hg)
   Mercury (Hg)



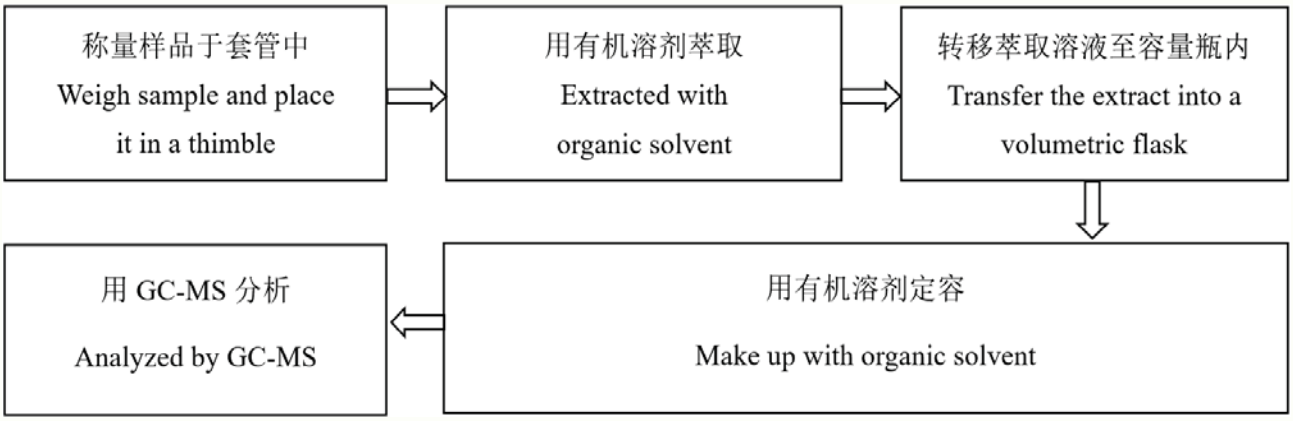
3. 六价铬(Cr(VI))
   Hexavalent Chromium (Cr(VI))



检测报告
Test Report

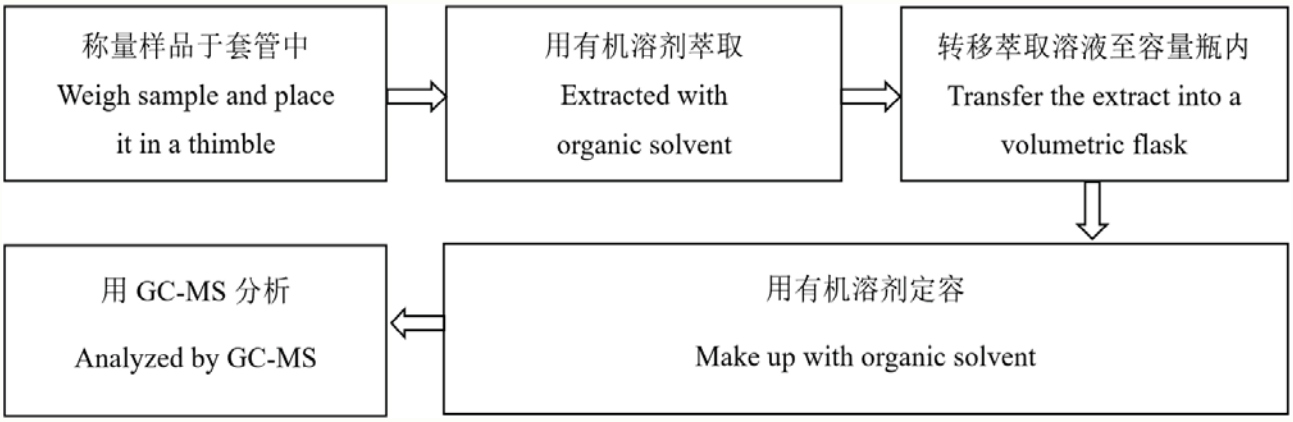
4. 多溴联苯(PBBs)， 多溴二苯醚(PBDEs)

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



5. 邻苯二甲酸酯(DBP， BBP， DEHP， DIBP)

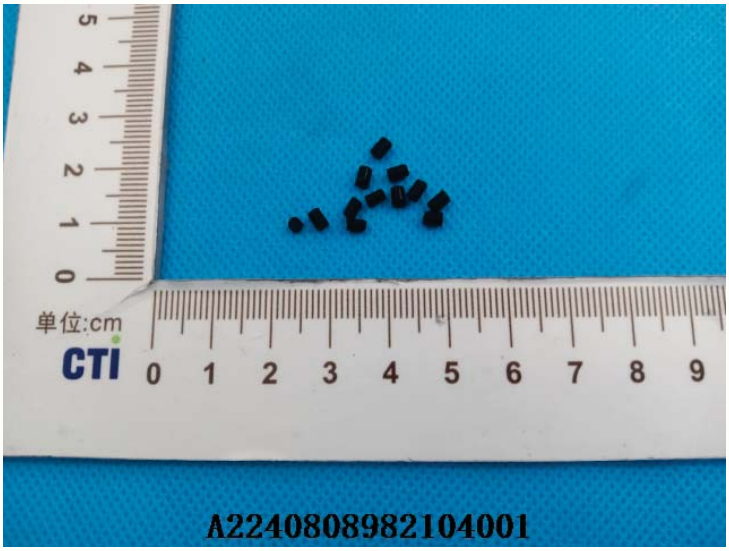
Phthalates (DBP, BBP, DEHP, DIBP)



检测报告
Test Report

报告编号 A2240808982104001E
Report No. A2240808982104001E

样品图片
Photo(s) of the sample(s)



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3. 本报告检测结果仅对受测样品负责；
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报告结束

*** End of report ***

检测报告
Test Report

报告编号 A2240808982105001E
Report No. A2240808982105001E

报告抬头公司名称 苏州中特电材有限公司/汉诺（苏州）聚合物科技有限公司/苏州汉诺材料科技有限公司
Company Name shown on Report SUZHOU ZHONGTE ELECTRIC MATERIAL CO., LTD. / HAMNOW (SUZHOU) POLYMER TECHNOLOGY CO., LTD. / HAMNOW MATERIAL SCIENCE AND TECHNOLOGY CO., LTD.

地 址 江苏省苏州市吴中区胥口镇长安路66号
Address NO.66, CHANGAN ROAD, XUKOU TOWN, WUZHONG ZONE, SUZHOU, CHINA

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

样品名称	红色色母
Sample Name	Red Color Masterbatch
样品接收日期	2024.12.23
Sample Received Date	Dec. 23, 2024
样品检测日期	2024.12.23-2025.01.02
Testing Period	Dec. 23, 2024 to Jan. 2, 2025

检测要求
Test Requested

根据客户要求，对所提交样品中的铅(Pb)，镉(Cd)，汞(Hg)，六价铬(Cr(VI))，多溴联苯(PBBs)，多溴二苯醚(PBDEs)，邻苯二甲酸酯(DBP，BBP，DEHP，DIBP)进行测试。

As specified by client, to test Lead (Pb), Cadmium (Cd), Mercury (Hg), Hexavalent Chromium (Cr(VI)), Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs), Phthalates (DBP, BBP, DEHP, DIBP) in the submitted sample(s).

检测依据/检测结果
Test Method/Test Result(s)

请参见下页。
Please refer to the following page(s).

批 准
Approved by

陈凯敏
实验室经理 Lab Manager

日 期
Date

2025.01.02

上海华测品标检测技术有限公司
Centre Testing International Pinbiao(Shanghai) Co., Ltd.

No. G508478838
上海市闵行区万芳路1351号
No.1351, Wanfang Road, Minhang District, Shanghai, China

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
	001		
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
	001		
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
	001		
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
	001		
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	001	红色固体 Red solid

备注: **对于检测铅，镉，汞之样品已消解完全。**
-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%

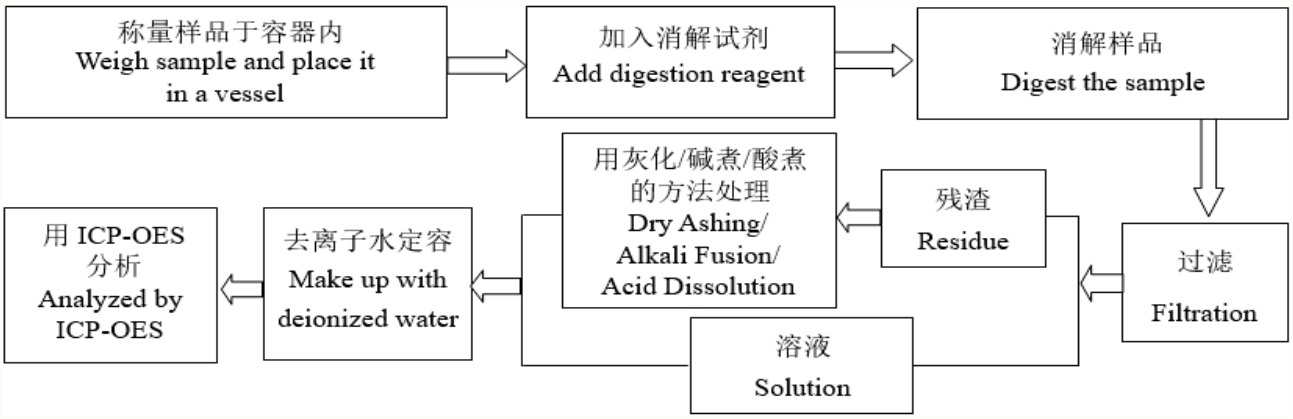
Remark: **The sample(s) had been dissolved totally tested for Lead, Cadmium, Mercury.**
-MDL = Method Detection Limit
-N.D. = Not Detected (<MDL)
-mg/kg = ppm = parts per million
-1000 mg/kg = 0.1%

检测报告
Test Report

检测流程 Test Process

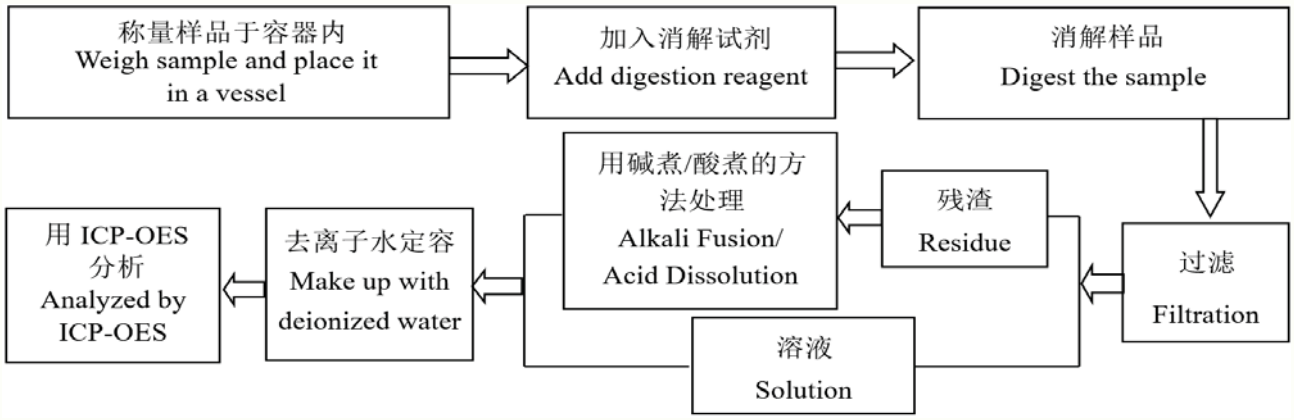
1. 铅(Pb)，镉(Cd)，铬(Cr)

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



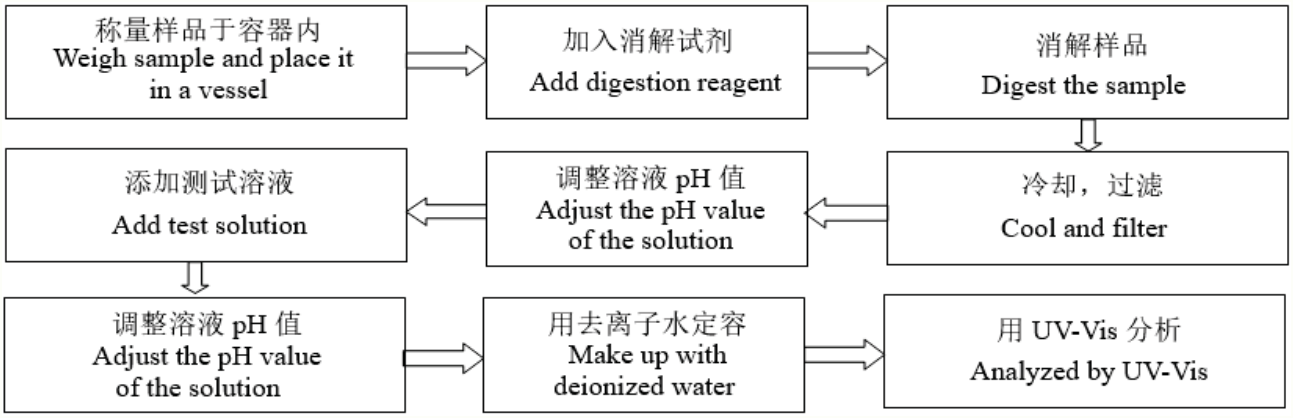
2. 汞(Hg)

Mercury (Hg)



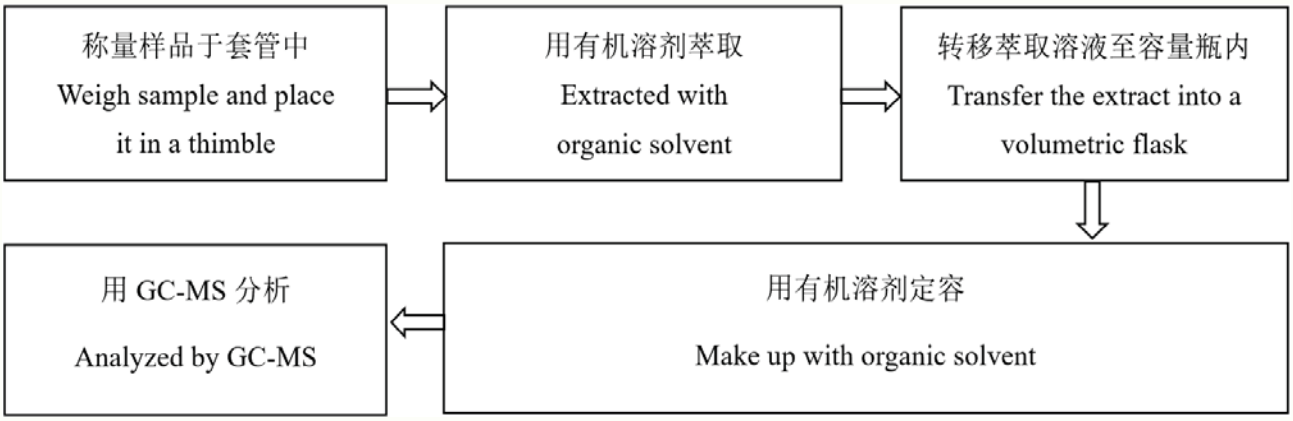
3. 六价铬(Cr(VI))

Hexavalent Chromium (Cr(VI))



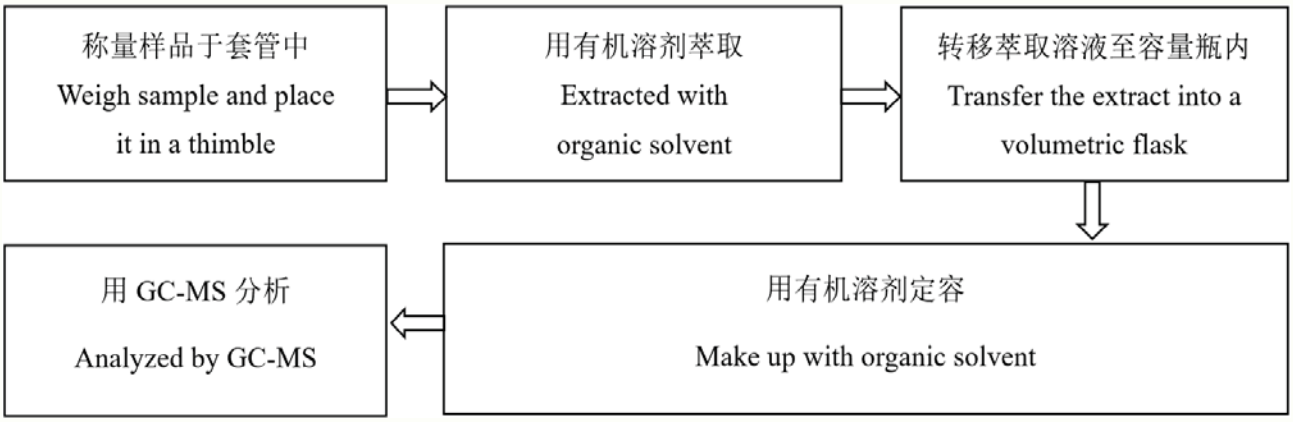
4. 多溴联苯(PBBs)， 多溴二苯醚(PBDEs)

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：

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   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 ***

KUNSHAN XINGHONGMENG ELECTRONIC CO.，LTD
TEL:0512-50191998 FAX:0512-50191996
http://www.szshongmeng.cn

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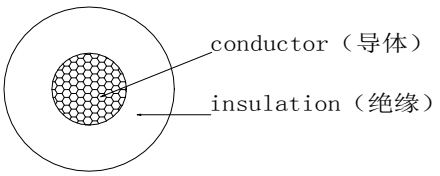
规格承认书 Product Specifications

REV:1.0

规格SPECIFICATION:		UL 10368 28#TS
项目ITEM		规 格 SPECIFICATION
导体 CONDUCTOR	线规AWG	28
	材质MATERIAL	镀锡铜 TINNED COPPER
	尺寸 COND SIZE(mm)	7/0.127±0.008
绝缘 INSULATION	标称厚度 Nominal Thickness	0.25㎜
	最小厚度 Min. Thickness	0.20㎜
	材质MATERIAL	交联聚乙烯 XL-PE
	OD外径(MM)	0.90±0.05
	颜色COLOUR	任意Optional
导体电阻Conductor Resistance: Max(Ω/Km,20℃)		239
容许电流Allow current（环境温度40℃）		3.4A
印 字 MARKING		AWM 10368 E315421 VW-1 105℃ 300V 28AWG HONGMENG C兄 AWM I A/B FT1 105℃ 300V 28AWG HF LM

电气性能ELECTRICAL CHARACTERISTICS	物理性能PHYSICAL CHARACTERISTICS
1. 额定值Rating : 温度TEMP 105℃； 电压VOLTAGE 300V 2.浸水耐压Dielectric-Withstand Test:2000V 3.火花电压Spark Test:3000V	1.抗张强度Tensile Strength: 1.05kgf/mm² 2. 伸长率Elongation: Unaged: 150% min 3. 热冲击Heat shock test: 不开裂NO CRACKING 4. 冷弯Cold bend test: 不开裂NO CRACKING 5. 加热变形Deformation test: MAX 50% 6. 燃烧测试Flame test: PASS VW-1 FT1 7.熔损试验Melting loss test :290℃*3秒沾锡回缩 Dip solder ≤1mm

剖面图Cross - Sectional View :



备 注 REMARK

图号 PART NO.	HM160621003	客户承认 APPROVED BY	

XINGHONGMENG ELECTRONIC CO.,LTD

兴鸿蒙电子有限公司

MATERIAL CERTIFICATE（Cu）

材料成份分析表（铜）

COMPONENT： 成分	RATIO（%） 含量
COPPER 铜	99.92
BISMUTH 铋	0.0002
STIBIUM 锑	0.0005
ARSENIC 砷	0.0005
IRON 铁	0.0005
NICKEL 镍	0.0004
LEAD 铅	0.0005
TIN 锡	0.07
SULFUR 硫	0.0001
OXYGEN 氧	0.006
ZINCUM 锌	0.0002
PHOSPHOR 磷	0.0005
ADMIUM 镉	0.00005

Pb≤50ppm(According to EPA3050B),Cd≤5ppm(According EN1122:2001)
根据 EN1122 和 EPA3050B 规定铅≤90ppm 镉≤5ppm

以上资料由本厂供方提供。其中镀锡线中锡的含量来自于铜丝的镀层，主要是防止铜丝氧化而特意加工为之，其它成份为自然界铜矿物质中自然含有的元素，无其它任何作用，也属非有意增加。

兴鸿蒙电子有限公司
工程部

2015 – 1 - 5

HAMNOW 汉诺

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一.制造商资料

制造商名称：苏州汉诺材料科技有限公司
制造商地址：江苏省苏州市吴中区浦庄镇长安路66号
联络电话：FAX：0512—66513866 TEL:0512-68582816

二.成份辨识资料

序号	物质名称	比例	化学简称或别名	物质分子式	CAS.NO
1	聚乙烯	40%	PE	(C2H4)x	9002-88-4
2	钛白粉	20-40%	颜料白	TiO2	13463-67-7
3	色粉	20%-40%	颜料蓝	C32H15ClCuN8	12239-87-1
4	色粉		颜料红	C18H10Cl2N2O2	84632-65-5
5	色粉		颜料黑	C	1333-86-4
6	色粉		颜料黄	C36H34Cl2N6O4	5102-83-0
7	色粉		颜料绿	C32Cl16CuN8	14832-14-5
8	色粉		颜料棕	Pigment brown 24	68186-90-3
9	色粉		颜料紫	C34H22Cl2N4O2	6358-30-1
10	色粉		颜料橙	PIG OR 73	78245-94-0
11	色粉		颜料灰	C+TiO2	13463-67-7/1333-86-4

苏州汉诺材料科技有限公司 销售部

Suzhou Hamnow Materials Science and Technology Co.,Ltd
No.66 ChangAn Road, Xukou Town, Wuzhong Zone, Suzhou, China
Tel: 0512-68582816 Fax: 0512-66513866

ONLINE CERTIFICATIONS DIRECTORY

AVLV2.E315421
Appliance Wiring Material - Component

Page Bottom

Appliance Wiring Material - Component

See General Information for Appliance Wiring Material - Component

KUNSHAN XINGHONGMENG ELECTRONIC CO LTD E315421
No. 1118 Jingban Rd
Shipai Industrial Area
Bacheng Town
Kunshan, Jiangsu 215312 CHINA

Table of Recognized Styles							
Single-conductor, thermoplastic insulation.							
1007	1185	1517	1618	1692	10064	10369	11136
1015	1332	1533	1637	1745	10086	10370	
1017	1354	1569	1640	1766	10231	10456	
1028	1430	1571	1672	1847	10248	10584	
1061	1500	1589	1674	1867	10316	10602	
1095	1516	1617	1685	1927	10368	10800	
Multiple-conductor, thermoplastic insulation.							
2095	2562	2835	2919	20375	20936	21088	
2464	2651	2844	2969	20376	20937	21099	
2468	2725	2851	2990	20379	20939	21139	
2547	2733	2854	20080	20549	21016	21143	
2555	2789	2877	20276	20694	21064	21311	
Single-conductor, thermoset insulation.							
3173	3271	3302	3348	3385	3443	3619	
3265	3272	3321	3363	3386	3485		
3266	3289	3347	3364	3398	3567		
Multiple-conductor, thermoset insulation.							
4384	4478						

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

Last Updated on 2016-05-09

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Test Report

No.: SHAEC24014644101 **Date:** Jul 05, 2024

Client Name: ZHEN XIONG COPPER GROUP CO., LTD

Client Address: NO.299,HUAYUAN ROAD.HUAQIAO TOWN.KUNSHAN CITY.JIANGSU PROVINCE

Sample Name: Tinned round copper wire

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

SGS Job No.: TIC1020240703113441HTJW

Sample Receiving Date: Jul 03, 2024

Testing Period: Jul 03, 2024 ~ Jul 05, 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

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

Jenny Lan
Approved Signatory

scan to see the report
6FF1AFB0

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Test Result(s):

Test Part Description：

SN ID	Sample No.	SGS Sample ID	Description
SN1	A1	SHA24-0146441-0001.C001	Silver 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	A1
Lead (Pb)	1000	mg/kg	2	6
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

检验检测专用章 Inspection & Testing Services
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Test Item(s)	Limit	Unit(s)	MDL	A1
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.

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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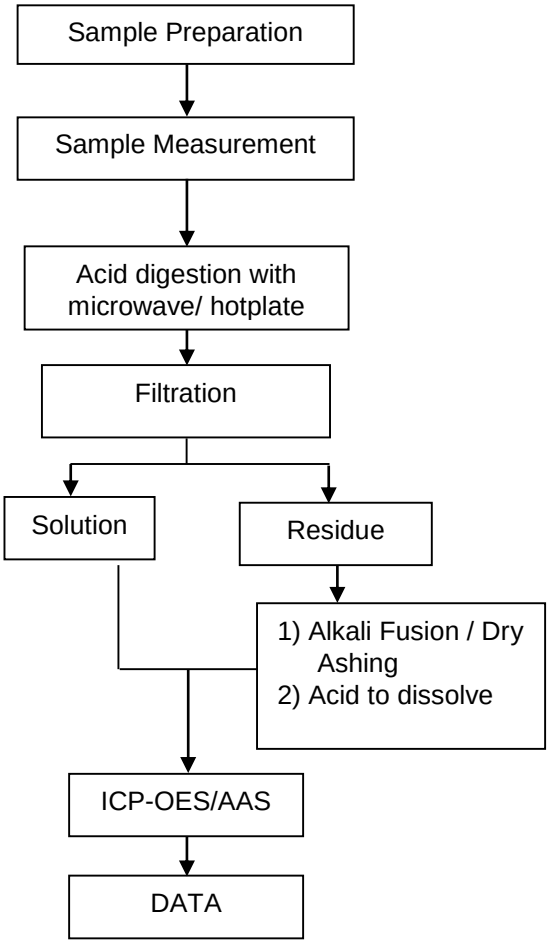
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ATTACHMENTS

Elements Testing Flow Chart

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



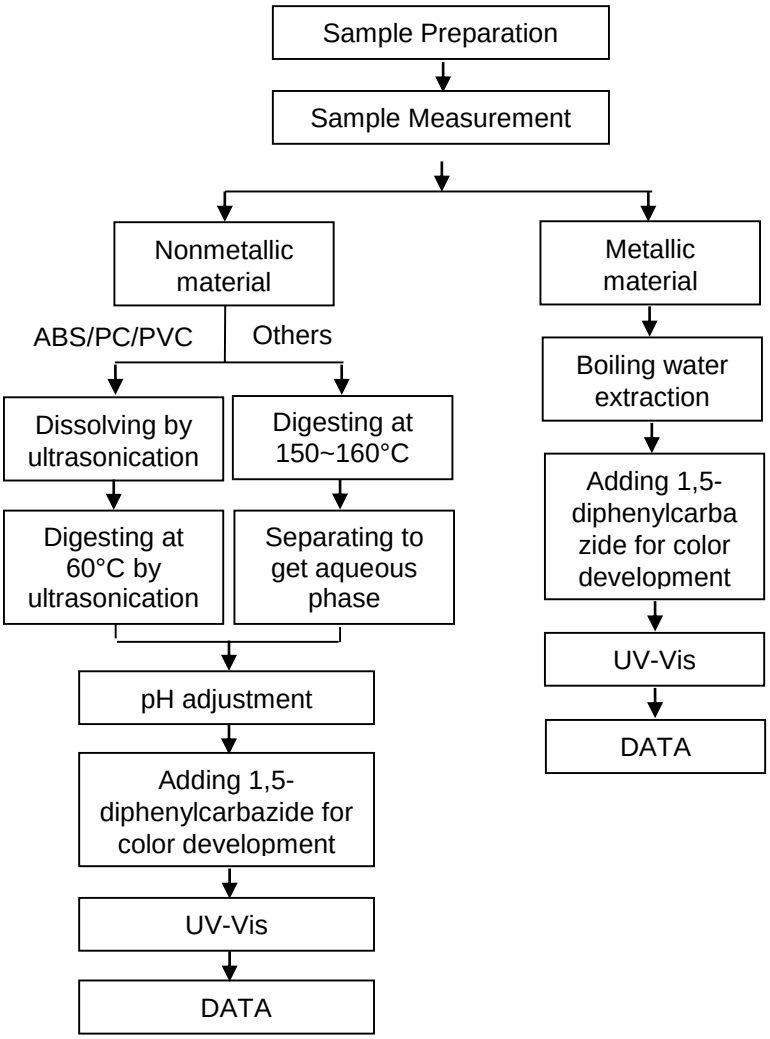
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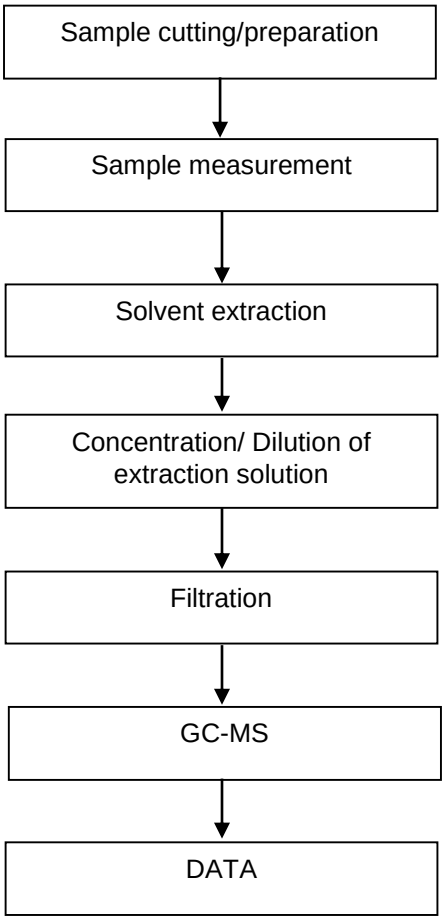
Hexavalent Chromium (Cr(VI)) Testing Flow Chart



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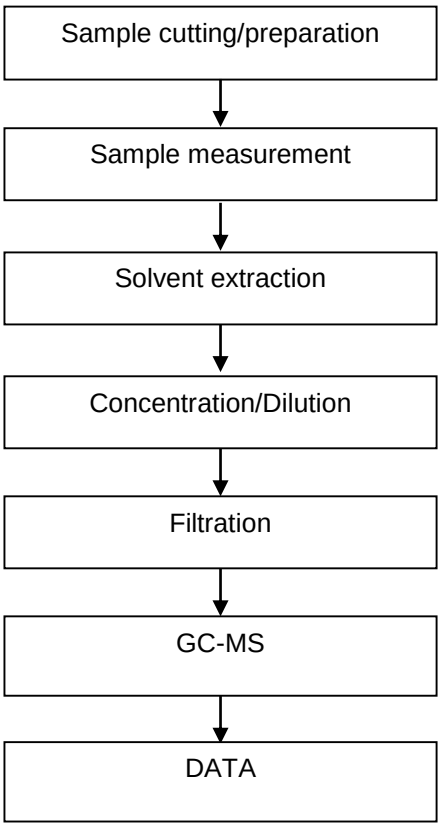
PBB/PBDE Testing Flow Chart



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Phthalates Testing Flow Chart



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Sample Photo:



SHA24-0146441-0001.C001

SGS authenticate the photo on original report only

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Test Report

Report No. A2250211249101006

Company Name shown on Report	SHANGHAI WUJIANG NEW MATERIAL TECHNOLOGY CO.,LTD. SHANGHAI TOPCOLOR PLASTICS TECHNOLOGY CO.,LTD.
Address	NO.399,HUAGAO ROAD,HUATING TOWN,JIADING DISTRICT,SHANGHAI

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

Sample Name	Masterbatch
Color	black
Sample Received Date	Apr. 2, 2025
Testing Period	Apr. 2, 2025 to Apr. 8, 2025
Test Requested	As specified by client, to test Lead (Pb), Cadmium (Cd), Mercury (Hg), Hexavalent Chromium (Cr(VI)), Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs), Phthalates (DBP, BBP, DEHP, DIBP) in the submitted sample(s).
Test Method	Please refer to the following page(s).
Test Result(s)	Please refer to the following page(s).

Approved by: Chen kaimin

Lab Manager

Date: Apr. 8, 2025

No. R748861545

Test Report

Report No. A2250211249101006

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 62321-12:2023	GC-MS
Polybrominated Diphenyl Ethers (PBDEs)	IEC 62321-12:2023	GC-MS
Phthalates (DBP, BBP, DEHP, DIBP)	IEC 62321-12:2023	GC-MS

Test Report

Report No. A2250211249101006

Test Result(s)

Tested Item(s)	Result	MDL
	006	
Lead (Pb)	N.D.	2 mg/kg
Cadmium (Cd)	N.D.	2 mg/kg
Mercury (Hg)	N.D.	2 mg/kg
Hexavalent Chromium (Cr(VI))	N.D.	8 mg/kg

Tested Item(s)	Result	MDL
	006	
Polybrominated Biphenyls (PBBs)		
Monobromobiphenyl	N.D.	25 mg/kg
Dibromobiphenyl	N.D.	25 mg/kg
Tribromobiphenyl	N.D.	25 mg/kg
Tetrabromobiphenyl	N.D.	25 mg/kg
Pentabromobiphenyl	N.D.	25 mg/kg
Hexabromobiphenyl	N.D.	25 mg/kg
Heptabromobiphenyl	N.D.	25 mg/kg
Octabromobiphenyl	N.D.	25 mg/kg
Nonabromobiphenyl	N.D.	25 mg/kg
Decabromobiphenyl	N.D.	25 mg/kg

Tested Item(s)	Result	MDL
	006	
Polybrominated Diphenyl Ethers (PBDEs)		
Monobromodiphenyl ether	N.D.	25 mg/kg
Dibromodiphenyl ether	N.D.	25 mg/kg
Tribromodiphenyl ether	N.D.	25 mg/kg
Tetrabromodiphenyl ether	N.D.	25 mg/kg
Pentabromodiphenyl ether	N.D.	25 mg/kg
Hexabromodiphenyl ether	N.D.	25 mg/kg
Heptabromodiphenyl ether	N.D.	25 mg/kg
Octabromodiphenyl ether	N.D.	25 mg/kg
Nonabromodiphenyl ether	N.D.	25 mg/kg
Decabromodiphenyl ether	N.D.	25 mg/kg

Test Report

Report No. A2250211249101006

Test Result(s)

Tested Item(s)	Result	MDL
	006	
Phthalates (DBP, BBP, DEHP, DIBP)		
Dibutyl phthalate (DBP) CAS#:84-74-2	N.D.	50 mg/kg
Butyl benzyl phthalate (BBP) CAS#:85-68-7	N.D.	50 mg/kg
Di-(2-ethylhexyl) phthalate (DEHP) CAS#:117-81-7	N.D.	50 mg/kg
Diisobutyl phthalate (DIBP) CAS#:84-69-5	N.D.	50 mg/kg

Sample/Part Description

No.	CTI Sample ID	Description
1	006	Black solid

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

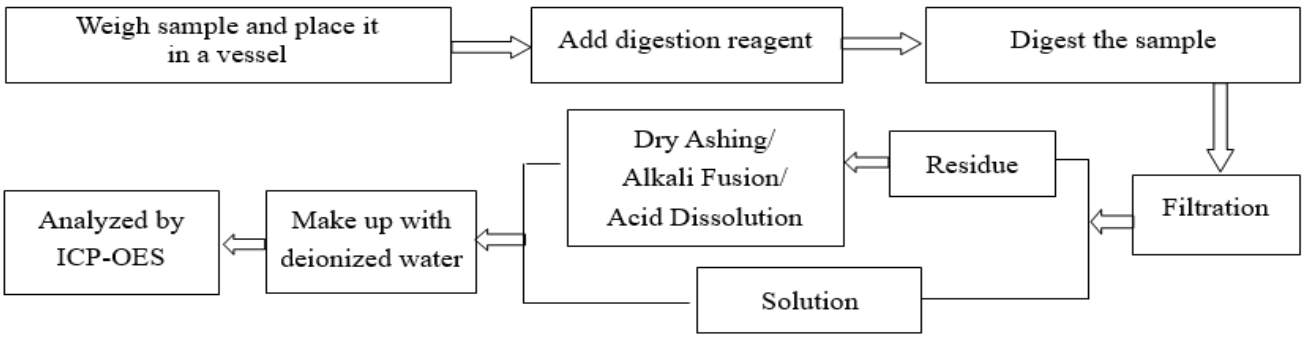
-MDL = Method Detection Limit

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

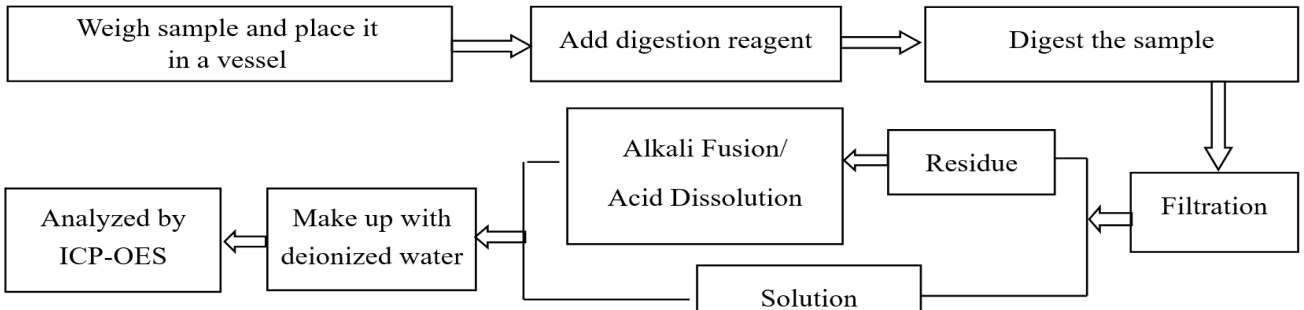
-mg/kg = ppm = parts per million

Test Process

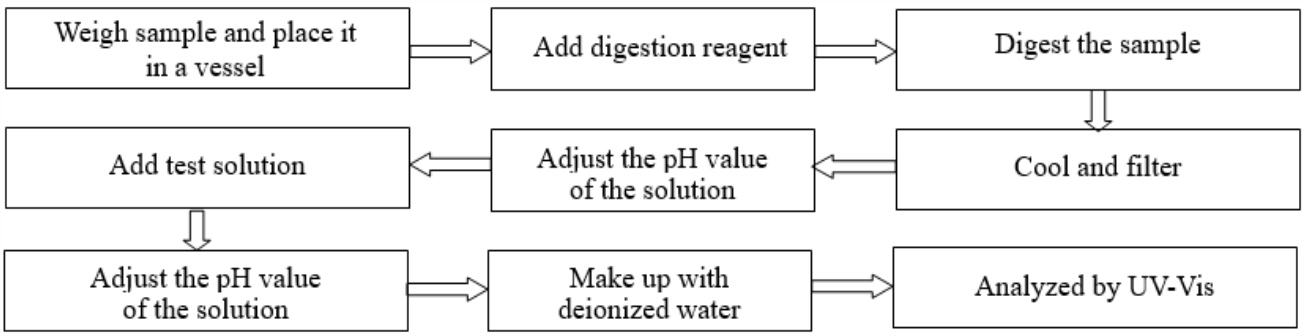
1. Lead (Pb), Cadmium (Cd), Chromium (Cr)



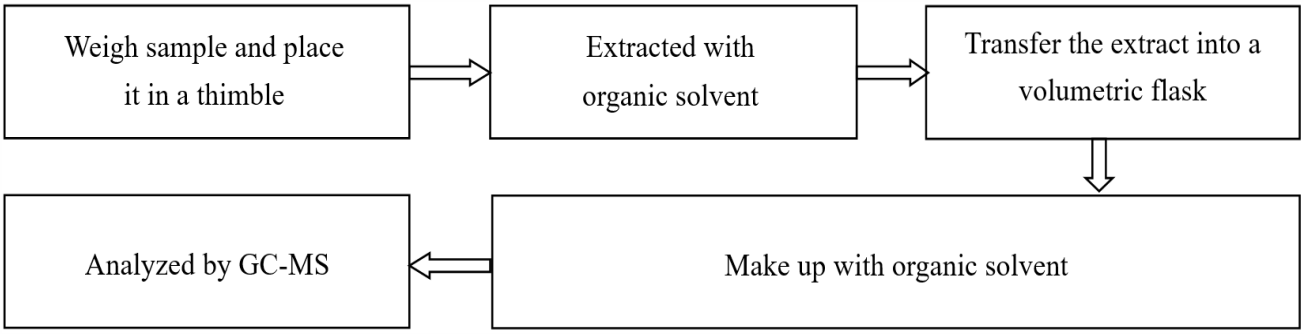
2. Mercury (Hg)



3. Hexavalent Chromium (Cr(VI))

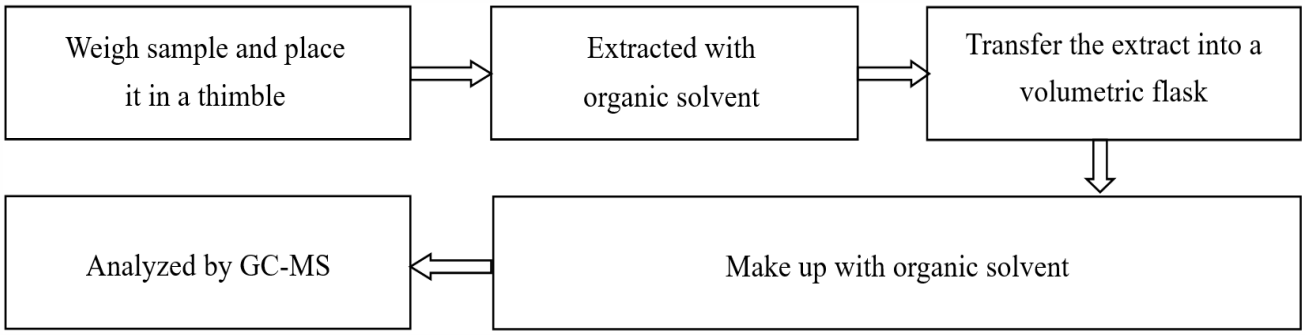


4. Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs)



Test Report

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



Test Report

Report No. A2250211249101006

Photo(s) of the sample(s)



Statement:

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3. The result(s) shown in this report refer(s) only to the sample(s) tested;
4. 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;
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Test Report

Report No. A2250211249101008

Company Name shown on Report	SHANGHAI WUJIANG NEW MATERIAL TECHNOLOGY CO.,LTD. SHANGHAI TOPCOLOR PLASTICS TECHNOLOGY CO.,LTD.
Address	NO.399,HUAGAO ROAD,HUATING TOWN,JIADING DISTRICT,SHANGHAI

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

Sample Name	Masterbatch
Color	red
Sample Received Date	Apr. 2, 2025
Testing Period	Apr. 2, 2025 to Apr. 8, 2025
Test Requested	As specified by client, to test Lead (Pb), Cadmium (Cd), Mercury (Hg), Hexavalent Chromium (Cr(VI)), Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs), Phthalates (DBP, BBP, DEHP, DIBP) in the submitted sample(s).
Test Method	Please refer to the following page(s).
Test Result(s)	Please refer to the following page(s).

Approved by

Chen kaimin

Lab Manager

Date Apr. 8, 2025

No. R748861545

Test Report

Report No. A2250211249101008

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 62321-12:2023	GC-MS
Polybrominated Diphenyl Ethers (PBDEs)	IEC 62321-12:2023	GC-MS
Phthalates (DBP, BBP, DEHP, DIBP)	IEC 62321-12:2023	GC-MS

Test Report

Test Result(s)

Tested Item(s)	Result	MDL
	008	
Lead (Pb)	N.D.	2 mg/kg
Cadmium (Cd)	N.D.	2 mg/kg
Mercury (Hg)	N.D.	2 mg/kg
Hexavalent Chromium (Cr(VI))	N.D.	8 mg/kg

Tested Item(s)	Result	MDL
	008	
Polybrominated Biphenyls (PBBs)		
Monobromobiphenyl	N.D.	25 mg/kg
Dibromobiphenyl	N.D.	25 mg/kg
Tribromobiphenyl	N.D.	25 mg/kg
Tetrabromobiphenyl	N.D.	25 mg/kg
Pentabromobiphenyl	N.D.	25 mg/kg
Hexabromobiphenyl	N.D.	25 mg/kg
Heptabromobiphenyl	N.D.	25 mg/kg
Octabromobiphenyl	N.D.	25 mg/kg
Nonabromobiphenyl	N.D.	25 mg/kg
Decabromobiphenyl	N.D.	25 mg/kg

Tested Item(s)	Result	MDL
	008	
Polybrominated Diphenyl Ethers (PBDEs)		
Monobromodiphenyl ether	N.D.	25 mg/kg
Dibromodiphenyl ether	N.D.	25 mg/kg
Tribromodiphenyl ether	N.D.	25 mg/kg
Tetrabromodiphenyl ether	N.D.	25 mg/kg
Pentabromodiphenyl ether	N.D.	25 mg/kg
Hexabromodiphenyl ether	N.D.	25 mg/kg
Heptabromodiphenyl ether	N.D.	25 mg/kg
Octabromodiphenyl ether	N.D.	25 mg/kg
Nonabromodiphenyl ether	N.D.	25 mg/kg
Decabromodiphenyl ether	N.D.	25 mg/kg

Test Report

Report No. A2250211249101008

Test Result(s)

Tested Item(s)	Result	MDL
	008	
Phthalates (DBP, BBP, DEHP, DIBP)		
Dibutyl phthalate (DBP) CAS#:84-74-2	N.D.	50 mg/kg
Butyl benzyl phthalate (BBP) CAS#:85-68-7	N.D.	50 mg/kg
Di-(2-ethylhexyl) phthalate (DEHP) CAS#:117-81-7	N.D.	50 mg/kg
Diisobutyl phthalate (DIBP) CAS#:84-69-5	N.D.	50 mg/kg

Sample/Part Description

No.	CTI Sample ID	Description
1	008	Red solid

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

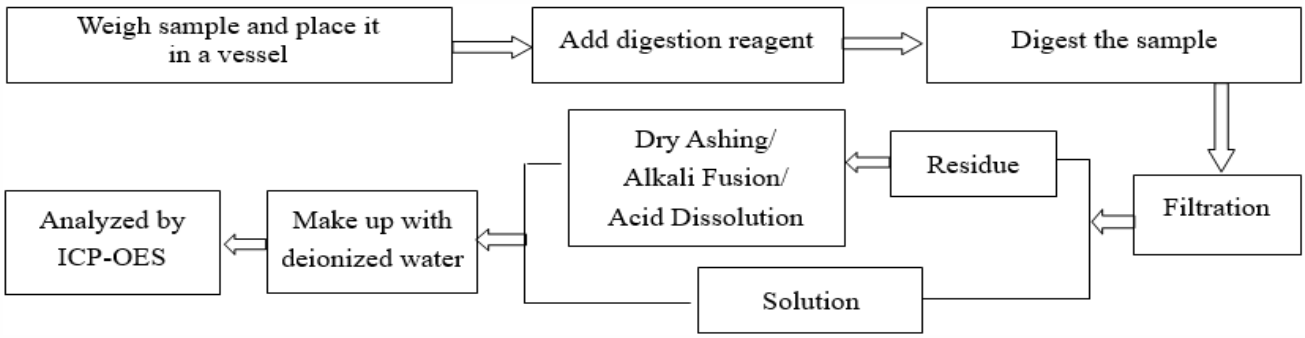
-MDL = Method Detection Limit

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

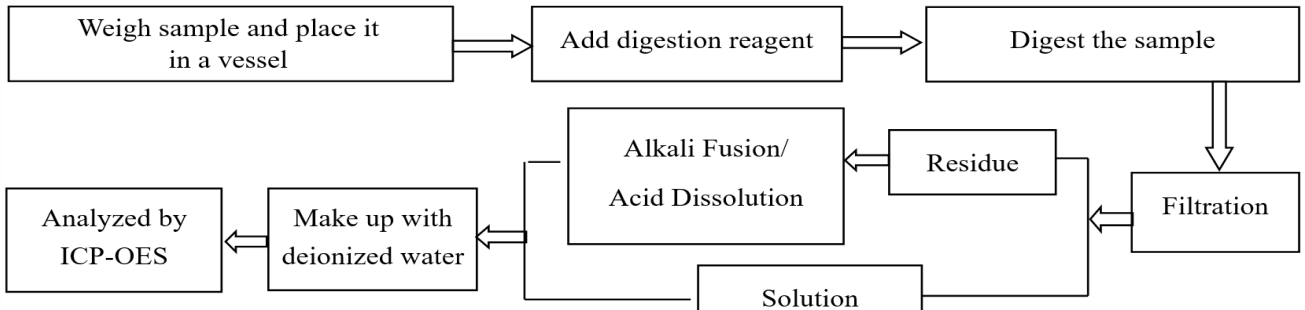
-mg/kg = ppm = parts per million

Test Process

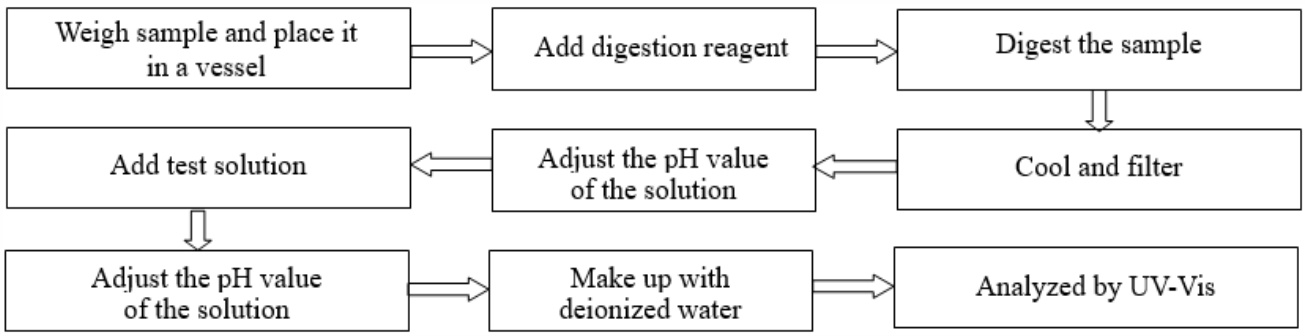
1. Lead (Pb), Cadmium (Cd), Chromium (Cr)



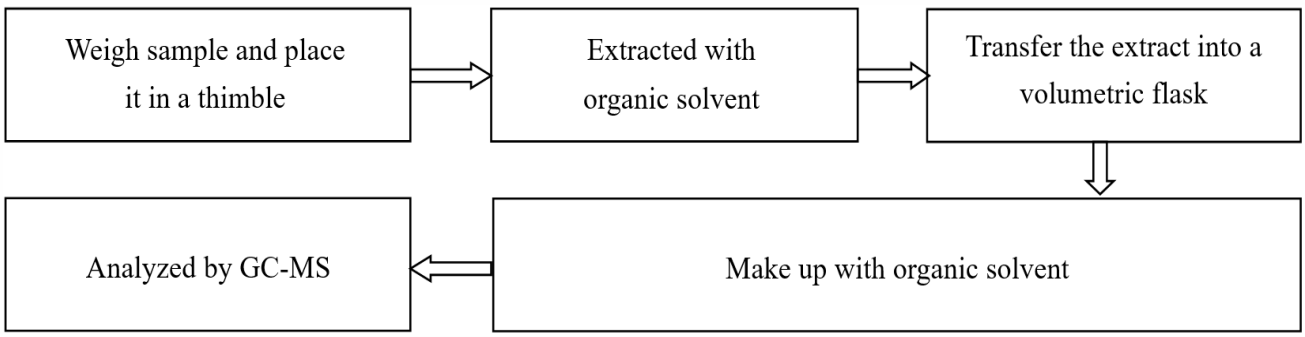
2. Mercury (Hg)



3. Hexavalent Chromium (Cr(VI))

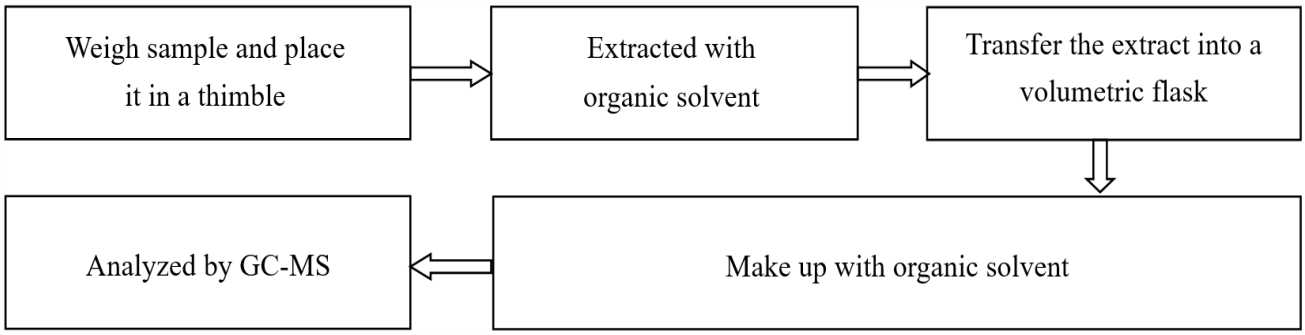


4. Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs)



Test Report

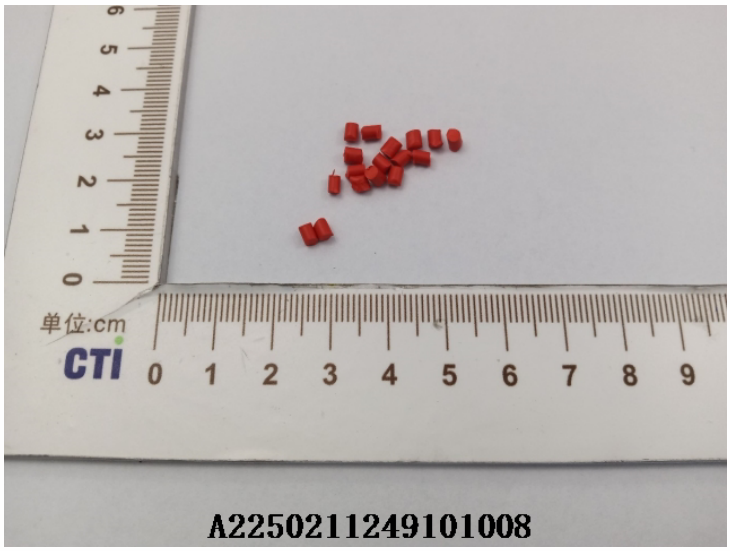
5. Phthalates (DBP, BBP, DEHP, DIBP)



Test Report

Report No. A2250211249101008

Photo(s) of the sample(s)



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Non-use Warranty for Level 1 Prohibited Substances in Product.

產品編號Part No：24033PS

品　　名Product：端子 TERMINAL

材　　質Material：PHOS.

包裝數量Standard Packing：20,000PCS

材料厚度Thickness：0.12 mm

端子間距Pitch：4.00 mm

適用電線Suitable Wire：28~32 AWG

線皮外徑Out Dimension ：0.65~0.92 mm

配合端子Suitable Terminal：MSA24033 Series、MSA24039 Series

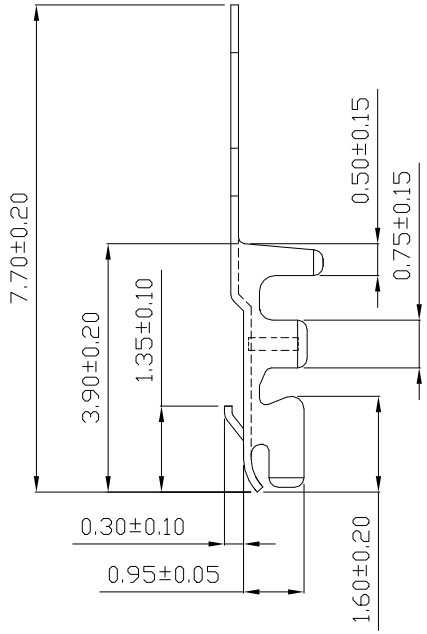
配合塑膠Suitable housing:：P24033 Series

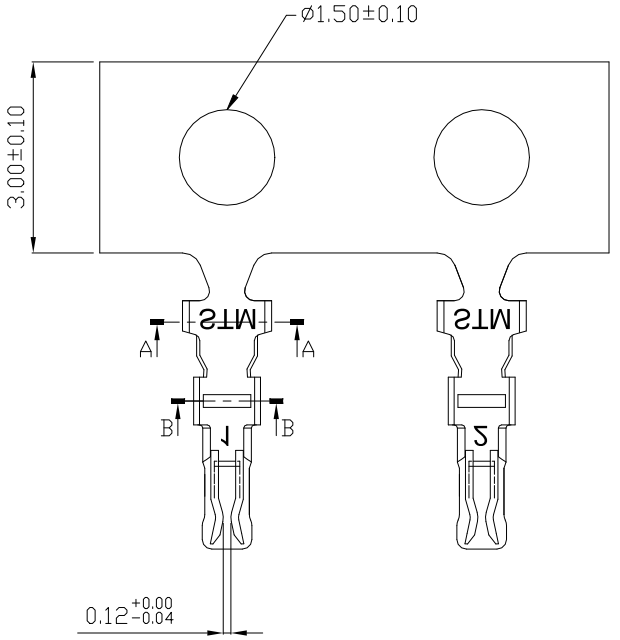
表面處理Treatment：-0 無表面處理、-00 鍍金、-1 鍍鎳、-2 鍍錫

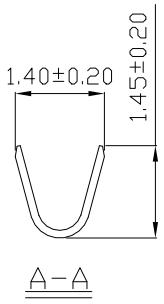
(-0 Non surface treatment、-00 Gold flash、-1 Nickel plated、-2 Tin plated)

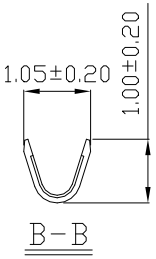
備　　註Remark：

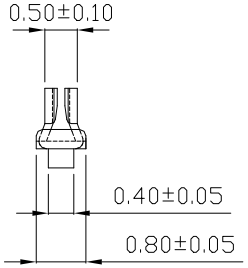
版　　次Version：VER.5











TOLERANCE		版次 RE V.	變更內容 DESCRIPTION	年/月/日 DATE	修改者 MODIFY	審查者 CHECK	核准者 APPROVAL
.0	±0.25						
.00	±0.15						
.000	±0.05						

備註Remark：

存檔位置 Filing: R/N1類/Terminal 端子

製圖者 DRAW.BY	審查者 CHECK	核准者APPROVAL	單位 Unit	年/月/日 Date	產品編號Part No：
陳妍禎	蔡秋鳳	余俊賢	mm	2023.06.14	24033PS

信盛精工股份有限公司
SIN SHENG TERMINAL & MACHINE INC.

本成品圖僅供參考,若需做為承認用請聯絡就近業務員確認.
(The drawing is for reference only,
please contact the sales division nearby for final confirmation if it's for approval purpose.)

H/Q：Kaohsiung,Taiwan 總公司：高雄,台灣 TEL:886-7-6283172 FAX:886-7-6282063 stmks__serve@stm.com.tw

Overseas,Taiwan 外銷業務區 TEL: 886-7-6283189 FAX: 886-7-6283440 stmtw@ms7.hinet.net

Taipei Branch,Taiwan 台北子公司 TEL:886-2-87519922 FAX:886-2-87519911 stmtp__serve@stm.com.tw

GuangDong,China 廣東工廠 TEL:86-769-87941000 FAX:86-769-87941004 stmdg__serve@stm.com.tw

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Malaysia Branch 馬來西亞子公司 TEL:60-3-79809325 FAX:60-3-79809242 stmma__serve@stm.com.tw

產品成品圖

禁止使用1級環境管理物質
Non-use Warranty for Level 1 Prohibited Substances in Product.
HF (Halogen Free)

產品編號Part No：P24033P6、P24033P8

品　　名Product：塑膠母座 HOUSING

材　　質Material：NYLON 94V-0

包裝數量Standard Packing：6PIN=1000PCS/PACK、
8PIN=500PCS/PACK

配合塑膠Suitable housing:：MSA24033 Series、
MSA24039Series

額定電壓／電流Current Rating：AC/DC 125V 1A (AWG#28)

絕緣阻抗INS. Resistance：100MΩ Min.

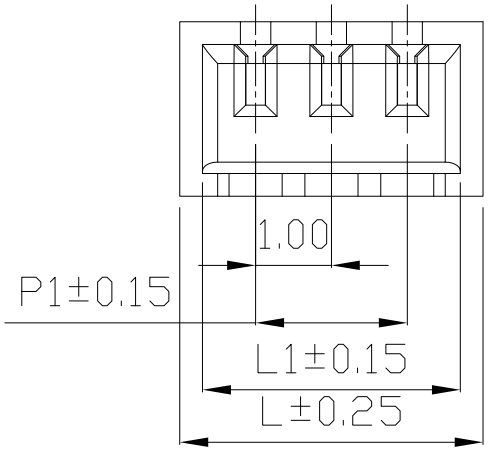
耐 電 壓Withstand Voltage：500V AC/1minute.

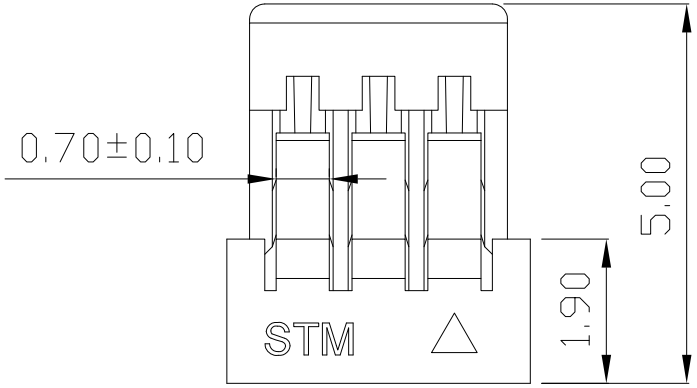
適用溫度Operation Temp. ：-25°C ~ +85°C

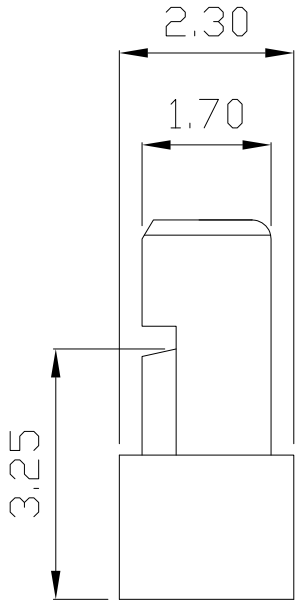
顏　　色Color：本色(Natural)

備　　註Remark：

版　　次Version：VER.6







PIN	L	L1	P1
6	7.0	6.4	5.0
8	9.0	8.4	7.0

TOLERANCE		版次 RE V.	變 更 內 容 DESCRIPTION	年/月/日 DATE	修 改 者 MODIFY	審 查 者 CHECK	核 准 者 APPROVAL
.0	±0.25						
.00	±0.15						
.000	±0.08						

備註Remark：

存檔位置 Filing: R/N1類/Housong 塑膠P

製圖者 DRAW.BY	審查者 CHECK	核准者APPROVAL	單位 Unit
翁意蕙	吳宜樺	蔡秋鳳	mm

信盛精工股份有限公司
SIN SHENG TERMINAL & MACHINE INC.

年/月/日 Date：2017.10.12

產品編號Part No：P24033P6、P24033P8

本成品圖僅供參考,若需做為承認用請聯絡就近業務員確認.
(The drawing is for reference only,
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Overseas,Taiwan 外銷業務區 TEL: 886-2-87519922 FAX: 886-2-87519911 saleabroad@stm.com.tw
Taipei Branch,Taiwan 台北分公司 TEL:886-2-87519922 FAX:886-2-87519911 stmtp__serve@stm.com.tw
Dong-Guan, China 東莞分公司 TEL:86-769-87941000 FAX:86-769-87941004 stmdg__serve@stm.com.tw
Suzhou, China 蘇州分公司 TEL:86-512-82627890 FAX:86-512-82627891 stmzu__serve@stm.com.tw
Malaysia Branch 馬來西亞分公司 TEL:60-3-79809325 FAX:60-3-79809242 stmma__serve@stm.com.tw

ECBT2.E110601
Connectors for Use in Data, Signal, Control and Power Applications - Component

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Connectors for Use in Data, Signal, Control and Power Applications - Component

See General Information for Connectors for Use in Data, Signal, Control and Power Applications - Component

SIN SHENG TERMINAL & MACHINE INC E110601
301 TAN-DEE RD
TAN-DEE LI
KANGSHAN
KAOHSIUNG HSIEN, 820 TAIWAN

Connectors, Cat. Nos. M113914, P102722, P102742, P112722; Series M24183, M24184, M24185, P10277, P11277, P24183, P24184, P24185, PD24184 followed by one or two digits and may be followed by R; Cat. No. MD24184 may be followed by R.

Cat. No. 2401 followed by 2 thru 15; Cat. No. 2402 followed by 2 thru 34, may be followed by R, provided with prefix M, P, MD or PD; Cat. No. 2403 followed by 5 thru 20, provided with prefix PD or MDS; Cat. No. 2404 followed by 4 thru 30.

Cat. No. P2426 followed by 2 thru 15; Cat. No. M2426 followed by 2 thru 15, may be followed by R.

Cat. No. P11110 followed by 2 thru 24.

Cat. No. P10113 followed by 2 thru 15; Cat. Nos. P10114, P10115, P10116 followed by 2 thru 16.

Crimp connectors, Cat. Nos. 2426PS, 2428PS, P2428 followed by 2 thru 15; Cat. No. M2428 followed by 2 thru 15, may be followed by R.

Housing, wafers, Cat. No. 1017 with prefix P, followed by 2 thru 20; Cat. No. 1018 with prefix P, followed by 2 thru 15; Cat. Nos. 1136, 2412, 2418, 2421 with prefix M or P, followed by 2 thru 20; Cat. Nos. 2411 with prefix P followed by 2 thru 20.

Connectors, Cat. Nos. M2408P2R, M2408P2R RF#B, MS2408P2, P2408P2.

Marking: Company name or trademark  and catalog or series designation.
Last Updated on 2008-06-16

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Connectors for Use in Data, Signal, Control and Power Applications Certified for Canada - Component

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Connectors for Use in Data, Signal, Control and Power Applications Certified for Canada - Component

See General Information for Connectors for Use in Data, Signal, Control and Power Applications Certified for Canada - Component

SIN SHENG TERMINAL & MACHINE INC E110601
301 TAN-DEE RD
TAN-DEE LI
KANGSHAN
KAOHSIUNG HSIEN, 820 TAIWAN

Connectors, Cat. Nos. M113914, P102722, P102742, P112722; Series M24183, M24184, M24185, P10277, P11277, P24183, P24184, P24185, PD24184 followed by one or two digits and may be followed by R; Cat. No. MD24184 may be followed by R.

Cat. No. P11110 followed by 2 through 24.

Cat. Nos. M11351, M11381, P11351B, P11351G, P11381.

Cat. No. P10113 followed by 2 thru 15; Cat. Nos. P10114, P10115, P10116 followed by 2 thru 16.

Cat. No. 2401 followed by 2 thru 15; Cat. No. 2402 followed by 2 thru 34, may be followed by R, provided with prefix M, P, MD or PD; Cat. No. 2403 followed by 5 thru 20, provided with prefix PD or MDS; Cat. No. 2404 followed by 4 thru 30.

Housing, wafers, Cat. No. 1017 with prefix P, followed by 2 through 20; Cat. No. 1018 with prefix P, followed by 2 through 15; Cat. Nos. 1135, 1136, 2412, 2418, 2421 with prefix M or P, followed by 2 through 20; Cat. Nos. 1138, 2411 with prefux P followed by 2 through 20.

Marking: Company name or trademark , catalog designation and Recognized Component Mark for Canada  on device or carton.

Last Updated on 2008-05-28

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Test Report
- Products

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Report No.:	48252908a9 001	*Page 1 of 12*
Client:	SIN SHENG TERMINAL & MACHINE INC. No.301, Tandi Rd., Gangshan Dist., Kaohsiung City 820, Taiwan, R.O.C.	
Test item(s):	Plastic	
Identification/Model No(s):	NYLON 66 94V-0(HF)	
Sample obtaining method:	Sending by customer	
Condition at delivery:	Test item complete and undamaged.	
Sample receiving date:	2024-10-07	
Testing period:	2024-10-07 – 2024-10-22	
Place of testing:	TÜV Rheinland Hong Kong Ltd.	

Test specification:	***Test result:***
Testing according to customer's specification for the following parameters:	
According to RoHS (recast): Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment, 2011/65/EU Annex II and its amendment Directive (EU) 2015/863: Total Content of Lead, Cadmium, Mercury, Chromium VI, Polybrominated Biphenyls, Polybrominated Diphenyl Ethers; and Benzylbutyl phthalate (BBP), Dibutyl phthalate (DBP), Bis(2-ethylhexyl) phthalate (DEHP), Diisobutyl phthalate (DIBP)	Pass
Halogen (Fluorine, Chlorine, Bromine, Iodine)	Refer to result page
Hexabromocyclododecane (HBCDD)	Refer to result page
Perfluorooctane Sulfonate (PFOS), Perfluorooctanoic Acid (PFOA)	Refer to result page
Perfluorohexanesulfonic acid (PFHxS) and its salts and PFHxS -related substances – According to Regulation (EU) 2019/1021 and its amendment	Pass
Selected Perfluorinated carboxylic acids (C9-C14 PFCAs) and related substances – According to Regulation (EC) No 1907/2006 (REACH) Annex XVII and its amendments	Pass

For and on behalf of
TÜV Rheinland Taiwan Ltd.

Arthur Cheng

TÜV Rheinland Taiwan Ltd. TÜVRheinland Softlines

2024-10-23 Arthur Cheng/Project Manager
Date Name/Position

Sample information is provided by customer. Test result is drawn according to the kind and extent of tests performed.
This test report relates to the above mentioned test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.
"Decision Rule" document announced in our website (https://www.tuv.com/landingpage/en/qm-gcn/) describes the statement of conformity and its rule of enforcement for test results are applicable throughout this test report..

Material List:

Item: NYLON 66 94V-0(HF)

Mat. No.	Material	Color	Lab no.
1	Plastic	White	TCL241007-23

Test Sample



Test Method : Total Cadmium, Lead, Chromium - Ref. to IEC 62321-5:2013
Mercury - Ref. to IEC 62321-4:2013
Chromium (VI)
- For Metal material - Ref. to IEC 62321-7-1:2015
- For Polymer, Electronic material or others materials - Ref. to IEC 62321-7-2:2017
PBBs, PBDEs - Ref. to IEC 62321-6:2015

Material No.			1
Parameter	Unit	MDL	Result
Cadmium (Cd)	mg/kg	2	n.d.
Lead (Pb)	mg/kg	2	n.d.
Mercury (Hg)	mg/kg	2	n.d.
Chromium VI (Cr VI)*	mg/kg	8	n.d.
Sum of Polybrominated biphenyls (PBBs)	mg/kg	-	n.d.
Monobromobiphenyl	mg/kg	5	n.d.
Dibromobiphenyl	mg/kg	5	n.d.
Tribromobiphenyl	mg/kg	5	n.d.
Tetrabromobiphenyl	mg/kg	5	n.d.
Pentabromobiphenyl	mg/kg	5	n.d.
Hexabromobiphenyl	mg/kg	5	n.d.
Heptabromobiphenyl	mg/kg	5	n.d.
Octabromobiphenyl	mg/kg	5	n.d.
Nonabromobiphenyl	mg/kg	5	n.d.
Decabromobiphenyl	mg/kg	5	n.d.
Sum of Polybrominated diphenyl ethers (PBDEs)	mg/kg	-	n.d.
Monobromodiphenyl ether	mg/kg	5	n.d.
Dibromodiphenyl ether	mg/kg	5	n.d.
Tribromodiphenyl ether	mg/kg	5	n.d.
Tetrabromodiphenyl ether	mg/kg	5	n.d.
Pentabromodiphenyl ether	mg/kg	5	n.d.
Hexabromodiphenyl ether	mg/kg	5	n.d.
Heptabromodiphenyl ether	mg/kg	5	n.d.
Octabromodiphenyl ether	mg/kg	5	n.d.
Nonabromodiphenyl ether	mg/kg	5	n.d.
Decabromodiphenyl ether	mg/kg	5	n.d.

Notes:
- MDL = Method Detection Limit
- n.d. = Not Detected ; Less than MDL
- n.a. = not applicable
- mg/kg = milligram per kilogram
- * Once the total Cr content in metal/ plastic or electronic sample is found to be exceeded the limit, the Cr (VI) content will be confirmed with reference to IEC 62321-7-1:2015/ IEC 62321-7-2:2017

	Cd	Cr(VI)	Pb	Hg	PBBs	PBDEs
Maximum permissible Limit acc. to 2011/65/EU (mg/kg)	100	1000	1000	1000	1000	1000

Test Method : BBP/DBP/DEHP/DIBP - Ref. to IEC 62321-8:2017

Material No.			1
Parameter	Unit	MDL	Result
Benzylbutylphthalate (BBP)	mg/kg	50	n.d.
Dibutylphthalate (DBP)	mg/kg	50	n.d.
Diethylhexylphthalate (DEHP)	mg/kg	50	n.d.
Diisobutylphthalate (DIBP)	mg/kg	50	n.d.

Notes:
- MDL = Method Detection Limit
- n.d. = Not Detected ; Less than MDL
- mg/kg = milligram per kilogram

	BBP	**DBP**	**DEHP**	**DIBP**
Maximum permissible Limit acc. to (EU) 2015/863 (mg/kg)	1000	1000	1000	1000

Test Method : Halogen - Following EN 14582:2016; determination by I.C.

Material No.			1
Halogen	Unit	MDL	Result
Fluorine (F)	mg/kg	50	n.d.
Chlorine (Cl)	mg/kg	50	n.d.
Bromine (Br)	mg/kg	50	n.d.
Iodine (I)	mg/kg	50	n.d.

Abbreviation: MDL = Method Detection Limit
n.d. = Not Detected ; Less than MDL
mg/kg = milligram per kilogram

Test Method : HBCDD - Organic solvent extraction, analyzed by LC-MS

Material No.			1
Parameter	Unit	MDL	Result
Hexabromocyclododecane (HBCDD)	mg/kg	5	n.d.

Abbreviation: MDL = Method Detection Limit
n.d. = Not Detected ; Less than MDL
mg/kg = milligram per kilogram

Test Method : PFOS/PFOA - Ref. to DIN CEN/TS 15968:2010

Material No.			1
Parameter	Unit	MDL	Result
Perfluorooctane Sulfonate (PFOS)	mg/kg	0.01	n.d.
Perfluorooctanoic Acid (PFOA)	mg/kg	0.01	n.d.

Abbreviation: MDL = Method Detection Limit
n.d. = Not Detected ; Less than MDL
mg/kg = milligram per kilogram

Test Method : Perfluorohexanesulfonic acid (PFHxS) –
For textile - Reference prEN 17681-1:2023, determination by CI-GCMS, GC-MSMS and LC-MSMS.
For others material- In house method, determination by CI-GCMS, GC-MSMS and LC-MSMS.

Material No.					1
Test Parameter	CAS no.	Unit	MDL	Regulatory requirement	Test Result
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	mg/kg	0.01	0.025	n.d.
Perfluorohexanesulfonate Sodium-salt (PFHxS-Na) *	82382-12-5	mg/kg	0.01	0.025	n.d.
Ammonium perfluorohexane-1-sulphonate (PFHxS-NH_4) *	68259-08-5	mg/kg	0.01	0.025	n.d.
Perfluorohexanesulfonate Potassium-salt (PFHxS-K) *	3871-99-6	mg/kg	0.01	0.025	n.d.
1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, lithium salt (1:1) (PFHxS-Li) *	55120-77-9	mg/kg	0.01	0.025	n.d.
1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, zinc salt (PFHxS-Zn) *	70136-72-0	mg/kg	0.01	0.025	n.d.
Ethanaminium, N-[4-[[4-(diethylamino)phenyl][4-(ethylamino)-1-naphthalenyl]methylene]-2,5-cyclohexadien-1-ylidene]-N-ethyl-, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonate (1:1) (Calculated in terms of PFHxS) *	1310480-24-0	mg/kg	0.01	0.025	n.d.
Methanaminium, N-[4-[[4-(dimethylamino)phenyl][4-(ethylamino)-1-naphthalenyl]methylene]-2,5-cyclohexadien-1-ylidene]-N-methyl-, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonate (1:1) *	1310480-27-3	mg/kg	0.01	0.025	n.d.
Methanaminium, N-[4-[[4-(dimethylamino)phenyl][4-(phenylamino)-1-naphthalenyl]methylene]-2,5-cyclohexadien-1-ylidene]-N-methyl-, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonate (1:1) *	1310480-28-4	mg/kg	0.01	0.025	n.d.
Beta-Cyclodextrin, compd. with 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonic acid ion(1-)(1:1) *	1329995-45-0	mg/kg	0.01	0.025	n.d.
Quinolinium, 1-(carboxymethyl)-4-[2-[4-[4-(2,2-diphenylethenyl)phenyl]-1,2,3,3a,4,8b-hexahydrocyclopent[b]indol-7-yl]ethenyl]-, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonate (1:1) *	1462414-59-0	mg/kg	0.01	0.025	n.d.
Gamma-Cyclodextrin, compd. with 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonic acid ion(1-)(1:1) *	1329995-69-8	mg/kg	0.01	0.025	n.d.

1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, cesium salt (1:1) (PFHxS-CsH) *	92011-17-1	mg/kg	0.01	0.025	n.d.
Perflurohexane sulphonyl fluoride *	423-50-7	mg/kg	0.01	0.025	n.d.
1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, gallium salt (9CI) *	341035-71-0	mg/kg	0.01	0.025	n.d.
Iodonium, bis[4-(1,1-dimethylethyl)phenyl]-, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonate (1:1) *	213740-81-9	mg/kg	0.01	0.025	n.d.
Iodonium, bis[(1,1-dimethylethyl)phenyl]-, salt with 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonic acid (1:1) (9CI) *	866621-50-3	mg/kg	0.01	0.025	n.d.
Iodonium, bis[4-(1,1-dimethylpropyl)phenyl]-, salt with 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonic *	421555-74-0	mg/kg	0.01	0.025	n.d.
Iodonium, diphenyl-, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonate (1:1) *	153443-35-7	mg/kg	0.01	0.025	n.d.
1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, compd. with N,N-diethylethanamine (1:1) *	72033-41-1	mg/kg	0.01	0.025	n.d.
N,N,N-triethylethanaminium tridecafluorohexane-1-sulfonate *	108427-55-0	mg/kg	0.01	0.025	n.d.
N,N,N-tributylbutan-1-aminium tridecafluorohexane-1-sulfonate *	108427-54-9	mg/kg	0.01	0.025	n.d.
Methanaminium, N,N,N-trimethyl-, salt with 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonic acid (1:1) *	189274-31-5	mg/kg	0.01	0.025	n.d.
1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, compd. With pyrrolidine (1:1) *	1187817-57-7	mg/kg	0.01	0.025	n.d.
1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, neodymium(3+) salt (3:1) *	41184-65-0	mg/kg	0.01	0.025	n.d.
Tridecafluorohexanesulphonic acid, compound with 2,2'-iminodiethanol (1:1) *	70225-16-0	mg/kg	0.01	0.025	n.d.
1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, compd.with 2-methyl-2-propanamine (1:1) *	202189-84-2	mg/kg	0.01	0.025	n.d.
Phosphonium, triphenyl(phenylmethyl)-, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonate (1:1) *	1000597-52-3	mg/kg	0.01	0.025	n.d.
Sulfonium, tris[4-(1,1-dimethylethyl)phenyl]-, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonate (1:1) *	425670-70-8	mg/kg	0.01	0.025	n.d.
Sulfonium, [4-[(2-methyl-1-oxo-2-propen-1-yl)oxy]phenyl]diphenyl-, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonate (1:1) *	911027-68-4	mg/kg	0.01	0.025	n.d.
Sulfonium, (4-methylphenyl)diphenyl-, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonate (1:1) *	910606-39-2	mg/kg	0.01	0.025	n.d.
Sulfonium, triphenyl-, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonate (1:1) *	144116-10-9	mg/kg	0.01	0.025	n.d.
Sulfonium, bis(4-methylphenyl)phenyl-, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonate (1:1) *	341548-85-4	mg/kg	0.01	0.025	n.d.
Sulfonium, (thiodi-4,1-phenylene)bis[diphenyl-, salt with 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonic acid (1:2) *	421555-73-9	mg/kg	0.01	0.025	n.d.
1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, scandium(3+) salt (3:1) *	350836-93-0	mg/kg	0.01	0.025	n.d.
Dibenzo[k,n][1,4,7,10,13]tetraoxathiacyclopentadecinium, 19-[4-(1,1-dimethylethyl)phenyl]-6,7,9,10,12,13-hexahydro-, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonate (1:1) *	928049-42-7	mg/kg	0.01	0.025	n.d.
Sulfonium, [4-[(2-methyl-1-oxo-2-propenyl)oxy]phenyl]diphenyl-, salt with 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonic acid (1:1), polymer with. *	911027-69-5	mg/kg	0.01	0.025	n.d.

1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, yttrium(3+) salt (3:1) *	41242-12-0	mg/kg	0.01	0.025	n.d.
N-Methylperfluoro-1-hexane sulfonamide (N-Me-FHxSA)	68259-15-4	mg/kg	0.01	-	n.d.
Perfluorohexane sulfonamide (PFHxSA)	41997-13-1	mg/kg	0.01	-	n.d.
N-(3-(Dimethylamino)propyl) tridecafluorohexanesulphonamide (N-AP-FHxSA)	50598-28-2	mg/kg	0.01	-	n.d.
Sum of PFHxS-related compounds (N-Me-FHxSA + PFHxSA + N-AP-FHxSA)	-	mg/kg	0.01	1	n.d.

Abbreviation: MDL = Method Detection Limit
n.d. = Not Detected ; Less than MDL
mg/kg = milligram per kilogram

Remark:
* Requirement according to the EU Commission published Regulation (EU) 2023/1608 amending Annex I of the POP Regulation (EU) 2019/1021 to restrict PFHxS, its salts and related compounds on August 8, 2023.

Test Method : Selected Perfluorinated carboxylic acids (C9-C14 PFCAs) and related substances –
For textile - Reference prEN 17681-1:2023, determination by CI-GCMS, GC-MSMS and LC-MSMS.
For others material- In house method, determination by CI-GCMS, GC-MSMS and LC-MSMS.

Material No.				1
Parameter	CAS No.	Unit	MDL	Result
Perfluorononan-1-oic acid (PFNA)	375-95-1	mg/kg	0.01	n.d.
Perfluorodecanoic acid (PFDA)	335-76-2	mg/kg	0.01	n.d.
Perfluoroundecanoic acid (PFUnA)	2058-94-8	mg/kg	0.01	n.d.
Perfluorododecanoic acid (PFDoA)	307-55-1	mg/kg	0.01	n.d.
Perfluorotridecanoic acid (PFTrA)	72629-94-8	mg/kg	0.01	n.d.
Perfluorotetradecanoic acid (PFTeA)	376-06-7	mg/kg	0.01	n.d.
Perfluoro-3,7-dimethyloctanoic acid (PF-3,7-DMOA)	172155-07-6	mg/kg	0.01	n.d.
Sum of C9-C14 PFCAs	--	mg/kg	--	n.d.
1H,1H,2H,2H-Perfluoro-1-decanol (8:2 FTOH)	678-39-7	mg/kg	0.25	n.d.
1H,1H,2H,2H-Perfluoro-1-dodecanol (10:2 FTOH)	865-86-1	mg/kg	0.25	n.d.
Perfluorodecanesulfonate (PFDS)	335-77-3	mg/kg	0.01	n.d.
2H,2H,3H,3H-Perfluoroundecanoicacid (H4PFUnA)	34598-33-9	mg/kg	0.01	n.d.
1H,1H,2H,2H-Perfluorododecanesulfonicacid (10:2 FTS)	120226-60-0	mg/kg	0.1	n.d.
1H, 1H, 2H, 2H-Perfluorodecyldichloromethylsilane (C8-PFSi)	3102-79-2	mg/kg	0.1	n.d.
1H,1H,2H,2H-Perfluorododecylacrylate (10:2 FTA)	17741-60-5	mg/kg	0.1	n.d.
8:2 Fluorotelomer olefin (8:2 FTO)	21652-58-4	mg/kg	0.1	n.d.
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2-FTSA)	39108-34-4	mg/kg	0.1	n.d.
1H,1H,2H,2H-perfluorotetradecan-1-ol (12:2 FTOH)	39239-77-5	mg/kg	0.1	n.d.
1H,1H,2H,2H-Perfluorodecyl acrylate (8:2-FTA)	27905-45-9	mg/kg	0.1	n.d.
Perfluorooctylethyl Methacrylate (8:2-FTMAC)	1996-88-9	mg/kg	0.1	n.d.
1H,1H,2H,2H-Heptadecafluoro-1-iododecane (8:2-FTI)	2043-53-0	mg/kg	0.1	n.d.
2-(Perfluorodecyl)ethyl methacrylate (10:2 FTMA)	2144-54-9	mg/kg	0.1	n.d.
1H,1H,2H,2H-Perfluorododecyl iodide (10:2 FTI)	2043-54-1	mg/kg	0.1	n.d.
1H,1H,2H,2H-Perfluorotetradecyl iodide (12:2 FTI)	30046-31-2	mg/kg	0.1	n.d.
Sum of C9-C14 PFCA related substances	--	mg/kg	--	n.d.

Abbreviation: MDL = Method Detection Limit
n.d. = Not Detected ; Less than MDL
mg/kg = milligram per kilogram

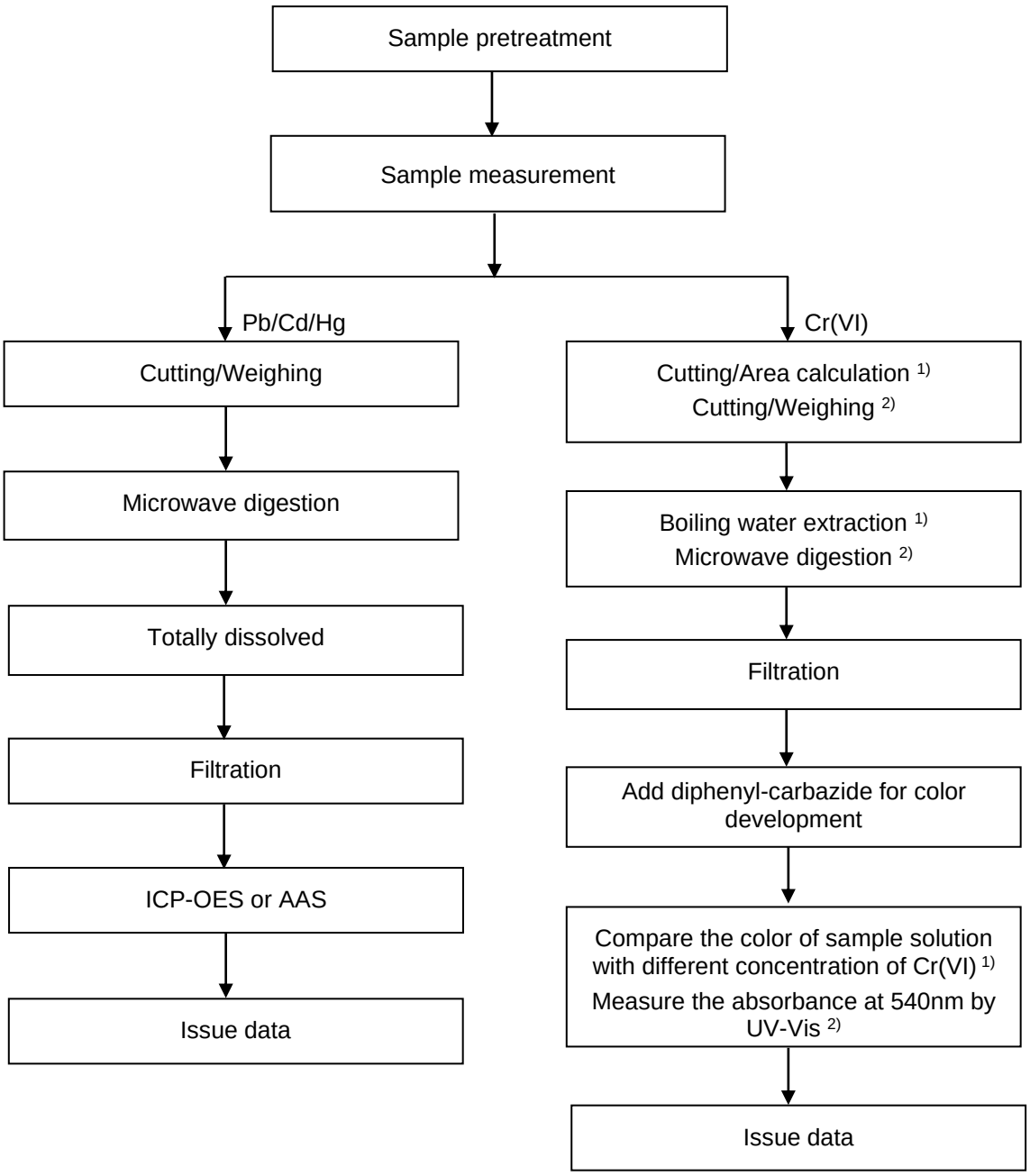
Remark:

* Requirements according to Annex XVII of Regulation (EC) No 1907/2006 entry 68 (REACH) for perfluorinated carboxylic acids (C9-C14-PFCA) their salts and C9-C14-PFCA related substances amended by Regulation (EU) 2021/1297.

Shall not be used or placed on the market after 25 February 2023:
(a) another substance, as a constituent;
(b) in a mixture;
(c) in an article,
except if the concentration in the substance, the mixture, or the article is below 25 ppb for the sum of C9-C14 PFCAs and their salts or 260 ppb for the sum of C9-C14 PFCA-related substances.

Testing procedure:

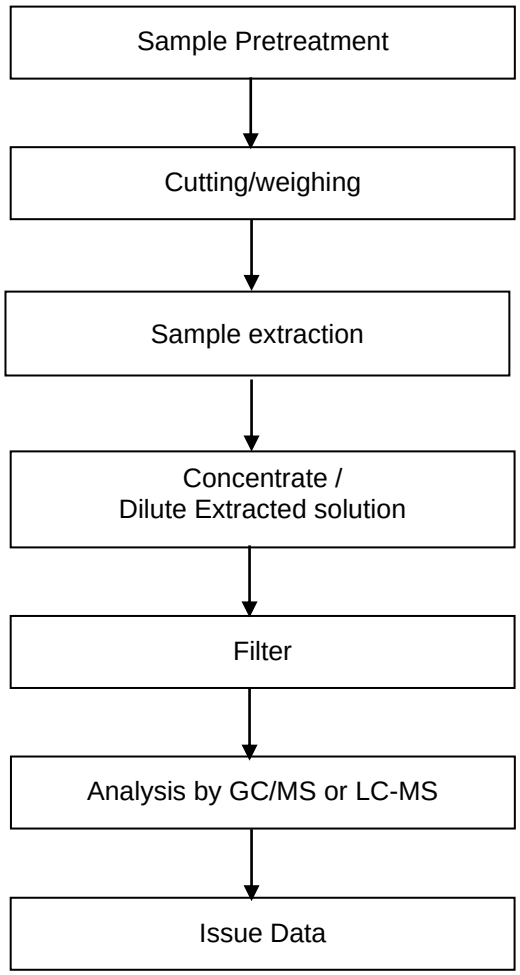
RoHS (Pb, Cd, Hg, Cr(VI))



Notes: 1) For metallic material
2) For non-metallic material

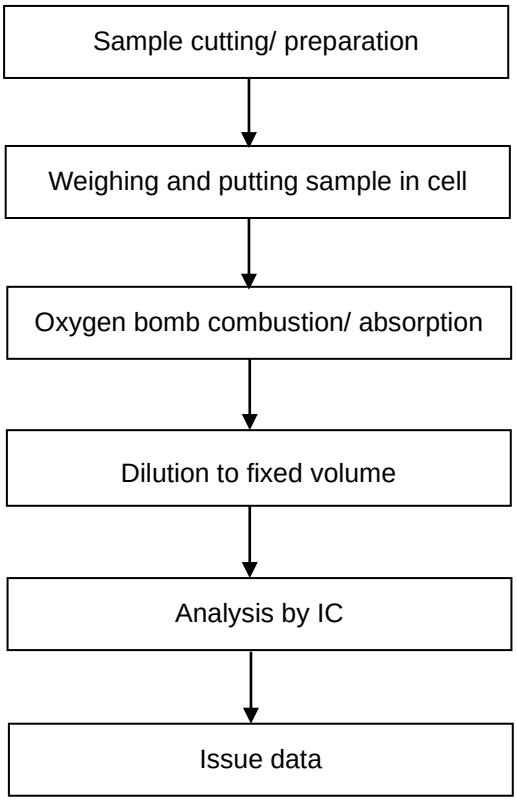
Testing procedure:

RoHS (PBBs/PBDEs, DEHP/DBP/BBP/DIBP), HBCDD



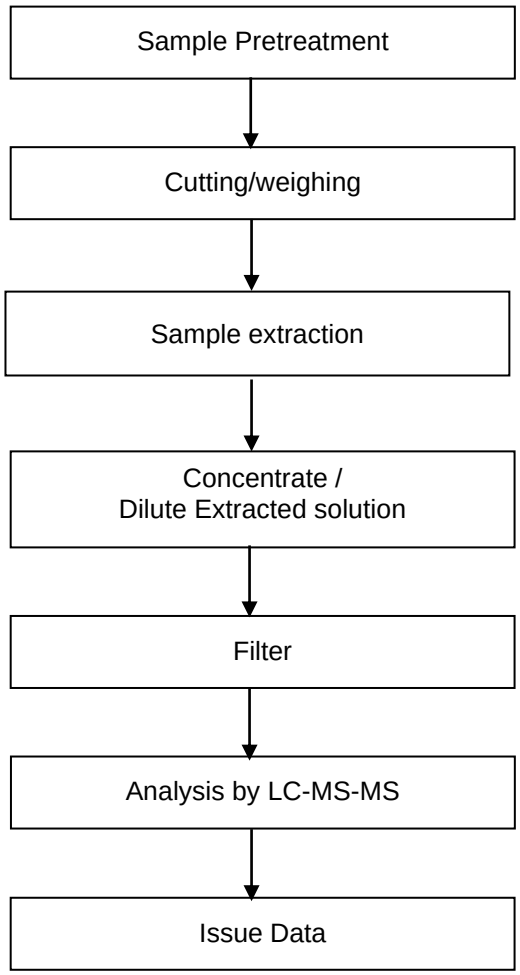
Testing procedure:

Halogen



Testing procedure:

PFOS/PFOA, PFHxS, C9-C14 PFCAs



--- End of Test-Report ---

Test Report
- Products

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Report No.:	48252908a1 001	*Page 1 of 6*
Client:	SIN SHENG TERMINAL & MACHINE INC. No.301, Tandi Rd., Gangshan Dist., Kaohsiung City 820, Taiwan, R.O.C.	
Test item(s):	Metal	
Identification/Model No(s):	PHOS.BRONZE, TIN-PLATES (PS-2)	
Sample obtaining method:	Sending by customer	
Condition at delivery:	Test item complete and undamaged.	
Sample receiving date:	2024-10-07	
Testing period:	2024-10-07 – 2024-10-22	
Place of testing:	TÜV Rheinland Hong Kong Ltd.	

Test specification:	***Test result:***
Testing according to customer's specification for the following parameters:	
Selected parameter(s) requested by the customer according to RoHS (recast): Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment, 2011/65/EU: Total Content of Lead, Cadmium, Mercury, Chromium VI	Pass
Beryllium (Be)	Refer to result page
Perfluorooctane Sulfonate (PFOS), Perfluorooctanoic Acid (PFOA)	Refer to result page

For and on behalf of
TÜV Rheinland Taiwan Ltd.



2024-10-23 Arthur Cheng/Project Manager
Date Name/Position

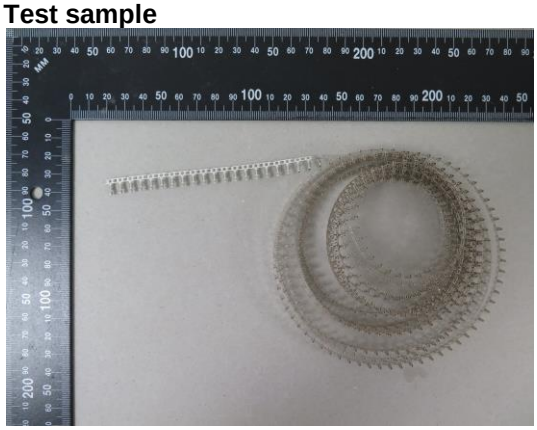
Sample information is provided by customer. Test result is drawn according to the kind and extent of tests performed.
This test report relates to the above mentioned test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.
"Decision Rule" document announced in our website (https://www.tuv.com/landingpage/en/qm-gcn/) describes the statement of conformity and its rule of enforcement for test results are applicable throughout this test report..

Material List:

Item: PHOS.BRONZE, TIN-PLATES (PS-2)

Mat. No.	Material	Color	Location
1	Metal	Metallic	TCL241007-15

Test sample



Test Method : Total Cadmium, Lead, Chromium - Ref. to IEC 62321-5:2013
Mercury - Ref. to IEC 62321-4:2013
Chromium (VI)
- For Metal material - Ref. to IEC 62321-7-1:2015
- For Plastic Polymer, or Electronic material or others materials - Ref. to IEC 62321-7-2:2017

Material No.			1
Parameter	Unit	MDL	Result
Cadmium (Cd)	mg/kg	2	n.d.
Lead (Pb)	mg/kg	2	n.d.
Mercury (Hg)	mg/kg	2	n.d.
Chromium VI (Cr VI)*	µg/cm^2	0.1	n.d.

Notes:
- MDL = Method Detection Limit
- n.d. = Not Detected ; Less than MDL
- mg/kg = milligram per kilogram
- µg/cm^2 = microgram per square centimetre
- * Once the total Cr content in metal/ plastic or electronic sample is found to be exceeded the limit, the Cr (VI) content will be confirmed with reference to IEC 62321-7-1:2015/ IEC 62321-7-2:2017

Chromium (VI) concentration	Qualitative result
<0.1µg/cm^2	The sample is negative (-ve) for Cr(VI). The Cr(VI) concentration is below the limit of quantification. The coating is considered a non-Cr(VI) based coating.
≥0.1µg/cm^2 and ≤0.13 µg/cm^2	The result is considered to be inconclusive. Unavoidable coating variations may influence the determination. Recommendation: if additional samples are available, perform a total of 3 trials to increase sampling surface area. Use the averaged result of the 3 trails for the final determination.
>0.13 µg/cm^2	The sample is positive (+ve) for Cr(VI). Concentration is above the limit of quantification and the statistical margin of error. The sample coating is considered to contain Cr(VI).

	Cd	**Cr(VI)**	**Pb**	**Hg**
Maximum permissible Limit acc. to 2011/65/EU (mg/kg)	100	1000	1000	1000

Test Method : Beryllium (Be) - Ref. to US EPA 3050B

Material No.			1
Parameter	Unit	MDL	Result
Beryllium (Be)	mg/kg	10	n.d.

Abbreviation: MDL = Method Detection Limit
n.d. = Not Detected ; Less than MDL
mg/kg = milligram per kilogram

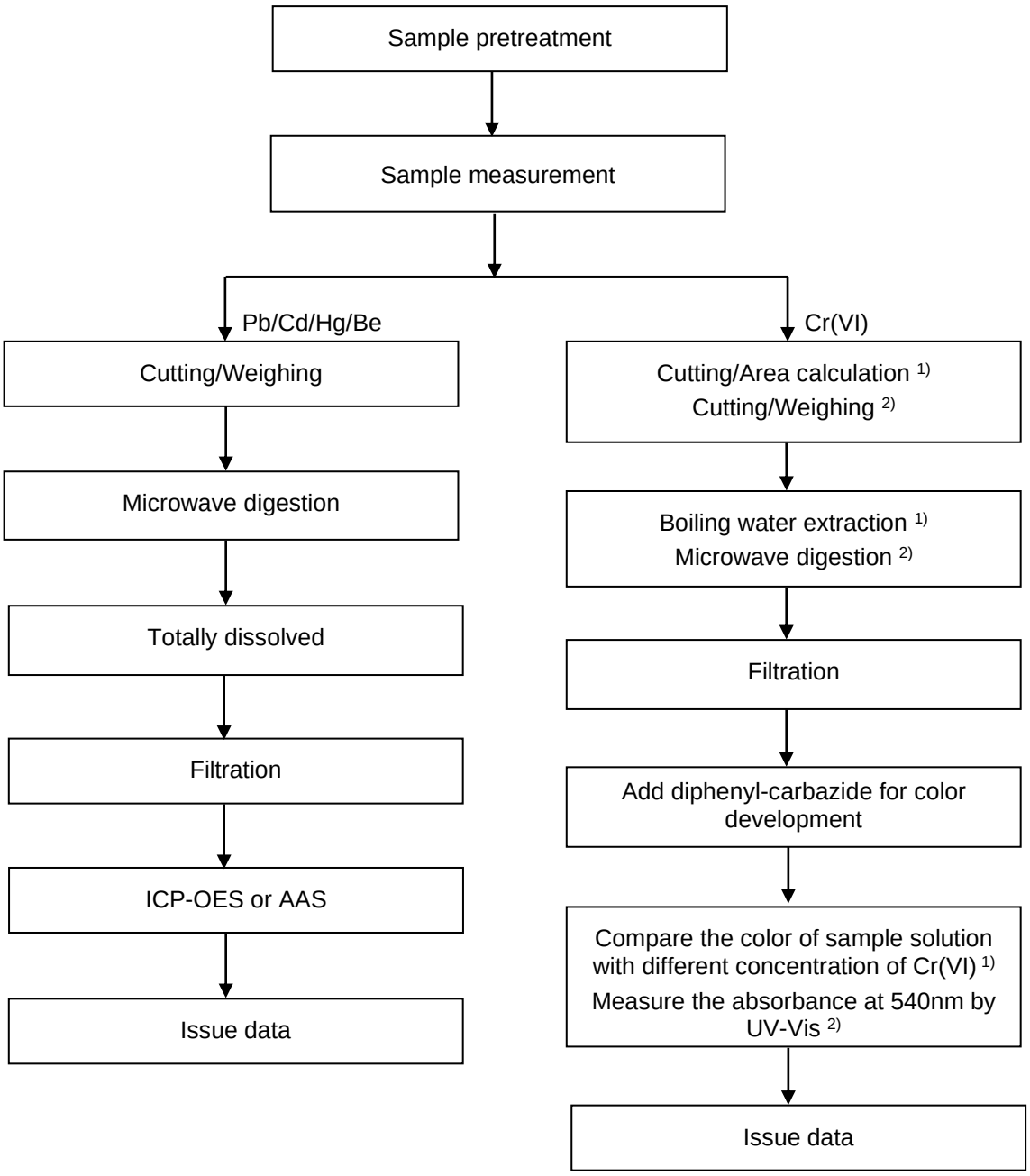
Test Method : PFOS/PFOA - Ref. to DIN CEN/TS 15968:2010

Material No.			1
Parameter	Unit	MDL	Result
Perfluorooctane Sulfonate (PFOS)	mg/kg	0.01	n.d.
Perfluorooctanoic Acid (PFOA)	mg/kg	0.01	n.d.

Abbreviation: MDL = Method Detection Limit
n.d. = Not Detected ; Less than MDL
mg/kg = milligram per kilogram

Testing procedure:

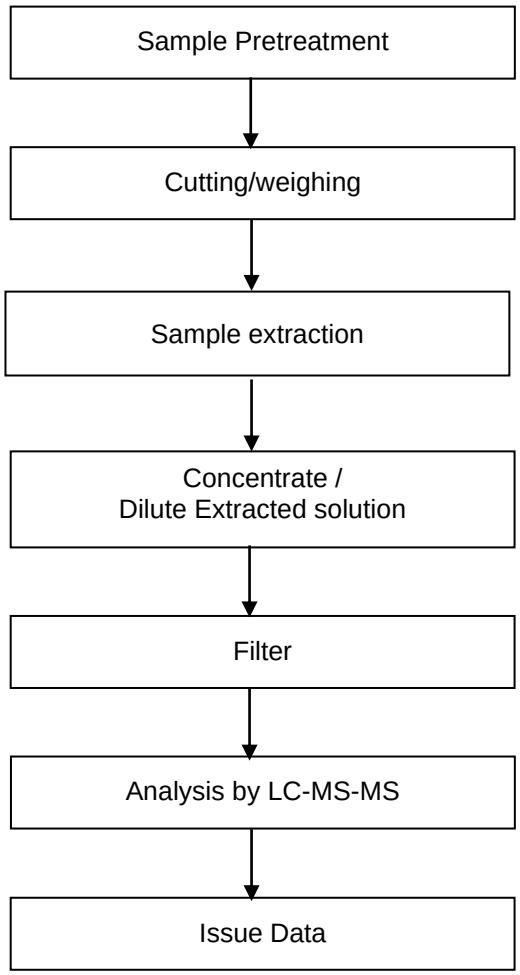
RoHS (Pb, Cd, Hg, Cr(VI)), Be



Notes: 1) For metallic material
2) For non-metallic material

Testing procedure:

PFOS, PFOA



--- End of Test-Report ---

Test Report
- Products

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Report No.:	48252908a2 001	*Page 1 of 6*
Client:	SIN SHENG TERMINAL & MACHINE INC. No.301, Tandi Rd., Gangshan Dist., Kaohsiung City 820, Taiwan, R.O.C.	
Test item(s):	Metal	
Identification/Model No(s):	PHOS.BRONZE, GOLD-FLASH (PS-00)	
Sample obtaining method:	Sending by customer	
Condition at delivery:	Test item complete and undamaged.	
Sample receiving date:	2024-10-07	
Testing period:	2024-10-07 – 2024-10-22	
Place of testing:	TÜV Rheinland Hong Kong Ltd.	

Test specification:	***Test result:***
Testing according to customer's specification for the following parameters:	
Selected parameter(s) requested by the customer according to RoHS (recast): Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment, 2011/65/EU: Total Content of Lead, Cadmium, Mercury, Chromium VI	Pass
Beryllium (Be)	Refer to result page
Perfluorooctane Sulfonate (PFOS), Perfluorooctanoic Acid (PFOA)	Refer to result page

For and on behalf of
TÜV Rheinland Taiwan Ltd.

TÜV Rheinland Taiwan Ltd. TÜVRheinland Softlines

2024-10-23 Arthur Cheng/Project Manager
Date Name/Position

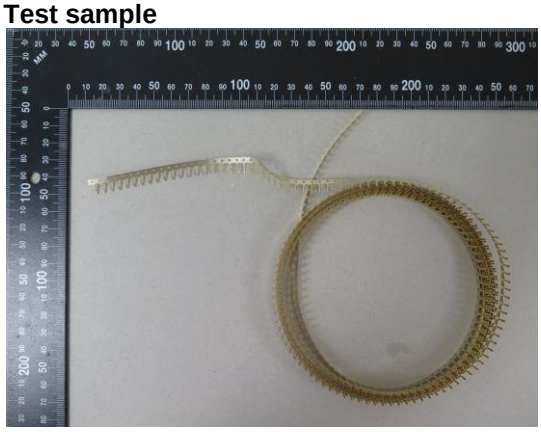
Sample information is provided by customer. Test result is drawn according to the kind and extent of tests performed.
This test report relates to the above mentioned test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.
"Decision Rule" document announced in our website (https://www.tuv.com/landingpage/en/qm-gcn/) describes the statement of conformity and its rule of enforcement for test results are applicable throughout this test report..

Material List:

Item: PHOS.BRONZE, GOLD-FLASH (PS-00)

Mat. No.	Material	Color	Location
1	Metal	Golden	TCL241007-16

Test sample



Test Method : Total Cadmium, Lead, Chromium - Ref. to IEC 62321-5:2013
Mercury - Ref. to IEC 62321-4:2013
Chromium (VI)
- For Metal material - Ref. to IEC 62321-7-1:2015
- For Plastic Polymer, or Electronic material or others materials - Ref. to IEC 62321-7-2:2017

Material No.			1
Parameter	Unit	MDL	Result
Cadmium (Cd)	mg/kg	2	n.d.
Lead (Pb)	mg/kg	2	n.d.
Mercury (Hg)	mg/kg	2	n.d.
Chromium VI (Cr VI)*	µg/cm^2	0.1	n.d.

Notes:
- MDL = Method Detection Limit
- n.d. = Not Detected ; Less than MDL
- mg/kg = milligram per kilogram
- µg/cm^2 = microgram per square centimetre
- * Once the total Cr content in metal/ plastic or electronic sample is found to be exceeded the limit, the Cr (VI) content will be confirmed with reference to IEC 62321-7-1:2015/ IEC 62321-7-2:2017

Chromium (VI) concentration	Qualitative result
<0.1µg/cm^2	The sample is negative (-ve) for Cr(VI). The Cr(VI) concentration is below the limit of quantification. The coating is considered a non-Cr(VI) based coating.
≥0.1µg/cm^2 and ≤0.13 µg/cm^2	The result is considered to be inconclusive. Unavoidable coating variations may influence the determination. Recommendation: if additional samples are available, perform a total of 3 trials to increase sampling surface area. Use the averaged result of the 3 trails for the final determination.
>0.13 µg/cm^2	The sample is positive (+ve) for Cr(VI). Concentration is above the limit of quantification and the statistical margin of error. The sample coating is considered to contain Cr(VI).

	Cd	**Cr(VI)**	**Pb**	**Hg**
Maximum permissible Limit acc. to 2011/65/EU (mg/kg)	100	1000	1000	1000

Test Method : Beryllium (Be) - Ref. to US EPA 3050B

Material No.			1
Parameter	Unit	MDL	Result
Beryllium (Be)	mg/kg	10	n.d.

Abbreviation: MDL = Method Detection Limit
n.d. = Not Detected ; Less than MDL
mg/kg = milligram per kilogram

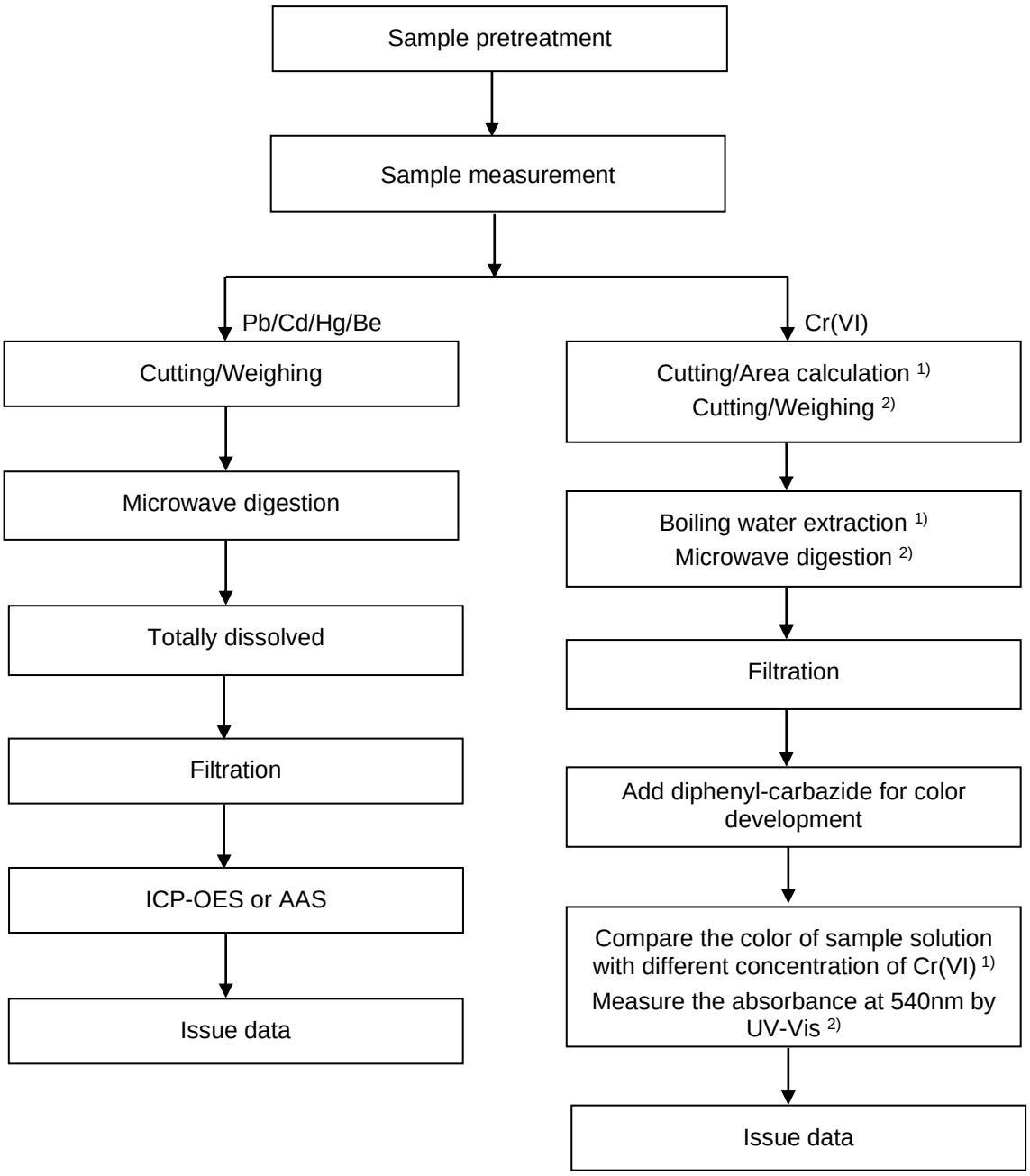
Test Method : PFOS/PFOA - Ref. to DIN CEN/TS 15968:2010

Material No.			1
Parameter	Unit	MDL	Result
Perfluorooctane Sulfonate (PFOS)	mg/kg	0.01	n.d.
Perfluorooctanoic Acid (PFOA)	mg/kg	0.01	n.d.

Abbreviation: MDL = Method Detection Limit
n.d. = Not Detected ; Less than MDL
mg/kg = milligram per kilogram

Testing procedure:

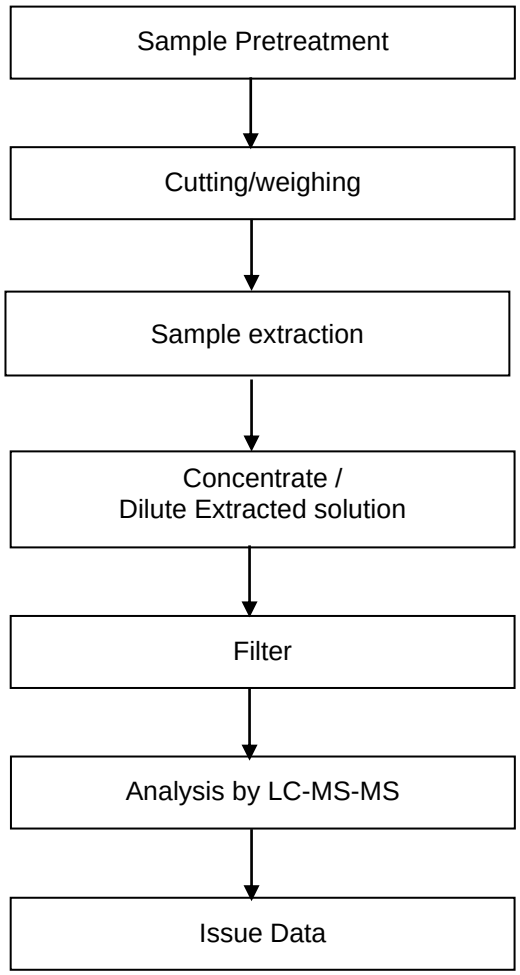
RoHS (Pb, Cd, Hg, Cr(VI)), Be



Notes: 1) For metallic material
2) For non-metallic material

Testing procedure:

PFOS, PFOA

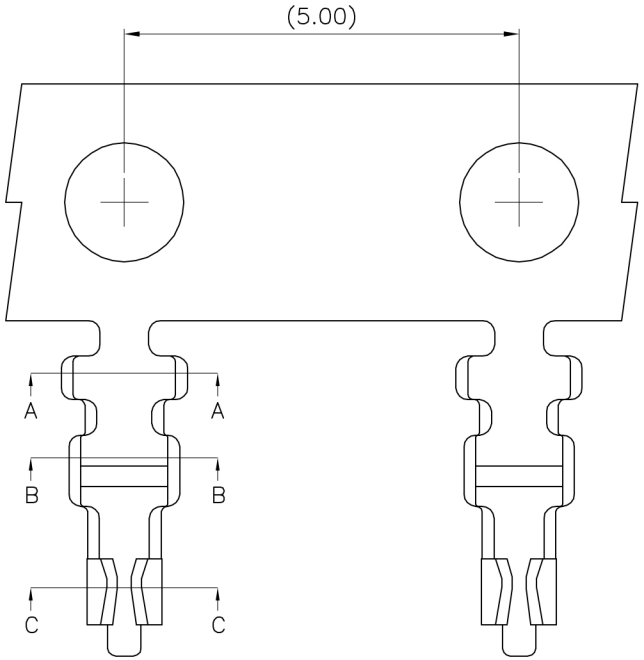


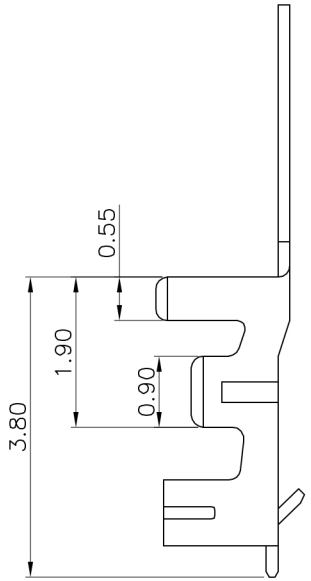
--- End of Test-Report ---

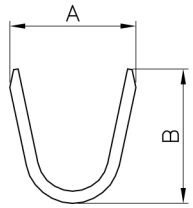
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Engineer Drawing

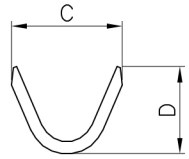
REV	ECN NO.	DESCRIPTION	DATE	APP'D
C/0	N/A	RELEASE TO PRODUCTION	03/19/10'	Goldberg
C/1	N/A	增加導電(P*)	12/01/15'	Paul
C/2	N/A	ADD TU1257TPL & MODIFY TOLERANCE	10/20/16'	Paul



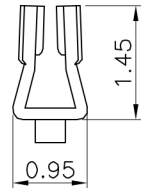




Section A–A



Section B–B



Section C–C

NOTES:
1. MATERIAL: PHOSPHOR BRONZE, t=0.15mm
2. FINISH: A--TIN-PLATED OVER NICKEL
   AE--PRESSING BEFORE TIN-PLATED OVER NICKEL
   G0--GOLD FLASH OVER NICKEL
   G*--*u"min. GOLD PLATED ON CONTACT AREA OUTSIDE, OVER NICKEL
   P*--*u"min. GOLD PLATED ON CONTACT AREA INSIDE, GOLD FLASH OUTSIDE, OVER NICKEL
3. APPLICABLE WIRE RANGE: SEE CONTACT INFORMATION
4. INSULATION O.D.: SEE CONTACT INFORMATION
5. USE WITH: TU1257 SERIES HOUSING
6. ORDERING CODE : TU1257TP*-*
   O: STANDARD
   L: LOW CRIMP HEIGHT
   FINISH SEE NOTE 2

CONTACT INFORMATION:

Part No.	Wire Range	Insulation O.D.	DIM.(mm)			
			A	B	C	D
TU1257TP0-*	AWG#26~#28	ø0.70~0.90mm	1.6	1.7	1.4	1.1
TU1257TPL-*	AWG#30~#32	ø0.40~0.70mm	1.4	1.3	1.1	1.0

TOLERANCE		APPROVALS	DATE
X.X	±0.25	DRAWN Fiwen Kong	10/20/16'
X.XX	±0.15	CHK'D Paul Chen	10/20/16'
ANGULA	3°	APP'D Wayne Lai	10/20/16'
UNLESS OTHERWISE SPECIFIED		UNITS mm / SCALE 1:1	SIZE: A4

唐虞企業股份有限公司
TARNG YU ENTERPRISE CO., LTD.

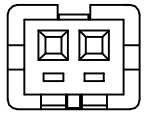
PART NO.	TU1257TP*-*
DRAWING NO.	EN-TU1257TP*-*
TITLE:	WIRE TO BOARD, PITCH 1.25mm, CRIMP TYPE, CONTACT
SHEET 1 OF 2	REV. C/2

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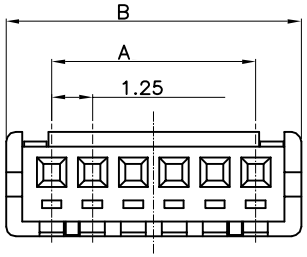
Engineer Drawing

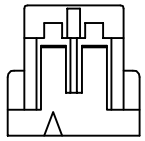
REV	ECN NO.	DESCRIPTION	DATE	APP'D
C/0		RELEASE TO PRODUCTION	03/19/10'	Goldberg
C/1		UPDATE DRAWING	12/11/12'	Paul

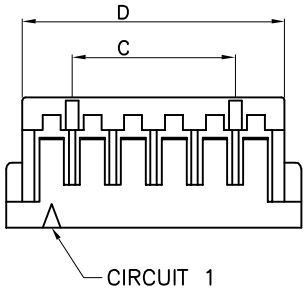
2~3P

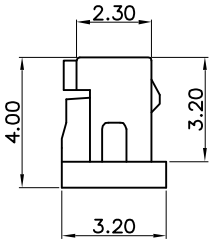


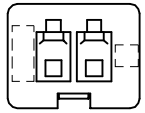
4~20P

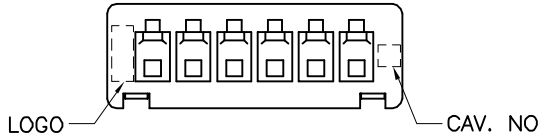












Pin	DIM. (mm)				Pcs/Bag	Pin	DIM. (mm)				Pcs/Bag
	A	B	C	D			A	B	C	D	
02	-	4.05	-	3.05	1,000	09	10.00	12.80	8.75	11.80	1,000
03	2.50	5.30	-	4.30	1,000	10	11.25	14.05	10.00	13.05	1,000
04	3.75	6.55	2.50	5.55	1,000	11	12.50	15.30	11.25	14.30	1,000
05	5.00	7.80	3.75	6.80	1,000	12	13.75	16.55	12.50	15.55	1,000
06	6.25	9.05	5.00	8.05	1,000	13	15.00	17.80	13.75	16.80	1,000
07	7.50	10.30	6.25	9.30	1,000	14	16.25	19.05	15.00	18.05	1,000
08	8.75	11.55	7.50	10.55	1,000	15	17.50	20.30	16.25	19.30	1,000

NOTES:

1. MATERIAL(HALOGEN FREE): NYLON 66 UL 94V-0 (GREY)
2. USE WITH: TU1257 CRIMP TERMINAL
3. MATES WITH: TU1257 SERIES SINGLE ROW WAFER
4. ORDERING CODE: TU1257HNO-1xNP
   PIN NO.

TOLERANCE	
X.	±0.30
X.X	±0.25
X.XX	±0.15
X.XXX	±0.08
ANGULA	3°

UNLESS OTHERWISE SPECIFIED

APPROVALS		DATE
DRAWN	Jiao Lei	12/11/12'
CHK'D	Paul Chen	12/11/12'
APP'D	Wayne Lai	12/11/12'
UNITS mm	SCALE 1:1	SIZE: A4

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TARNG YU ENTERPRISE CO., LTD.

PART NO.	TU1257HNO-1xNP
DRAWING NO.	EN-TU1257HNO-1xNP
SHEET	1 OF 1

TITLE:
WIRE TO BOARD, PLUG,
PITCH 1.25mm, SINGLE ROW,
CRIMP TYPE, INSULATOR

REV. C/1

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Component - Plastics [guide info] **E53898**

EMS-CHEMIE AG

EMS CHEMIE HOLDING, VIA INNOVATIVA 1, DOMAT/EMS 7013 CH

Grilon AS V0

Polyamide 66 (PA66) "Grilon", furnished as pellets

Color	Min Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str
ALL	0.75	V-0	4	0	115	105	120
	0.85	V-0	4	0	115	105	120
	1.5	V-0	2	0	115	105	120
	3.0	V-0	1	0	115	105	120

Comparative Tracking Index (CTI): 0
Inclined Plane Tracking (IPT): -
Dielectric Strength (kV/mm): -
Volume Resistivity (10^x ohm-cm): -
High-Voltage Arc Tracking Rate (HVTR): 0
High Volt, Low Current Arc Resis (D495): 5
Dimensional Stability (%): -

ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL.

Report Date: 1986-03-24
Last Revised: 2013-06-24

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IEC and ISO Test Methods

Test Name	Test Method	Units	Thk (mm)	Value
Flammability	IEC 60695-11-10	Class (color)	0.75	V-0 (ALL)
			0.85	V-0 (ALL)
			1.5	V-0 (ALL)
			3.0	V-0 (ALL)
Glow-Wire Flammability (GWFI)	IEC 60695-2-12	C	0.85	960
			1.5	960
			3.0	960
Glow-Wire Ignition (GWIT)	IEC 60695-2-13	C	-	-
IEC Comparative Tracking Index	IEC 60112	Volts (Max)	-	-
IEC Ball Pressure	IEC 60695-10-2	C	-	-
ISO Heat Deflection (1.80 MPa)	ISO 75-2	C	-	-
ISO Tensile Strength	ISO 527-2	MPa	-	-
ISO Flexural Strength	ISO 178	MPa	-	-
ISO Tensile Impact	ISO 8256	kJ/m^2	-	-
ISO Izod Impact	ISO 180	kJ/m^2	-	-
ISO Charpy Impact	ISO 179-2	kJ/m^2	-	-

Test Report

No.: CANEC24021974001 **Date:** Nov 01, 2024

Client Name: DONG GUAN TARNG YU ELECTRONIC CO.,LTD

Client Address: NO.623,DADONG ROAD,DAZHOU DISTRICT,QIAOTOU TOWN,DONGGUAN CITY,GUANGDONG PROVINCE

Sample Name: NYLON66 UL94-V0(NC-NL)

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

SGS Job No.: SZP24-043875

Sample Receiving Date: Oct 08, 2024

Testing Period: Oct 08, 2024 ~ Oct 17, 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
EN 14372:2004-Phthalates	See Results
AfPS GS 2019:01 PAK-Polycyclic Aromatic Hydrocarbons (PAHs)	See Results
Perfluorooctanoic acid (PFOA) and its salts, Perfluorooctane sulfonic acid (PFOS) and its derivatives	See Results
Halogen	See Results
Element(s)	See Results
Red Phosphorus	See Results
Flame Retardants	See Results

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

Allie Chen

Allie Chen
Approved Signatory

scan to see the report

9C49EC85

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Test Result(s):

Test Part Description：

SN ID	Sample No.	SGS Sample ID	Description
SN1	A1	CAN24-0219740-0001.C001	White plastic

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	A1
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	A1
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.

EN 14372:2004-Phthalates

Test Method: With reference to EN 14372:2004, Clause 6.3.2, analysis was performed by GC-MS.

Test Item(s)	CAS No.	Unit(s)	MDL	A1
Dibutyl Phthalate (DBP)	84-74-2	%	0.003	ND
Benzylbutyl Phthalate (BBP)	85-68-7	%	0.003	ND
Bis-(2-ethylhexyl) Phthalate (DEHP)	117-81-7	%	0.003	ND
Diisononyl Phthalate (DINP)	28553-12-0 /68515-48-0	%	0.010	ND
Di-n-octyl Phthalate (DNOP)	117-84-0	%	0.003	ND
Diisodecyl Phthalate (DIDP)	26761-40-0 /68515-49-1	%	0.010	ND
Dimethyl Phthalate(DMP)	131-11-3	%	0.003	ND
Diethyl Phthalate(DEP)	84-66-2	%	0.003	ND
Dipropyl Phthalate(DPrP)	131-16-8	%	0.003	ND
Diisobutyl Phthalate(DIBP)	84-69-5	%	0.003	ND
Dipentyl Phthalates (DPP)	131-18-0	%	0.003	ND
Di-n-Hexyl Phthalate(DnHP)	84-75-3	%	0.003	ND
Dicyclohexyl Phthalate(DCHP)	84-61-7	%	0.003	ND
Diphenyl Phthalate(DPhP)	84-62-8	%	0.003	ND
Dinonyl Phthalate(DNP)	84-76-4	%	0.003	ND
Diisooctyl Phthalate(DIOP)	27554-26-3	%	0.010	ND
Bis(2-methoxyethyl)phthalate(DMEP)	117-82-8	%	0.003	ND
1,2-Benzenedicarboxylic Acid,Dipentyl Ester,Branched and Linear	84777-06-0	%	0.010	ND
1,2-benzenedicarboxylic Acid,dihexyl ester branched and linear(DHxP)	68515-50-4	%	0.010	ND

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

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

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Test Item(s)	CAS No.	Unit(s)	MDL	A1
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
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

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Member of the SGS Group (SGS SA)

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
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.

Perfluorooctanoic acid (PFOA) and its salts, 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	A1
PFOS, its salts and related compounds				

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Test Item(s)	CAS No.	Unit(s)	MDL	A1
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
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
PFOA, its salts				
Perfluorooctanoic acid (PFOA), its salts^	335-67-1	mg/kg	0.010	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

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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
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

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Heptadecafluorooctane-1-sulphonamide, compound with triethylamine (1:1) (PFOSA-$C_6H_{15}N$)	76752-82-4
PFOA, its salts & derivatives	
Perfluorooctanoic acid (PFOA)	335-67-1
Sodium perfluorooctanoate (PFOA-Na)	335-95-5
Potassium perfluorooctanoate (PFOA-K)	2395-00-8
Silver perfluorooctanote (PFOA-Ag)	335-93-3
Perfluorooctanoyl fluoride (PFOA-F)	335-66-0
Ammonium pentadecafluorooctanoate (APFO)	3825-26-1
Lithium perfluorooctanoate (PFOA-Li)	17125-58-5
Cobalt perfluorooctanoate (PFOA-Co)	35965-01-6
Cesium perfluorooctanoate (PFOA-Cs)	17125-60-9
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
Pentadecafluorooctanoic acid--piperazine (2/1) (PFOA-NH($C_4H_{10}N$))	423-52-9
Pentadecafluorooctanoate (anion)	45285-51-6
Perfluorooctanoic Anhydride	33496-48-9
N,N,N-Triethylethanaminium perfluorooctanoate	98241-25-9
Perfluorooctanoate N,N,N-Trimethylmethanaminium	32609-65-7
Tetrapropylammonium perfluorooctanoate	277749-00-5
Potassium pentadecafluorooctanoate--water (1/1/2) (PFOA-K(H_2O)$_2$)	98065-31-7
Perfluorooctanoic acid compd. with ethanamine (1:1) (PFOA-C_2H_7N)	1376936-03-6
Pentadecafluorooctanoic acid--pyridine (1/1) (PFOA-C_5H_5N)	95658-47-2
pentadecafluorooctanoic acid- 1-phenylpiperazine(1:1) (PFOA-$C_{10}H_{14}N_2$)	1514-68-7
N,N,N-Trimethyloctan-1-aminium pentadecafluorooctanoate (PFOA-$C_{11}H_{26}N$)	927835-01-6

Halogen

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

Test Item(s)	Unit(s)	MDL	A1
Fluorine(F)	mg/kg	20	ND
Chlorine(Cl)	mg/kg	50	ND
Bromine(Br)	mg/kg	50	ND
Iodine(I)	mg/kg	50	ND

Element(s)

Test Method: With reference to US EPA 3052:1996, analysis was performed by ICP-OES/AAS.

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Test Item(s)	Unit(s)	MDL	A1
Antimony(Sb)	mg/kg	10	ND

Red Phosphorus

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

Test Item(s)	CAS No.	Unit(s)	MDL	A1
Red Phosphorus	7723-14-0	mg/kg	500	ND

Flame Retardants

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

Test Item(s)	CAS No.	Unit(s)	MDL	A1
Hexabromocyclododecane (HBCDD)	134237-50-6 /134237-51-7 /134237-52-8 /25637-99-4 /3194-55-6	mg/kg	5	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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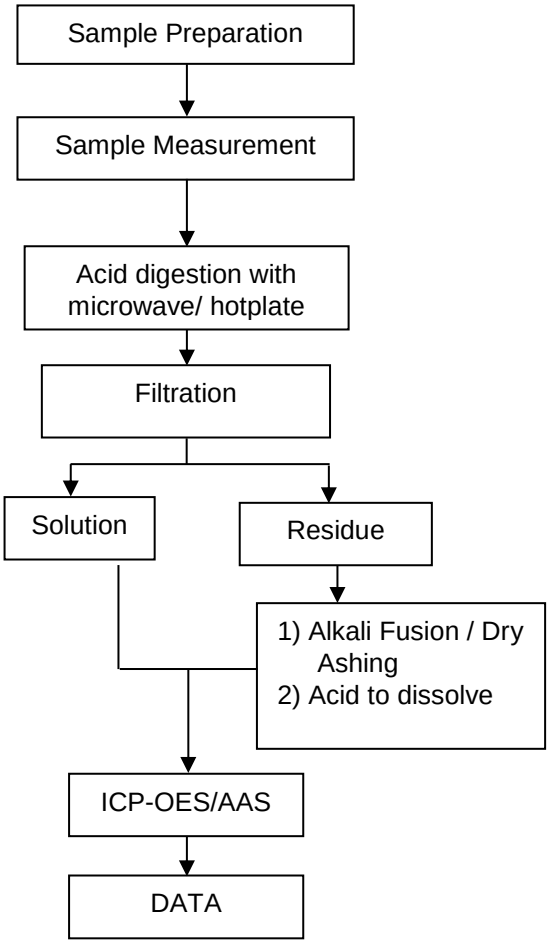
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Elements Testing Flow Chart

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

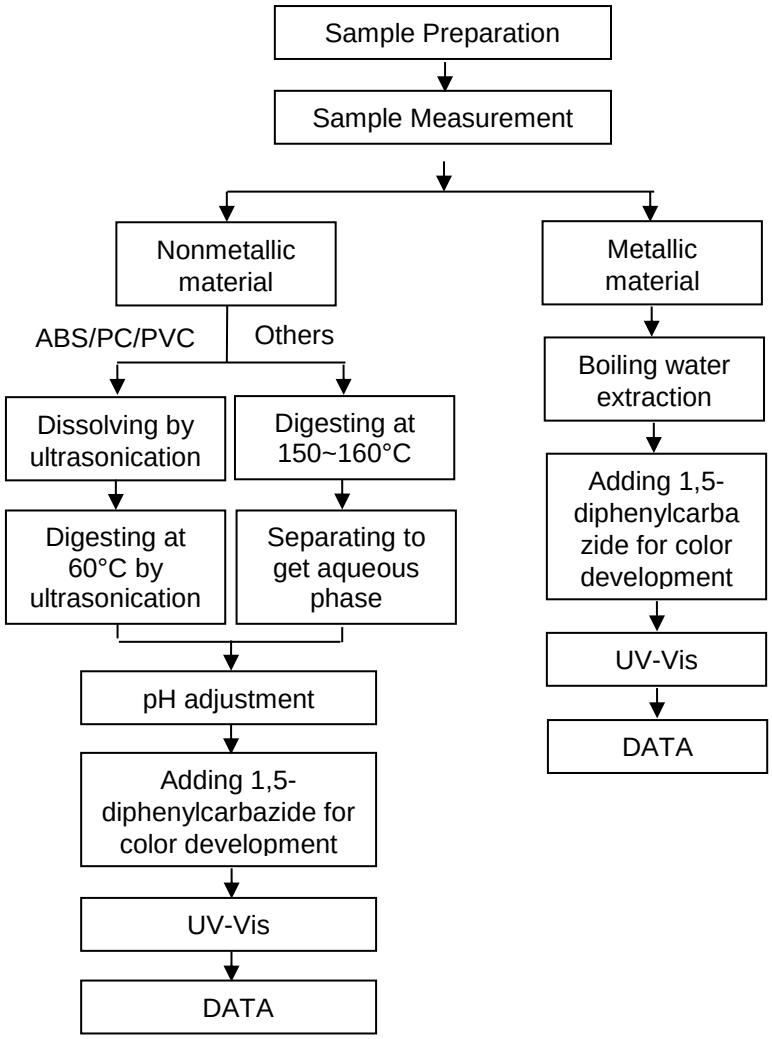


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Hexavalent Chromium (Cr(VI)) Testing Flow Chart

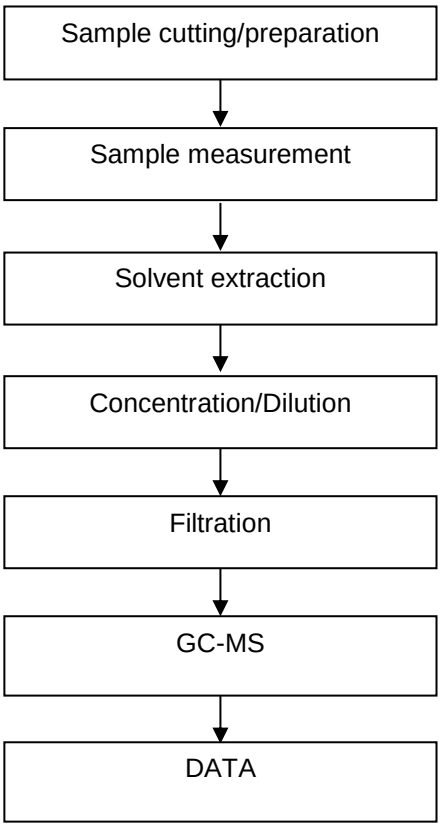


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PBB/PBDE/Phthalates Testing Flow Chart

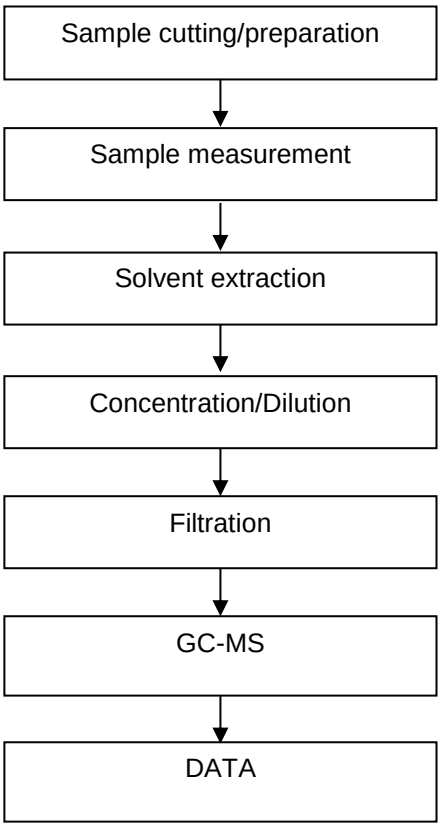


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Phthalates Testing Flow Chart

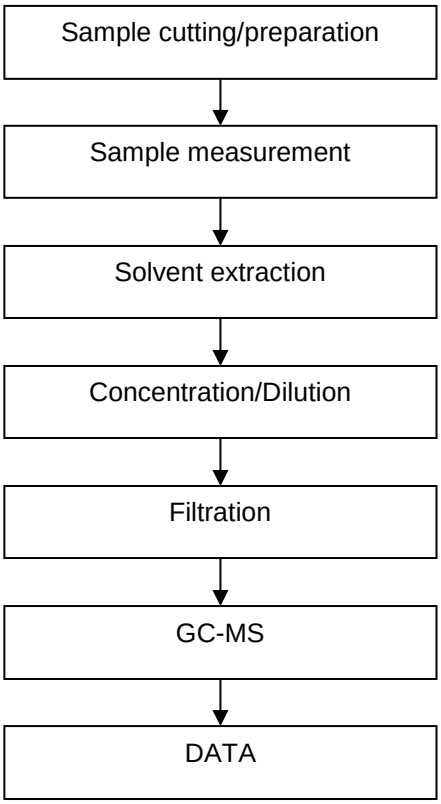


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PAHs Testing Flow Chart

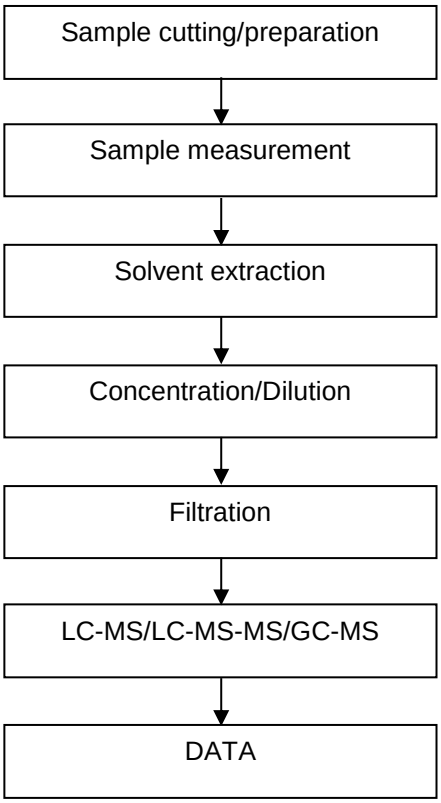


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PFASs/ PFOS/PFOA Testing Flow Chart

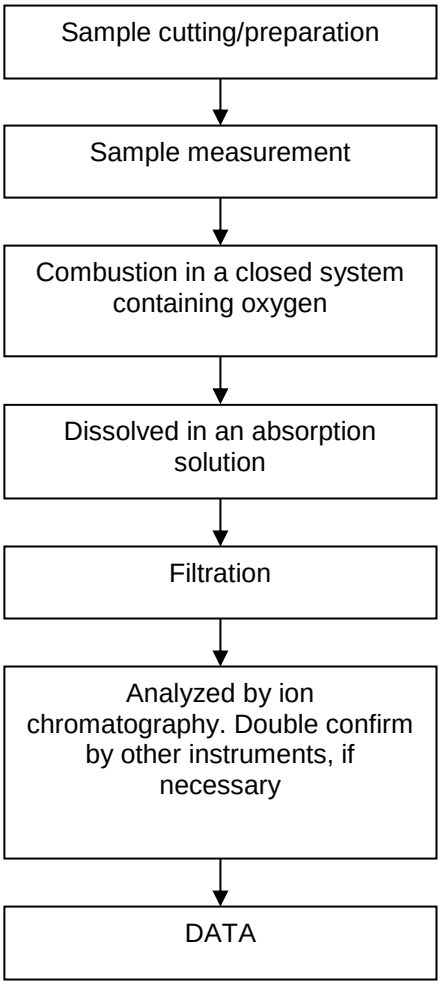


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Halogen Testing Flow Chart

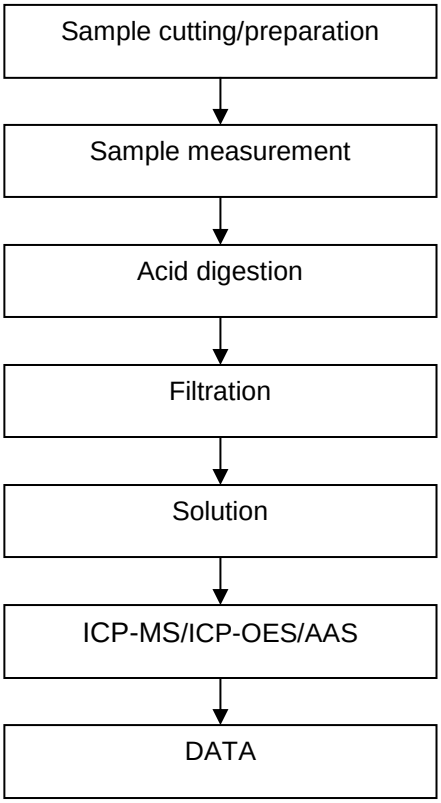


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Elements Testing Flow Chart

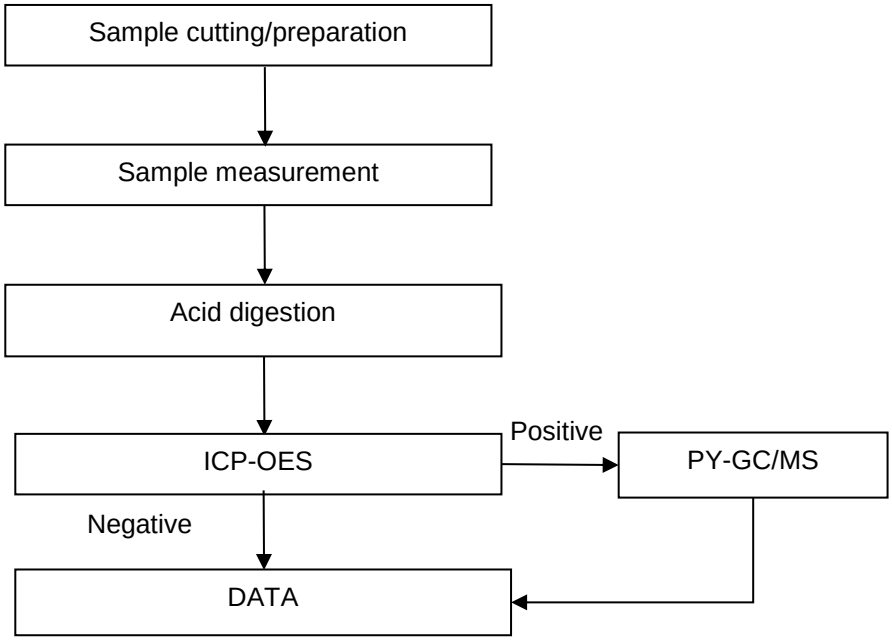


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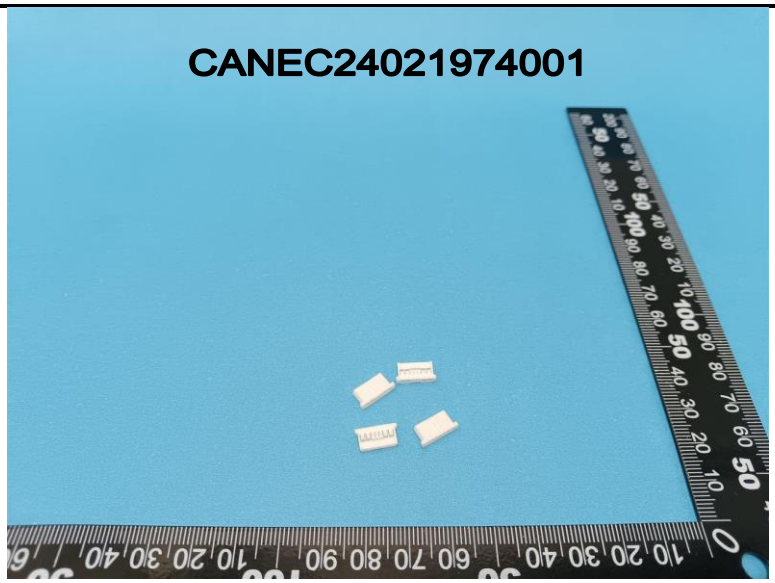
Red phosphorus Testing Flow Chart



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Sample Photo:



CAN24-0219740-0001.C001

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*** End of Report ***

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測試報告
Test Report

號碼(No.): ETR24C00481　　日期(Date): 10-Dec-2024　　

名佳利金屬工業股份有限公司 (MINCHALI METAL INDUSTRY CO., LTD.)
桃園市中壢區北園路11號 (NO.11, BEIYUAN RD., CHUNG-LI DIST., TAOYUAN CITY, TAIWAN, R.O.C.)

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

送樣廠商(Sample Submitted By)	:	名佳利金屬工業股份有限公司 (MINCHALI METAL INDUSTRY CO., LTD.)
樣品名稱(Sample Name)	:	PHOSPHOR BRONZE(磷青銅)
樣品型號(Style/Item No.)	:	C5191 (PBP)

==========

收件日(Sample Receiving Date)	:	03-Dec-2024
測試期間(Testing Period)	:	03-Dec-2024 to 10-Dec-2024

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: B459FA84

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測試報告
Test Report

名佳利金屬工業股份有限公司 (MINCHALI METAL INDUSTRY CO., LTD.)
桃園市中壢區北園路11號 (NO.11, BEIYUAN RD., CHUNG-LI DIST., TAOYUAN CITY, TAIWAN, R.O.C.)

測試部位敘述 (Test Part Description)

No.1 : 銅色金屬片 (COPPER COLORED METAL SHEET)

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))		mg/kg	2	12.4	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 (Hexavalent Chromium) Cr(VI) (#2)	參考IEC 62321-7-1: 2015，以紫外光-可見光分光光度計分析。(With reference to IEC 62321-7-1: 2015, analysis was performed by UV-VIS.)	μg/cm²	0.1	n.d.	-
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
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.	-

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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
四溴雙酚-A (TBBP-A) (Tetrabromobisphenol A (TBBP-A)) (CAS No.: 79-94-7)	參考RSTS-E&E-121，以液相層析儀/質譜儀分析。(With reference to RSTS-E&E-121, analysis was performed by LC/MS.)	mg/kg	10	n.d.	-
中鏈氯化石蠟(C14-C17) (MCCP) (Medium Chain Chlorinated Paraffins(C14-C17) (MCCP)) (CAS No.: 85535-85-9)	參考ISO 18219-2: 2021，以氣相層析儀/質譜儀分析。(With reference to ISO 18219-2: 2021, analysis was performed by GC/MS.)	mg/kg	50	n.d.	-
鈹 (Be) (Beryllium (Be)) (CAS No.: 7440-41-7)	參考US EPA 3050B: 1996，以感應耦合電漿發射光譜儀分析。(With reference to US EPA 3050B: 1996, analysis was performed by ICP-OES.)	mg/kg	2	n.d.	-
銻 (Sb) (Antimony (Sb)) (CAS No.: 7440-36-0)	參考US EPA 3050B: 1996，以感應耦合電漿發射光譜儀分析。(With reference to US EPA 3050B: 1996, analysis was performed by ICP-OES.)	mg/kg	2	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)	修改EN 17681-1: 2022 & EN 17681-2: 2022，以液相層析串聯質譜儀分析。(Modified EN 17681-1: 2022 & EN 17681-2: 2022, 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)	修改EN 17681-1: 2022 & EN 17681-2: 2022，以液相層析串聯質譜儀分析。(Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.)	mg/kg	0.01	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. (#2) =
   a. 當六價鉻結果大於0.13 μg/cm²，表示樣品表層含有六價鉻。(The sample is positive for Cr(VI) if the Cr(VI) concentration is greater than 0.13 μg/cm². The sample coating is considered to contain Cr(VI).)
   b. 當六價鉻結果為n.d. (濃度小於0.10 μg/cm²)，表示表層不含六價鉻。(The sample is negative for Cr(VI) if Cr(VI) is n.d. (concentration less than 0.10 μg/cm²). The coating is considered a non-Cr(VI) based coating)
   c. 當六價鉻結果介於 0.10 及 0.13 μg/cm² 時，無法確定塗層是否含有六價鉻。(The result between 0.10 μg/cm² and 0.13 μg/cm² is considered to be inconclusive - unavoidable coating variations may influence the determination.)
6. 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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測試報告
Test Report

名佳利金屬工業股份有限公司 (MINCHALI METAL INDUSTRY CO., LTD.)
桃園市中壢區北園路11號 (NO.11, BEIYUAN RD., CHUNG-LI DIST., TAOYUAN CITY, TAIWAN, R.O.C.)

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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桃園市中壢區北園路11號 (NO.11, BEIYUAN RD., CHUNG-LI DIST., TAOYUAN CITY, TAIWAN, R.O.C.)

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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桃園市中壢區北園路11號 (NO.11, BEIYUAN RD., CHUNG-LI DIST., TAOYUAN CITY, TAIWAN, R.O.C.)

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}全氟辛烷磺酸氮鎓鹽 (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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桃園市中壢區北園路11號 (NO.11, BEIYUAN RD., CHUNG-LI DIST., TAOYUAN CITY, TAIWAN, R.O.C.)

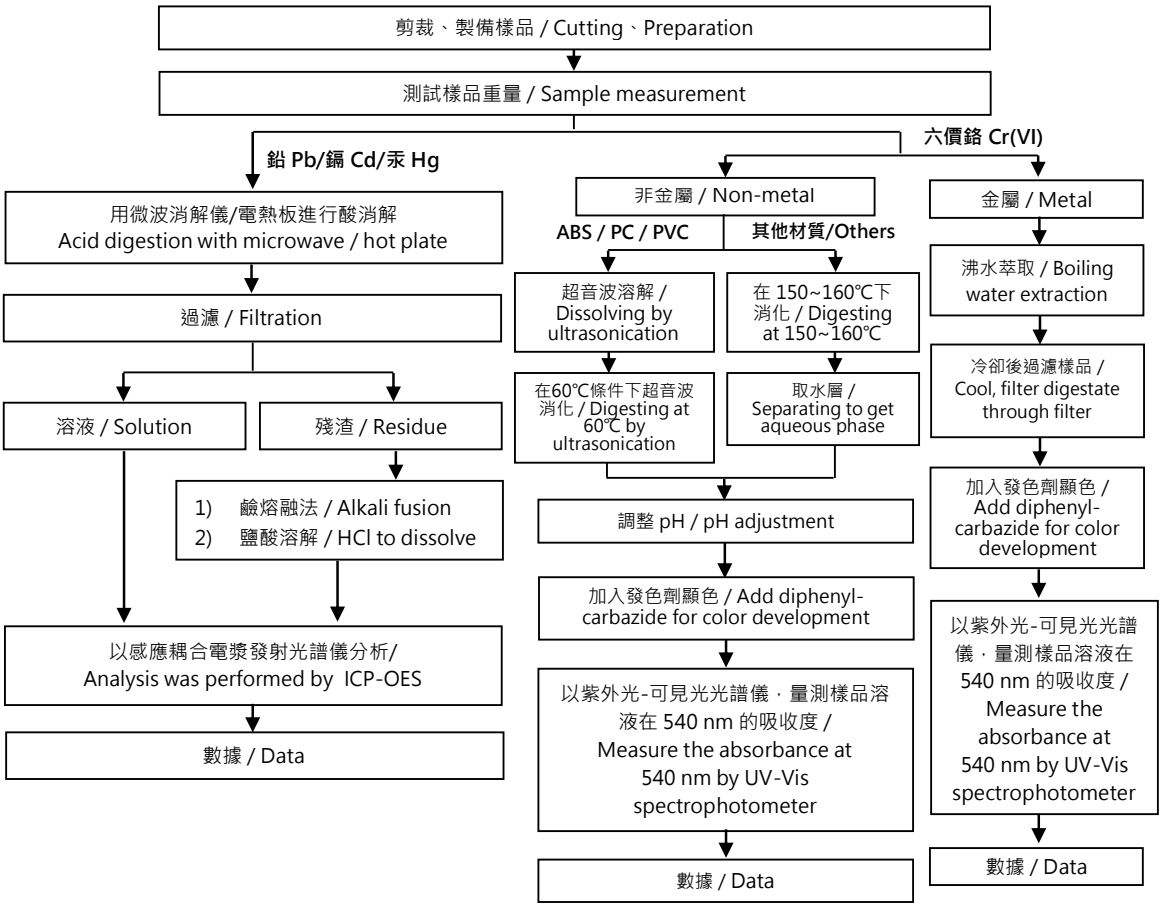
群組名稱 (Group Name)	物質名稱 (Substance Name)	CAS No.
PFOA, 及其鹽&衍生物 (PFOA, its salts & derivatives)	全氟辛酸-哌嗪(2:1) PFOA-NH($C_4H_{10}N$) Pentadecafluorooctanoic acid--piperazine (2/1)PFOA-NH($C_4H_{10}N$)	423-52-9
	全氟辛酸鹽 Pentadecafluorooctanoate (anion)	45285-51-6
	全氟辛酸酐 Perfluorooctanoic Anhydride	33496-48-9
	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) (9CI) (PFOA-C_5H_5N) Octanoic acid, pentadecafluoro-, compd. with pyridine (1:1) (9CI) (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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重金屬流程圖 / Analytical flow chart of heavy metal

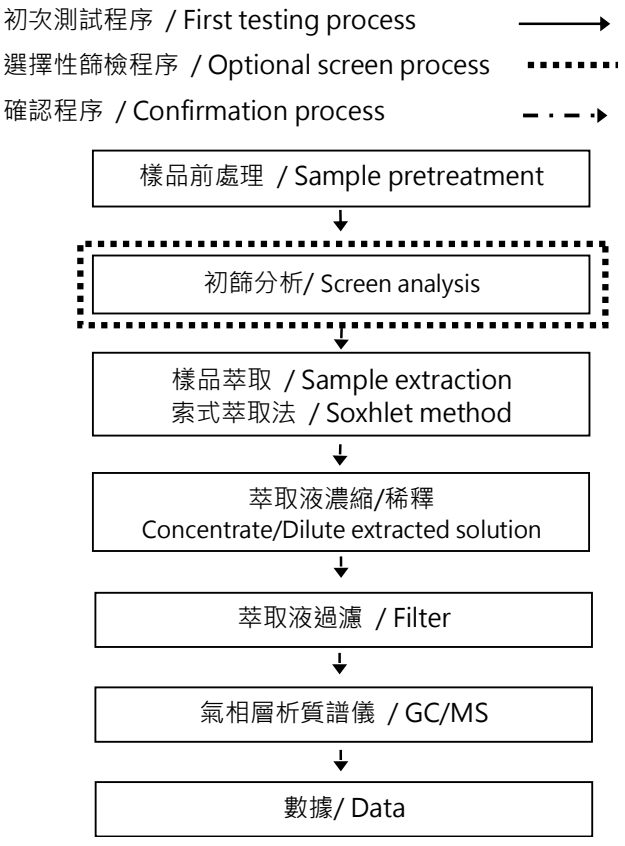
根據以下的流程圖之條件，樣品已完全溶解。（六價鉻測試方法除外）
These samples were dissolved totally by pre-conditioning method according to below flow chart.
（Cr^{6+} test method excluded）



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

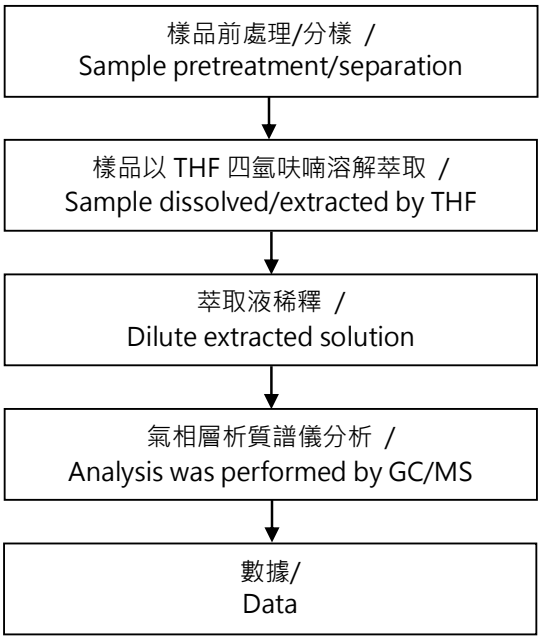


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可塑劑分析流程圖 / Analytical flow chart - Phthalate

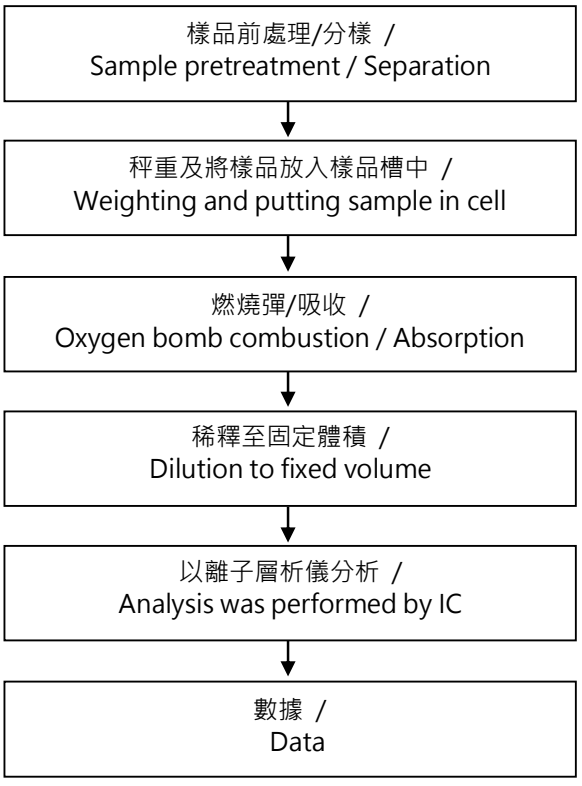
【測試方法/Test method: IEC 62321-8】



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桃園市中壢區北園路11號 (NO.11, BEIYUAN RD., CHUNG-LI DIST., TAOYUAN CITY, TAIWAN, R.O.C.)

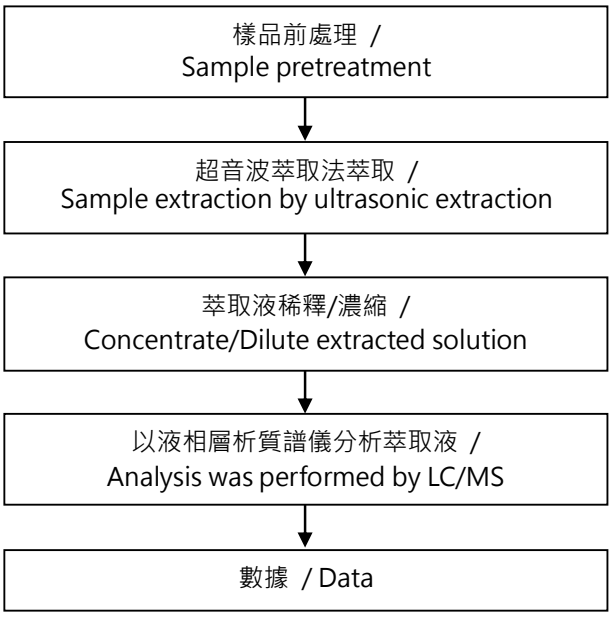
鹵素分析流程圖 / Analytical flow chart - Halogen



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四溴雙酚-A 分析流程圖 / Analytical flow chart - TBBP-A



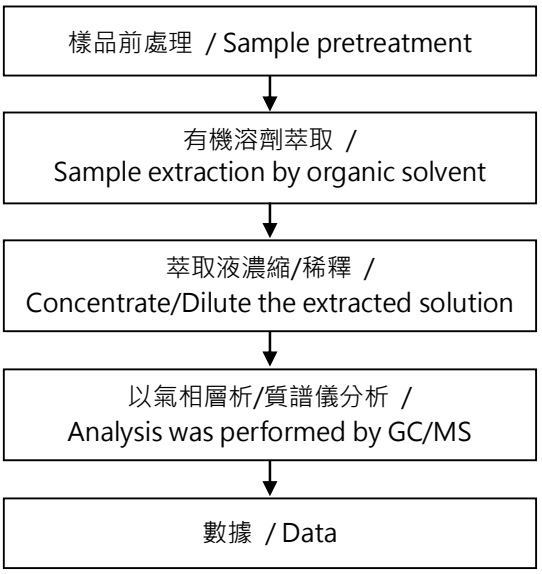
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分析流程圖 / Analytical flow chart

【適用於：多氯聯苯、多氯奈、多氯三聯苯、滅蟻靈、氯化石蠟、DBBT】

*Apply to: PCBs, PCNs, PCTs, Mirex, Chlorinated Paraffins, DBBT

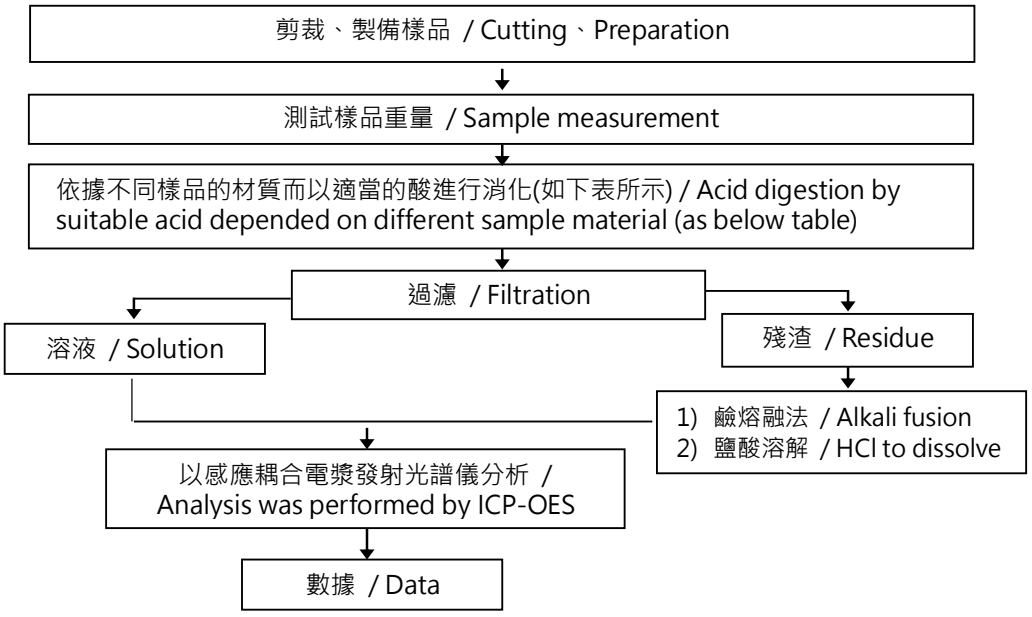


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元素以 ICP-OES 分析的消化流程圖
(Flow chart of digestion for the elements analysis performed by ICP-OES)

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.

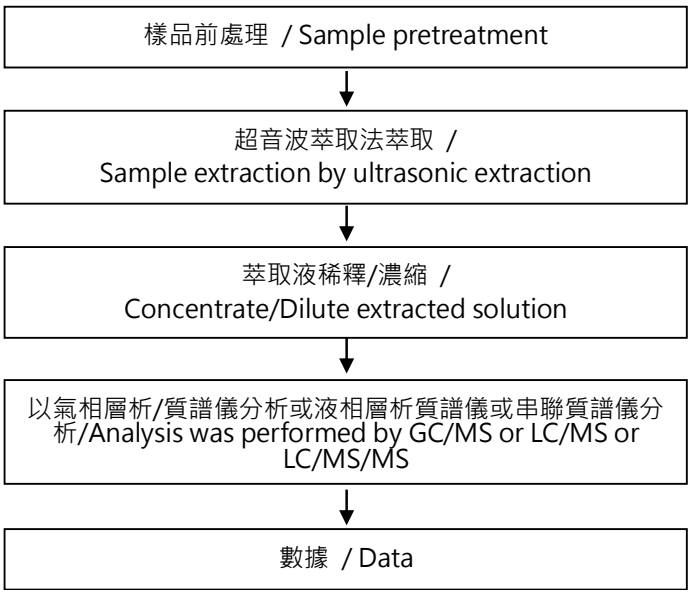


鋼,銅,鋁,焊錫 / Steel, copper, aluminum, solder	王水,硝酸,鹽酸,氫氟酸,雙氧水 / Aqua regia, HNO_3, HCl, HF, H_2O_2
玻璃 / Glass	硝酸,氫氟酸 / HNO_3,HF
金,鉑,鈀,陶瓷 / Gold, platinum, palladium, ceramic	王水 / Aqua regia
銀 / Silver	硝酸 / HNO_3
塑膠 / Plastic	硫酸,雙氧水,硝酸,鹽酸 / H_2SO_4, H_2O_2, HNO_3, HCl
其他 / Others	加入適當的試劑至完全溶解 / Added appropriate reagent to total digestion

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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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測試報告
Test Report

名佳利金屬工業股份有限公司 (MINCHALI METAL INDUSTRY CO., LTD.)
桃園市中壢區北園路11號 (NO.11, BEIYUAN RD., CHUNG-LI DIST., TAOYUAN CITY, TAIWAN, R.O.C.)

*** 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.)

ETR24C00481



** 報告結尾 (End of Report) **

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检测报告
Test Report

报告编号 A2240458420101003E
Report No. A2240458420101003E

报告抬头公司名称 博罗县宏晟电子有限公司
Company Name shown on Report HONGSHENG ELECTRONIC CO.,LTD
地 址 惠州市博罗县龙溪镇电镀基地301栋
Address BUILDING 301,1ST FLOOR,LONGXI PLATING BASE,LONGXI TOWN,BOLUO COUNTY.

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

样品名称	亮锡镀层(Sn-001)
Sample Name	Bright Tin Layer(Sn-001)
材料名称	铜材
Material	copper product
样品接收日期	2024.07.31
Sample Received Date	Jul. 31, 2024
样品检测日期	2024.07.31-2024.08.05
Testing Period	Jul. 31, 2024 to Aug. 5, 2024

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

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

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

批 准
Approved by

郑晴涛
技术经理 Technical Manager

日 期
Date 2024.08.05

No. R393381757

华测检测认证集团股份有限公司
Centre Testing International Group Co.,Ltd.
CTI Building, Xing Dong Community, Xin'an Sub-district, Bao'an District, Shenzhen City, Guangdong Province, P.R. China
广东省深圳市宝安区新安街道兴东社区华测检测大楼

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)	参考IEC 62321-5:2013 Refer to IEC 62321-5:2013	ICP-OES
镉 Cadmium (Cd)	参考IEC 62321-5:2013 Refer to IEC 62321-5:2013	ICP-OES
汞 Mercury (Hg)	参考IEC 62321-4:2013+AMD1:2017 CSV Refer to IEC 62321-4:2013+AMD1:2017 CSV	ICP-OES
六价铬 Hexavalent Chromium (Cr(VI))	IEC 62321-7-1:2015	UV-Vis
多溴联苯 Polybrominated Biphenyls (PBBs)*	IEC 62321-6:2015	GC-MS
多溴二苯醚 Polybrominated Diphenyl Ethers (PBDEs)*	IEC 62321-6:2015	GC-MS
邻苯二甲酸酯 Phthalates (DBP, BBP, DEHP, DIBP)*	IEC 62321-8:2017	GC-MS
铍 Beryllium(Be)*	参考US EPA 3050B:1996 & US EPA 6010D:2018 Refer to US EPA 3050B:1996 & US EPA 6010D:2018	ICP-OES
全氟辛酸 Perfluorooctanoic Acid(PFOA)	参考US EPA 3550C:2007 & US EPA 8321B:2007 Refer to US EPA 3550C:2007 & US EPA 8321B:2007	LC-MS-MS
全氟辛烷磺酸 Perfluorooctane Sulfonates(PFOS)	参考US EPA 3550C:2007 & US EPA 8321B:2007 Refer to US EPA 3550C:2007 & US EPA 8321B:2007	LC-MS-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. ▼	0.10 μg/cm² (LOQ)	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.	5 mg/kg	1000 mg/kg
二溴联苯 Dibromobiphenyl	N.D.	5 mg/kg	
三溴联苯 Tribromobiphenyl	N.D.	5 mg/kg	
四溴联苯 Tetrabromobiphenyl	N.D.	5 mg/kg	
五溴联苯 Pentabromobiphenyl	N.D.	5 mg/kg	
六溴联苯 Hexabromobiphenyl	N.D.	5 mg/kg	
七溴联苯 Heptabromobiphenyl	N.D.	5 mg/kg	
八溴联苯 Octabromobiphenyl	N.D.	5 mg/kg	
九溴联苯 Nonabromobiphenyl	N.D.	5 mg/kg	
十溴联苯 Decabromobiphenyl	N.D.	5 mg/kg	

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL	限值 Limit
	003		
多溴二苯醚 Polybrominated Diphenyl Ethers (PBDEs)*			
一溴二苯醚 Monobromodiphenyl ether	N.D.	5 mg/kg	1000 mg/kg
二溴二苯醚 Dibromodiphenyl ether	N.D.	5 mg/kg	
三溴二苯醚 Tribromodiphenyl ether	N.D.	5 mg/kg	
四溴二苯醚 Tetrabromodiphenyl ether	N.D.	5 mg/kg	
五溴二苯醚 Pentabromodiphenyl ether	N.D.	5 mg/kg	
六溴二苯醚 Hexabromodiphenyl ether	N.D.	5 mg/kg	
七溴二苯醚 Heptabromodiphenyl ether	N.D.	5 mg/kg	
八溴二苯醚 Octabromodiphenyl ether	N.D.	5 mg/kg	
九溴二苯醚 Nonabromodiphenyl ether	N.D.	5 mg/kg	
十溴二苯醚 Decabromodiphenyl ether	N.D.	5 mg/kg	

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

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	003	
铍 Beryllium (Be)*	N.D.	2 mg/kg

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	003	
全氟辛酸 Perfluorooctanoic Acid (PFOA)	N.D.	0.5 μg/m²

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	003	
全氟辛烷磺酸 Perfluorooctane Sulfonates (PFOS)	N.D.	0.5 μg/m²

检测报告
Test Report

样品/部位描述 Sample/Part Description

序号 No.	CTI样品ID CTI Sample ID	描述 Description
1	003	银白色镀层 Silvery white plating

备注: **对于检测铅，镉，汞，铍之样品已消解完全。**

-N.D. = 未检出（小于方法检出限或定量限）

-mg/kg = ppm = 百万分之一

-1000 mg/kg = 0.1%

-LOQ = 定量限，六价铬的定量限为0.10 μg/cm²

-▼六价铬浓度小于0.10 μg/cm²，样品未检出六价铬。由于未获知样品的存储条件和生产日期，样品的六价铬测试结果仅能代表测试时样品含六价铬的状态。

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

-MDL = Method Detection Limit

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

-mg/kg = ppm = parts per million

-1000 mg/kg = 0.1%

-LOQ = Limit of Quantification, The LOQ of Hexavalent chromium is 0.10 μg/cm²

-▼ The sample is negative for Cr(VI) − The Cr(VI) concentration is below 0.10 μg/cm². The coating is considered a non-Cr(VI) based coating. 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.

注释: **-*表示该项目/方法不在CNAS认可范围内。**

-本报告中的数据结果供科研、教学、企业内部质量控制、企业产品研发等目的用。

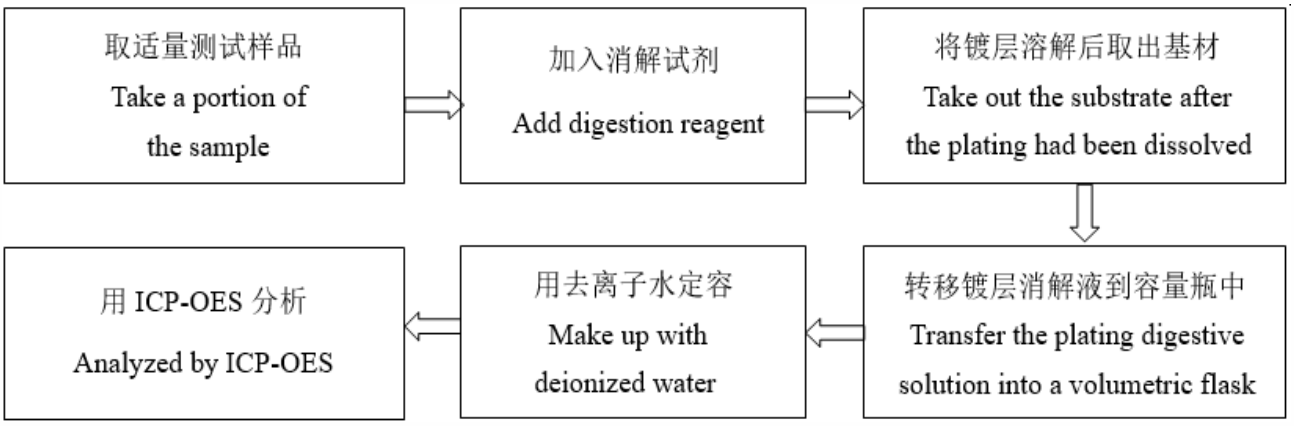
Note: **-*indicates the item(s)/method(s) is (are) not in CNAS accreditation scope.**

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

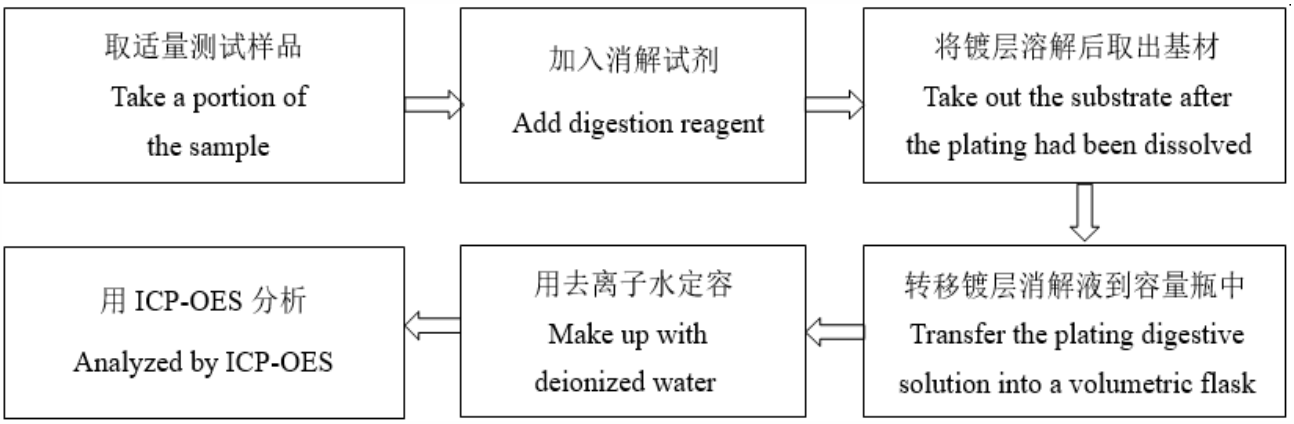
检测报告
Test Report

检测流程 Test Process

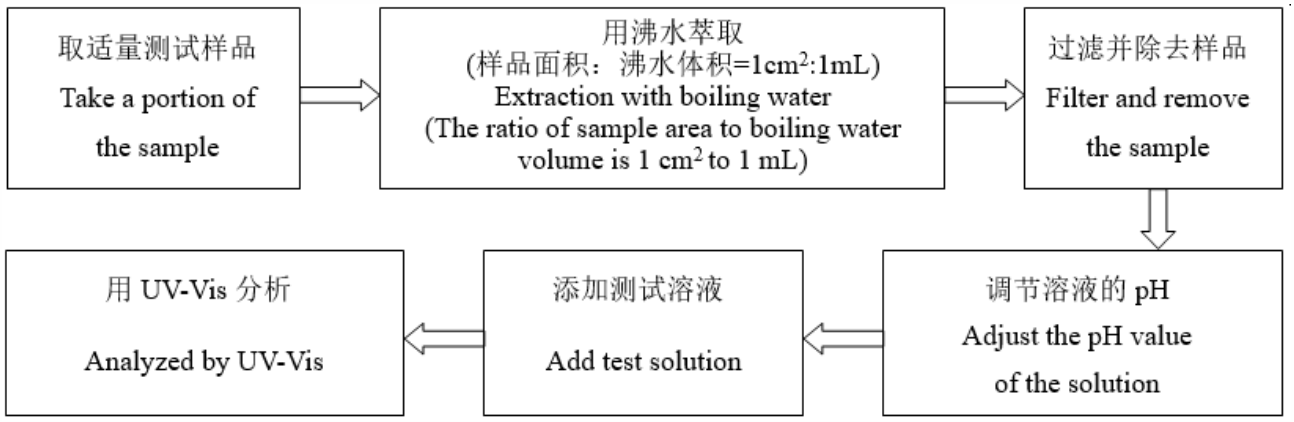
1. 铅(Pb)， 镉(Cd)
   Lead (Pb), Cadmium (Cd)



2. 汞(Hg)
   Mercury (Hg)



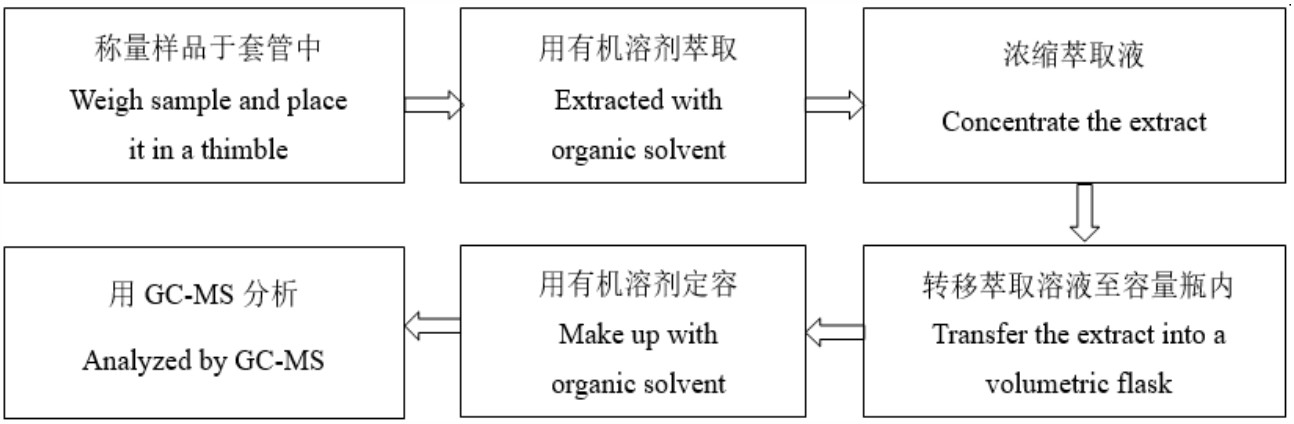
3. 六价铬(Cr(VI))
   Hexavalent Chromium (Cr(VI))



检测报告
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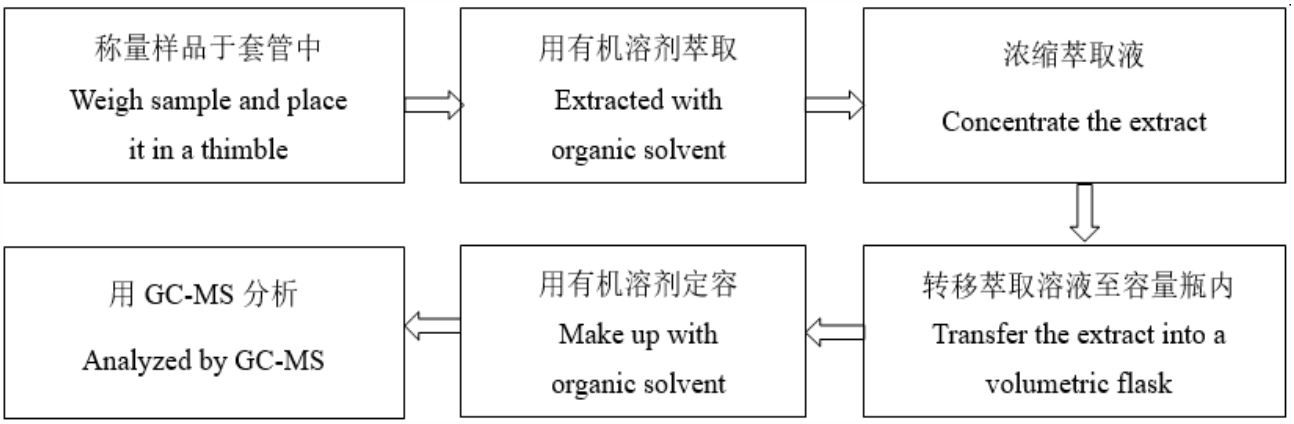
4. 多溴联苯(PBBs)， 多溴二苯醚(PBDEs)

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



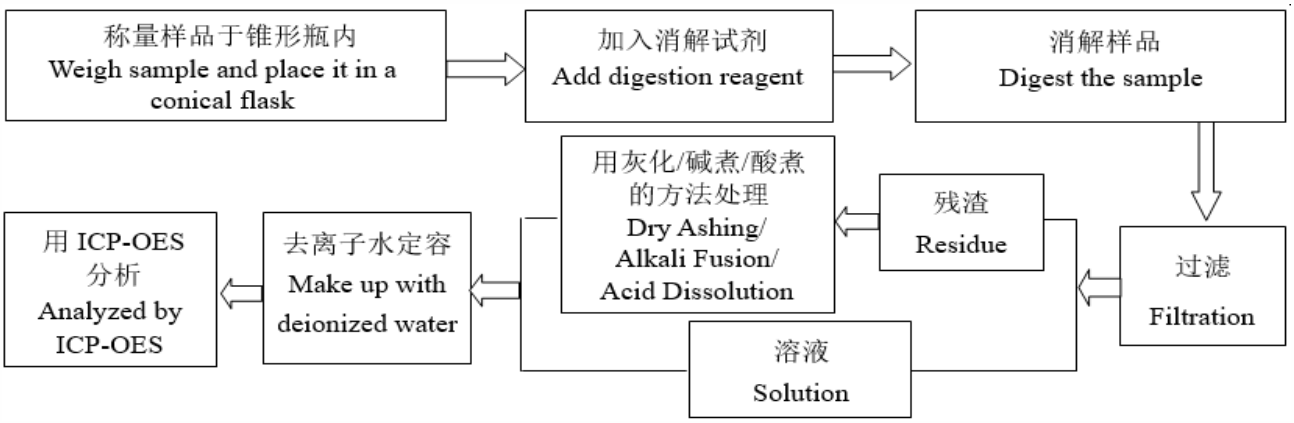
5. 邻苯二甲酸酯(DBP， BBP， DEHP， DIBP)

Phthalates (DBP, BBP, DEHP, DIBP)



6. 铍(Be)

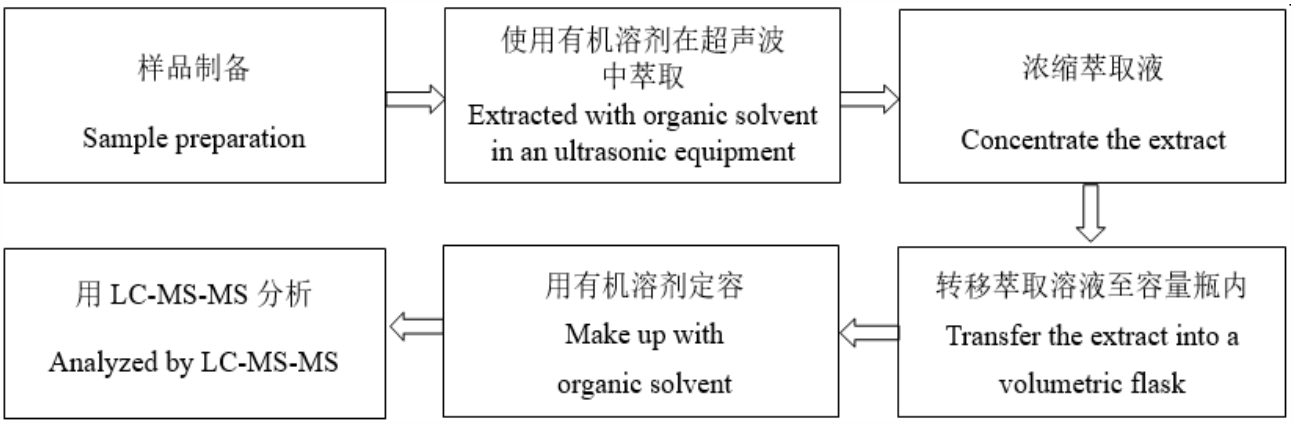
Beryllium(Be)



检测报告
Test Report

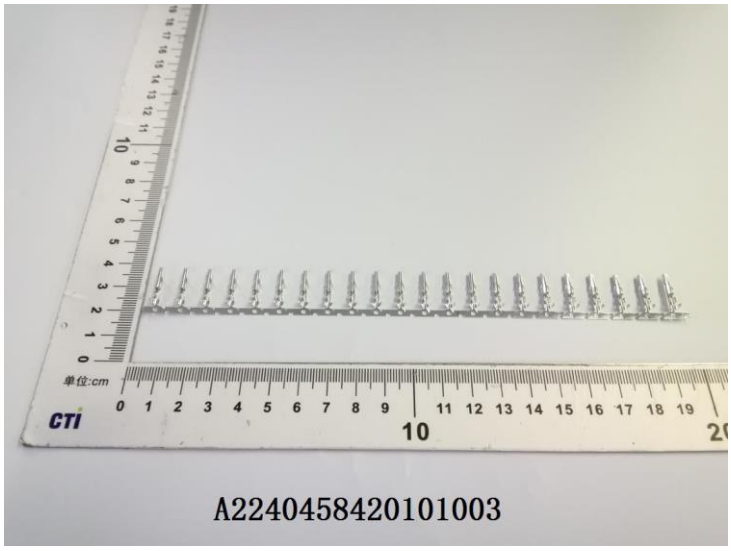
7. 全氟辛酸(PFOA)， 全氟辛烷磺酸(PFOS)

Perfluorooctanoic Acid(PFOA), Perfluorooctane Sulfonates(PFOS)



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；
   Without written approval of CTI, this report can’t be reproduced except in full;
6. 如检测报告中的英文内容与中文内容有差异，以中文为准。
   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 ***

检测报告
Test Report

报告编号 A2240458420101002E
Report No. A2240458420101002E

报告抬头公司名称 博罗县宏晟电子有限公司
Company Name shown on Report HONGSHENG ELECTRONIC CO.,LTD
地 址 惠州市博罗县龙溪镇电镀基地301栋
Address BUILDING 301,1ST FLOOR,LONGXI PLATING BASE,LONGXI TOWN,BOLUO COUNTY.

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

样品名称	镍镀层(Ni-001)
Sample Name	Plating Ni(Ni-001)
材料名称	铜材
Material	copper product
样品接收日期	2024.07.31
Sample Received Date	Jul. 31, 2024
样品检测日期	2024.07.31-2024.08.05
Testing Period	Jul. 31, 2024 to Aug. 5, 2024

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

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

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

批 准
Approved by

郑晴涛
技术经理 Technical Manager

日 期
Date 2024.08.05

No. R393381757

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)	参考IEC 62321-5:2013 Refer to IEC 62321-5:2013	ICP-OES
镉 Cadmium (Cd)	参考IEC 62321-5:2013 Refer to IEC 62321-5:2013	ICP-OES
汞 Mercury (Hg)	参考IEC 62321-4:2013+AMD1:2017 CSV Refer to IEC 62321-4:2013+AMD1:2017 CSV	ICP-OES
六价铬 Hexavalent Chromium (Cr(VI))	IEC 62321-7-1:2015	UV-Vis
多溴联苯 Polybrominated Biphenyls (PBBs)*	IEC 62321-6:2015	GC-MS
多溴二苯醚 Polybrominated Diphenyl Ethers (PBDEs)*	IEC 62321-6:2015	GC-MS
邻苯二甲酸酯 Phthalates (DBP, BBP, DEHP, DIBP)*	IEC 62321-8:2017	GC-MS
铍 Beryllium(Be)*	参考US EPA 3050B:1996 & US EPA 6010D:2018 Refer to US EPA 3050B:1996 & US EPA 6010D:2018	ICP-OES
全氟辛酸 Perfluorooctanoic Acid(PFOA)	参考US EPA 3550C:2007 & US EPA 8321B:2007 Refer to US EPA 3550C:2007 & US EPA 8321B:2007	LC-MS-MS
全氟辛烷磺酸 Perfluorooctane Sulfonates(PFOS)	参考US EPA 3550C:2007 & US EPA 8321B:2007 Refer to US EPA 3550C:2007 & US EPA 8321B:2007	LC-MS-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
	002		
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. ▼	0.10 μg/cm² (LOQ)	1000 mg/kg

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL	限值 Limit
	002		
多溴联苯 Polybrominated Biphenyls (PBBs)*			
一溴联苯 Monobromobiphenyl	N.D.	5 mg/kg	1000 mg/kg
二溴联苯 Dibromobiphenyl	N.D.	5 mg/kg	
三溴联苯 Tribromobiphenyl	N.D.	5 mg/kg	
四溴联苯 Tetrabromobiphenyl	N.D.	5 mg/kg	
五溴联苯 Pentabromobiphenyl	N.D.	5 mg/kg	
六溴联苯 Hexabromobiphenyl	N.D.	5 mg/kg	
七溴联苯 Heptabromobiphenyl	N.D.	5 mg/kg	
八溴联苯 Octabromobiphenyl	N.D.	5 mg/kg	
九溴联苯 Nonabromobiphenyl	N.D.	5 mg/kg	
十溴联苯 Decabromobiphenyl	N.D.	5 mg/kg	

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL	限值 Limit
	002		
多溴二苯醚 Polybrominated Diphenyl Ethers (PBDEs)*			
一溴二苯醚 Monobromodiphenyl ether	N.D.	5 mg/kg	1000 mg/kg
二溴二苯醚 Dibromodiphenyl ether	N.D.	5 mg/kg	
三溴二苯醚 Tribromodiphenyl ether	N.D.	5 mg/kg	
四溴二苯醚 Tetrabromodiphenyl ether	N.D.	5 mg/kg	
五溴二苯醚 Pentabromodiphenyl ether	N.D.	5 mg/kg	
六溴二苯醚 Hexabromodiphenyl ether	N.D.	5 mg/kg	
七溴二苯醚 Heptabromodiphenyl ether	N.D.	5 mg/kg	
八溴二苯醚 Octabromodiphenyl ether	N.D.	5 mg/kg	
九溴二苯醚 Nonabromodiphenyl ether	N.D.	5 mg/kg	
十溴二苯醚 Decabromodiphenyl ether	N.D.	5 mg/kg	

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
	002		
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

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	002	
铍 Beryllium (Be)*	N.D.	2 mg/kg

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	002	
全氟辛酸 Perfluorooctanoic Acid (PFOA)	N.D.	0.5 μg/m²

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	002	
全氟辛烷磺酸 Perfluorooctane Sulfonates (PFOS)	N.D.	0.5 μg/m²

检测报告
Test Report

样品/部位描述 Sample/Part Description

序号 No.	CTI样品ID CTI Sample ID	描述 Description
1	002	银色镀层 Silvery plating

备注: **对于检测铅，镉，汞，铍之样品已消解完全。**

-N.D. = 未检出（小于方法检出限或定量限）

-mg/kg = ppm = 百万分之一

-1000 mg/kg = 0.1%

-LOQ = 定量限，六价铬的定量限为0.10 μg/cm²

-▼六价铬浓度小于0.10 μg/cm²，样品未检出六价铬。由于未获知样品的存储条件和生产日期，样品的六价铬测试结果仅能代表测试时样品含六价铬的状态。

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

-MDL = Method Detection Limit

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

-mg/kg = ppm = parts per million

-1000 mg/kg = 0.1%

-LOQ = Limit of Quantification, The LOQ of Hexavalent chromium is 0.10 μg/cm²

-▼ The sample is negative for Cr(VI) − The Cr(VI) concentration is below 0.10 μg/cm². The coating is considered a non-Cr(VI) based coating. 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.

注释: **-*表示该项目/方法不在CNAS认可范围内。**

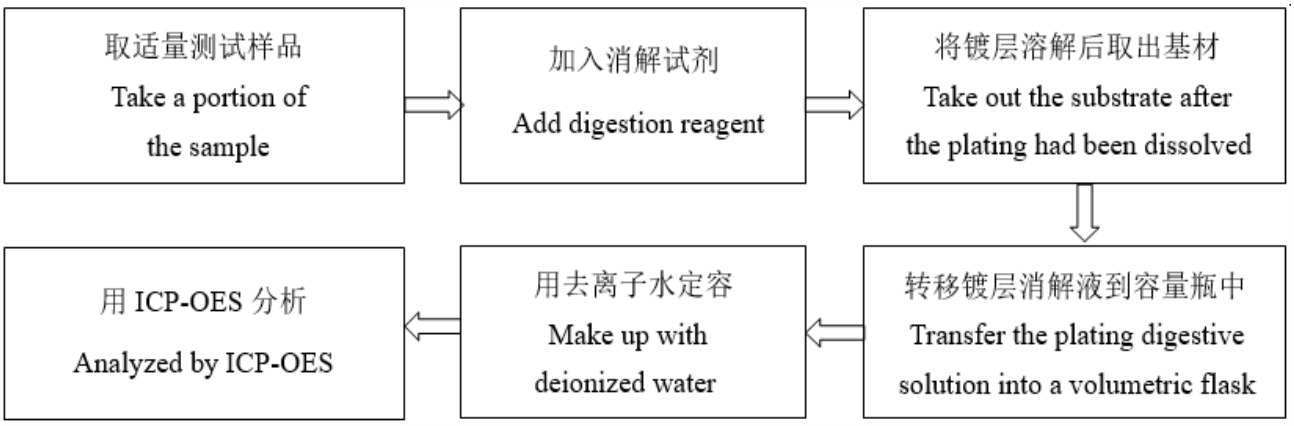
-本报告中的数据结果供科研、教学、企业内部质量控制、企业产品研发等目的用。

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

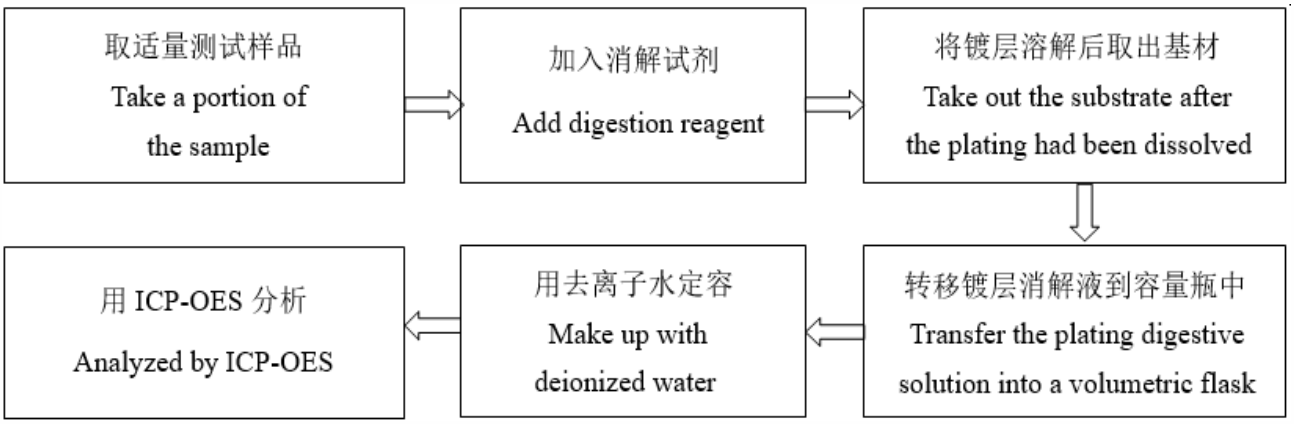
-The testing data and result(s) in this report is(are) just for scientific research, education, internal quality control and product development etc.

检测流程 Test Process

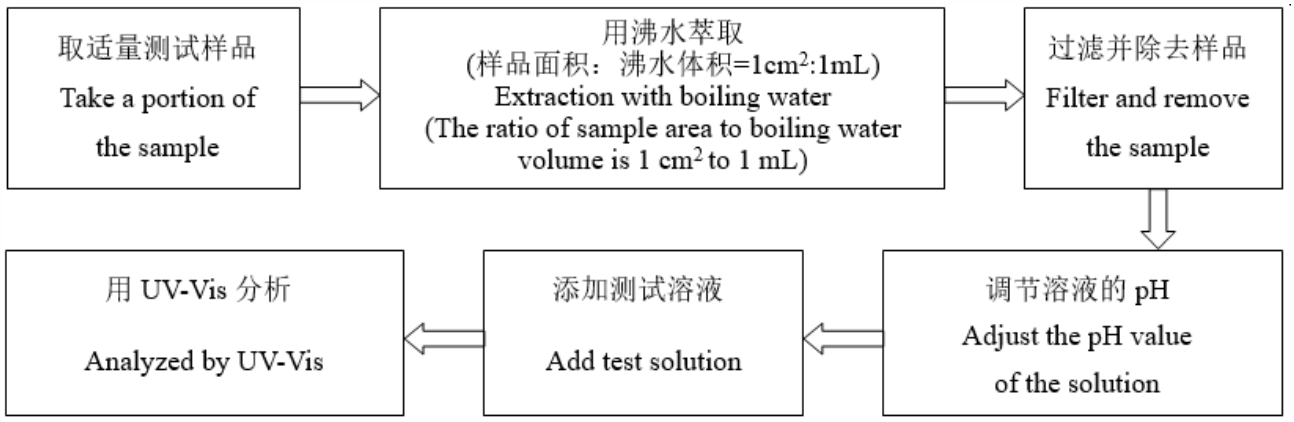
1. 铅(Pb)， 镉(Cd)
   Lead (Pb), Cadmium (Cd)



2. 汞(Hg)
   Mercury (Hg)



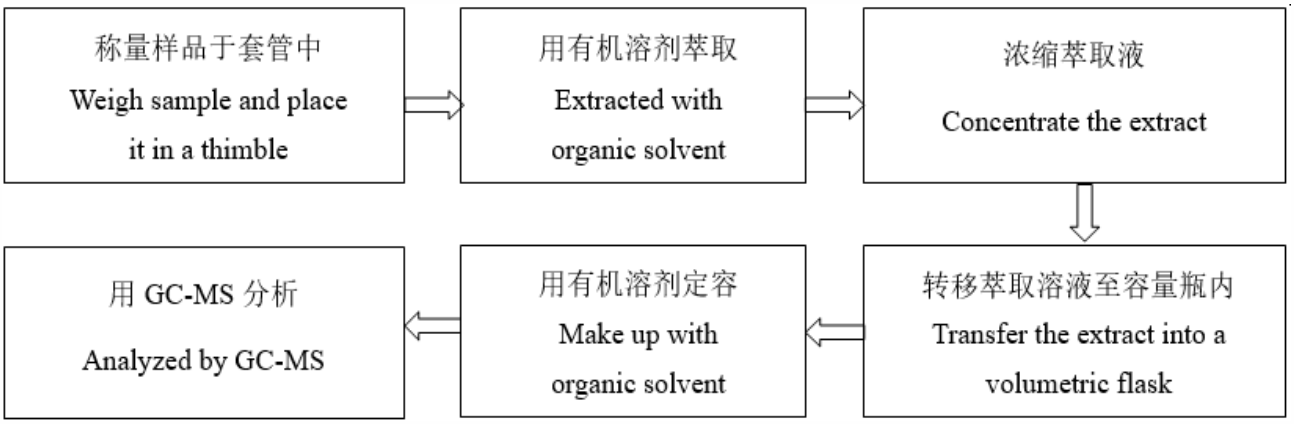
3. 六价铬(Cr(VI))
   Hexavalent Chromium (Cr(VI))



检测报告
Test Report

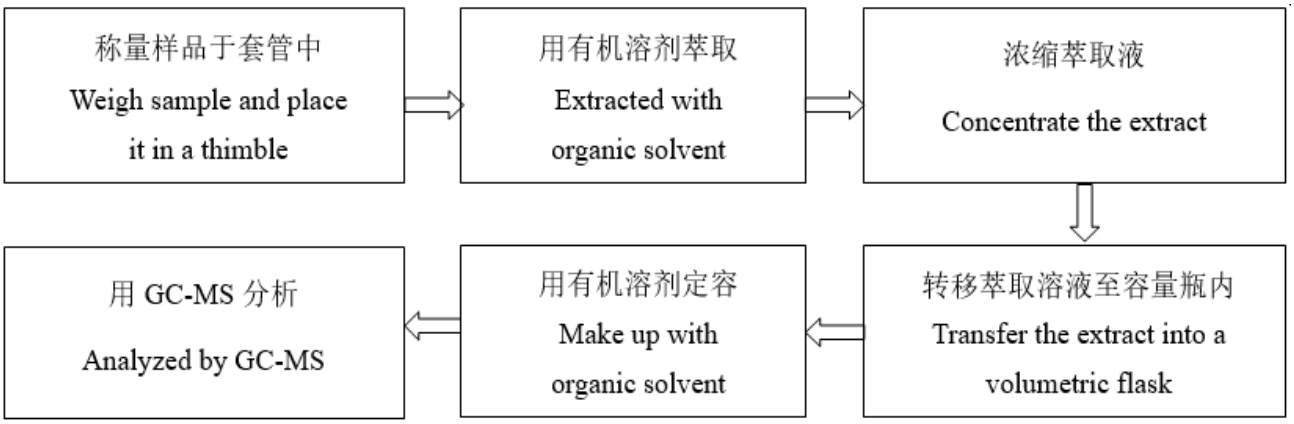
4. 多溴联苯(PBBs)， 多溴二苯醚(PBDEs)

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



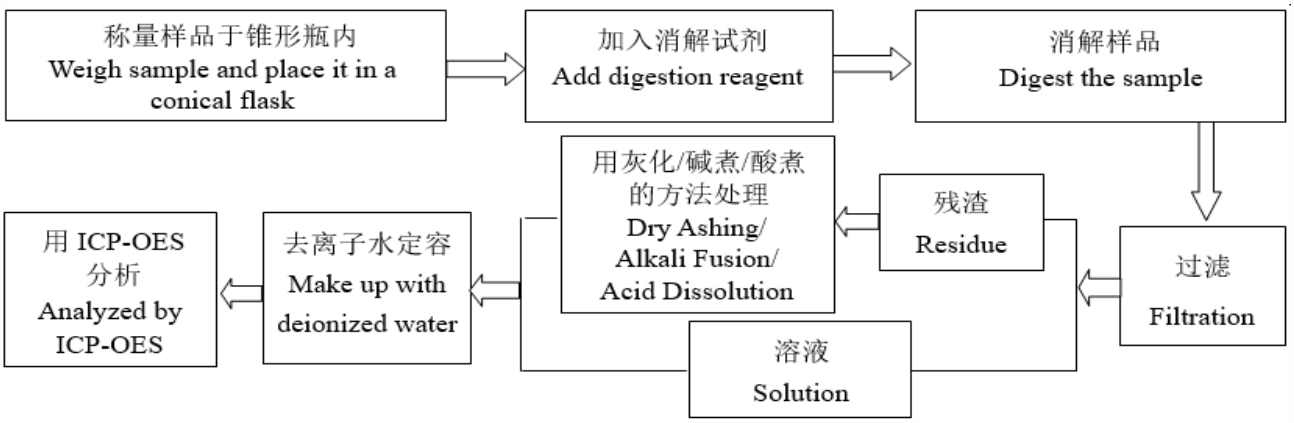
5. 邻苯二甲酸酯(DBP， BBP， DEHP， DIBP)

Phthalates (DBP, BBP, DEHP, DIBP)



6. 铍(Be)

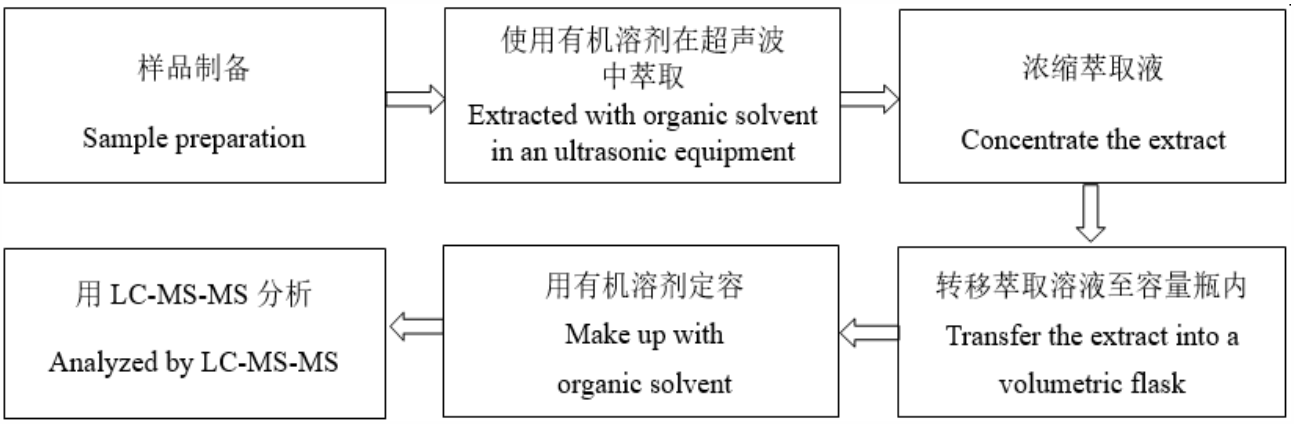
Beryllium(Be)



检测报告
Test Report

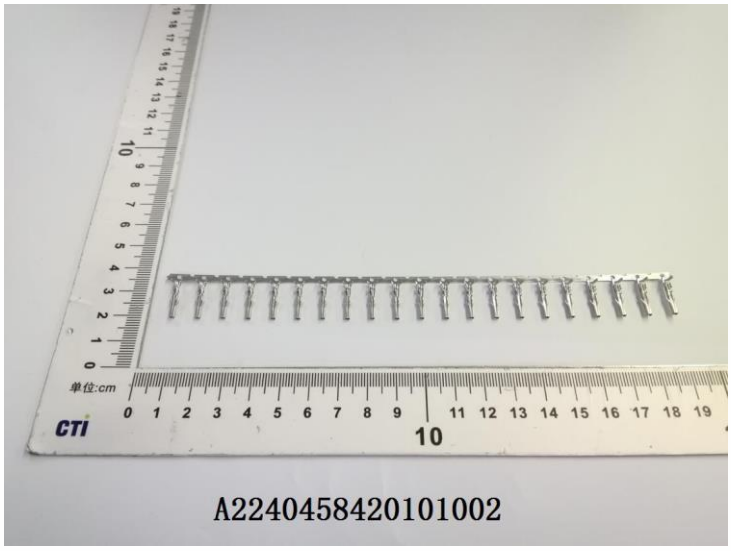
7. 全氟辛酸(PFOA)， 全氟辛烷磺酸(PFOS)

Perfluorooctanoic Acid(PFOA), Perfluorooctane Sulfonates(PFOS)



检测报告
Test Report

样品图片
Photo(s) of the sample(s)



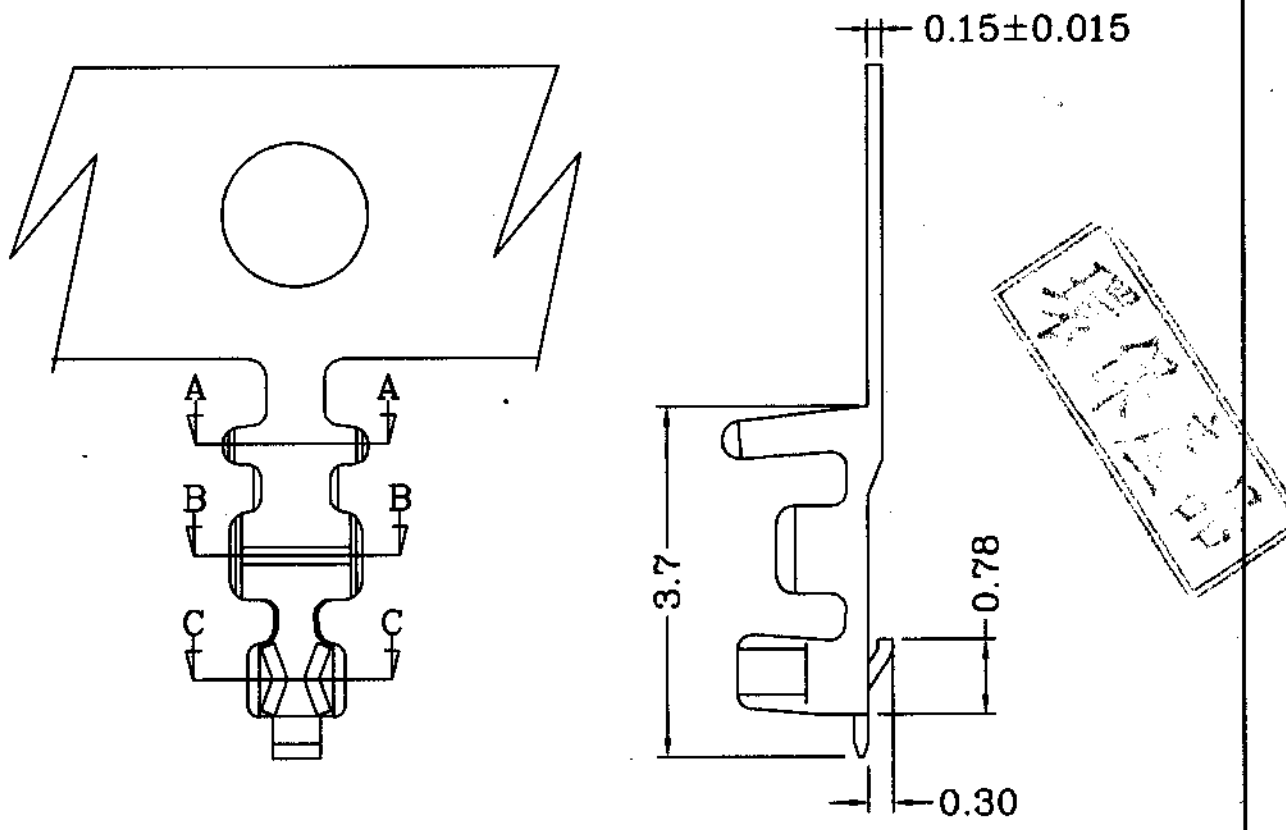
声明Statement：

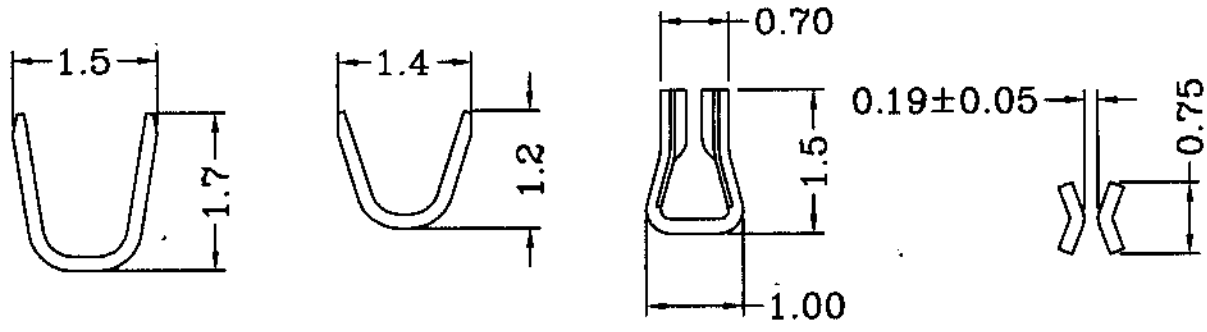
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   This report is considered invalid without approved signature, special seal and the seal on the perforation;
2. 报告抬头公司名称及地址、样品及样品信息由申请者提供，申请者应对其真实性负责，CTI未核实其真实性；
   The Company Name shown on Report and Address, the sample(s) and sample information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn’t verified;
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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 ***

JYC 東莞市加揚電子有限公司
DONG GUAN JIA YANG ELECTRONICS CO., LTD.
東莞市石碣鎮同富路西
TEL :(0769)86366858 FAX : (0769)86366811

DOCUMENT NO.
RDE0132D
SERIAL NO.
A1252T





Section A–A Section B–B Section C–C

Specification & Ordering Information:

Part No	Wire Range	Insulation O.D.	Material	Finish	Qty/reel
A1252TOP-2	AWG #26~#30	1.0mm(max)	Phosphor bronze	Tin-plated	20,000 pcs

REV.	ECN NO.	UNIT	TOLERANCE	PROJECTION	DRAWING	CHECK	APPROVAL
D	NEW DRAWING	mm	.*** ±0.08 .** ±0.15 .* ±0.25				

東莞市加揚電子有限公司

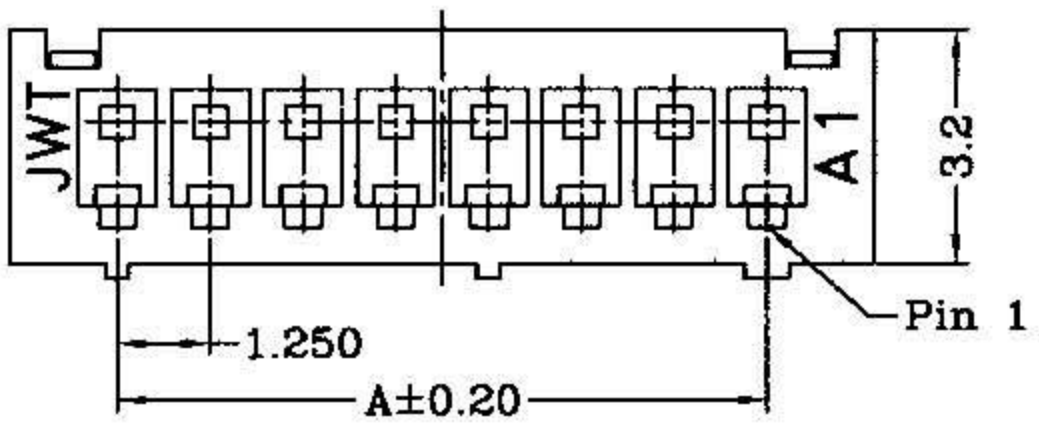
DONG GUAN JIA YANG ELECTRONICS CO., LTD.

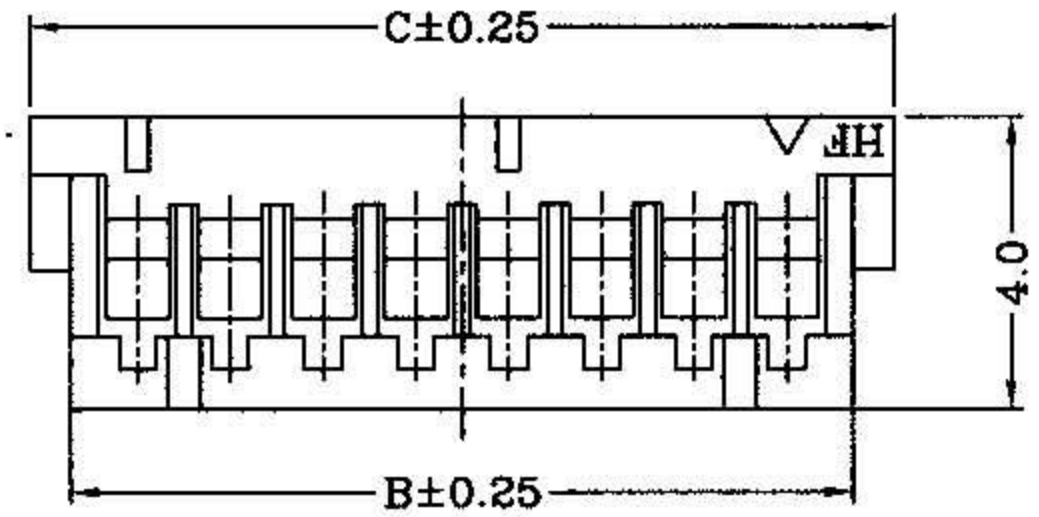
東莞市石碣鎮沙腰村中興路

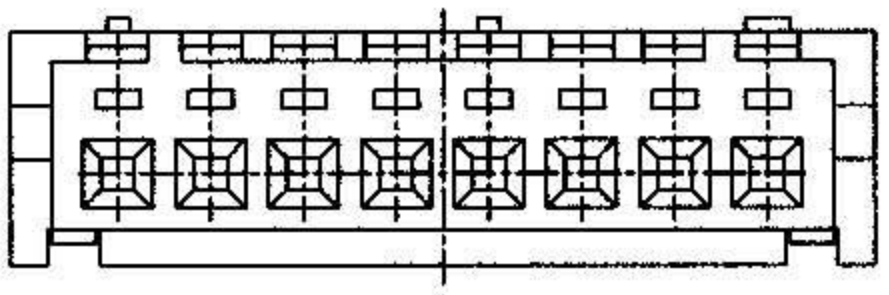
TEL :(0769)86366858 FAX : (0769)86366811

DOCUMENT NO.
RDE0781A
SERIAL NO.
A1252H00-NP-66

Material: Nylon 66 UL 94V-0 (White)







Dimensional & Ordering Information:

Circuits	Part No	Dimensions			PCS/Bag
		A	B	C	
2	A1252H00-2P-66	1.25	3.05	4.15	1000
3	A1252H00-3P-66	2.50	4.30	5.40	1000
4	A1252H00-4P-66	3.75	5.55	6.65	1000
5	A1252H00-5P-66	5.00	6.80	7.90	1000
6	A1252H00-6P-66	6.25	8.05	9.15	1000
7	A1252H00-7P-66	7.50	9.30	10.40	1000
8	A1252H00-8P-66	8.75	10.55	11.65	1000
9	A1252H00-9P-66	10.00	11.80	12.90	1000
10	A1252H00-10P-66	11.25	13.05	14.15	1000
11	A1252H00-11P-66	12.50	14.30	15.40	1000
12	A1252H00-12P-66	13.75	15.55	16.65	1000
13	A1252H00-13P-66	15.00	16.80	17.90	1000
14	A1252H00-14P-66	16.25	18.05	19.15	1000
15	A1252H00-15P-66	17.50	19.30	20.40	1000

REV.	ECN NO.	UNIT	TOLERANCE	PROJECTION	DRAWING	CHECK	APPROVAL
A	NEW DRAWING	mm	.*** ±0.08 .** ±0.15 .* ±0.25		黃念年		協理 2013.1.05 張再添

Need more information? Click Here to go to the iQ™ for Plastics database

Component - Plastics

E132701

EMS-CHEMIE (TAIWAN) LTD

36 KWANG FU SOUTH RD, HSIN CHU INDUSTRIAL PARK, FU KOU HSIANG, HSIN CHU HSIEN 30351 TW

Grilon AS V0

Polyamide 66 (PA66), unreinforced, "Grilon", furnished as pellets

Color	Min Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str
ALL	0.75	V-0	4	0	115	105	120
	0.85	V-0	4	0	115	105	120
	1.5	V-0	2	0	115	105	120
	3.0	V-0	1	0	115	105	120

Comparative Tracking Index (CTI): 0

Dimensional Stability (%): -

High-Voltage Arc Tracking Rate (HVTR): 0

High Volt, Low Current Arc Resis (D495): 5

Dielectric Strength (kV/mm): -

Volume Resistivity (10^x ohm-cm): -

ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL.

Report Date: 1986-03-24

Last Revised: 2004-12-10

Underwriters Laboratories Inc®

IEC and ISO Test Methods

Test Name	Test Method	Units	Thickness Tested (mm)	Value
Flammability	IEC 60695-11-10	Class (color)	0.75	V-0 (ALL)
			0.85	V-0 (ALL)
			1.5	V-0 (ALL)
			3.0	V-0 (ALL)
Glow-Wire Flammability (GWFI)	IEC 60695-2-12	C	0.85	960
			1.5	960
			3.0	960
Glow-Wire Ignition (GWIT)	IEC 60695-2-13	C	-	-
IEC Comparative Tracking Index	IEC 60112	Volts (Max)	-	-
IEC Ball Pressure	IEC 60695-10-2	C	-	-
ISO Heat Deflection (1.80 MPa)	ISO 75-2	C	-	-
ISO Tensile Strength	ISO 527-2	MPa	-	-
ISO Flexural Strength	ISO 178	MPa	-	-
ISO Tensile Impact	ISO 8256	kJ/m^2	-	-
ISO Izod Impact	ISO 180	kJ/m^2	-	-
ISO Charpy Impact	ISO 179-2	kJ/m^2	-	-

Underwriters Laboratories Inc®

The materials covered in this database are incomplete in certain constructional features or restricted in performance capabilities and are intended for use as components of complete equipment submitted for investigation rather than for direct separate installation in the field. THE FINAL ACCEPTANCE OF THE COMPONENT IS DEPENDENT UPON ITS INSTALLATION AND USE IN COMPLETE PRODUCTS SUBMITTED TO UNDERWRITERS LABORATORIES INC.

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ECBT2.E144544
Connectors for Use in Data, Signal, Control and Power Applications - Component

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Connectors for Use in Data, Signal, Control and Power Applications - Component

See General Information for Connectors for Use in Data, Signal, Control and Power Applications - Component

JOWLE TECHNOLOGY CO LTD E144544
13 LANE 660 HUA CHENG RD
HSIN CHUANG, TAIPEI HSIEN 242 TAIWAN

Connectors, Cat. No. B3951H02 followed by 2P thru 15P.

Models A2002, A2507 followed by H02 or WV2, followed by 2P thru 15P.

Cat. Nos. A1501 followed by H00, WV0, WR0, followed by 2 thru 15, followed by P; Cat. Nos. A2007 followed by H00, WV0, WR0, followed by 2 thru 15, followed by P; Cat. No. A2008 followed by H00, WV0, WR0, followed by 2 thru 16, followed by P; Cat. No. A2506 followed by H02, WV2, WR2, followed by 2 thru 14, followed by P.

Cat. No. A2004H00 followed by 2P thru 15P, Cat. Nos. A2005H00, A2005H02 followed by 1X1P thru 1X25P or 2X2P thru 2X25P; Cat No. A2006H00 followed by 10P thru 32P; Cat. No. B2012H00 followed by 2P thru 15P; Cat. No. B2515 followed by WR0 or WV0, followed by 3P thru 15P; Cat. No. C4201 followed by H00, H02, WR0, WR2, WV0 or WV2, followed by 2*1P thru 2X12P; Cat. Nos. C4202H00, C4202H02 followed by 2X1P thru 2X12P or 1X4P; Cat Nos. B1011T0P, B1813T0P, B1813T2P followed by 2 or 2e.

Cat. No. A2548HOO followed by 2P or 3P; Cat. No. A2508WRO followed by 2P, 3P or 4P.

Cat. Nos. C3962H00-2P, C4203H02-2P, C4204H02-2x1P.

Cat. No. A2540H00 followed by 2 thru 5, followed by P.

Cat. Nos. C1581, C1582 followed by 01 thru 05; Cat. Nos. D1021, D1022 followed by 09, 15, 25 or 37, followed by P; Cat. No. D0761 followed by WV2 or H02, followed by 15P; Cat Nos. A1561, A2361 followed by H0 or WV, followed by 0 or 2, followed by 2P thru 6P; Cat. No. A2501 followed by WV2 or WR2, followed by 2P thru 12P; Cat. No. A3963 followed by WR2, WV2 or H02, followed by 2P thru 12P; Cat. No. B2512 followed by H00 or H02, followed by 2P thru 12P; Cat. No. C2522 followed by WV2 or H02, followed by 2P thru 12P or 18P; Cat. Nos. A2001, A2502, A2505 followed by H02, WR2 or WV2, followed by 2P thru 15P; Cat. Nos. B2011, B2513 followed by 02 thru 16; Cat. No. A2501H02 followed by 2P thru 20P; Cat. Nos. A2503, A2504, A2543, A3961 followed by WR, WV or H0, followed by 0 or 2, followed by 2P thru 20P; Cat. No. C2521 followed by H02, followed by 2P thru 20P; Cat. No. C2523 followed by WV2 or H02, followed by 2P thru 20P; Cat. No. A2003H02 followed by 1 X 1P thru 1 X 21P or 1 X 40P; Cat. No. A2003H02 followed by 2 X 2P thru 2 X 22P or 2 X 55P; Cat. No. A2003 followed by WV2, WR2 followed by 2P thru 40P; Cat. No. A2003 followed by WV2, WR2 followed by 2 X 2P thru 2 X 44P; Cat. No. A2541 followed by WV2, WR2, HO2 followed by N X 02 thru N X 40; Cat. No. A2544 followed by H0 or WV, followed by 0 or 2, followed by 4P; Cat. No. A3962 followed by H0 or WV, followed by 0 or 2, followed by 6P; Cat. Nos. C5081, C5082, F6001 followed by 04.

Cat. No. A1561 followed by H0, followed by 0 or 2, followed by 1P thru 6P, followed by one code alphanumerical or +; Cat. No. A1561 followed by WV2, followed by 1P thru 6P, followed by one code alphanumerical or +; Cat. No. A3961 followed by H0, WV and WR, followed by 0 or 2, followed by 2P thru 16P, followed by one code alphanumerical or +; Cat. No. A3962 followed by H0, followed by 0 or 2, followed by 2P thru 16P, followed by one code alphanumerical or +; Cat. No. A3962 followed by WV2, followed by 2P thru 16P, followed by one code alphanumerical or +; Cat. No. A3963 followed by H02, WV2 and WR2, followed by 2P thru 16P, followed by one code alphanumerical or +; Cat. No. A7921 followed by H00-2P; Cat. Nos. C1581, 1582, followed by H02, followed by 1*1P thru 1*5P, 2*2P, 2*3P, 3*3P or 3*4P; Cat. Nos. C5081, C5082 followed by H0, followed by 0 or 2, followed by 4P, followed by one code alphanumerical or +; Cat. No. F6001 followed by HS, followed by 0 or 2, followed by 4P, followed by one code alphanumerical or +.

Cat. Nos. C6351H0, C6352H0 followed by 0 or 2, followed by 2P, 3P or 4P.

Cat. No. A1002H00 followed by 2 thru 15, followed by P; Cat. No. A1002H002x followed by 9 thru 25, followed by P; Cat. Nos. A1002WV0, A1002WR0 followed by 2 thru 15, followed by PS; Cat. No. A1002WR02x followed by 9 thru 25, followed by PS;

Cat. No. A1252H00 followed by 2 thru 15, followed by P; Cat. No. A1252H002x followed by 2 thru 20, followed by P; Cat. No. A1252WV0 followed by 2 thru 15, followed by P or PSBS; Cat. No. A1252WR0 followed by 2 thru 15, followed by P, PS or PSBS; Cat. No. A1252WV02x followed by 2 thru 20, followed by PS or PSBS; Cat. Nos. A1254H00, A1255H00 followed by 2 thru 30, followed by P; Cat. No. A1255WR0 followed by 2 thru 30, followed by PS or PSBS; Cat. Nos. A2512H00, A2512WV0, A2512WR0 followed by 2 thru 15, followed by P; Cat. No. A3811H00-5P; Cat. No. 4001H00 followed by 2 thru 4, followed by P; Cat. No. A4001WR0 followed by 2 thru 4, followed by P or PS; Cat. Nos. C2365H00-2x3P, C2365H02-2x3P, C2366H00-2x3P, C2366H02-2x3P, F6002HS0-5P.

Cat. No. A1002WV02x followed by 9 thru 25, followed by PS.

Cat. Nos. C2021H, C2022H followed by 02, followed by 1x3, followed by P.

Cat. No. A2005H followed by 00, followed by 2Bx5, 2Bx6, 2Bx7, 2Bx8, 2Bx10, 2Bx11, 2Bx12, 2Bx13, 2Bx16, 2Bx17, 2Bx18, 2Bx20, 2Bx22 or 2Bx25, followed by P; Cat. No. A2005H followed by 00, followed by 2Cx2, 2Cx3, 2Cx4, 2Cx5, 2Cx6, 2Cx7, 2Cx8, 2Cx9, 2Cx10, 2Cx11, 2Cx12, 2Cx13, 2Cx14, 2Cx15, 2Cx16, 2Cx17, 2Cx18, 2Cx20, 2Cx22 or 2Cx25, followed by P; Cat. No. A2005H followed by 00, followed by 2Dx7, 2Dx8, 2Dx9, 2Dx10, 2Dx11, 2Dx12, 2Dx13, 2Dx14, 2Dx15, 2Dx16, 2Dx17, 2Dx18, 2Dx20, 2Dx22 or 2Dx25, followed by P; Cat. No. A2005, followed by WR0 or WV0, followed by 2x5, 2x6, 2x7, 2x8, 2x10, 2x11, 2x12, 2x13, 2x16, 2x17, 2x18, 2x20, 2x22 or 2x25, followed by P; Cat. No. A2005 followed by WR0 or WV0, followed by 2Cx2 thru 2Cx25 or 2Dx7 thru 2Dx25, followed by P; Cat. No. A2005 followed by WR0, followed by 2Cx2 thru 2Cx25 or 2Dx7 thru 2Dx25, followed by PBS; Cat. No. A2501 followed by WR2 or WV2, followed by 13 thru 20, followed by P; Cat. No. A2501 followed by WV2, followed by 2 thru 20, followed by PBS; Cat. No. A2508H followed by 00, followed by 2 thru 20, followed by P; Cat. No. A2508 followed by WR0 or WV0, followed by 2 thru 20, followed by P; Cat. No. A2509H followed by 00, followed by 2 thru 15, followed by P; Cat. No. A2542H followed by 02, followed by 2x2 thru 2x25, followed by P; Cat. No. A2544H, followed by 00 or 02, followed by 2 thru 8, followed by P; Cat. No. A2544 followed by WR0, WR2, WV0 or WV2, followed by 2 thru 8, followed by P; Cat. No. A2545 followed by WR2 or WV2, followed by 2x5, 2x7, 2x8, 2x10, 2x12, 2x13, 2x15, 2x17, 2x20, 2x22, 2x23, 2x24 or 2x25, followed by P; Cat. No. A2546H followed by 00, followed by 2 thru 12, followed by P.

Cat. No. A4001H00 followed by -2P-HK thru -5P-HK or -5P; Cat. No. A4001WR0, followed by -5P, -5PS, -2P-HK thru -5P-HK, -2PS-HK thru -5PS-HK or -A2P thru -A5P; Cat. No. C3501H00-2P; Cat. No. C3502H00 followed by -2P or -2P-HK; Cat. No. C3502WR0 followed by -2P, -2P-HK, -2PS or -2PS-HK; Cat. No. C4001H00 followed by -2P thru -5P.

Cat. Nos. A3963WV2, A3963WR2 followed by -3P-D, -5P-A, -7P-U, -9P-U1, -11P-U3, -13P-U5 or -15P-W1; Cat. Nos. B2503WV0-7P, B2503HS0-7P, C2502H00-3P.

Cat. No. A1003WV0, followed by 2x5, 2x6, 2x8, 2x10, 2x15, 2x20 or 2x25, followed by PSBS, followed by G5e or blank; Cat. No. A1003H00, followed by 2x5, 2x6, 2x8, 2x10, 2x15, 2x20 or 2x25, followed by P; Cat. Nos. A1257WV0 and A1257WR0, followed by 2 thru 15, followed by PS; Cat. No. A1257H00, followed by 2 thru 15, followed by P.

Low voltage connectors, Cat. No. A1001H, followed by S0, followed by 14, 20 or 30, followed by P; Cat. No. A1004H, followed by S0, followed by 8, 14 or 20, followed by P; Cat. No. A1256H, followed by 00, followed by 1x2, 1x3, 1x4, 1x5, 1x6, 1x7, 1x8, 1x9, 1x10, 1x15, 1x20, 1x25, 1x30, followed by P; Cat. No. A2004, followed by WR0 or WV0, followed by 2 thru 15, followed by P; Cat. No. A2006H, followed by 00, followed by 2x3, 2x4, 2x17, 2x18, 2x19, 2x20, followed by P; Cat. No. A2006, followed by WR0 or WV0, followed by 2x3 thru 2x20, followed by P; Cat. No. A2006, followed by WV0, followed by 2x3 thru 2x20, followed by PBS; Cat. No. B2541, followed by WR0 or WV0, 2Ax1 thru 2Ax32 or 1Ax2 thru 1Ax32, followed by P.

Cat. No. B0502, followed by WR0, followed by A or B, followed by 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 30, 32, 33, 34, 35, 36, 38, 40, 43, 45 or 50, followed by PSD or PSU.

Low voltage connectors, uninsulated connectors, Cat. Nos. T1103T0B-2e, T1103T0B-2e-1.6.

Uninsulated low voltage connectors, Cat. Nos. B1611T, B1815T, B2516T, B3211T followed by 0P or 0B, followed by 2 or 2e; Cat. Nos. C5083T0, C5083T2 followed by P or B, followed by 2.

Multipin connectors, Models C1301WV2, C1302H02, C1301H00, C1302H00 followed by 3X3P, 3X4P or 3X5P; Model A2547 followed by 4 thru 14, followed by P; Models A1251WV0, A1251WV2, A1251WR0, A1251WR2, A1251H00, A1251H02 followed by 2 thru 15, followed by P.

Terminal Series, Cat. Nos. B1811, B1812.

Marking: Company name or tradenames "JWT", "TSJ" or "JYC" and catalog or model designation on unit or carton.

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測試報告
Test Report

號碼(No.): ETR24A03184　　日期(Date): 24-Oct-2024　　

瑞士遠東股份有限公司 (EMS-CHEMIE (TAIWAN) LTD.)
新竹縣湖口鄉新竹工業區光復南路36號 (36, KWANG FU SOUTH ROAD, HSIN CHU INDUSTRIAL PARK, HSIN CHU HSIEN, TAIWAN, R. O. C.)

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

送樣廠商(Sample Submitted By)	:	瑞士遠東股份有限公司 (EMS-CHEMIE (TAIWAN) LTD.)
樣品名稱(Sample Name)	:	GRILON AS V0 NATURAL 6093

==========

收件日(Sample Receiving Date)	:	17-Oct-2024
測試期間(Testing Period)	:	17-Oct-2024 to 24-Oct-2024

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) 依據客戶指定，測試 PAHs 及其他測項。 (As specified by client, to test PAHs and 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

CHECK REPORT
PIN CODE: B48400D8

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測試報告
Test Report

瑞士遠東股份有限公司 (EMS-CHEMIE (TAIWAN) LTD.)
新竹縣湖口鄉新竹工業區光復南路36號 (36, KWANG FU SOUTH ROAD, HSIN CHU INDUSTRIAL PARK, HSIN CHU HSIEN, TAIWAN, R. O. C.)

測試部位敘述 (Test Part Description)

No.1 : 白色塑膠粒 (WHITE PLASTIC PELLETS)

測試結果 (Test Results)

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)	限值 (Limit)
				No.1	
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))		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

瑞士遠東股份有限公司 (EMS-CHEMIE (TAIWAN) LTD.)
新竹縣湖口鄉新竹工業區光復南路36號 (36, KWANG FU SOUTH ROAD, HSIN CHU INDUSTRIAL PARK, HSIN CHU HSIEN, TAIWAN, R. O. C.)

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 62321-9: 2021，以氣相層析儀/質譜儀分析。(With reference to IEC 62321-9: 2021, analysis was performed by GC/MS.)	mg/kg	20	n.d.	-

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測試報告
Test Report

瑞士遠東股份有限公司 (EMS-CHEMIE (TAIWAN) LTD.)
新竹縣湖口鄉新竹工業區光復南路36號 (36, KWANG FU SOUTH ROAD, HSIN CHU INDUSTRIAL PARK, HSIN CHU HSIEN, TAIWAN, R. O. C.)

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.	-
鄰苯二甲酸二異癸酯 (DIDP) (Diisodecyl phthalate (DIDP)) (CAS No.: 26761-40-0, 68515-49-1)	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.	-
鄰苯二甲酸二異壬酯 (DINP) (Diisononyl phthalate (DINP)) (CAS No.: 28553-12-0, 68515-48-0)		mg/kg	50	n.d.	-
鄰苯二甲酸二正辛酯 (DNOP) (Di-n-octyl phthalate (DNOP)) (CAS No.: 117-84-0)		mg/kg	50	n.d.	-
鄰苯二甲酸二丙酯 (DPrP) (Dipropyl phthalate (DPrP)) (CAS No.: 131-16-8)		mg/kg	50	n.d.	-
鄰苯二甲酸二苯酯 (DPhP) (Diphenyl phthalate (DPhP)) (CAS No.: 84-62-8)		mg/kg	50	n.d.	-
鄰苯二甲酸二正戊酯 (DNPP) (Di-n-pentyl phthalate (DNPP)) (CAS No.: 131-18-0)		mg/kg	50	n.d.	-
鄰苯二甲酸二正壬酯 (DNNP) (Di-n-nonyl phthalate (DNNP)) (CAS No.: 84-76-4)		mg/kg	50	n.d.	-
鄰苯二甲酸二正己酯 (DNHP) (Di-n-hexyl phthalate (DNHP)) (CAS No.: 84-75-3)		mg/kg	50	n.d.	-
鄰苯二甲酸二甲酯 (DMP) (Dimethyl phthalate (DMP)) (CAS No.: 131-11-3)		mg/kg	50	n.d.	-
鄰苯二甲酸二異辛酯 (DIOP) (Diisooctyl phthalate (DIOP)) (CAS No.: 27554-26-3)		mg/kg	50	n.d.	-

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測試報告
Test Report

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新竹縣湖口鄉新竹工業區光復南路36號 (36, KWANG FU SOUTH ROAD, HSIN CHU INDUSTRIAL PARK, HSIN CHU HSIEN, TAIWAN, R. O. C.)

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
鄰苯二甲酸二乙酯 (DEP) (Di-ethyl phthalate (DEP)) (CAS No.: 84-66-2)	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.	-
鄰苯二甲酸二環己酯 (DCHP) (Di-cyclohexyl phthalate (DCHP)) (CAS No.: 84-61-7)		mg/kg	50	n.d.	-
鄰苯二甲酸二苯甲基酯 (Dibenzyl phthalate) (CAS No.: 523-31-9)		mg/kg	50	n.d.	-
鄰苯二甲酸雙(2-甲氧基乙基)酯 (DMEP) (Bis(2-methoxyethyl) phthalate (DMEP)) (CAS No.: 117-82-8)		mg/kg	50	n.d.	-
鄰苯二甲酸二 (C6-8支鏈)烷基酯，富C7 (DIHP) (1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)) (CAS No.: 71888-89-6)		mg/kg	50	n.d.	-
全氟辛烷磺酸及其鹽類 (PFOS and its salts) (CAS No.: 1763-23-1 and its salts)	參考US EPA 3550C: 2007，以液相層析串聯質譜儀分析。(With reference to US EPA 3550C: 2007, analysis was performed by LC/MS/MS.)	mg/kg	10	n.d.	-
全氟辛酸及其鹽類 (PFOA and its salts) (CAS No.: 335-67-1 and its salts)	參考US EPA 3550C: 2007，以液相層析串聯質譜儀分析。(With reference to US EPA 3550C: 2007, analysis was performed by LC/MS/MS.)	mg/kg	10	n.d.	-
磷酸三(2-氯乙基)酯 (TCEP) (Tris(2-chloroethyl) phosphate (TCEP)) (CAS No.: 115-96-8)	參考US EPA 3550C: 2007，以氣相層析儀/質譜儀分析。(With reference to US EPA 3550C: 2007, analysis was performed by GC/MS.)	mg/kg	5	n.d.	-
N-苯基苯胺與苯乙烯和2,4,4-三甲基戊烯的反應物 (Benzenamine, N-phenyl-, reaction products with styrene and 2,4,4-trimethylpentene) (CAS No.: 68921-45-9)	參考US EPA 3550C: 2007，以氣相層析儀/質譜儀分析。(With reference to US EPA 3550C: 2007, analysis was performed by GC/MS.)	mg/kg	100	n.d.	-

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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
多環芳香烴 (Polycyclic Aromatic Hydrocarbons) (PAHs)					
苯駢(a)芘 (Benzo[a]pyrene) (CAS No.: 50-32-8)	參考AfPS GS 2019:01 PAK，以氣相層析儀/質譜儀分析。(With reference to AfPS GS 2019:01 PAK, analysis was performed by GC/MS.)	mg/kg	0.2	n.d.	-
苯駢(e)芘 (Benzo[e]pyrene) (CAS No.: 192-97-2)		mg/kg	0.2	n.d.	-
苯駢蒽 (Benzo[a]anthracene) (CAS No.: 56-55-3)		mg/kg	0.2	n.d.	-
苯(b)苯駢芴 (Benzo[b]fluoranthene) (CAS No.: 205-99-2)		mg/kg	0.2	n.d.	-
苯(j)苯駢芴 (Benzo[j]fluoranthene) (CAS No.: 205-82-3)		mg/kg	0.2	n.d.	-
苯(k)苯駢芴 (Benzo[k]fluoranthene) (CAS No.: 207-08-9)		mg/kg	0.2	n.d.	-
䓛 (Chrysene) (CAS No.: 218-01-9)		mg/kg	0.2	n.d.	-
二苯駢蒽 (Dibenzo[a,h]anthracene) (CAS No.: 53-70-3)		mg/kg	0.2	n.d.	-
苯駢苝 (Benzo[g,h,i]perylene) (CAS No.: 191-24-2)		mg/kg	0.2	n.d.	-
茚酮芘 (Indeno[1,2,3-c,d]pyrene) (CAS No.: 193-39-5)		mg/kg	0.2	n.d.	-
蒽 (Anthracene) (CAS No.: 120-12-7)		mg/kg	0.2	n.d.	-
苯駢芴 (Fluoranthene) (CAS No.: 206-44-0)		mg/kg	0.2	n.d.	-
菲 (Phenanthrene) (CAS No.: 85-01-8)		mg/kg	0.2	n.d.	-
芘 (Pyrene) (CAS No.: 129-00-0)		mg/kg	0.2	n.d.	-
萘 (Naphthalene) (CAS No.: 91-20-3)		mg/kg	0.2	n.d.	-
多環芳香烴15項總和 (Sum of 15 PAHs)		mg/kg	-	n.d.	-
苊烯 (Acenaphthylene) (CAS No.: 208-96-8)	參考AfPS GS 2019:01 PAK，以氣相層析儀/質譜儀分析。(With reference to AfPS GS 2019:01 PAK, analysis was performed by GC/MS.)	mg/kg	0.2	n.d.	-
苊 (Acenaphthene) (CAS No.: 83-32-9)		mg/kg	0.2	n.d.	-
芴 (Fluorene) (CAS No.: 86-73-7)		mg/kg	0.2	n.d.	-

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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
不完全鹵化氟溴化物 (Hydrobromofluorocarbons) (HBFCs)					
HBFC-271B1 (C3H6FBr)	參考US EPA 5021A: 2014，以氣相層析儀/質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-262B1 (C3H5F2Br)	參考US EPA 5021A: 2014，以氣相層析儀/質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-261B2 (C3H5FBr2)	參考US EPA 5021A: 2014，以氣相層析儀/質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-253B1 (C3H4F3Br)	參考US EPA 5021A: 2014，以氣相層析儀/質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-252B2 (C3H4F2Br2)	參考US EPA 5021A: 2014，以氣相層析儀/質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-251B3 (C3H4FBr3)	參考US EPA 5021A: 2014，以氣相層析儀/質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-244B1 (C3H3F4Br)	參考US EPA 5021A: 2014，以氣相層析儀/質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-

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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
HBFC-243B2 (C3H3F3Br2)	參考US EPA 5021A: 2014，以氣相層析儀/質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-242B3 (C3H3F2Br3)	參考US EPA 5021A: 2014，以氣相層析儀/質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-241B4 (C3H3FBr4)	參考US EPA 5021A: 2014，以氣相層析儀/質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-235B1 (C3H2F5Br)	參考US EPA 5021A: 2014，以氣相層析儀/質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-234B2 (C3H2F4Br2)	參考US EPA 5021A: 2014，以氣相層析儀/質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-233B3 (C3H2F3Br3)	參考US EPA 5021A: 2014，以氣相層析儀/質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-232B4 (C3H2F2Br4)	參考US EPA 5021A: 2014，以氣相層析儀/質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-231B5 (C3H2FBr5)	參考US EPA 5021A: 2014，以氣相層析儀/質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-

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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
HBFC-226B1 (C3HF6Br)	參考US EPA 5021A: 2014，以氣相層析儀/質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-225B2 (C3HF5Br2)	參考US EPA 5021A: 2014，以氣相層析儀/質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-224B3 (C3HF4Br3)	參考US EPA 5021A: 2014，以氣相層析儀/質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-223B4 (C3HF3Br4)	參考US EPA 5021A: 2014，以氣相層析儀/質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-222B5 (C3HF2Br5)	參考US EPA 5021A: 2014，以氣相層析儀/質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-221B6 (C3HFBr6)	參考US EPA 5021A: 2014，以氣相層析儀/質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-151B1 (C2H4FBr)	參考US EPA 5021A: 2014，以氣相層析儀/質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-142B1 (C2H3F2Br)	參考US EPA 5021A: 2014，以氣相層析儀/質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-

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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
HBFC-141B2 (C2H3FBr2)	參考US EPA 5021A: 2014，以氣相層析儀/質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-133B1 (C2H2F3Br)	參考US EPA 5021A: 2014，以氣相層析儀/質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-132B2 (C2H2F2Br2)	參考US EPA 5021A: 2014，以氣相層析儀/質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-131B3 (C2H2FBr3)	參考US EPA 5021A: 2014，以氣相層析儀/質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-124B1 (C2HF4Br)	參考US EPA 5021A: 2014，以氣相層析儀/質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-123B2 (C2HF3Br2)	參考US EPA 5021A: 2014，以氣相層析儀/質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-122B3 (C2HF2Br3)	參考US EPA 5021A: 2014，以氣相層析儀/質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-121B4 (C2HFBr4)	參考US EPA 5021A: 2014，以氣相層析儀/質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-

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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
HBFC-31B1 (CH2FBr) (CAS No.: 373-52-4)	參考US EPA 5021A: 2014，以氣相層析儀/質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-22B1 (CHF2Br) (CAS No.: 1511-62-2)	參考US EPA 5021A: 2014，以氣相層析儀/質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-21B2 (CHFBr2) (CAS No.: 1868-53-7)	參考US EPA 5021A: 2014，以氣相層析儀/質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-

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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測試報告
Test Report

瑞士遠東股份有限公司 (EMS-CHEMIE (TAIWAN) LTD.)
新竹縣湖口鄉新竹工業區光復南路36號 (36, KWANG FU SOUTH ROAD, HSIN CHU INDUSTRIAL PARK, HSIN CHU HSIEN, TAIWAN, R. O. C.)

PAHs Remark：

Δ 德國產品安全委員會(AfPS): GS PAHs 要求

AfPS (German commission for Product Safety): GS PAHs requirements

項目 (Parameter)	第 1 類(Category 1)	第 2 類(Category 2)		第 3 類(Category 3)	
	意圖放入口中的材料或者長時間接觸皮膚(超過 30 秒)的 2009/48/EC 定義的玩具材料和 3 歲以下兒童使用的產品(Materials intended to be placed in the mouth, or materials in toys (Directive 2009/48/EC) or articles for children up to 3 years of age with intended long-term skin contact (> 30 seconds))	不屬於第 1 類的材料，並意圖或可預見與皮膚接觸逾 30 秒(長期皮膚接觸)或重複的短時間接觸(Materials that are not in Category 1, with intended or foreseeable long-term skin contact (> 30 seconds) or short-term repetitive contact with the skin)		不屬於第 1 類或第 2 類的材料，並意圖或可預見與皮膚接觸不超過 30 秒(短期皮膚接觸)(Materials not covered by Category 1 or 2, with intended or foreseeable short-term skin contact (≦ 30 seconds))	
		a. 供 14 歲以下兒童使用的產品(Use by children under 14)	b. 其它產品(Other consumer products)	a. 供 14 歲以下兒童使用的產品(Use by children under 14)	b. 其它產品(Other consumer products)
Naphthalene	< 1	< 2		< 10	
Phenanthrene	< 1 Sum	< 5 Sum	< 10 Sum	< 20 Sum	< 50 Sum
Anthracene					
Fluoranthene					
Pyrene					
Benzo[a]anthracene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Chrysene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[b]fluoranthene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[j]fluoranthene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[k]fluoranthene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[a]pyrene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[e]pyrene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Indeno[1,2,3-c,d] pyrene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Dibenzo[a,h]anthracene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[g,h,i]perylene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
15 項 PAH 總濃度 (Sum of 15 PAH)	< 1	< 5	< 10	< 20	< 50

單位(Unit)：mg/kg

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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
	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

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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
	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

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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}全氟辛烷磺酸氮鎓鹽 (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
	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

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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)	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) (9CI) (PFOA-C_5H_5N) Octanoic acid, pentadecafluoro-, compd. with pyridine (1:1) (9CI) (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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測試報告
Test Report

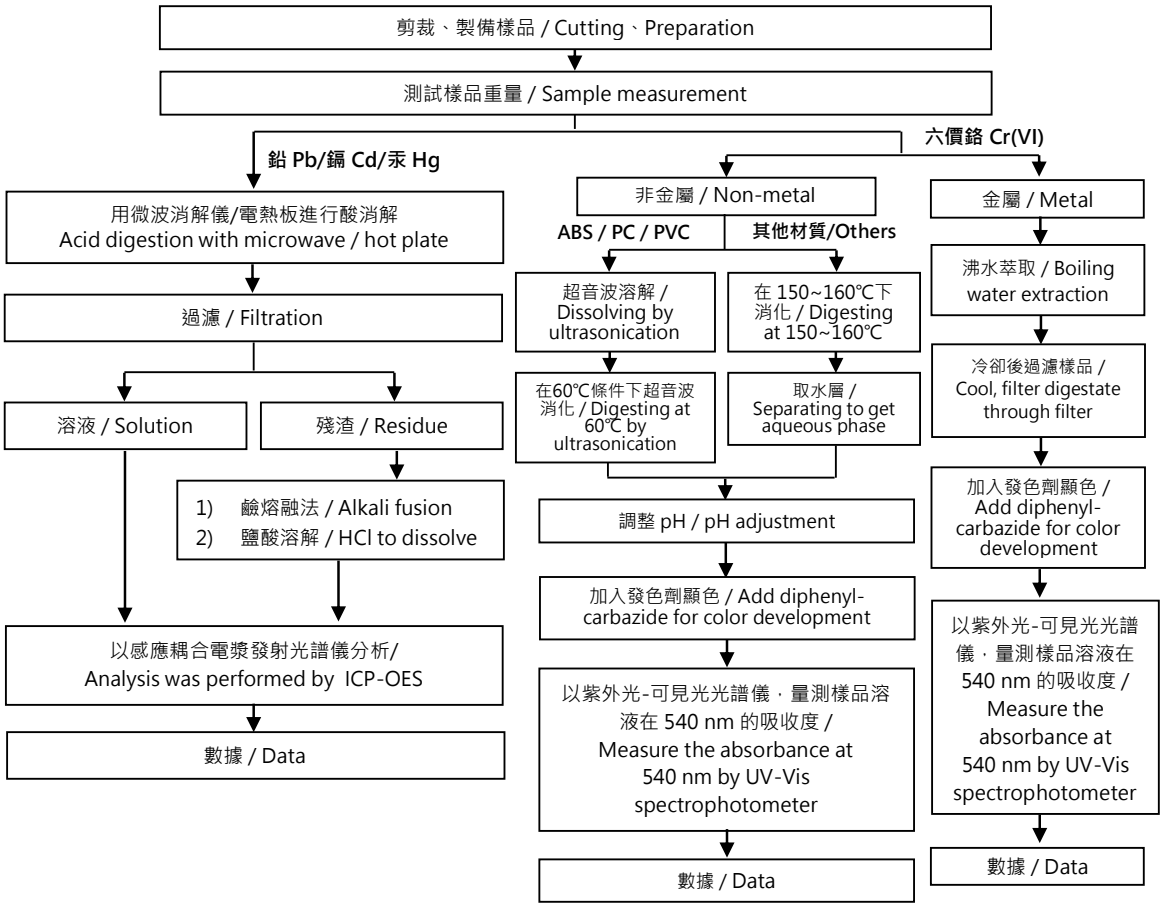
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重金屬流程圖 / Analytical flow chart of heavy metal

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.

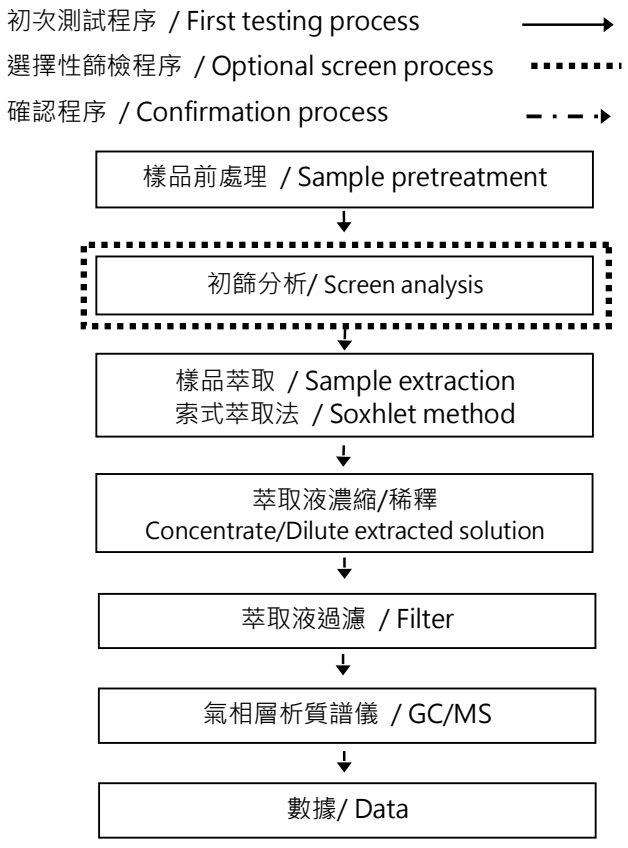
（Cr^{6+} test method excluded）



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

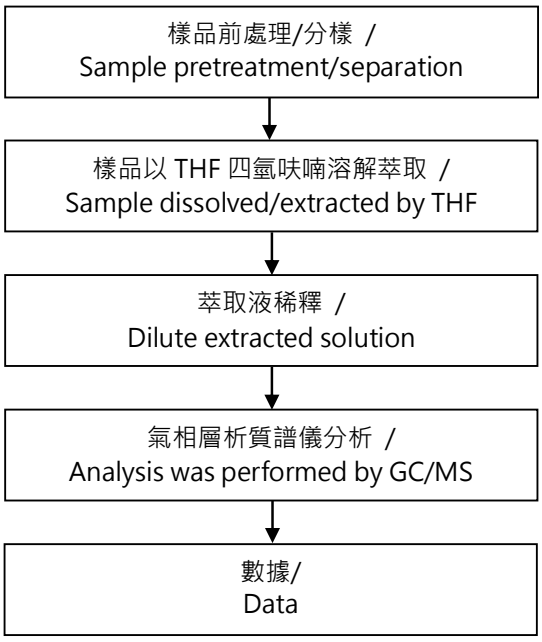


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可塑劑分析流程圖 / Analytical flow chart - Phthalate

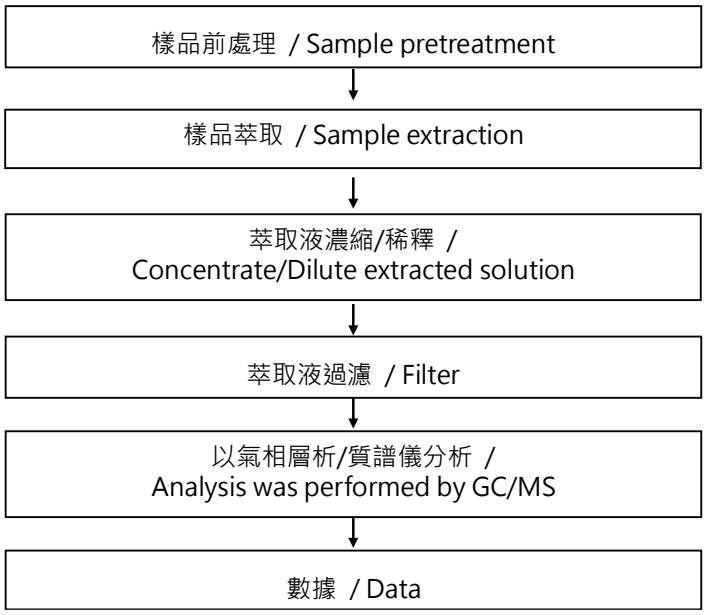
【測試方法/Test method: IEC 62321-8】



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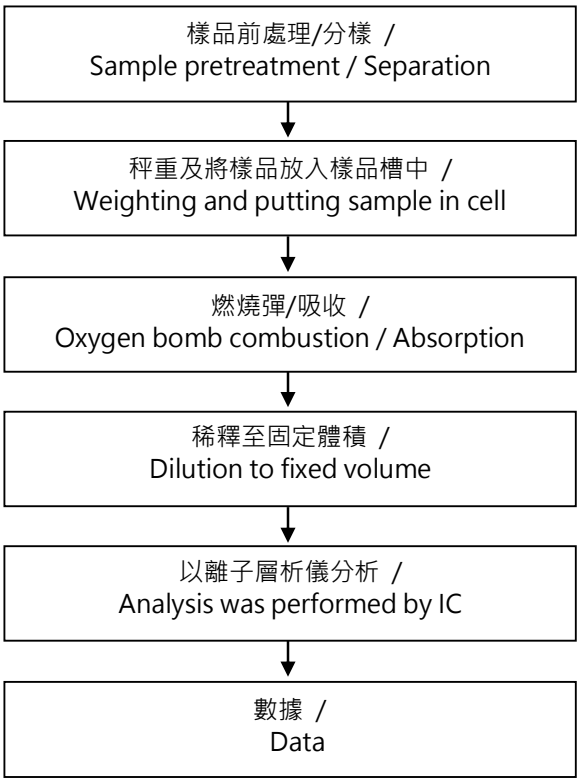
六溴環十二烷分析流程圖 / Analytical flow chart - HBCDD



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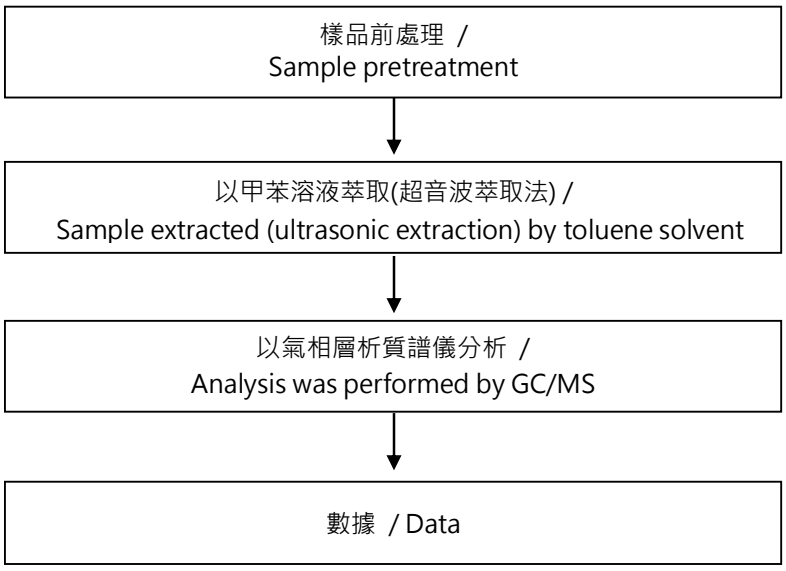
鹵素分析流程圖 / Analytical flow chart - Halogen



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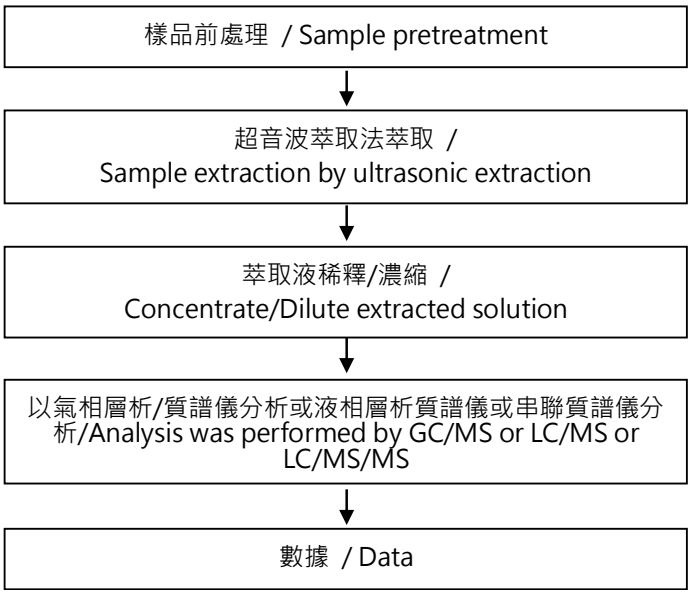
多環芳香烴分析流程圖 /
Analytical flow chart - PAHs (Polycyclic Aromatic Hydrocarbons)



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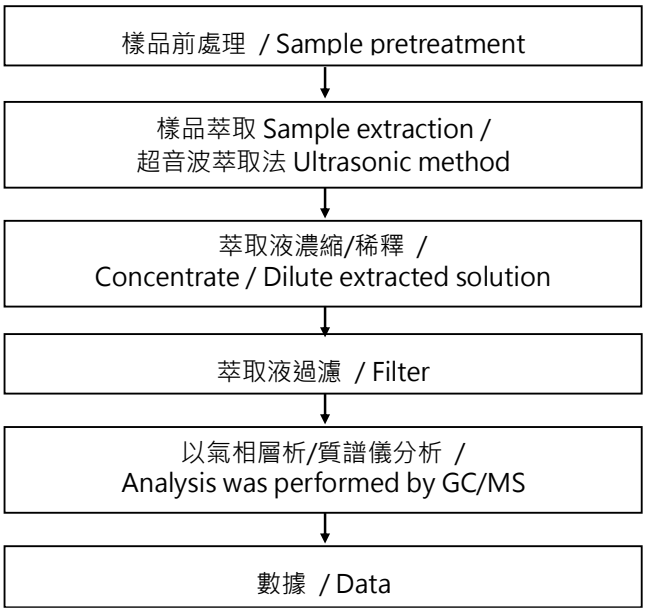
全氟化合物(包含全氟辛酸/全氟辛烷磺酸/其相關化合物等等)分析流程圖 / Analytical flow chart – PFAS (including PFOA/PFOS/its related compound, etc.)



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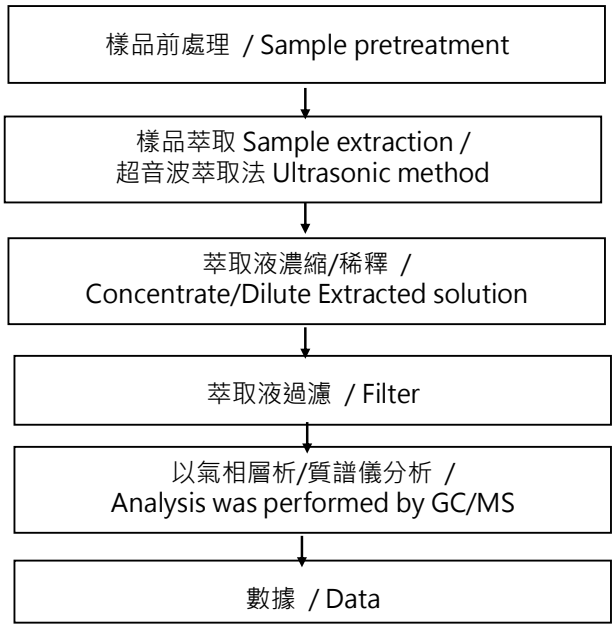
有機磷化合物分析流程圖 / Analytical flow chart - Organic phosphorus compounds



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BNST分析流程圖 / Analytical flow chart - BNST

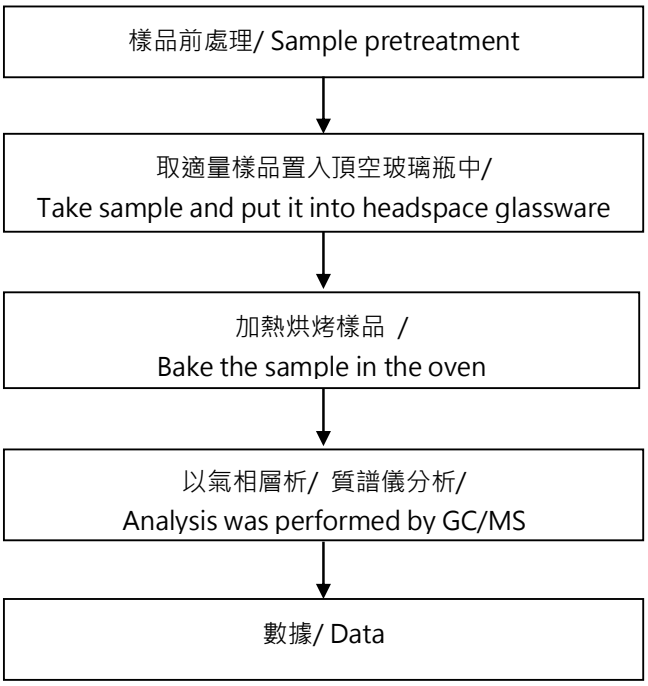


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揮發性有機化合物分析流程圖/
Analytical flow chart of volatile organic compounds (VOCs)

【參考方法/ Reference method：US EPA 5021A】



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測試報告
Test Report

號碼(No.): ETR24A03184　　日期(Date): 24-Oct-2024　　

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

ETR24A03184



** 報告結尾 (End of Report) **

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Test Report

No.: CANEC24022446707 **Date:** Oct 17, 2024

Client Name: DONGGUAN YULAN METAL CO.,LTD

Client Address: ROOM 101, BUILDING 2, NO.11, SECOND WUSONG STREET, DONGCHENG STREET, DONGGUAN CITY, GUANGDONG PROVINCE

Sample Name: PHOSPHOR BRONZE COPPER C5191

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

SGS Job No.: SZP24-044456

Sample Receiving Date: Oct 12, 2024

Testing Period: Oct 12, 2024 ~ Oct 17, 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

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

789355C9

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Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

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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 www.sgsgroup.com.cn
t (86–20) 82155555 sgs.china@sgs.com

Test Result(s):

Test Part Description：

SN ID	Sample No.	SGS Sample ID	Description
SN1	A3	CAN24-0224467-0001.C003	Copper-colored metal

Remarks:

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

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 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	9
Mercury (Hg)	1000	mg/kg	2	ND
Cadmium (Cd)	100	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))▼	-	µg/cm²	0.10	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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检验检测专用章 Inspection & Testing Services

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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) ▼ =
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.

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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检验检测专用章 Inspection & Testing Services

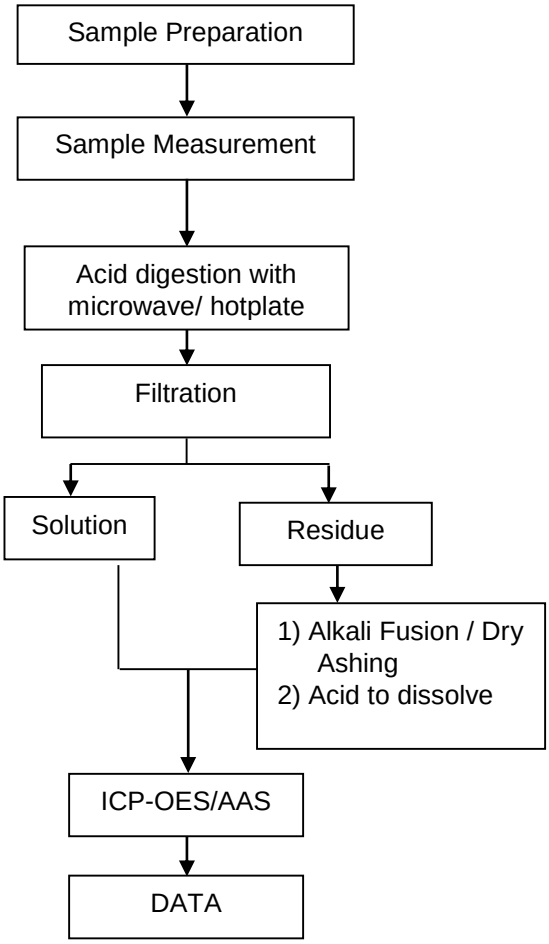
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Elements Testing Flow Chart

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

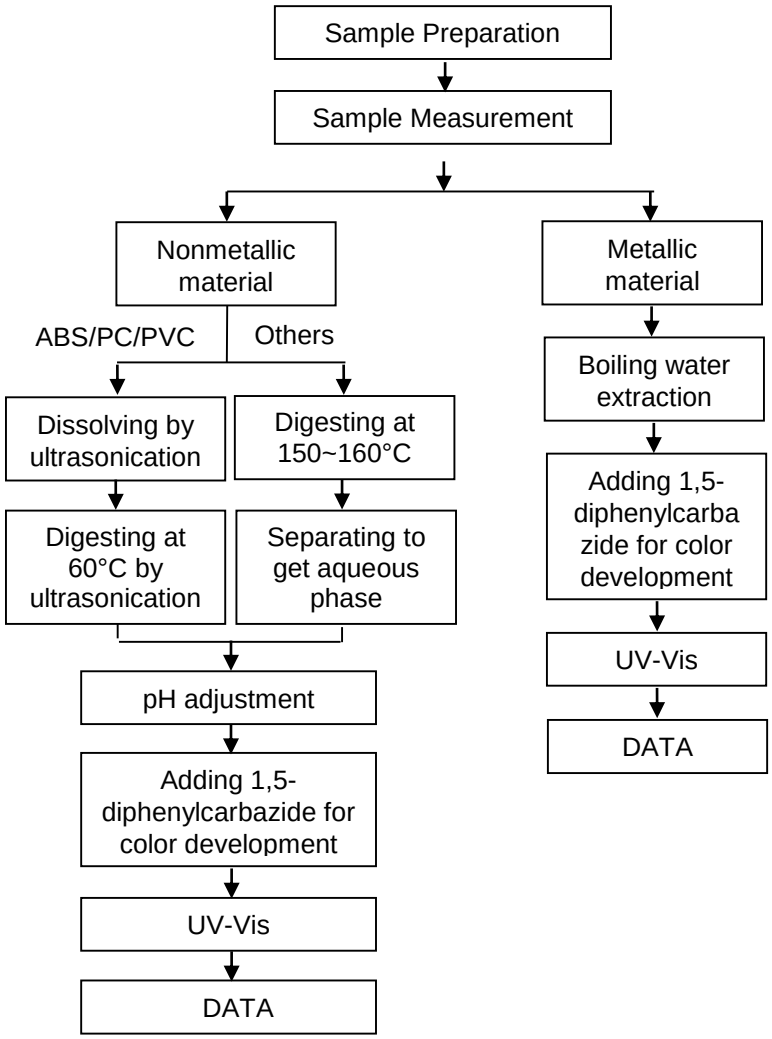


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Hexavalent Chromium (Cr(VI)) Testing Flow Chart

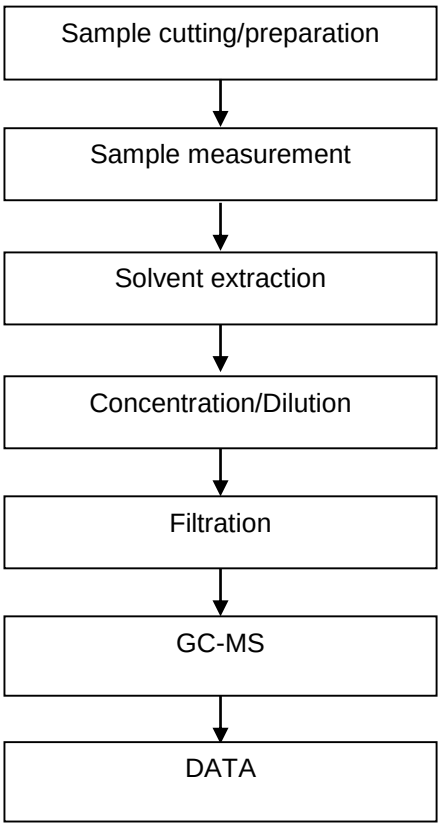


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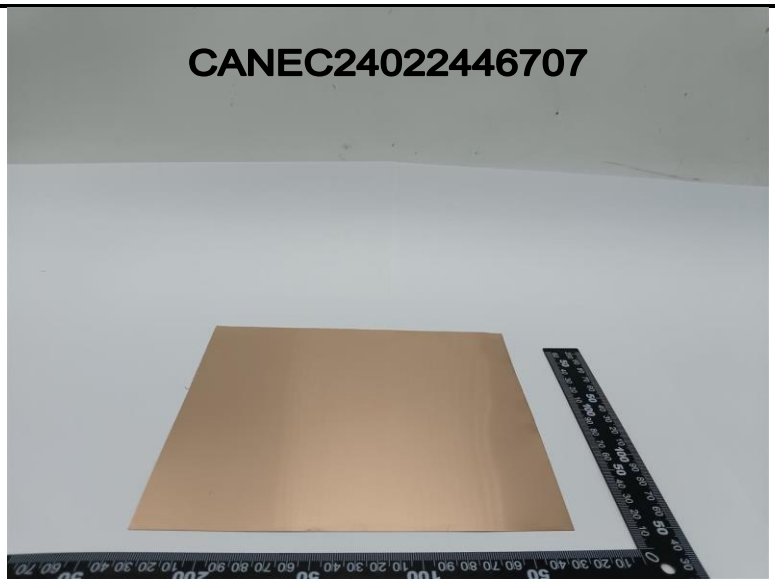
PBB/PBDE/Phthalates Testing Flow Chart



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Sample Photo:



CAN24-0224467-0001.C003

SGS authenticate the photo on original report only

*** End of Report ***

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检测报告
Test Report

报告编号 A2240458420101003E
Report No. A2240458420101003E

报告抬头公司名称 博罗县宏晟电子有限公司
Company Name shown on Report HONGSHENG ELECTRONIC CO.,LTD
地 址 惠州市博罗县龙溪镇电镀基地301栋
Address BUILDING 301,1ST FLOOR,LONGXI PLATING BASE,LONGXI TOWN,BOLUO COUNTY.

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

样品名称	亮锡镀层(Sn-001)
Sample Name	Bright Tin Layer(Sn-001)
材料名称	铜材
Material	copper product
样品接收日期	2024.07.31
Sample Received Date	Jul. 31, 2024
样品检测日期	2024.07.31-2024.08.05
Testing Period	Jul. 31, 2024 to Aug. 5, 2024

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

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

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

批 准
Approved by

郑晴涛
技术经理 Technical Manager

日 期
Date 2024.08.05

No. R393381757

华测检测认证集团股份有限公司
Centre Testing International Group Co.,Ltd.
CTI Building, Xing Dong Community, Xin'an Sub-district, Bao'an District, Shenzhen City, Guangdong Province, P.R. China
广东省深圳市宝安区新安街道兴东社区华测检测大楼

检测报告
Test Report

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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
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检测依据 Test Method

测试项目 Test Item(s)	测试方法 Test Method	测试仪器 Measured Equipment(s)
铅 Lead (Pb)	参考IEC 62321-5:2013 Refer to IEC 62321-5:2013	ICP-OES
镉 Cadmium (Cd)	参考IEC 62321-5:2013 Refer to IEC 62321-5:2013	ICP-OES
汞 Mercury (Hg)	参考IEC 62321-4:2013+AMD1:2017 CSV Refer to IEC 62321-4:2013+AMD1:2017 CSV	ICP-OES
六价铬 Hexavalent Chromium (Cr(VI))	IEC 62321-7-1:2015	UV-Vis
多溴联苯 Polybrominated Biphenyls (PBBs)*	IEC 62321-6:2015	GC-MS
多溴二苯醚 Polybrominated Diphenyl Ethers (PBDEs)*	IEC 62321-6:2015	GC-MS
邻苯二甲酸酯 Phthalates (DBP, BBP, DEHP, DIBP)*	IEC 62321-8:2017	GC-MS
铍 Beryllium(Be)*	参考US EPA 3050B:1996 & US EPA 6010D:2018 Refer to US EPA 3050B:1996 & US EPA 6010D:2018	ICP-OES
全氟辛酸 Perfluorooctanoic Acid(PFOA)	参考US EPA 3550C:2007 & US EPA 8321B:2007 Refer to US EPA 3550C:2007 & US EPA 8321B:2007	LC-MS-MS
全氟辛烷磺酸 Perfluorooctane Sulfonates(PFOS)	参考US EPA 3550C:2007 & US EPA 8321B:2007 Refer to US EPA 3550C:2007 & US EPA 8321B:2007	LC-MS-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. ▼	0.10 μg/cm² (LOQ)	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.	5 mg/kg	1000 mg/kg
二溴联苯 Dibromobiphenyl	N.D.	5 mg/kg	
三溴联苯 Tribromobiphenyl	N.D.	5 mg/kg	
四溴联苯 Tetrabromobiphenyl	N.D.	5 mg/kg	
五溴联苯 Pentabromobiphenyl	N.D.	5 mg/kg	
六溴联苯 Hexabromobiphenyl	N.D.	5 mg/kg	
七溴联苯 Heptabromobiphenyl	N.D.	5 mg/kg	
八溴联苯 Octabromobiphenyl	N.D.	5 mg/kg	
九溴联苯 Nonabromobiphenyl	N.D.	5 mg/kg	
十溴联苯 Decabromobiphenyl	N.D.	5 mg/kg	

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL	限值 Limit
	003		
多溴二苯醚 Polybrominated Diphenyl Ethers (PBDEs)*			
一溴二苯醚 Monobromodiphenyl ether	N.D.	5 mg/kg	1000 mg/kg
二溴二苯醚 Dibromodiphenyl ether	N.D.	5 mg/kg	
三溴二苯醚 Tribromodiphenyl ether	N.D.	5 mg/kg	
四溴二苯醚 Tetrabromodiphenyl ether	N.D.	5 mg/kg	
五溴二苯醚 Pentabromodiphenyl ether	N.D.	5 mg/kg	
六溴二苯醚 Hexabromodiphenyl ether	N.D.	5 mg/kg	
七溴二苯醚 Heptabromodiphenyl ether	N.D.	5 mg/kg	
八溴二苯醚 Octabromodiphenyl ether	N.D.	5 mg/kg	
九溴二苯醚 Nonabromodiphenyl ether	N.D.	5 mg/kg	
十溴二苯醚 Decabromodiphenyl ether	N.D.	5 mg/kg	

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

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	003	
铍 Beryllium (Be)*	N.D.	2 mg/kg

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	003	
全氟辛酸 Perfluorooctanoic Acid (PFOA)	N.D.	0.5 μg/m²

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	003	
全氟辛烷磺酸 Perfluorooctane Sulfonates (PFOS)	N.D.	0.5 μg/m²

检测报告
Test Report

样品/部位描述 Sample/Part Description

序号 No.	CTI样品ID CTI Sample ID	描述 Description
1	003	银白色镀层 Silvery white plating

备注: **对于检测铅，镉，汞，铍之样品已消解完全。**

-N.D. = 未检出（小于方法检出限或定量限）

-mg/kg = ppm = 百万分之一

-1000 mg/kg = 0.1%

-LOQ = 定量限，六价铬的定量限为0.10 μg/cm²

-▼六价铬浓度小于0.10 μg/cm²，样品未检出六价铬。由于未获知样品的存储条件和生产日期，样品的六价铬测试结果仅能代表测试时样品含六价铬的状态。

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

-MDL = Method Detection Limit

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

-mg/kg = ppm = parts per million

-1000 mg/kg = 0.1%

-LOQ = Limit of Quantification, The LOQ of Hexavalent chromium is 0.10 μg/cm²

-▼ The sample is negative for Cr(VI) − The Cr(VI) concentration is below 0.10 μg/cm². The coating is considered a non-Cr(VI) based coating. 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.

注释: **-*表示该项目/方法不在CNAS认可范围内。**

-本报告中的数据结果供科研、教学、企业内部质量控制、企业产品研发等目的用。

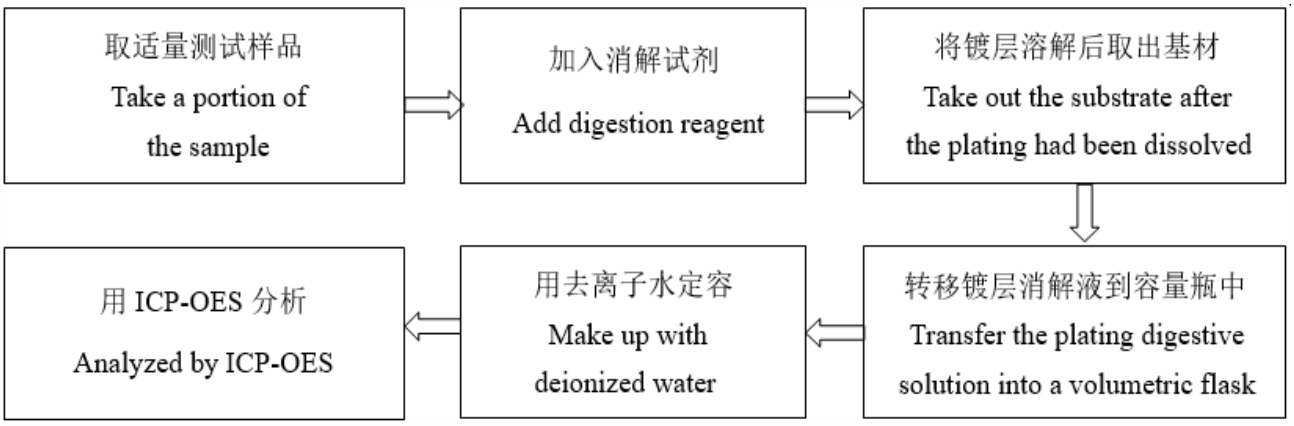
Note: **-*indicates the item(s)/method(s) is (are) not in CNAS accreditation scope.**

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

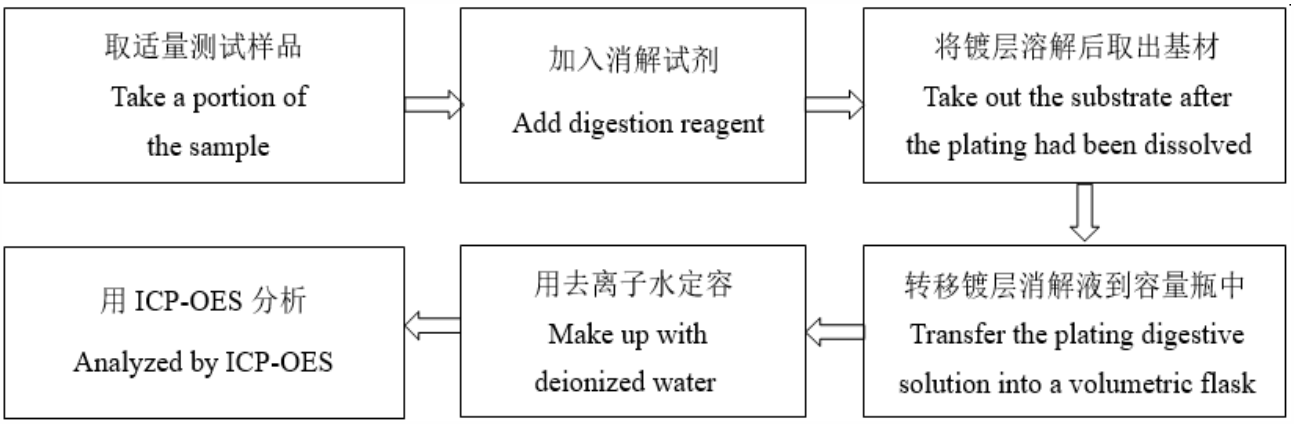
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检测流程 Test Process

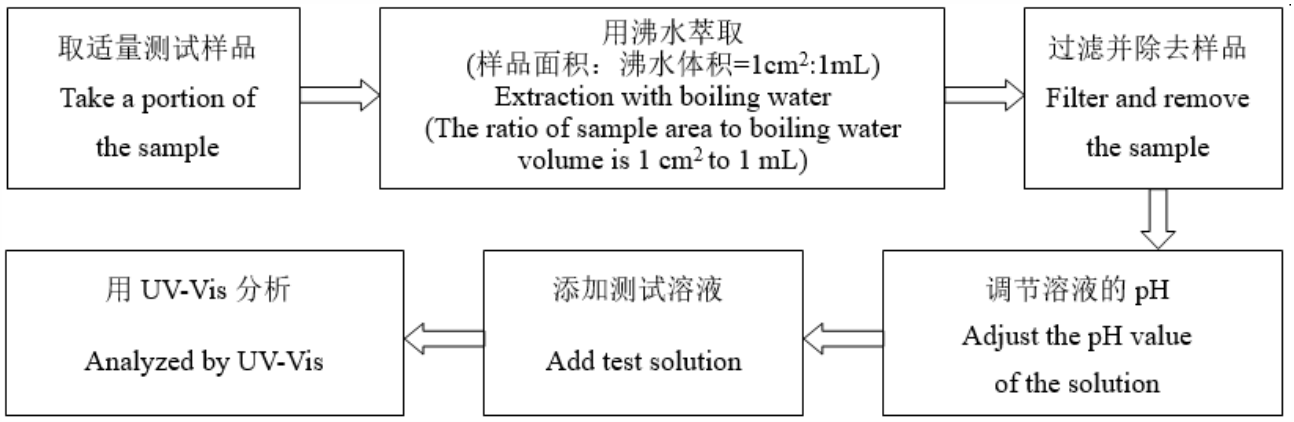
1. 铅(Pb)， 镉(Cd)
   Lead (Pb), Cadmium (Cd)



2. 汞(Hg)
   Mercury (Hg)



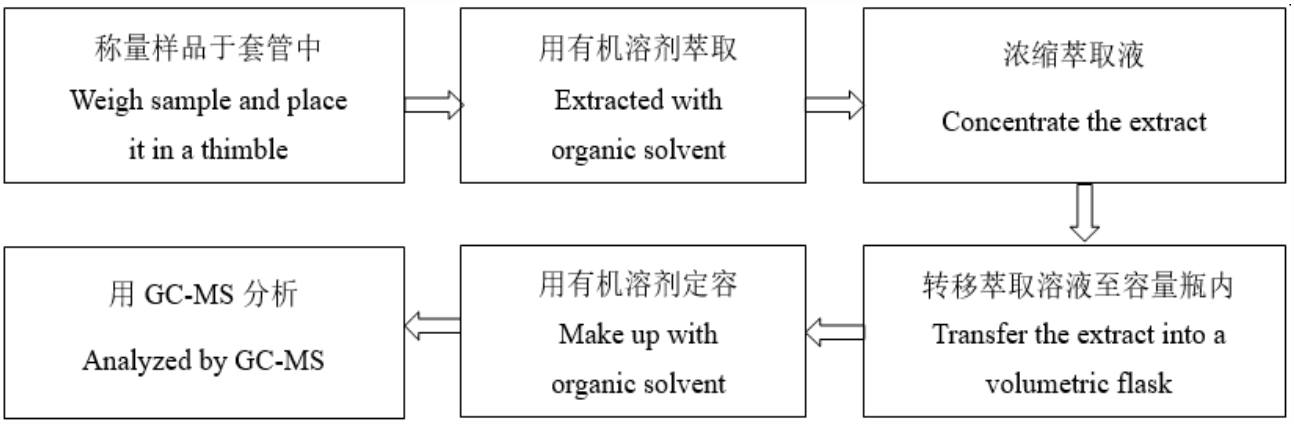
3. 六价铬(Cr(VI))
   Hexavalent Chromium (Cr(VI))



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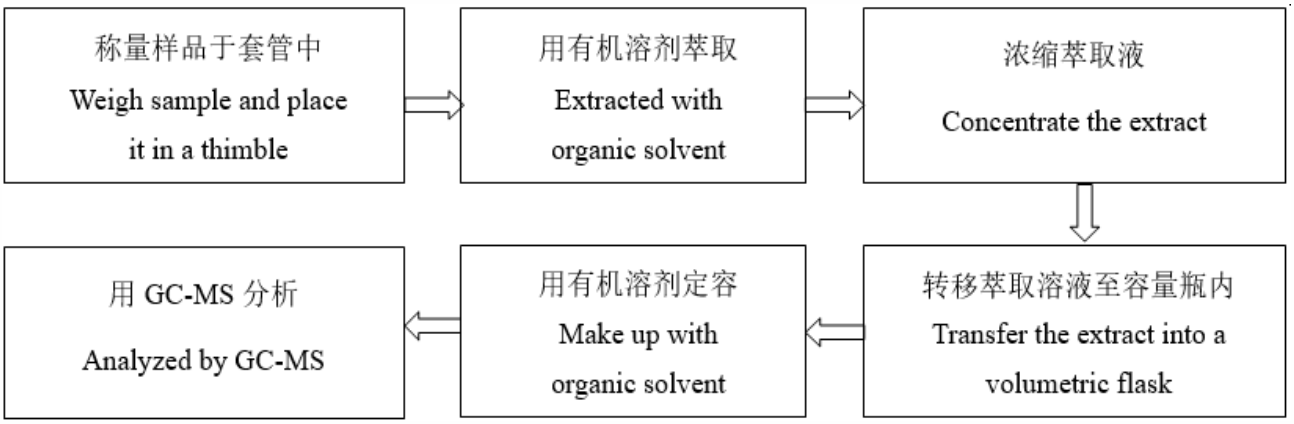
4. 多溴联苯(PBBs)， 多溴二苯醚(PBDEs)

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



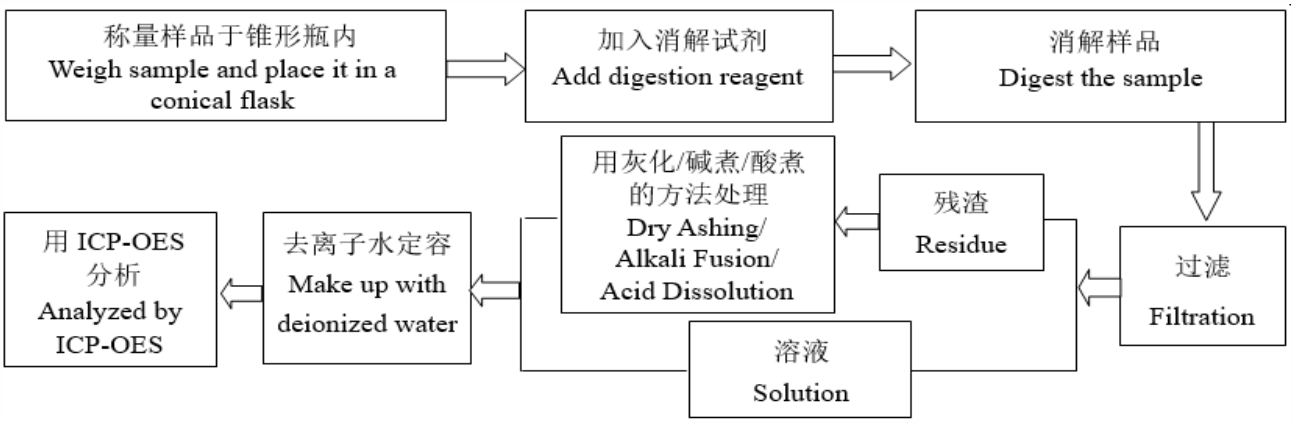
5. 邻苯二甲酸酯(DBP， BBP， DEHP， DIBP)

Phthalates (DBP, BBP, DEHP, DIBP)



6. 铍(Be)

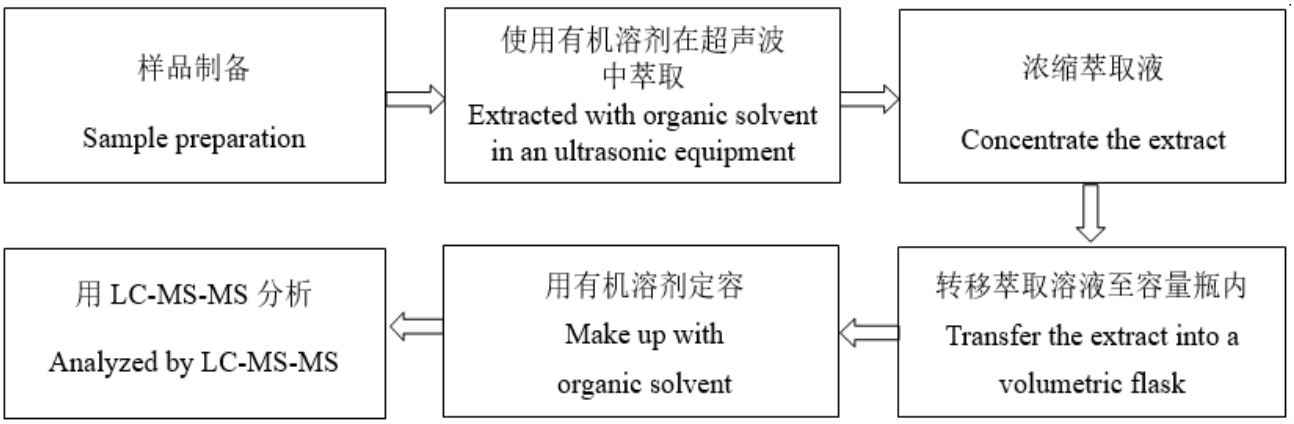
Beryllium(Be)



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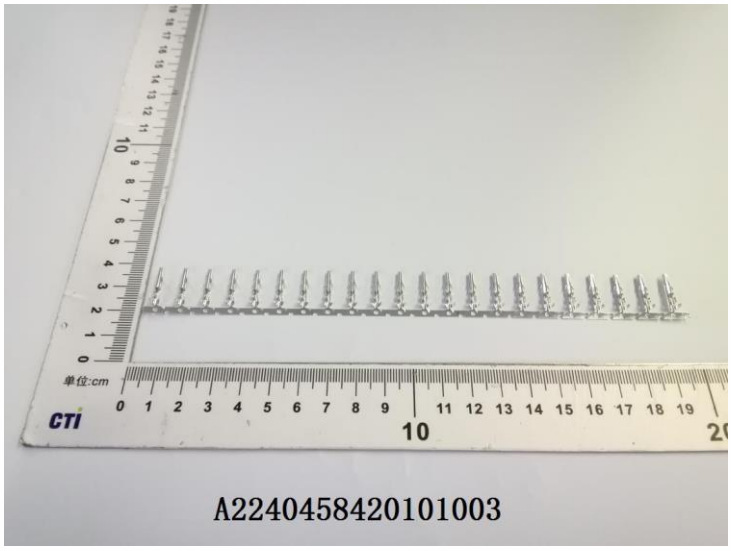
7. 全氟辛酸(PFOA)， 全氟辛烷磺酸(PFOS)

Perfluorooctanoic Acid(PFOA), Perfluorooctane Sulfonates(PFOS)



检测报告
Test Report

样品图片
Photo(s) of the sample(s)



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