

Lct

SPECIFICATION FOR APPROVAL

承認書

客 戶 承 認 印 章	龍呈國際科技有限公司		
	業 務	工 程	品 管

客 戶 **燁懋科技股份有限公司**

CUSTOMER _____

品 名 **2.4GHz S-SMA-M/F Ant. WHITE**

SPECIES _____

料 號 **F1B_WH3404-52**

PART NO. _____

客 戶 料 號

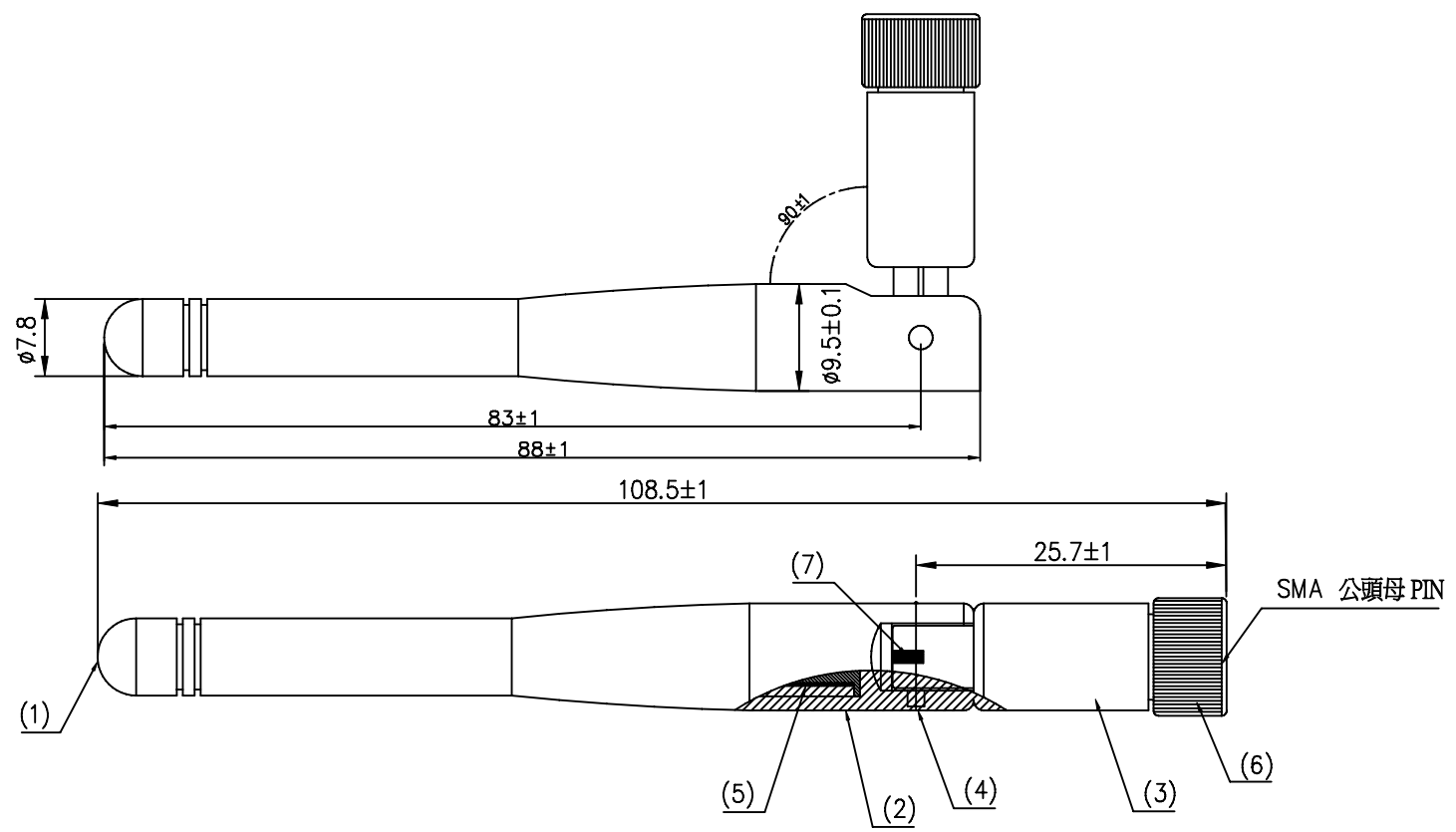
CUSTOMER PART NO. _____

龍呈國際科技有限公司

Long Cheng Tech. Int'l Co., Ltd.

新竹縣竹北市中和街 62 巷 15 弄 3 號 3 樓
3Floor, No.3, Alley 15, Lane 62, Chung Ho St.,
Chu-Pei City, Hsin Chu, Taiwan, R.O.C
TEL: 03-5541117 FAX: 03-5541065

LTR		Zone		REVISION RECORD / Description			DWN	CHK	DATE	LTR		Zone		REVISION RECORD / Description			DWN	CHK	DATE	DRAWING NUMBER	
1				New Release					3/20/09"											F1B_WH3404-52	
2																					



8					
7	Cable : RC178	1		M02-117003-10	
6	SMA Male/ Female Ni plated	1	Brass	M01-053020-04	
5	BRASS Tube	1		M04-3BS030-02	
4	PIN RIVET Ni Surface	2		M06-216040-S1	
3	LOWER BASE : White	1	ABS/Nylon	M04-006055-07	
2	UPPER BASE : White	1	ABS/Nylon	M04-006055-02	
1	COVER : White	1	TPE	M04-006056-03	
NO	DESCRIPTION	Q'ty	MATERIAL	Part Number	

Lct LONG CHENG ELECTRONICS CO. LTD
龍呈國際科技有限公司

DESCRIPTION:
 2.4Ghz Ant. S-SMA M/F Ant. (white) Lead Free

DIMENSION:		PART NUMBER		REV
1 PLC	±0.5	F1B_WH3404-52		1
2 PLC	±0.3	SIZE	SCALE	SHEET
3 PLC	±0.2	A4	1/1	1 OF 1
ANGLES	±5°			

UNIT	APVD
mm	
MATERIAL	CHK
SEE NOTE	
FINISH	DWN
SEE NOTE	Kaven

電氣特性規格

Electrical Specifications

頻率範圍 (Frequency Range)	2400GHZ - 2500GHZ
增益 (Gain)	2 dBi (Nominal)
電壓駐波比 (VSWR)	< 2 : 1
極化 (Polarzation)	Linear, Vertical
半功率水平波束寬 (HPBW/Horizontal)	360°
半功率垂直波束寬 (HPBW/Vertical)	78°(typical)
最大功率 (Max. Power Rating)	2 W (CW)
阻抗匹配 (Impedance)	50 Ohms (typical)

電氣特性測試

Electrical Specifications Test

1. 輻射場型測試 (Radiation Pattern Test):

測試儀器 (Test Instrument) :

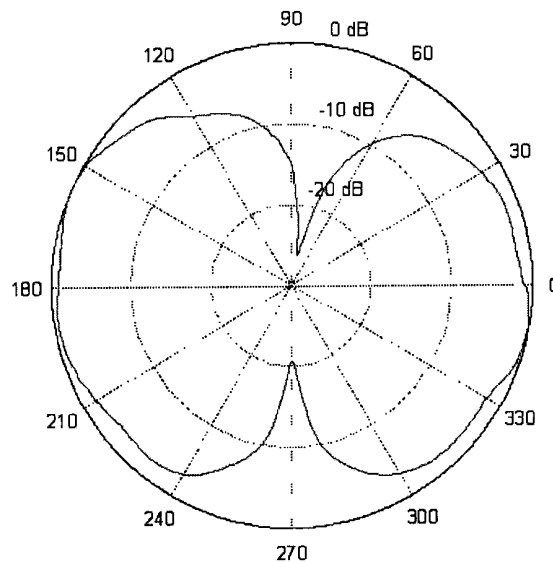
Ancom 6 ft Near-field antenna test system

測試資料 (Test Result) :

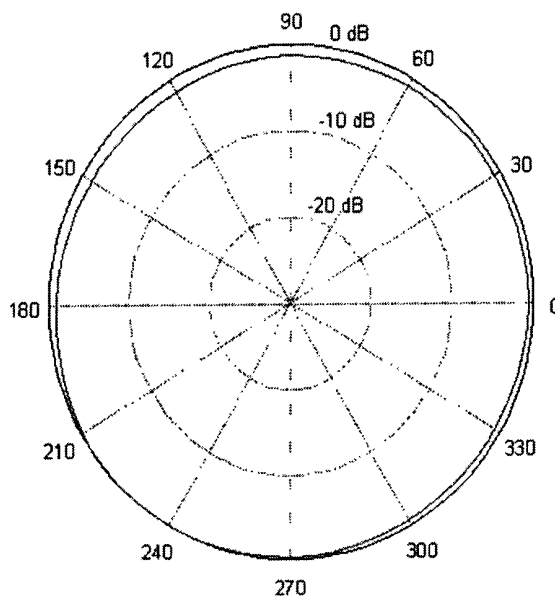
頻率 (Frequency) : **2.45GHz**

Max. gain : 1.73 dbi

Avg. gain : 1.25 dbi



Vertical Pattern



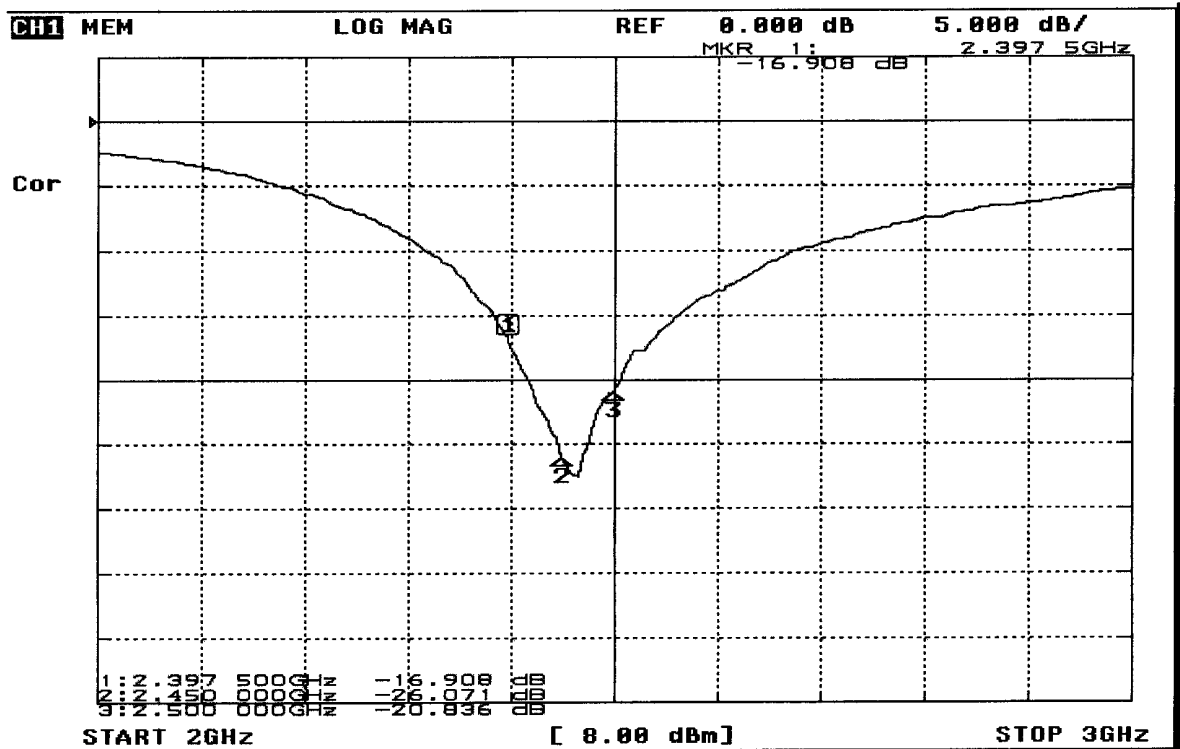
Horizontal pattern

2. Function Test :

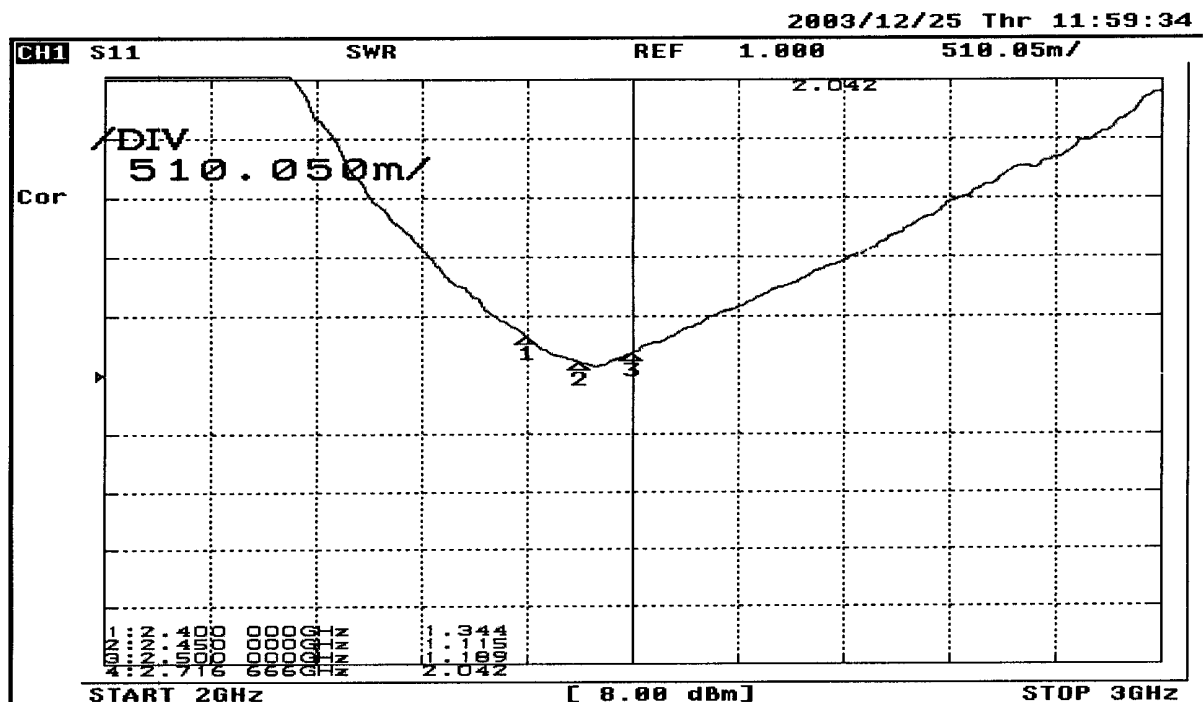
測試儀器 (Test Instrument):

- HP 8753E Network Analyzer 30 KHz ~ 3GHz
- Advantest R3767CG Network Analyzer 300 KHz ~ 8GHz

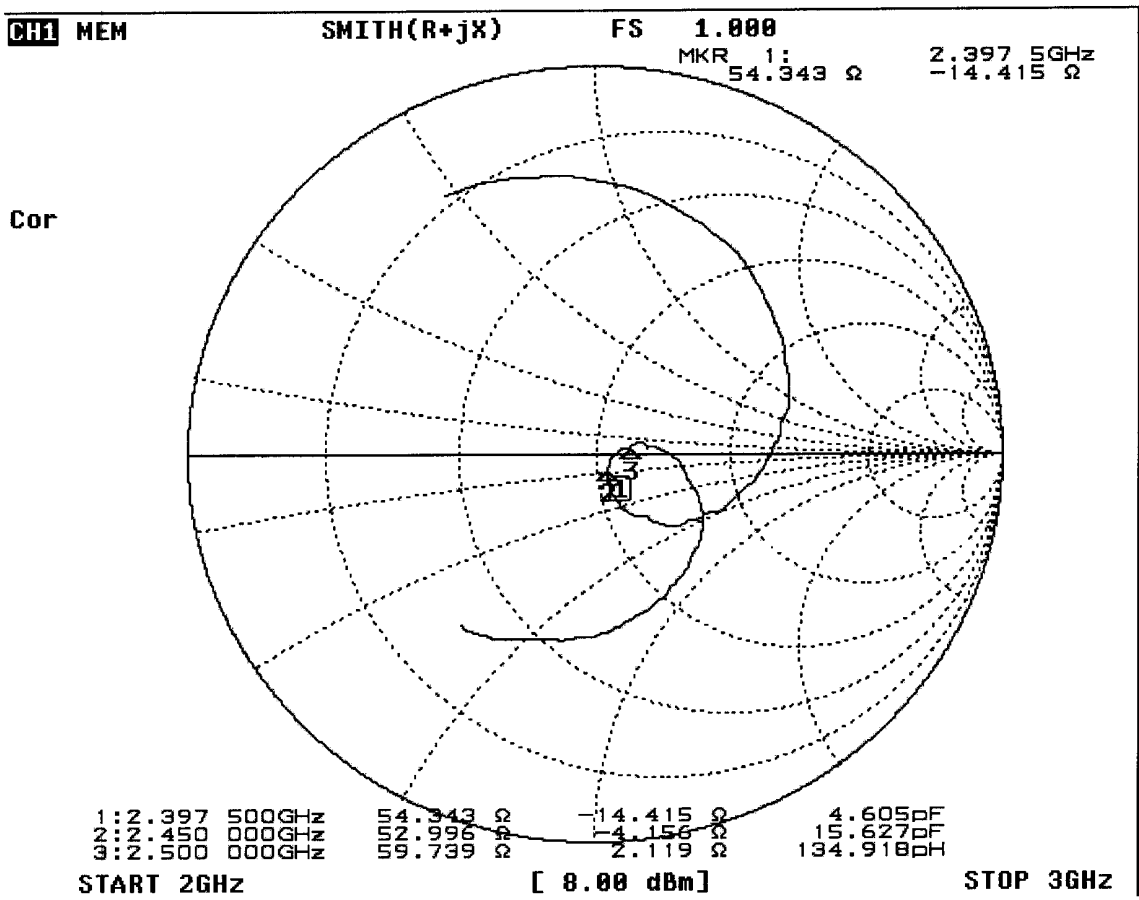
2.1 Return Loss



2.2 VSWR :



2.3 Smith Chart :



SPECIFICATION FOR APPROVAL

DOCUMENT: A30178B001

STYLE : 105°C 30V
RG-178B/U

SIZE: 7/0.102 SCCS

RECOGNIZED: UL 1979



WONDERFUL HI-TECH CO.,LTD

OFFICE : 72WU KONG 6TH ROAD,
WU KU IND. DISTRICT
TAIPEI HSIEN, TAIWAN

TEL : (02)22988033
FAX : (02)22988031-2

FACTORY : 17 PEI YUAN ROAD,
CHUNG-LI IND. PARK
TAIWAN, R.O.C.

TEL : (03)4527777
FAX : (03)4517214


WONDERFUL HI-TECH CO., LTD
SPECIFICATION

STYLE	105°C 30V UL1979	DOCUMENT NO : A30178B001	
SIZE	RG-178B/U	ESTABLISHED DATE: 2004/03/22	
STANDARD : MIL-C-17			
Conductor	Size	AWG	30
	Material	----	Silver-Coated Copper Clad Steel
	Conductors No.	----	7
	Conductors Size	mm	0.102
	O.D.	mm	0.30
Insulation	Average Thickness	mm	0.28
	Diameter	mm	0.86 ±0.03
	Material	----	FEP
	Color	----	Clear
Braid	Material	----	Silver-Coated Copper
	Construction	mm	16 / 3 / 0.10
	Coverage	%	95
Jacket	Average Thickness	mm	0.25
	Diameter	mm	1.80 ±0.05
	Material	----	FEP
	Color	----	Brown
Marking			
Drawing			


WONDERFUL HI-TECH CO., LTD.
SPECIFICATION

Electrical & Physical Properties						
Item		RG-178B/U				
Rating Temp Voltage		105°C 30V				
Conductor Resistance		838 OHM/KM/20°C MAX.				
Insulation Resistance		3000 MEGA OHM/KM MIN.				
Dielectric Strength		AC 500V/Minute				
Spark Test		2.5 KV				
Insulation	Unaged	Tensile Strength	2500 PSI MIN.(1.76 Kg / m m ²)			
		Elongation	200% MIN.			
	Aged	Tensile Strength	UNAGED MIN 75%(168HRS×232°C)			
		Elongation	UNAGED MIN 75%(168HRS×232°C)			
Jacket	Unaged	Tensile Strength	2500 PSI MIN.(1.76 Kg / m m ²)			
		Elongation	200% MIN.			
	Aged	Tensile Strength	UNAGED MIN.75%(168HRS×232°C)			
		Elongation	UNAGED MIN.75%(168HRS×232°C)			
Nom. Impedance		50 Ohms				
Nom. Capacitance		95.8 pF/m				
Nom. Vel. of Prop.		69.5%				
VSWR (0 – 6 GHZ)		UNDER 1.3				
Attenuation (dB/100m)	100MHz	1GHz	1.8GHz	2.4GHz	5.2GHz	6GHz
	46	155	295	340	505	550

AK001/210X297/1.0

PAGE : 2

EDITION : 1.2

MAKER : C.Y.CHEN

CONFIRM : S.N.WONG

APPROVAL : W.J.WANG

測試報告 Test Report

號碼(No.) : CE/2007/C7040D 日期(Date) : 2008/07/10 頁數(Page) : 1 of 21

萬泰科技股份有限公司
WONDERFUL HI-TECH CO., LTD.

桃園縣中壢市北園路17號

NO. 17, PEI-YUAN ROAD, CHUNG-LI IND. PARK, TAOYUAN, TAIWAN, R. O. C.



以下測試樣品係由客戶送樣，且由客戶聲稱並經客戶確認如下 (The following samples was/were submitted and identified by/on behalf of the client as) :

樣品名稱(Sample Description) : RF COAXIAL CABLE, RG-178B/U, RG-179/U, RG-316/U, MINI 0.8MM & 1.13MM & 1.32MM & 1.37MM & 1.48MM, RF405A
樣品型號(Style/Item No.) : BLACK、BROWN、ORANGE、BLUE、GRAY、WHITE
收件日期(Sample Receiving Date) : 2007/12/26
測試期間(Testing Period) : 2007/12/26 TO 2008/01/03 AND 2008/01/11 TO 2008/01/21 AND 2008/07/03 TO 2008/07/10

=====
測試結果(Test Results) : 請見下一頁 (Please refer to next pages).

* 此份報告為加測及合併CE/2007/C7040之報告 *
(This report is added testing and combined with CE/2007/C7040)

Chenyu Kung / Operation Manager
Signed for and on behalf of
SGS TAIWAN LTD.
Chemical Laboratory – Taipei

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萬泰科技股份有限公司
 WONDERFUL HI-TECH CO., LTD.
 桃園縣中壢市北園路17號
 NO. 17, PEI-YUAN ROAD, CHUNG-LI IND. PARK, TAOYUAN, TAIWAN, R. O. C.



測試結果(Test Results)

- 測試部位(PART NAME) NO.1 : 銀色金屬線鍍層 (PLATING LAYER OF SILVER COLORED METAL WIRE)
- 測試部位(PART NAME) NO.2 : 半透明塑膠粒 (TRANSLUCENT PLASTIC PELLETS)
- 測試部位(PART NAME) NO.3 : 銀色金屬線底材 (BASE MATERIAL OF SILVER COLORED METAL WIRE)
- 測試部位(PART NAME) NO.4 : 黑色塑膠外被 (BLACK PLASTIC JACKET)
- 測試部位(PART NAME) NO.5 : 咖啡色塑膠外被 (BROWN PLASTIC JACKET)
- 測試部位(PART NAME) NO.6 : 橘色塑膠外被 (ORANGE PLASTIC JACKET)
- 測試部位(PART NAME) NO.7 : 藍色塑膠外被 (BLUE PLASTIC JACKET)
- 測試部位(PART NAME) NO.8 : 灰色塑膠外被 (GRAY PLASTIC JACKET)
- 測試部位(PART NAME) NO.9 : 白色塑膠外被 (WHITE PLASTIC JACKET)
- 測試部位(PART NAME) NO.10 : 混測黑色/咖啡色/橘色/藍色/灰色/白色塑膠外被 (MIXED BLACK/BROWN/ORANGE/BLUE/GRAY/WHITE PLASTIC JACKET)

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限值 (MDL)	結果 (Result)		
				NO.1	NO.2	NO.3
鎘 / Cadmium (Cd)	mg/kg	參考 IEC 62321/2nd CDV (111/95/CDV) 方法, 用感應耦合電漿原子發射光譜儀檢測鎘含量。 / With reference to IEC 62321/2nd CDV (111/95/CDV). Determination of Cadmium by ICP-AES.	2	n.d.	n.d.	n.d.
鉛 / Lead (Pb)	mg/kg	參考 IEC 62321/2nd CDV (111/95/CDV) 方法, 用感應耦合電漿原子發射光譜儀檢測鉛含量。 / With reference to IEC 62321/2nd CDV (111/95/CDV). Determination of Lead by ICP-AES.	2	6	n.d.	n.d.

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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限值 (MDL)	結果 (Result)		
				NO.1	NO.2	NO.3
汞 / Mercury (Hg)	mg/kg	參考IEC 62321/2nd CDV (111/95/CDV)方法, 用感應藕合電漿原子發射光譜儀檢測汞含量。 / With reference to IEC 62321/2nd CDV (111/95/CDV). Determination of Mercury by ICP-AES.	2	n.d.	n.d.	n.d.
六價鉻 / Hexavalent Chromium Cr(VI) by Spot test / boiling water extraction	**	針對金屬材質之樣品, 參考IEC 62321/2nd CDV (111/95/CDV)方法檢測, 用Spot test / boiling water extraction方法檢測六價鉻含量。 / With reference to IEC 62321/2nd CDV (111/95/CDV). Determination of Hexavalent Chromium for metallic samples by Spot test / boiling water extraction Method. (See Note 7)	0.02mg/kg with 50 cm ² surface area	Negative	---	Negative
六價鉻 / Hexavalent Chromium Cr(VI) by alkaline extraction	mg/kg	針對非金屬材質之樣品, 參考IEC 62321/2nd CDV (111/95/CDV)方法檢測, 用UV-VIS檢測六價鉻含量。 / With reference to IEC 62321/2nd CDV (111/95/CDV). Determination of Hexavalent Chromium for non-metallic samples by UV/Vis Spectrometry.	2	---	n.d.	---
聚氯乙烯 / PVC	%	以紅外線光譜分析法及熱裂解氣相層析質譜儀檢測。 / Analysis was performed by FTIR and Pyrolyzer-GC/MS.	1	---	Negative	---

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桃園縣中壢市北園路17號

NO. 17, PEI-YUAN ROAD, CHUNG-LI IND. PARK, TAOYUAN, TAIWAN, R. O. C.



測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限值 (MDL)	結果 (Result)		
				NO.1	NO.2	NO.3
鹵素 (氯) / Halogen-Chlorine (Cl) (CAS No.: 007782-50-5)	mg/kg	參考BS EN 14582, 以離子層析儀 分析氯含量。 / With reference to BS EN 14582. Analysis was performed by IC method for Chlorine content.	50	---	n.d.	---
鹵素 (溴) / Halogen-Bromine (Br) (CAS No.: 007726-95-6)	mg/kg	參考BS EN 14582, 以離子層析儀 分析溴含量。 / With reference to BS EN 14582. Analysis was performed by IC method for Bromine content.	50	---	n.d.	---
鹵素 (碘) / Halogen-Iodine (I) (CAS No.: 007553-56-2)	mg/kg	參考BS EN 14582, 以離子層析儀 分析碘含量。 / With reference to BS EN 14582. Analysis was performed by IC method for Iodine content.	50	---	n.d.	---
多溴聯苯總和 / Sum of PBBs			-	---	n.d.	---
一溴聯苯 / Monobromobiphenyl			5	---	n.d.	---
二溴聯苯 / Dibromobiphenyl			5	---	n.d.	---
三溴聯苯 / Tribromobiphenyl			5	---	n.d.	---
四溴聯苯 / Tetrabromobiphenyl			5	---	n.d.	---
五溴聯苯 / Pentabromobiphenyl			5	---	n.d.	---
六溴聯苯 / Hexabromobiphenyl			5	---	n.d.	---
七溴聯苯 / Heptabromobiphenyl			5	---	n.d.	---
八溴聯苯 / Octabromobiphenyl			5	---	n.d.	---
九溴聯苯 / Nonabromobiphenyl			5	---	n.d.	---
十溴聯苯 / Decabromobiphenyl			5	---	n.d.	---
	mg/kg	參考IEC 62321/2nd CDV (111/95/CDV)方法, 以氣相層析 儀/質譜儀檢測多溴聯苯和多溴聯 苯醚含量。 / With reference to IEC 62321/2nd CDV (111/95/CDV). Determination of PBB and PBDE by GC/MS.				

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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限值 (MDL)	結果 (Result)		
				NO.1	NO.2	NO.3
多溴聯苯醚總和 / Sum of PBDEs	mg/kg	參考IEC 62321/2nd CDV (111/95/CDV)方法, 以氣相層析儀/質譜儀檢測多溴聯苯和多溴聯苯醚含量. / With reference to IEC 62321/2nd CDV (111/95/CDV). Determination of PBB and PBDE by GC/MS.	-	---	n.d.	---
一溴聯苯醚 / Monobromodiphenyl ether			5	---	n.d.	---
二溴聯苯醚 / Dibromodiphenyl ether			5	---	n.d.	---
三溴聯苯醚 / Tribromodiphenyl ether			5	---	n.d.	---
四溴聯苯醚 / Tetrabromodiphenyl ether			5	---	n.d.	---
五溴聯苯醚 / Pentabromodiphenyl ether			5	---	n.d.	---
六溴聯苯醚 / Hexabromodiphenyl ether			5	---	n.d.	---
七溴聯苯醚 / Heptabromodiphenyl ether			5	---	n.d.	---
八溴聯苯醚 / Octabromodiphenyl ether			5	---	n.d.	---
九溴聯苯醚 / Nonabromodiphenyl ether			5	---	n.d.	---
十溴聯苯醚 / Decabromodiphenyl ether	5	---	n.d.	---		

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限值 (MDL)	結果 (Result)		
				NO.4	NO.5	NO.6
鎘 / Cadmium (Cd)	mg/kg	參考IEC 62321/2nd CDV (111/95/CDV)方法, 用感應耦合電漿原子發射光譜儀檢測鎘含量. / With reference to IEC 62321/2nd CDV (111/95/CDV). Determination of Cadmium by ICP-AES.	2	n.d.	n.d.	n.d.
鉛 / Lead (Pb)	mg/kg	參考IEC 62321/2nd CDV (111/95/CDV)方法, 用感應耦合電漿原子發射光譜儀檢測鉛含量. / With reference to IEC 62321/2nd CDV (111/95/CDV). Determination of Lead by ICP-AES.	2	n.d.	n.d.	n.d.

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測試報告

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萬泰科技股份有限公司
 WONDERFUL HI-TECH CO., LTD.
 桃園縣中壢市北園路17號
 NO. 17, PEI-YUAN ROAD, CHUNG-LI IND. PARK, TAOYUAN, TAIWAN, R. O. C.



測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限值 (MDL)	結果 (Result)		
				NO.4	NO.5	NO.6
汞 / Mercury (Hg)	mg/kg	參考IEC 62321/2nd CDV (111/95/CDV)方法, 用感應耦合電漿原子發射光譜儀檢測汞含量。 / With reference to IEC 62321/2nd CDV (111/95/CDV). Determination of Mercury by ICP-AES.	2	n.d.	n.d.	n.d.
六價鉻 / Hexavalent Chromium Cr(VI) by alkaline extraction	mg/kg	針對非金屬材質之樣品, 參考IEC 62321/2nd CDV (111/95/CDV)方法檢測, 用UV-VIS檢測六價鉻含量。 / With reference to IEC 62321/2nd CDV (111/95/CDV). Determination of Hexavalent Chromium for non-metallic samples by UV/Vis Spectrometry.	2	n.d.	n.d.	n.d.
全氟辛酸(銨) / PFOA	mg/kg	參考US EPA 3540C : 1996方法, 以液相層析質譜儀檢測全氟辛酸(銨)含量。 / With reference to US EPA 3540C : 1996 method for PFOA Content. Analysis was performed by LC/MS.	10	n.d.	---	---
全氟辛磺酸 / PFOS	mg/kg	參考US EPA 3540C : 1996方法, 以液相層析質譜儀檢測全氟辛磺酸含量。 / With reference to US EPA 3540C : 1996 method for PFOS Content. Analysis was performed by LC/MS.	10	n.d.	---	---

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萬泰科技股份有限公司
WONDERFUL HI-TECH CO., LTD.

桃園縣中壢市北園路17號

NO. 17, PEI-YUAN ROAD, CHUNG-LI IND. PARK, TAOYUAN, TAIWAN, R. O. C.



測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限值 (MDL)	結果 (Result)		
				NO.4	NO.5	NO.6
多溴聯苯總和 / Sum of PBBs	mg/kg	參考 IEC 62321/2nd CDV (111/95/CDV) 方法, 以氣相層析儀/質譜儀檢測多溴聯苯和多溴聯苯醚含量. / With reference to IEC 62321/2nd CDV (111/95/CDV). Determination of PBB and PBDE by GC/MS.	-	n.d.	n.d.	n.d.
一溴聯苯 / Monobromobiphenyl			5	n.d.	n.d.	n.d.
二溴聯苯 / Dibromobiphenyl			5	n.d.	n.d.	n.d.
三溴聯苯 / Tribromobiphenyl			5	n.d.	n.d.	n.d.
四溴聯苯 / Tetrabromobiphenyl			5	n.d.	n.d.	n.d.
五溴聯苯 / Pentabromobiphenyl			5	n.d.	n.d.	n.d.
六溴聯苯 / Hexabromobiphenyl			5	n.d.	n.d.	n.d.
七溴聯苯 / Heptabromobiphenyl			5	n.d.	n.d.	n.d.
八溴聯苯 / Octabromobiphenyl			5	n.d.	n.d.	n.d.
九溴聯苯 / Nonabromobiphenyl			5	n.d.	n.d.	n.d.
十溴聯苯 / Decabromobiphenyl			5	n.d.	n.d.	n.d.
多溴聯苯醚總和 / Sum of PBDEs			-	n.d.	n.d.	n.d.
一溴聯苯醚 / Monobromodiphenyl ether			5	n.d.	n.d.	n.d.
二溴聯苯醚 / Dibromodiphenyl ether			5	n.d.	n.d.	n.d.
三溴聯苯醚 / Tribromodiphenyl ether			5	n.d.	n.d.	n.d.
四溴聯苯醚 / Tetrabromodiphenyl ether			5	n.d.	n.d.	n.d.
五溴聯苯醚 / Pentabromodiphenyl ether			5	n.d.	n.d.	n.d.
六溴聯苯醚 / Hexabromodiphenyl ether			5	n.d.	n.d.	n.d.
七溴聯苯醚 / Heptabromodiphenyl ether			5	n.d.	n.d.	n.d.
八溴聯苯醚 / Octabromodiphenyl ether			5	n.d.	n.d.	n.d.
九溴聯苯醚 / Nonabromodiphenyl ether	5	n.d.	n.d.	n.d.		
十溴聯苯醚 / Decabromodiphenyl ether	5	n.d.	n.d.	n.d.		

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萬泰科技股份有限公司
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桃園縣中壢市北園路17號

NO. 17, PEI-YUAN ROAD, CHUNG-LI IND. PARK, TAOYUAN, TAIWAN, R. O. C.



測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限值 (MDL)	結果(Result)		
				NO.7	NO.8	NO.9
鎘 / Cadmium (Cd)	mg/kg	參考 IEC 62321/2nd CDV (111/95/CDV) 方法, 用感應耦合電漿原子發射光譜儀檢測鎘含量。 / With reference to IEC 62321/2nd CDV (111/95/CDV). Determination of Cadmium by ICP-AES.	2	n.d.	n.d.	n.d.
鉛 / Lead (Pb)	mg/kg	參考 IEC 62321/2nd CDV (111/95/CDV) 方法, 用感應耦合電漿原子發射光譜儀檢測鉛含量。 / With reference to IEC 62321/2nd CDV (111/95/CDV). Determination of Lead by ICP-AES.	2	n.d.	n.d.	n.d.
汞 / Mercury (Hg)	mg/kg	參考 IEC 62321/2nd CDV (111/95/CDV) 方法, 用感應耦合電漿原子發射光譜儀檢測汞含量。 / With reference to IEC 62321/2nd CDV (111/95/CDV). Determination of Mercury by ICP-AES.	2	n.d.	n.d.	n.d.
六價鉻 / Hexavalent Chromium Cr(VI) by alkaline extraction	mg/kg	針對非金屬材質之樣品, 參考 IEC 62321/2nd CDV (111/95/CDV) 方法檢測, 用 UV-VIS 檢測六價鉻含量。 / With reference to IEC 62321/2nd CDV (111/95/CDV). Determination of Hexavalent Chromium for non-metallic samples by UV/Vis Spectrometry.	2	n.d.	n.d.	n.d.

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萬泰科技股份有限公司
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桃園縣中壢市北園路17號

NO. 17, PEI-YUAN ROAD, CHUNG-LI IND. PARK, TAOYUAN, TAIWAN, R. O. C.



測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限值 (MDL)	結果(Result)		
				NO.7	NO.8	NO.9
多溴聯苯總和 / Sum of PBBs	mg/kg	參考IEC 62321/2nd CDV (111/95/CDV)方法, 以氣相層析儀/質譜儀檢測多溴聯苯和多溴聯苯醚含量. / With reference to IEC 62321/2nd CDV (111/95/CDV). Determination of PBB and PBDE by GC/MS.	-	n.d.	n.d.	n.d.
一溴聯苯 / Monobromobiphenyl			5	n.d.	n.d.	n.d.
二溴聯苯 / Dibromobiphenyl			5	n.d.	n.d.	n.d.
三溴聯苯 / Tribromobiphenyl			5	n.d.	n.d.	n.d.
四溴聯苯 / Tetrabromobiphenyl			5	n.d.	n.d.	n.d.
五溴聯苯 / Pentabromobiphenyl			5	n.d.	n.d.	n.d.
六溴聯苯 / Hexabromobiphenyl			5	n.d.	n.d.	n.d.
七溴聯苯 / Heptabromobiphenyl			5	n.d.	n.d.	n.d.
八溴聯苯 / Octabromobiphenyl			5	n.d.	n.d.	n.d.
九溴聯苯 / Nonabromobiphenyl			5	n.d.	n.d.	n.d.
十溴聯苯 / Decabromobiphenyl			5	n.d.	n.d.	n.d.
多溴聯苯醚總和 / Sum of PBDEs			-	n.d.	n.d.	n.d.
一溴聯苯醚 / Monobromodiphenyl ether			5	n.d.	n.d.	n.d.
二溴聯苯醚 / Dibromodiphenyl ether			5	n.d.	n.d.	n.d.
三溴聯苯醚 / Tribromodiphenyl ether			5	n.d.	n.d.	n.d.
四溴聯苯醚 / Tetrabromodiphenyl ether			5	n.d.	n.d.	n.d.
五溴聯苯醚 / Pentabromodiphenyl ether			5	n.d.	n.d.	n.d.
六溴聯苯醚 / Hexabromodiphenyl ether			5	n.d.	n.d.	n.d.
七溴聯苯醚 / Heptabromodiphenyl ether			5	n.d.	n.d.	n.d.
八溴聯苯醚 / Octabromodiphenyl ether			5	n.d.	n.d.	n.d.
九溴聯苯醚 / Nonabromodiphenyl ether	5	n.d.	n.d.	n.d.		
十溴聯苯醚 / Decabromodiphenyl ether	5	n.d.	n.d.	n.d.		

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限值 (MDL)	結果 (Result)
				NO.10
聚氯乙烯 / PVC	%	以紅外線光譜分析法及熱裂解氣相層析質譜儀檢測. / Analysis was performed by FTIR and Pyrolyzer-GC/MS.	1	Negative
鹵素 (氯) / Halogen-Chlorine (Cl) (CAS No.: 007782-50-5)	mg/kg	參考BS EN 14582, 以離子層析儀分析氯含量. / With reference to BS EN 14582. Analysis was performed by IC method for Chlorine content.	50	n.d.

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萬泰科技股份有限公司
WONDERFUL HI-TECH CO., LTD.

桃園縣中壢市北園路17號

NO. 17, PEI-YUAN ROAD, CHUNG-LI IND. PARK, TAOYUAN, TAIWAN, R. O. C.



測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限值 (MDL)	結果 (Result)
				NO.10
鹵素 (溴) / Halogen-Bromine (Br) (CAS No.: 007726-95-6)	mg/kg	參考BS EN 14582, 以離子層析儀分析溴含量。 / With reference to BS EN 14582. Analysis was performed by IC method for Bromine content.	50	n.d.
鹵素 (碘) / Halogen-Iodine (I) (CAS No.: 007553-56-2)	mg/kg	參考BS EN 14582, 以離子層析儀分析碘含量。 / With reference to BS EN 14582. Analysis was performed by IC method for Iodine content.	50	n.d.

備註(Note) :

1. mg/kg = ppm
2. n.d. = Not Detected (未檢出)
3. MDL = Method Detection Limit (方法偵測極限值)
4. "-" = Not Regulated (無規格值)
5. **= Qualitative analysis (No Unit) 定性分析(無單位)
6. Negative = Undetectable 陰性(未偵測到); Positive = Detectable 陽性(已偵測到)
7. Spot-test:
 - Negative = Absence of Cr(VI) coating / surface layer(鍍層中偵測不到六價鉻),
 - Positive = Presence of Cr(VI) coating / surface layer(鍍層中偵測到六價鉻);
 - The tested sample should be further verified by boiling-water-extraction method if the spot test result cannot be confirmed.
 - (當該測項無法確認時, 測試樣品可藉由boiling-water-extraction測試方法進一步確認)
- Boiling-water-extraction:
 - Negative = Absence of Cr(VI) coating / surface layer(鍍層中偵測不到六價鉻),
 - Positive = Presence of Cr(VI) coating / surface layer(鍍層中偵測到六價鉻);
 - the detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm² sample surface area.
 - 該溶液濃度 \geq 0.02 mg/kg with 50 cm² (sample surface area)
8. 樣品的測試是基於申請人要求混合測試, 報告中的混合測試結果不代表其中個別單一材質的含量。
(The samples was/were analyzed on behalf of the applicant as mixing sample in one testing.
The above results was/were only given as the informality value)

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測試報告 Test Report

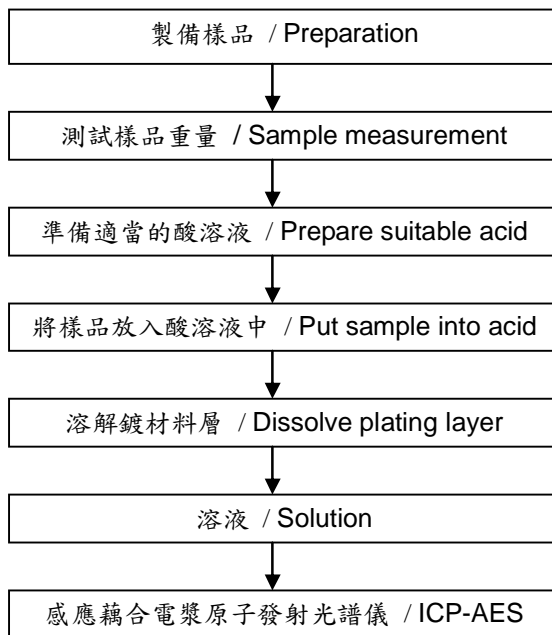
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萬泰科技股份有限公司
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- NO.1
- 1) 根據以下的流程圖之條件，樣品已完全溶解。 / These samples were dissolved totally by pre-conditioning method according to below flow chart.
 - 2) 測試人員：張啓興 / Name of the person who made measurement: Troy Chang
 - 3) 測試負責人：龔振裕 / Name of the person in charge of measurement: Chenyu Kung

鍍層重金屬測試流程圖 / Flow Chart of Stripping method for metal analysis



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萬泰科技股份有限公司
WONDERFUL HI-TECH CO., LTD.

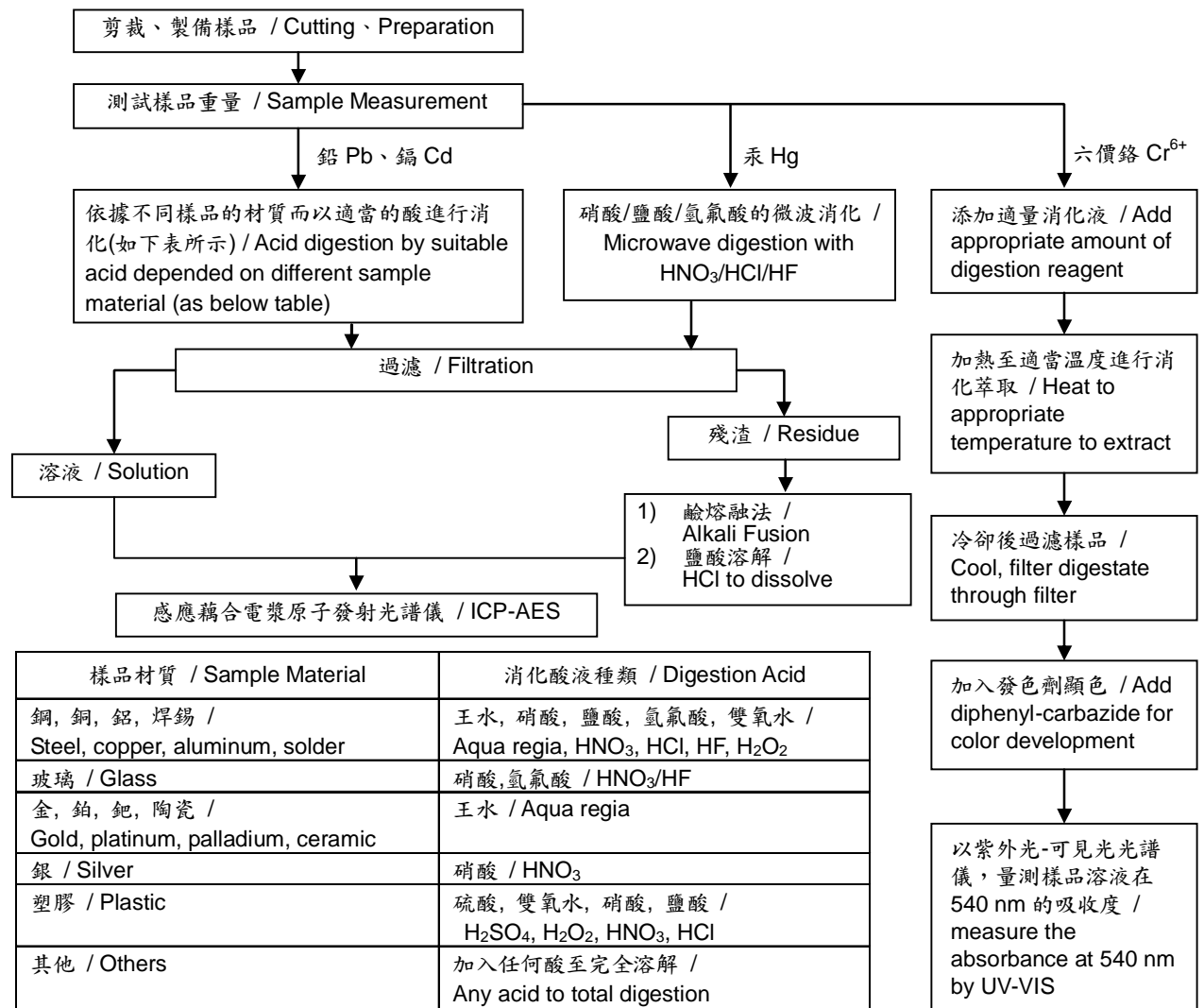
桃園縣中壢市北園路17號

NO. 17, PEI-YUAN ROAD, CHUNG-LI IND. PARK, TAOYUAN, TAIWAN, R. O. C.



NO.2-10

- 1) 根據以下的流程圖之條件，樣品已完全溶解。(六價鉻測試方法除外) / These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ test method excluded)
- 2) 測試人員：張啓興 / Name of the person who made measurement: Troy Chang
- 3) 測試負責人：龔振裕 / Name of the person in charge of measurement: Chenyu Kung



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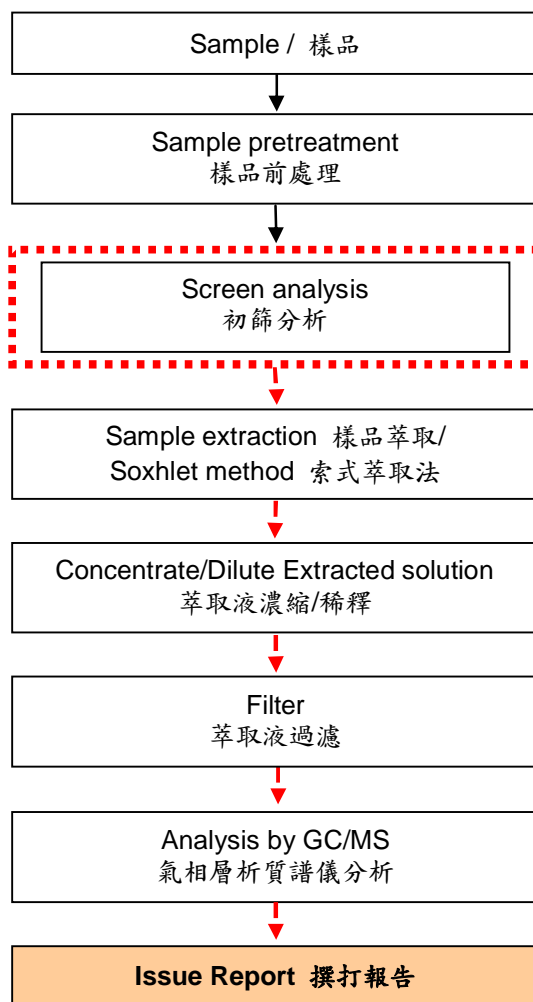
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萬泰科技股份有限公司
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多溴聯苯/多溴聯苯醚分析流程圖 / PBB/PBDE analytical FLOW CHART

初次測試程序 / First testing process ———→
 選擇性篩檢程序 / Optional screen process
 確認程序 / Confirmation process - - - ->



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測試報告 Test Report

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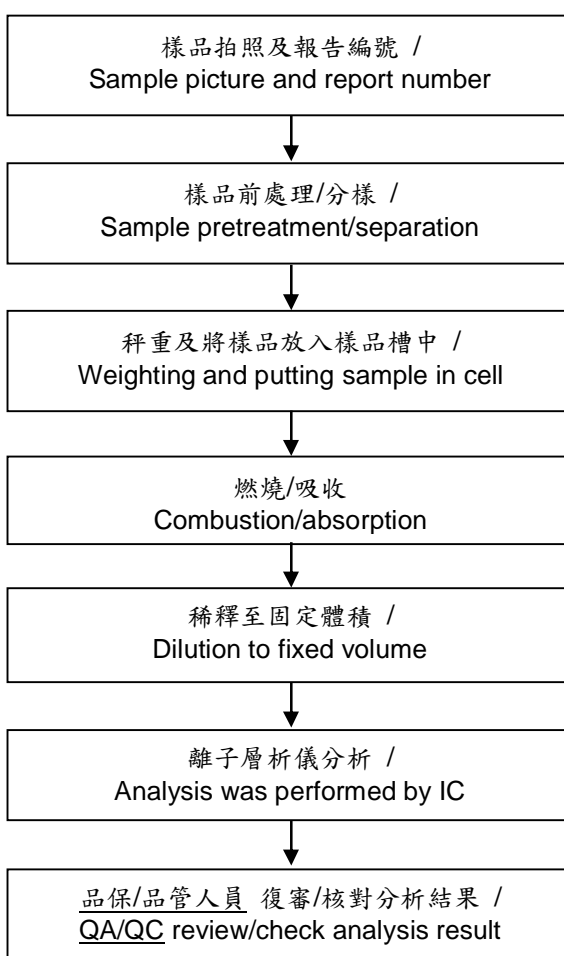
萬泰科技股份有限公司
WONDERFUL HI-TECH CO., LTD.

桃園縣中壢市北園路17號

NO. 17, PEI-YUAN ROAD, CHUNG-LI IND. PARK, TAOYUAN, TAIWAN, R. O. C.



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



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WONDERFUL HI-TECH CO., LTD.

桃園縣中壢市北園路17號

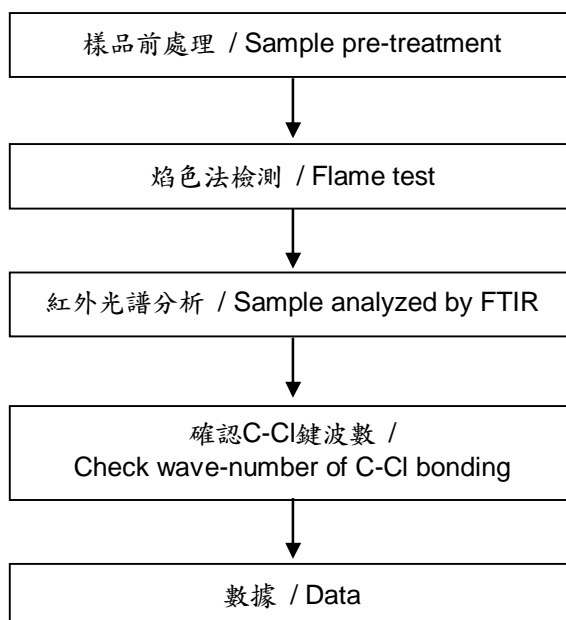
NO. 17, PEI-YUAN ROAD, CHUNG-LI IND. PARK, TAOYUAN, TAIWAN, R. O. C.



聚氯乙稀物質判定分析流程圖 /

Analysis flow chart for determination of PVC in material

- 1) 測試人員：趙婉愉 / Name of the person who made measurement: Eva Chao
- 2) 測試負責人：陳新智 / Name of the person in charge of measurement: Shinjyh Chen



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萬泰科技股份有限公司
WONDERFUL HI-TECH CO., LTD.

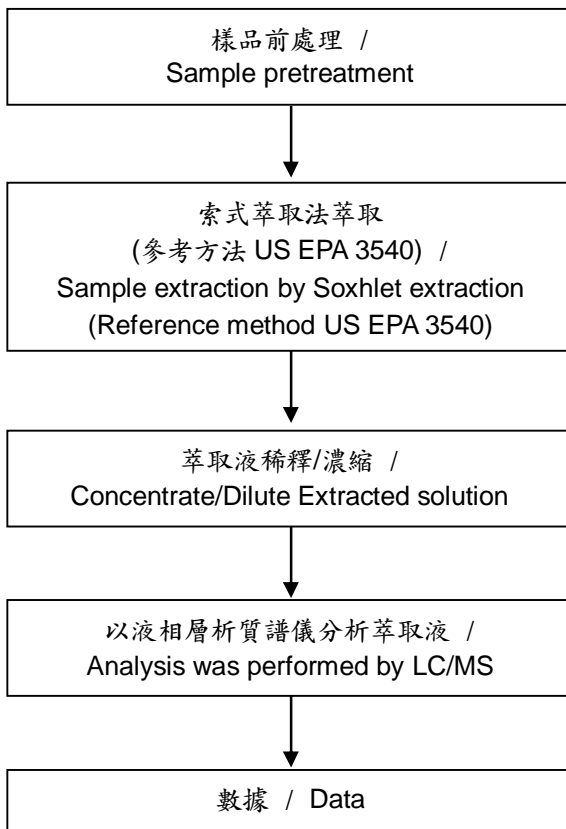
桃園縣中壢市北園路17號

NO. 17, PEI-YUAN ROAD, CHUNG-LI IND. PARK, TAOYUAN, TAIWAN, R. O. C.



全氟辛酸(銨)/全氟辛磺酸分析流程圖 / Analytical flow chart of PFOA/PFOS content

- 1) 測試人員：劉家瑗 / Name of the person who made measurement: Carrie Liu
- 2) 測試負責人：陳新智 / Name of the person in charge of measurement: Shinjyh Chen



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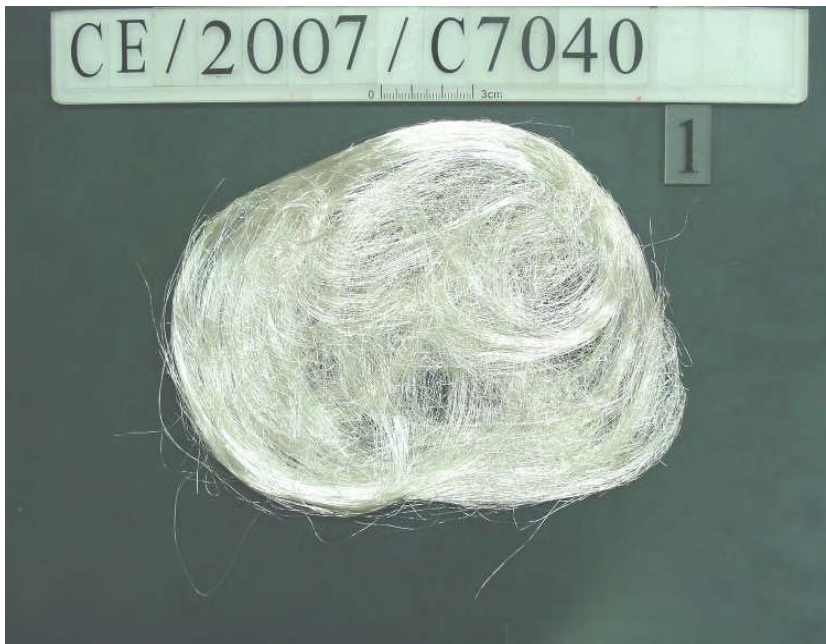
萬泰科技股份有限公司
WONDERFUL HI-TECH CO., LTD.

桃園縣中壢市北園路17號

NO. 17, PEI-YUAN ROAD, CHUNG-LI IND. PARK, TAOYUAN, TAIWAN, R. O. C.



NO.1



NO.2



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NO.3



NO.4



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萬泰科技股份有限公司
WONDERFUL HI-TECH CO., LTD.

桃園縣中壢市北園路17號

NO. 17, PEI-YUAN ROAD, CHUNG-LI IND. PARK, TAOYUAN, TAIWAN, R. O. C.



NO.5



NO.6



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萬泰科技股份有限公司
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NO. 17, PEI-YUAN ROAD, CHUNG-LI IND. PARK, TAOYUAN, TAIWAN, R. O. C.



NO.7



NO.8



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桃園縣中壢市北園路17號

NO. 17, PEI-YUAN ROAD, CHUNG-LI IND. PARK, TAOYUAN, TAIWAN, R. O. C.



NO.9



NO.10



** 報告結尾 **

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Test Report

No. :KA/2008/30534

Date: 2008/03/13 Page: 1 of 4



CONNEKT PRECISION ELECTRONICS CO., LTD
NO.115, HSIN TIEW RD., JENTE HSIANG, TAINAN HSIEN, TAIWAN R.O.C.

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

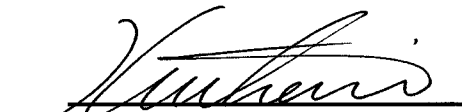
Sample Description : COPPER ALLOY/BRASS(C3604)
Style/Item No. : COPPER ALLOY/BRASS(C3604)
Color : COPPER
Sample Receiving Date : 2008/03/06
Testing Period : 2008/03/06 TO 2008/3/13

=====
Test Requested : In accordance with the RoHS Directive 2002/95/EC, and its amendment directives.

Test Method :

- (1) With reference to BS EN 1122:2001, Method B for Cadmium Content. Analysis was performed by ICP-AES.
- (2) With reference to US EPA Method 3050B for Lead Content. Analysis was performed by ICP-AES.
- (3) With reference to US EPA Method 3052 for Mercury Content. Analysis was performed by ICP-AES.
- (4) With reference to IEC 62321/2nd CDV (111/95/CDV). Determination of Hexavalent Chromium for metallic samples by Spot test / Colorimetric Method.
- (5) With reference to US EPA 3540C for PBBs/PBDEs Content. Analysis was performed by GC/MS.

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


Katherine Ho / Supervisor
Signed for and on behalf of
SGS Taiwan Limited

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Test Report

No. :KA/2008/30534

Date: 2008/03/13 Page: 2 of 4



CONNEKT PRECISION ELECTRONICS CO., LTD
NO.115, HSIN TIEW RD., JENTE HSIANG, TAINAN HSIEN, TAIWAN R.O.C.

Test results by chemical method (Unit: mg/kg)

Test Item (s):	Method (Refer to)	Result	MDL
		No.1	
Cadmium (Cd)	(1)	38.0	2
Lead (Pb)	(2)	26200	2
Mercury (Hg)	(3)	n.d.	2
Hexavalent Chromium Cr(VI) by Spot test / boiling water extraction	(4)	Negative	See note5
Sum of PBBs	(5)	n.d.	-
Monobromobiphenyl		n.d.	5
Dibromobiphenyl		n.d.	5
Tribromobiphenyl		n.d.	5
Tetrabromobiphenyl		n.d.	5
Pentabromobiphenyl		n.d.	5
Hexabromobiphenyl		n.d.	5
Heptabromobiphenyl		n.d.	5
Octabromobiphenyl		n.d.	5
Nonabromobiphenyl		n.d.	5
Decabromobiphenyl		n.d.	5
Sum of PBDEs (Mono to Nona)(Note 4)		n.d.	-
Monobromobiphenyl ether		n.d.	5
Dibromobiphenyl ether		n.d.	5
Tribromobiphenyl ether		n.d.	5
Tetrabromobiphenyl ether		n.d.	5
Pentabromobiphenyl ether		n.d.	5
Hexabromobiphenyl ether		n.d.	5
Heptabromobiphenyl ether		n.d.	5
Octabromobiphenyl ether		n.d.	5
Nonabromobiphenyl ether		n.d.	5
Decabromobiphenyl ether		n.d.	5
Sum of PBDEs (Mono to Deca)		n.d.	-

TEST PART DESCRIPTION:

NO.1 : COPPER ALLOY/BRASS(C3604)

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CONNEKT PRECISION ELECTRONICS CO., LTD
NO.115, HSIN TIEW RD., JENTE HSIANG, TAINAN HSIEN, TAIWAN R.O.C.

- Note :
1. mg/kg = ppm
 2. n.d. = Not Detected
 3. MDL = Method Detection Limit
 4. According to 2005/717/EC DecaBDE is exempt.
 5. Spot-test:
 - Negative = Absence of Cr(VI) coating / surface layer, Positive = Presence of Cr(VI) coating / surface layer;
(The tested sample should be further verified by boiling-water-extraction method if the spot test result cannot be confirmed.)
 - Boiling-water-extraction:
 - Negative = Absence of Cr(VI) coating / surface layer,
 - Positive = Presence of Cr(VI) coating / surface layer the detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm² sample surface area.
 6. " - " = Not Regulated

Test Report

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CONNEKT PRECISION ELECTRONICS CO., LTD
NO.115, HSIN TIEW RD., JENTE HSIANG, TAINAN HSIEN, TAIWAN R.O.C.



** End of Report **



Test Report

No. : KA/2009/10529 Date : 2009/01/16 Page : 1 of 9

DING MING INDUSTRY LTD
NO.13,LANE 105,JHENGAN 1ST ST.,YONG-KANG CITY,TAINAN COUNTY
71046,TAIWAN(R.O.C.)



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

Sample Description	:	鍍鎳產品
Sample Receiving Date	:	2009/01/12
Testing Period	:	2009/01/12 TO 2009/1/16

=====

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



Katherine Ho / Supervisor
Signed for and on behalf of
SGS Taiwan Limited

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TW7881675



Test Report

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DING MING INDUSTRY LTD
NO.13,LANE 105,JHENGNAN 1ST ST.,YONG-KANG CITY,TAINAN COUNTY
71046,TAIWAN(R.O.C.)



Test Result(s)

PART NAME NO.1 : SILVER 鍍銀產品

Test Item (s):	Unit	Method	MDL	Result
				No.1
Cadmium (Cd)	mg/kg	With reference to IEC 62321:2008. Determination of Cadmium by ICP-AES.	2	n.d.
Lead (Pb)	mg/kg	With reference to IEC 62321:2008. Determination of Lead by ICP-AES.	2	28.5
Mercury (Hg)	mg/kg	With reference to IEC 62321:2008. Determination of Mercury by ICP-AES.	2	n.d.
Hexavalent Chromium Cr(VI) by Spot test / boiling water extraction	**	With reference to IEC 62321:2008. Determination of Hexavalent Chromium for metallic samples by Spot test / boiling water extraction Method.	See Note 4	Negative
PERFLUOROOCCTANOIC ACID (PFOA)	µg/m2	With reference to US EPA 3540C : 1996 method for PFOS Content. Analysis was performed by LC/MS.	1	n.d.
PERFLUOROOCCTANE SULFONATES (PFOS) PFOS – Acid PFOS – Metal Salt	µg/m2	With reference to US EPA 3540C : 1996 method for PFOS Content. Analysis was performed by LC/MS.	1	n.d.

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TW7881674



Test Report

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DING MING INDUSTRY LTD
NO.13,LANE 105,JHENGAN 1ST ST.,YONG-KANG CITY,TAINAN COUNTY
71046,TAIWAN(R.O.C.)



Test Item (s):	Unit	Method	MDL	Result No.1
Sum of PBBs	mg/kg	With reference to IEC 62321:2008. Determination of PBB and PBDE by GC/MS.	-	n.d.
Monobromobiphenyl			5	n.d.
Dibromobiphenyl			5	n.d.
Tribromobiphenyl			5	n.d.
Tetrabromobiphenyl			5	n.d.
Pentabromobiphenyl			5	n.d.
Hexabromobiphenyl			5	n.d.
Heptabromobiphenyl			5	n.d.
Octabromobiphenyl			5	n.d.
Nonabromobiphenyl			5	n.d.
Decabromobiphenyl			5	n.d.
Sum of PBDEs			mg/kg	With reference to IEC 62321:2008. Determination of PBB and PBDE by GC/MS.
Monobromodiphenyl ether	5	n.d.		
Dibromodiphenyl ether	5	n.d.		
Tribromodiphenyl ether	5	n.d.		
Tetrabromodiphenyl ether	5	n.d.		
Pentabromodiphenyl ether	5	n.d.		
Hexabromodiphenyl ether	5	n.d.		
Heptabromodiphenyl ether	5	n.d.		
Octabromodiphenyl ether	5	n.d.		
Nonabromodiphenyl ether	5	n.d.		
Decabromodiphenyl ether	5	n.d.		
Halogen		With reference to BS EN 14582:2007. Analysis was performed by IC method for F , Cl , Br, I content.		
Halogen-Chlorine (Cl) (CAS No.: 022537-15-1)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC method for Chlorine content.	50	n.d.
Halogen-Fluorine (F) (CAS No.: 014762-94-8)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC method for Fluorine content.	50	n.d.
Halogen-Bromine (Br) (CAS No.: 010097-32-2)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC method for Bromine content.	50	n.d.
Halogen-Iodine (I) (CAS No.: 014362-44-8)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC method for Iodine content.	50	n.d.

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Test Report

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DING MING INDUSTRY LTD
NO.13,LANE 105,JHENGAN 1ST ST.,YONG-KANG CITY,TAINAN COUNTY
71046,TAIWAN(R.O.C.)



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

Negative = Absence of Cr(VI) coating / surface layer, Positive = Presence of Cr(VI) coating /
(The tested sample should be further verified by boiling-water-extraction method if the
spot test result cannot be confirmed.)

Boiling-water-extraction:

Negative = Absence of Cr(VI) coating / surface layer,
Positive = Presence of Cr(VI) coating / surface layer the detected concentration in
boiling-water-extraction solution is equal or greater than 0.02 mg/kg
with 50 cm² sample surface area.

5. The exemption of DecaBDE in polymeric application according 2005/717/EC was overruled
by the European Court of Justice by its decision of 01.04.2008. Subsequently DecaBDE will be included
in the sum of PBDE after 01.07.2008
6. " - " = Not Regulated

PFOS Reference Information : Directive 2006/122/EC

- (1) May not be placed on the market or used as a substance or constituent of preparations in a
concentration equal to or higher than 0.005 % by mass.
(2) May not be placed on the market in semi-finished products or articles, or parts thereof, if the
concentration of PFOS is equal to or higher than 0.1 % by mass calculated with reference to the
mass of structurally or microstructurally distinct parts that contain PFOS or, for textiles or other
coated materials, if the amount of PFOS is equal to or higher than 1µg/m² of the coated material.

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extent of the law.

TW7881672

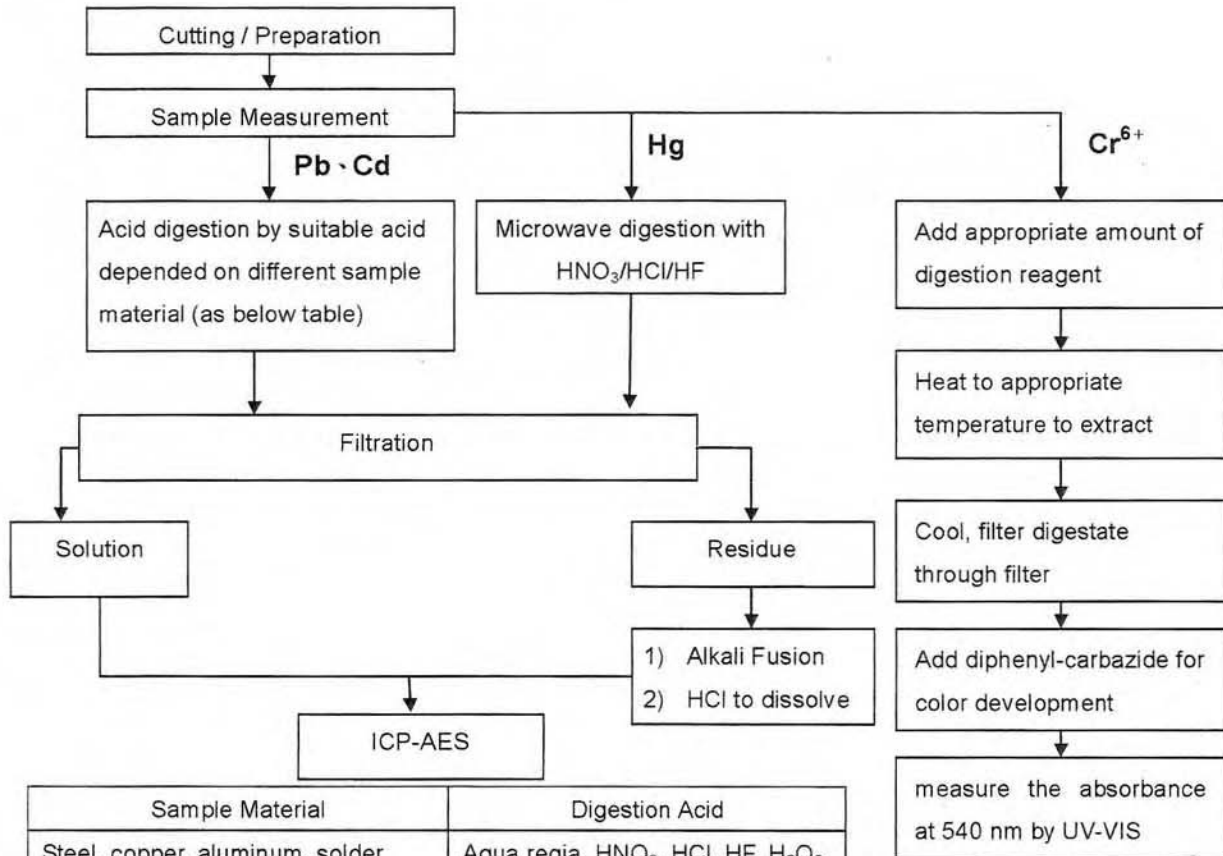
Test Report

No. : KA/2009/10529 Date : 2009/01/16 Page : 5 of 9

DING MING INDUSTRY LTD
 NO.13,LANE 105,JHENGAN 1ST ST.,YONG-KANG CITY,TAINAN COUNTY
 71046,TAIWAN(R.O.C.)



- 1) These samples were dissolved totally by pre-conditioning method according to below flow chart.
 (Cr6+ test method excluded)
- 2) Name of the person who made measurement: Hungming Li
- 3) Name of the person in charge of measurement: Ray Chang



Sample Material	Digestion Acid
Steel, copper, aluminum, solder	Aqua regia, HNO ₃ , HCl, HF, H ₂ O ₂
Glass	HNO ₃ /HF
Gold, platinum, palladium, ceramic	Aqua regia
Silver	HNO ₃
Plastic	H ₂ SO ₄ , H ₂ O ₂ , HNO ₃ , HCl
Others	Any acid to total digestion

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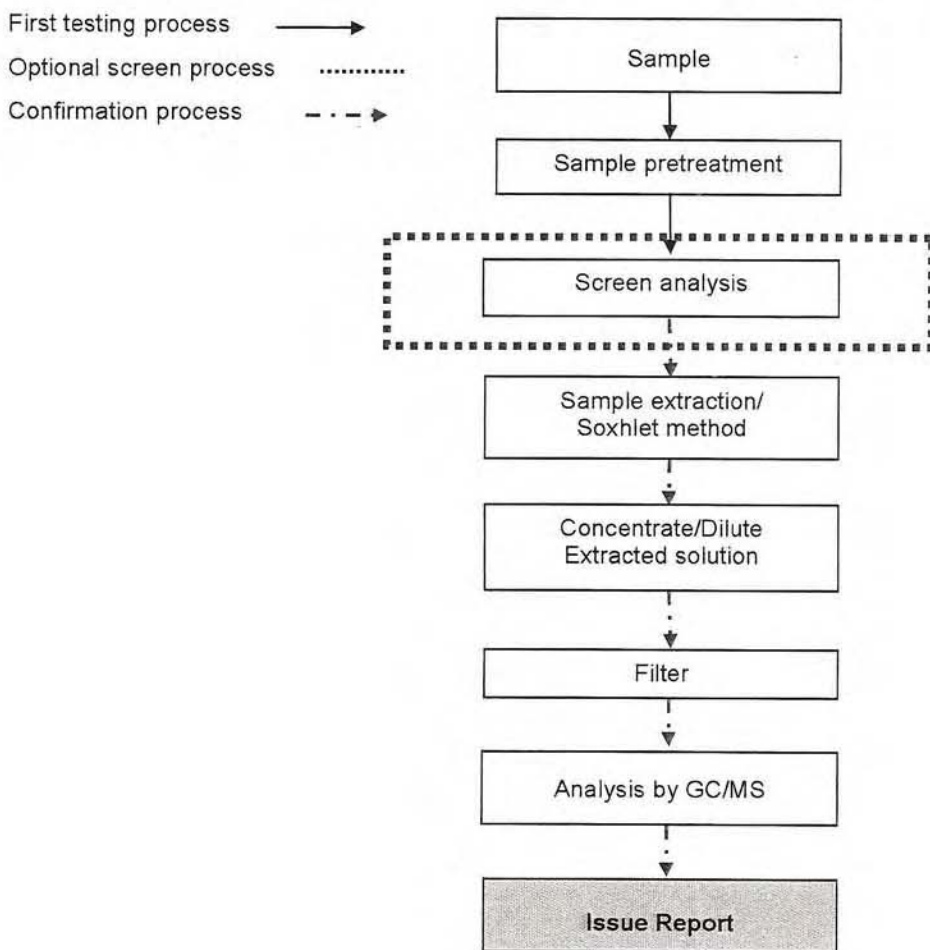
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DING MING INDUSTRY LTD
 NO.13,LANE 105,JHENGAN 1ST ST.,YONG-KANG CITY,TAINAN COUNTY
 71046,TAIWAN(R.O.C.)



PBB/PBDE analytical FLOW CHART

- 1) Name of the person who made measurement: Anson Tsao
- 2) Name of the person in charge of measurement: Ray Chang



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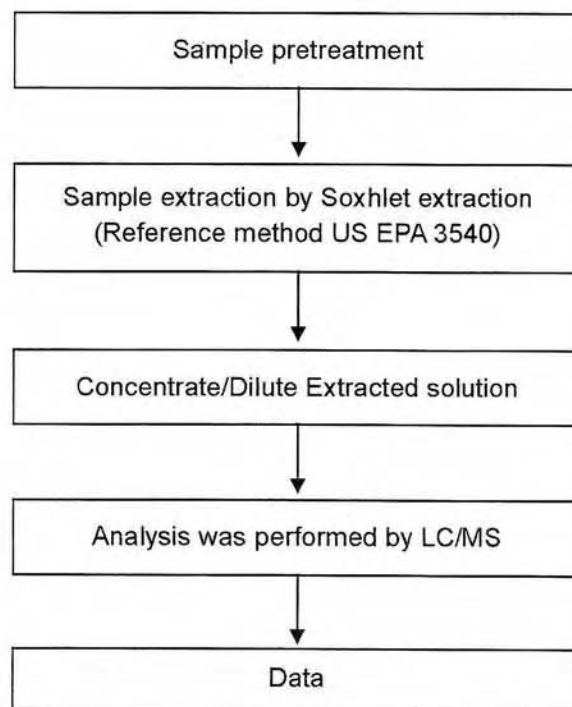
TW7881670

DING MING INDUSTRY LTD
NO.13,LANE 105,JHENGNAN 1ST ST.,YONG-KANG CITY,TAINAN COUNTY
71046,TAIWAN(R.O.C.)



Analytical flow chart of PFOA/PFOS content

- 1) Name of the person who made measurement: Anson Tsao
- 2) Name of the person in charge of measurement: Ray Chang



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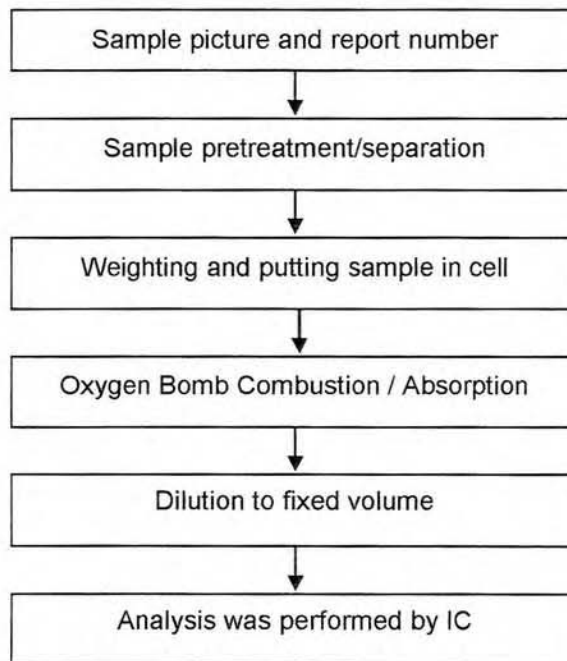
TW7881669

DING MING INDUSTRY LTD
 NO.13,LANE 105,JHENGAN 1ST ST.,YONG-KANG CITY,TAINAN COUNTY
 71046,TAIWAN(R.O.C.)



Analytical flow chart of halogen content

- 1) Name of the person who made measurement: Hungming Li
- 2) Name of the person in charge of measurement: Ray Chang



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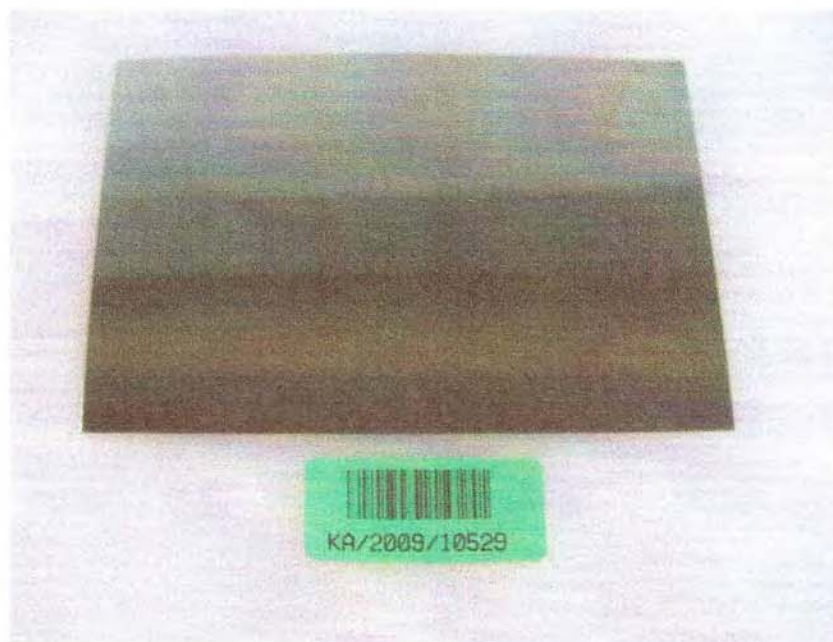
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TW 7881668

Test Report

No. : KA/2009/10529 Date : 2009/01/16 Page : 9 of 9

DING MING INDUSTRY LTD
NO.13,LANE 105,JHENGAN 1ST ST.,YONG-KANG CITY,TAINAN COUNTY
71046,TAIWAN(R.O.C.)



** End of Report **

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TW7881667



Test Report

No. : CE/2008/15622 Date : 2008/01/25 Page : 1 of 3

NYTEX COMPOSITES CO., LTD.
NO. 6, LN. 468, SEC. 4, CHANGSUI RD., PEITOU HSIANG,
CHANGHWA COUNTY, TAIWAN, R. O. C.



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

Sample Description : POLYAMIDE-66(NYLON-66) NEAT RESIN.
Style/Item No. : VYDYNE 21SPC, 21SPF, 22HSP
Manufacturer/Vendor : SOLUTIA INC.
Country of Origin : U. S. A.
Sample Receiving Date : 2008/01/18
Testing Period : 2008/01/18 TO 2008/01/25

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

Shin-Jyh Chen
Shin-jyh Chen / Asst. Manager
Signed for and on behalf of
SGS TAIWAN LTD.
Chemical Laboratory - Taipei

Test Report

No. : CE/2008/15622 Date : 2008/01/25 Page : 2 of 3

NYTEX COMPOSITES CO., LTD.
NO. 6, LN. 468, SEC. 4, CHANGSUI RD., PEITOU HSIANG,
CHANGHWA COUNTY, TAIWAN, R. O. C.



Test Result(s)

PART NAME NO.1 : TRANSLUCENT-WHITE PLASTIC PELLETS

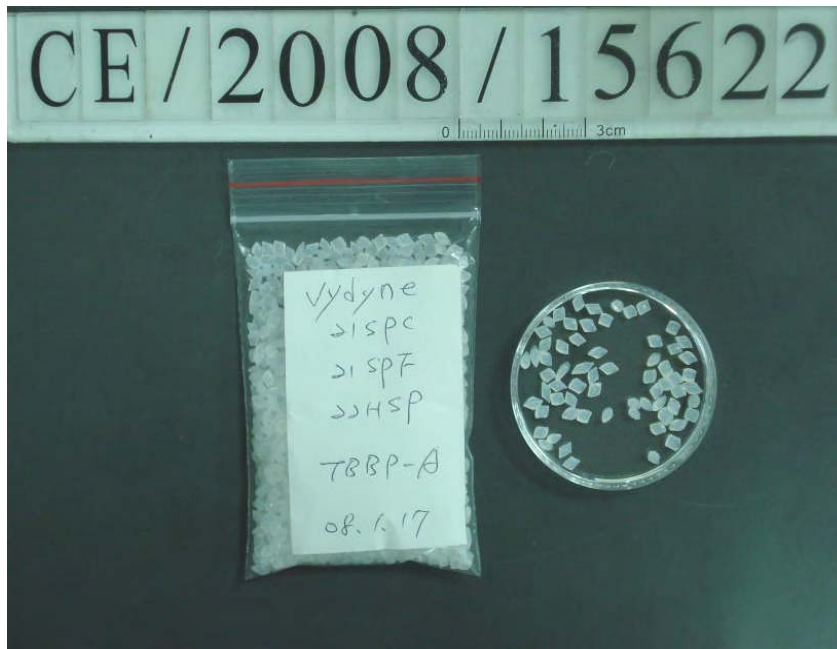
Test Item (s):	Unit	Method	MDL	Result
				No.1
Tetrabromobisphenol A (TBBP-A) (CAS No.: 000079-94-7)	mg/kg	With reference to DIN 53313. Analysis was performed by GC/MS.	10	n.d.

- Note : 1. mg/kg = ppm
2. n.d. = Not Detected
3. MDL = Method Detection Limit

Test Report

No. : CE/2008/15622 Date : 2008/01/25 Page : 3 of 3

NYTEX COMPOSITES CO., LTD.
NO. 6, LN. 468, SEC. 4, CHANGSUI RD., PEITOU HSIANG,
CHANGHWA COUNTY, TAIWAN, R. O. C.



** End of Report **



Test Report

No GZ0801012015/CHEM

Date: JAN 29, 2008

Page 1 of 3

PTM RUBBER PLASTIC COMPANY
THE SECOND INDSERID DISTRICT OF MATOULING LOU VILLAGE EONG MAON SHENZHEN

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

SGS Ref No. : GZ10818787EC-12.1
Sample Receiving Date : JAN 18, 2008
Further Information Receiving Date : JAN 29, 2008
Testing Period : JAN 18, 2008 TO JAN 29, 2008

Test Requested : To determine the Cadmium, Lead, Mercury, Hexavalent Chromium, PBBs (Polybrominated Biphenyls) & PBDEs (Polybrominated Diphenylethers) content in the submitted sample

Test Method : With reference to IEC 62321/2nd CDV (111/95/CDV)
Procedures for the Determination of Levels of Regulated Substances in Electrotechnical Products
(1) Determination of Cadmium by ICP-OES.
(2) Determination of Lead by ICP-OES.
(3) Determination of Mercury by ICP-OES.
(4) Determination of Hexavalent Chromium by Colorimetric Method
(5) Determination of PBBs and PBDEs by GC-MS.

Test Results : Please refer to next page.

Signed for and on behalf of
SGS-CSTC Ltd.

Huang Fang, Sunny
Sr. Engineer

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Test Report

No. GZ0801012015/CHEM

Date: JAN 29, 2008

Page 2 of 3

Test results by chemical method (Unit: mg/kg)

Test Item(s):	Method (refer to)	No. 1	MDL
Cadmium(Cd)	(1)	N.D.	2
Lead (Pb)	(2)	N.D.	2
Mercury (Hg)	(3)	N.D.	2
Hexavalent Chromium (CrVI) by alkaline extraction	(4)	N.D.	2
Sum of PBBs		N.D.	-
Monobromobiphenyl		N.D.	5
Dibromobiphenyl		N.D.	5
Tribromobiphenyl		N.D.	5
Tetrabromobiphenyl		N.D.	5
Pentabromobiphenyl		N.D.	5
Hexabromobiphenyl		N.D.	5
Heptabromobiphenyl		N.D.	5
Octabromobiphenyl		N.D.	5
Nonabromobiphenyl		N.D.	5
Decabromobiphenyl		N.D.	5
Sum of PBDEs	(5)	N.D.	-
Monobromodiphenyl ether		N.D.	5
Dibromodiphenyl ether		N.D.	5
Tribromodiphenyl ether		N.D.	5
Tetrabromodiphenyl ether		N.D.	5
Pentabromodiphenyl ether		N.D.	5
Hexabromodiphenyl ether		N.D.	5
Heptabromodiphenyl ether		N.D.	5
Octabromodiphenyl ether		N.D.	5
Nonabromodiphenyl ether		N.D.	5
Decabromodiphenyl ether		N.D.	5

Test Part Description:

No.1 White grains

- Note . 1. mg/kg = ppm
 2. N.D. = Not Detected (< MDL)
 3. MDL = Method Detection Limit
 4. "-" = Not regulated

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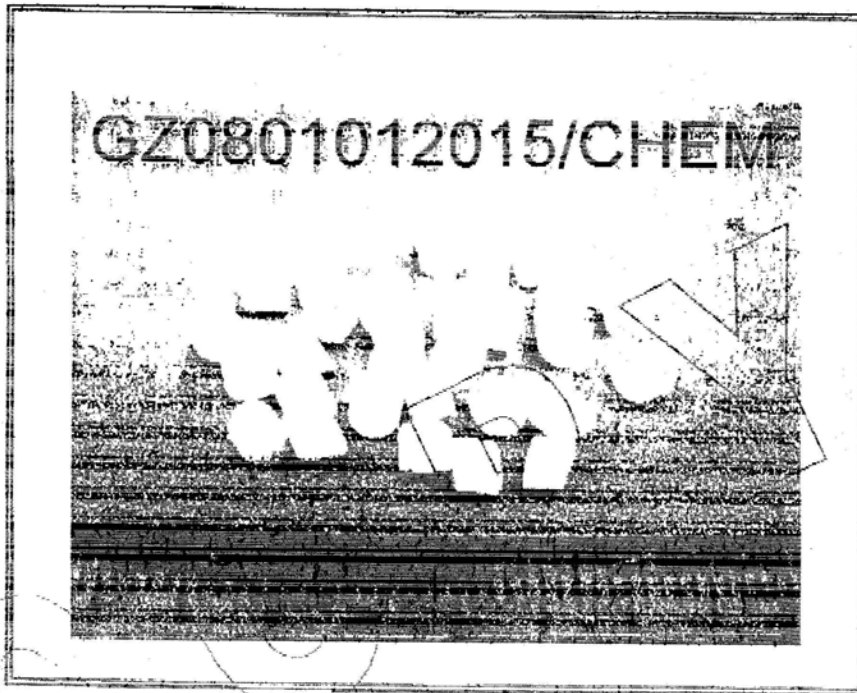
Test Report

No.: GZ0801012015/CHEM

Date: JAN 29, 2008

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Sample photo



SGS authenticate the photo on original report only

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Member of the SGS Group (SGS S.A.)

Test Report

No. CANEC0800573906

Date: 04 Mar 2008

Page 1 of 4

SHEN ZHEN LONG GANG PING HU XING HUA CHEMICAL CO.,LTD
M24-106 CHINA NAN CHENG HARDWARE CHEMICAL INDUSTRY AREA PING HU TOWN LONG GANG
DISTRICT SHENZHEN
CHINA

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

塑胶颜料

SGS Job No. : 10871655 - GZ
SGS Internal Reference No. : 6.6
Client Reference Information : 增白剂OB-1, 增白剂KCB, 增白剂KSN, 增白剂127, 增白剂OB, 增白剂OBI, 增白剂KS-N,夜光粉GSS,抗紫外线剂UV531,抗紫外线剂UV-P,钛白粉RCL-69,钛白粉RFC5,钛白粉R-TC30,扩散粉EBS,扩散粉花王EB-FF,扩散剂6A,扩散剂A蜡,扩散粉EBS-H38
Date of Sample Received : 29 Feb 2008
Testing Period : 29 Feb 2008 - 04 Mar 2008
Test Requested : Selected test(s) as requested by client.
Test Method : Please refer to next page(s).
Test Results : Please refer to next page(s).
Conclusion : Based on the performed tests on submitted sample(s), the results **comply with** the RoHS Directive 2002/95/EC and its subsequent amendments.

Signed for and on behalf of
SGS-CSTC Ltd.



Huang Fang, Sunny
Sr. Engineer

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Test Report

No. CANEC0800573906

Date: 04 Mar 2008

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Test Results:

ID for specimen 1 : CAN08-005739.006

Description for specimen 1 : Fluorescent kelly powder

RoHS Directive 2002/95/EC

Test Item(s)	Unit	Test Method (Reference)	Result	MDL	Limit
Cadmium (Cd)	mg/kg	IEC 62321/2nd CDV (111/95/CDV), ICP-OES	N.D.	2	100
Lead (Pb)	mg/kg	IEC 62321/2nd CDV (111/95/CDV), ICP-OES	156	2	1000
Mercury (Hg)	mg/kg	IEC 62321/2nd CDV (111/95/CDV), ICP-OES	N.D.	2	1000
Hexavalent Chromium (CrVI) by alkaline extraction	mg/kg	IEC 62321/2nd CDV (111/95/CDV), UV-Vis	N.D.	2	1000
Sum of PBBs	mg/kg	-	N.D.	-	1000
Monobromobiphenyl	mg/kg	IEC 62321/2nd CDV (111/95/CDV), GC-MS	N.D.	5	
Dibromobiphenyl	mg/kg	IEC 62321/2nd CDV (111/95/CDV), GC-MS	N.D.	5	
Tribromobiphenyl	mg/kg	IEC 62321/2nd CDV (111/95/CDV), GC-MS	N.D.	5	
Tetrabromobiphenyl	mg/kg	IEC 62321/2nd CDV (111/95/CDV), GC-MS	N.D.	5	
Pentabromobiphenyl	mg/kg	IEC 62321/2nd CDV (111/95/CDV), GC-MS	N.D.	5	
Hexabromobiphenyl	mg/kg	IEC 62321/2nd CDV (111/95/CDV), GC-MS	N.D.	5	
Heptabromobiphenyl	mg/kg	IEC 62321/2nd CDV (111/95/CDV), GC-MS	N.D.	5	
Octabromobiphenyl	mg/kg	IEC 62321/2nd CDV (111/95/CDV), GC-MS	N.D.	5	
Nonabromobiphenyl	mg/kg	IEC 62321/2nd CDV (111/95/CDV), GC-MS	N.D.	5	
Decabromobiphenyl	mg/kg	IEC 62321/2nd CDV (111/95/CDV), GC-MS	N.D.	5	
Sum of PBDEs(Mono to Nona) (Note 4)	mg/kg	-	N.D.	-	1000
Monobromodiphenyl ether	mg/kg	IEC 62321/2nd CDV (111/95/CDV), GC-MS	N.D.	5	
Dibromodiphenyl ether	mg/kg	IEC 62321/2nd CDV (111/95/CDV), GC-MS	N.D.	5	
Tribromodiphenyl ether	mg/kg	IEC 62321/2nd CDV (111/95/CDV), GC-MS	N.D.	5	
Tetrabromodiphenyl ether	mg/kg	IEC 62321/2nd CDV (111/95/CDV), GC-MS	N.D.	5	
Pentabromodiphenyl ether	mg/kg	IEC 62321/2nd CDV (111/95/CDV), GC-MS	N.D.	5	
Hexabromodiphenyl ether	mg/kg	IEC 62321/2nd CDV (111/95/CDV), GC-MS	N.D.	5	
Heptabromodiphenyl ether	mg/kg	IEC 62321/2nd CDV (111/95/CDV), GC-MS	N.D.	5	
Octabromodiphenyl ether	mg/kg	IEC 62321/2nd CDV (111/95/CDV), GC-MS	N.D.	5	
Nonabromodiphenyl ether	mg/kg	IEC 62321/2nd CDV (111/95/CDV), GC-MS	N.D.	5	
Decabromodiphenyl ether	mg/kg	IEC 62321/2nd CDV (111/95/CDV), GC-MS	N.D.	5	
Sum of PBDEs(Mono to Deca)	mg/kg	-	N.D.	-	-

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Note:

1. mg/kg = ppm
2. N.D. = Not Detected (< MDL)
3. MDL = Method Detection Limit
4. Sum of Mono to NonaBDE & according to 2005/717/EC DecaBDE is exempt.
5. "-" = Not regulated

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Sample photo:



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測試報告

號碼：CE/2007/35384

日期：2007/03/23

頁數：1 of 3

映森企業股份有限公司

台北縣三重市中正北路540巷13號2樓



以下測試樣品係由客戶送樣，且由客戶聲稱並經客戶確認如下：


樣品名稱： 鉚釘
樣品型號： 鐵鍍鎳
收件日期： 2007/03/16
測試期間： 2007/03/16 TO 2007/03/23

=====
測試需求： 參照 RoHS 2002/95/EC 及其修定指令要求。

測試方法： 參考IEC 62321, Ed. 1 111/54/CDV方法檢測。

- (1) 用感應耦合電漿原子發射光譜儀(ICP-AES)檢測鎘含量。
- (2) 用感應耦合電漿原子發射光譜儀(ICP-AES)檢測鉛含量。
- (3) 用感應耦合電漿原子發射光譜儀(ICP-AES)檢測汞含量。
- (4) 針對金屬材質之樣品，用Spot test / Colorimetric方法檢測六價鉻含量。

測試結果： 請見下一頁。


Daniel Yeh, M.R. / Operation Manager
Signed for and on behalf of
SGS TAIWAN LTD.

測試報告

號碼：CE/2007/35384

日期：2007/03/23

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映森企業股份有限公司

台北縣三重市中正北路540巷13號2樓



測試結果 (單位: mg/kg)

測試項目	測試方法 (請參考)	結果	方法偵測 極限值
		No.1	
鎘	(1)	n.d.	2
鉛	(2)	n.d.	2
汞	(3)	n.d.	2
六價鉻 (Spot test / boiling water extraction)	(4)	Negative	備註 4

測試部位描述:

NO.1 : 銀色金屬鍍層

備註: 1. mg/kg = ppm

2. n.d. = Not Detected / 未檢出

3. MDL = Method Detection Limit / 方法偵測極限值
高分子材質中十溴聯苯醚之使用限制。

4. Spot-test:

Negative=鍍層中偵測不到六價鉻, Positive=鍍層中偵測到六價鉻;

當該測項無法確認時, 測試樣品可藉由boiling-water-extraction測試方法進一步確認

Boiling-water-extraction:

Negative=鍍層中偵測不到六價鉻, Positive=鍍層中偵測到六價鉻;

該濃度溶液 ≥ 0.02 mg/kg with 50 cm^2 (sample surface area)

測試報告

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映森企業股份有限公司

台北縣三重市中正北路540巷13號2樓



** 報告結尾 **

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日期(Date) : 2008/01/14

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新原金屬工業股份有限公司

SOLNET METAL INDUSTRY CO., LTD.

台北縣新莊市化成路83巷9號

NO. 9, LANE 83, HWA CHENG RD., HSIN CHUANG, TAIPEI HSIEN, TAIWAN.



以下測試樣品係由客戶送樣，且由客戶聲稱並經客戶確認如下 (The following samples was/were submitted and identified by/on behalf of the client as) :

樣品名稱(Sample Description) : 無鉛鉛錫 (LEAD-FREE SOLDER)
樣品型號(Style/Item No.) : M705(E)*適用主成份(Sn / 3Ag / 0.5Cu) 無鉛鉛錫系列產品
批號(Lot No.) : M705E LOT:GK415, EX M705 1.0/m LOT:GL444, Sn M705 2.0/m
LOT:GL440, EV-B M705 1.0/m LOT:GA128, ESC M705 1.0/m F:3
LOT:GK416
收件日期(Sample Receiving Date) : 2008/01/07
測試期間(Testing Period) : 2008/01/07 TO 2008/01/14

=====
測試結果(Test Results) : 請見下一頁 (Please refer to next pages).

Chenyu Kung / Operation Manager
Signed for and on behalf of
SGS TAIWAN LTD.
Chemical Laboratory – Taipei

測試報告

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新原金屬工業股份有限公司

SOLNET METAL INDUSTRY CO., LTD.

台北縣新莊市化成路83巷9號

NO. 9, LANE 83, HWA CHENG RD., HSIN CHUANG, TAIPEI HSIEN, TAIWAN.



測試結果(Test Results)

測試部位(PART NAME) NO.1 : 銀色金屬棒 (SILVER COLORED METAL BAR)

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限值 (MDL)	結果 (Result)
				NO.1
鎘 / Cadmium (Cd)	mg/kg	參考IEC 62321, Ed.1 111/54/CDV 方法, 用感應耦合電漿原子發射光 譜儀 (ICP-AES) 檢測鎘含量. / With reference to IEC 62321, Ed.1 111/54/CDV. Determination of Cadmium by ICP-AES.	2	n.d.
鉛 / Lead (Pb)	mg/kg	參考IEC 62321, Ed. 1 111/54/CDV 方法, 用感應耦合電漿原子發射光 譜儀 (ICP-AES) 檢測鉛含量. / With reference to IEC 62321, Ed.1 111/54/CDV. Determination of Lead by ICP-AES.	2	196
汞 / Mercury (Hg)	mg/kg	參考IEC 62321, Ed. 1 111/54/CDV 方法, 用感應耦合電漿原子發射光 譜儀 (ICP-AES) 檢測汞含量. / With reference to IEC 62321, Ed.1 111/54/CDV. Determination of Mercury by ICP-AES.	2	n.d.
六價鉻 / Hexavalent Chromium Cr(VI) by Spot test / boiling water extraction	**	針對金屬材質之樣品, 參考IEC 62321, Ed. 1 111/54/CDV方法檢 測, 用Spot test / Colorimetric 方法檢測六價鉻含量. / With reference to IEC 62321, Ed.1 111/54/CDV. Determination of Hexavalent Chromium for metallic samples by Spot test / Colorimetric Method.	0.02mg/kg with 50 cm ² surface area	Negative

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新原金屬工業股份有限公司

SOLNET METAL INDUSTRY CO., LTD.

台北縣新莊市化成路83巷9號

NO. 9, LANE 83, HWA CHENG RD., HSIN CHUANG, TAIPEI HSIEN, TAIWAN.



測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限值 (MDL)	結果 (Result)
				NO.1
多溴聯苯總和 / Sum of PBBs	mg/kg	參考IEC 62321, Ed. 1 111/54/CDV 方法, 以氣相層析儀/質譜儀檢測多 溴聯苯和多溴聯苯醚含量. / With reference to IEC 62321, Ed.1 111/54/CDV. Determination of PBB and PBDE by GC/MS.	-	n.d.
一溴聯苯 / Monobromobiphenyl			5	n.d.
二溴聯苯 / Dibromobiphenyl			5	n.d.
三溴聯苯 / Tribromobiphenyl			5	n.d.
四溴聯苯 / Tetrabromobiphenyl			5	n.d.
五溴聯苯 / Pentabromobiphenyl			5	n.d.
六溴聯苯 / Hexabromobiphenyl			5	n.d.
七溴聯苯 / Heptabromobiphenyl			5	n.d.
八溴聯苯 / Octabromobiphenyl			5	n.d.
九溴聯苯 / Nonabromobiphenyl			5	n.d.
十溴聯苯 / Decabromobiphenyl			5	n.d.
多溴聯苯醚總和 (一至九溴) / Sum of PBDEs (Mono to Nona) (Note 4)			-	n.d.
一溴聯苯醚 / Monobromobiphenyl ether			5	n.d.
二溴聯苯醚 / Dibromobiphenyl ether			5	n.d.
三溴聯苯醚 / Tribromobiphenyl ether			5	n.d.
四溴聯苯醚 / Tetrabromobiphenyl ether			5	n.d.
五溴聯苯醚 / Pentabromobiphenyl ether			5	n.d.
六溴聯苯醚 / Hexabromobiphenyl ether			5	n.d.
七溴聯苯醚 / Heptabromobiphenyl ether			5	n.d.
八溴聯苯醚 / Octabromobiphenyl ether			5	n.d.
九溴聯苯醚 / Nonabromobiphenyl ether			5	n.d.
十溴聯苯醚 / Decabromobiphenyl ether			5	n.d.
多溴聯苯醚總和 (一至十溴) / Sum of PBDEs (Mono to Deca)			-	n.d.

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新原金屬工業股份有限公司

SOLNET METAL INDUSTRY CO., LTD.

台北縣新莊市化成路83巷9號

NO. 9, LANE 83, HWA CHENG RD., HSIN CHUANG, TAIPEI HSIEN, TAIWAN.



測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限值 (MDL)	結果 (Result)
				NO.1
鹵素 / Halogen	---	參考BS EN 14582, 以離子層析儀分析氟, 氯, 溴, 碘含量. / With reference to BS EN 14582. Analysis was performed by IC method for F, Cl, Br, I content.	---	---
鹵素 (氟) / Halogen-Fluorine (F) (CAS No.: 007782-41-4)	mg/kg	參考BS EN 14582, 以離子層析儀分析氟含量. / With reference to BS EN 14582. Analysis was performed by IC method for Fluorine content.	50	n.d.
鹵素 (氯) / Halogen-Chlorine (Cl) (CAS No.: 007782-50-5)	mg/kg	參考BS EN 14582, 以離子層析儀分析氯含量. / With reference to BS EN 14582. Analysis was performed by IC method for Chlorine content.	50	n.d.
鹵素 (溴) / Halogen-Bromine (Br) (CAS No.: 007726-95-6)	mg/kg	參考BS EN 14582, 以離子層析儀分析溴含量. / With reference to BS EN 14582. Analysis was performed by IC method for Bromine content.	50	n.d.
鹵素 (碘) / Halogen-Iodine (I) (CAS No.: 007553-56-2)	mg/kg	參考BS EN 14582, 以離子層析儀分析碘含量. / With reference to BS EN 14582. Analysis was performed by IC method for Iodine content.	50	n.d.

備註(Note) :

1. mg/kg = ppm
2. n.d. = Not Detected (未檢出)
3. MDL = Method Detection Limit (方法偵測極限值)
4. 根據2005年10月13日歐盟會議公佈2005/717/EC, 修訂2002/95/EC內容, 通過解除高分子材質中十溴聯苯醚之使用限制. (According to 2005/717/EC DecaBDE is exempt.)
5. "-" = Not Regulated (無規格值)
6. "---" = Not Conducted (未測項目)
7. "*" = Qualitative analysis (No Unit) 定性分析(無單位)
8. Negative = Undetectable 陰性(未偵測到); Positive = Detectable 陽性(已偵測到)

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新原金屬工業股份有限公司

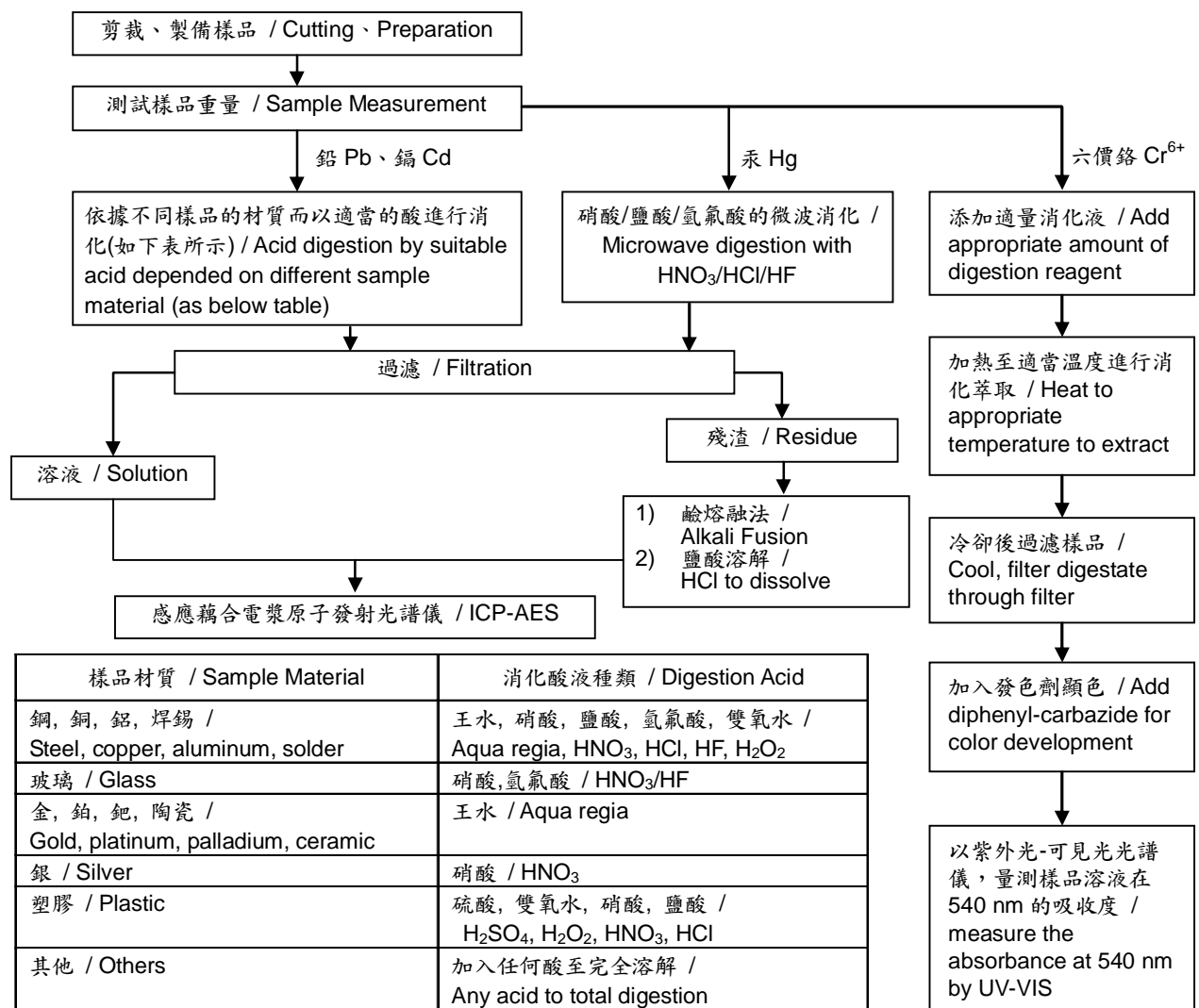
SOLNET METAL INDUSTRY CO., LTD.

台北縣新莊市化成路83巷9號

NO. 9, LANE 83, HWA CHENG RD., HSIN CHUANG, TAIPEI HSIEN, TAIWAN.



- 1) 根據以下的流程圖之條件，樣品已完全溶解。(六價鉻測試方法除外) / These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ test method excluded)
- 2) 測試人員：張啓興 / Name of the person who made measurement: Troy Chang
- 3) 測試負責人：龔振裕 / Name of the person in charge of measurement: Chenyu Kung



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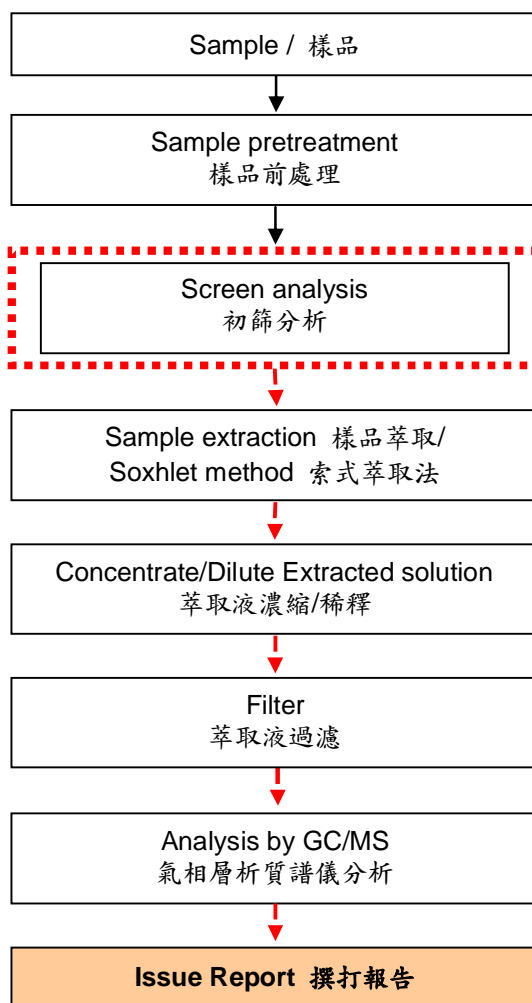


多溴聯苯/多溴聯苯醚分析流程圖 / PBB/PBDE analytical FLOW CHART

初次測試程序 / First testing process ———→

選擇性篩檢程序 / Optional screen process→

確認程序 / Confirmation process - - - ->



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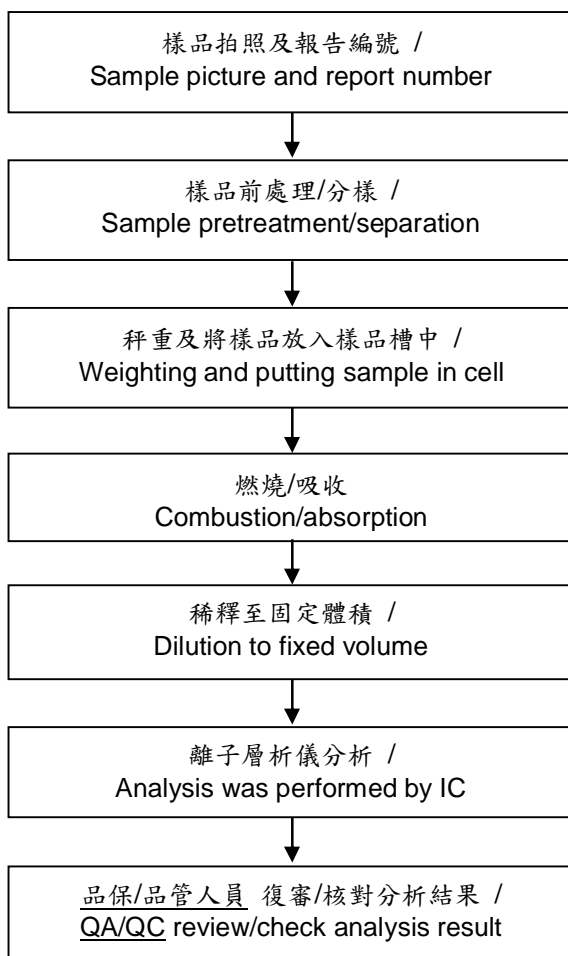
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台北縣新莊市化成路83巷9號

NO. 9, LANE 83, HWA CHENG RD., HSIN CHUANG, TAIPEI HSIEN, TAIWAN.



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



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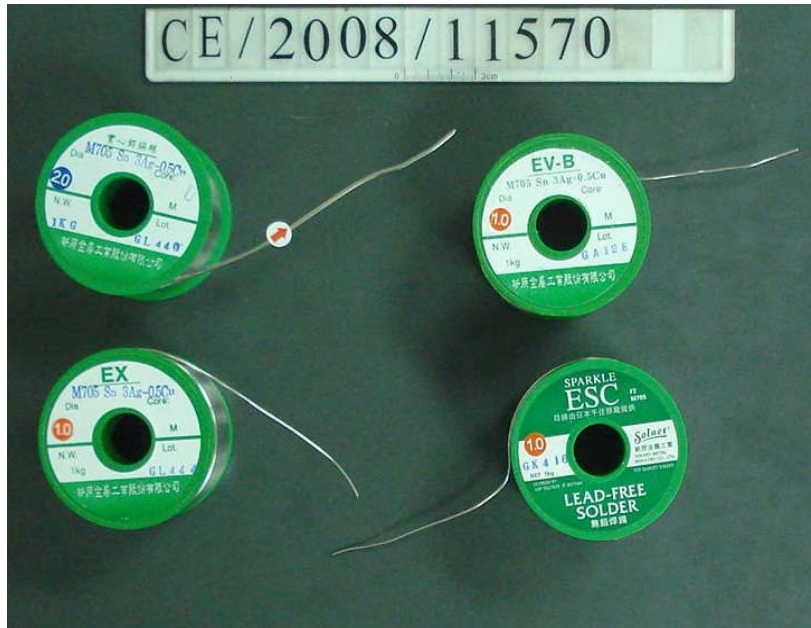
日期(Date) : 2008/01/14

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新原金屬工業股份有限公司
SOLNET METAL INDUSTRY CO., LTD.

台北縣新莊市化成路83巷9號

NO. 9, LANE 83, HWA CHENG RD., HSIN CHUANG, TAIPEI HSIEN, TAIWAN.



** 報告結尾 **