

$II_{PRC}$	-NET	S				
捷超通訊科	技股份	有限	公司			
	承		認		<u> </u>	
公司料號:		(	G153240	039090 <u>0</u>		
供應商及料	號:_	慶陞	, 660210	00031-14	0 黑色タ	小軍
料品名稱:			ANT	ENNA		- 57
料品規格:	F	reque	ncy Rang	ge: 2.4~	2.5GHZ	
=		Gain	:2.0±0.2	25(dBi),	140mm	
		CO	LOR: BLAC	JK, 剝皮釒	度錫	
適用機型:_			共用相	&型		
注意事項:	無鉛	报告起力	治日期:200	09/07/14	保存期限	:1年
單重(仟克)	:		0.005	4KG		
最小包裝量						
	受文單位	立		j	<b>承認單位</b>	
□業務部 □製	造部 🔲	品保部	□ 採購部	核准	審核	承辦人
				R	集	可取
				A.	華	2
				13/	多	利力
確認日期:			2009/12	/21	1/2	1 /
住址:台北	践中和	市立	<b>渔街 95</b>	號7樓		

# TO: 捷超通訊股份有限公司

#### SPECIFICATION FOR APPROVAL

DESCRIPTION: 2.4GHz Antenna+1.13mm(140mm) Coaxial Cable(剝皮鍍錫)

CUSTOMER DWG. NO. /PART NO:

KINSUN PROD. NO: 6602100031-140 黑色外罩

DATE: **2009.12.17** 

PLEASE RETURN TO US ONE COPY OF "SPECIFICATION FOR APPROVAL" WITH YOUR APPROVED SIGNATURES

#### APPROVED SIGNA TURES



- 1. 單體重量:5.4g
- 2. 保存期限:一年
- 3. 最小包裝:10PCS/BAG

	APPROVED	CHECKED	PREPARED
NAME	Yang Alan	Roy Wu	Stella Wang

## 慶陞工業股份有限公司



#### KINSUN INDUSTRIES INC.

桃園縣中壢市普忠路 211 巷 20 號

TEL: 886-3-4353551 FAX: 886-3-4353951 http://www.kinsun.com e-mail: roy@kinsun.com



http://www.kinsun.com

TEL: (03) 4353	<b>3551</b>	FAX: (03) 4	353951

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#### **TECHNICAL DATA**

#### **Electrical Properties**

Frequency Range: 2.4~2.5 GHz

**Impedance: 50 Ohm nominal** 

V.S.W.R: 2.0

Gain: 2dBi±0.25

**Radiation: Omni** 

**Polarization: Vertical** 

**Electrical Wave: Dipole array** 

**Connector:** 

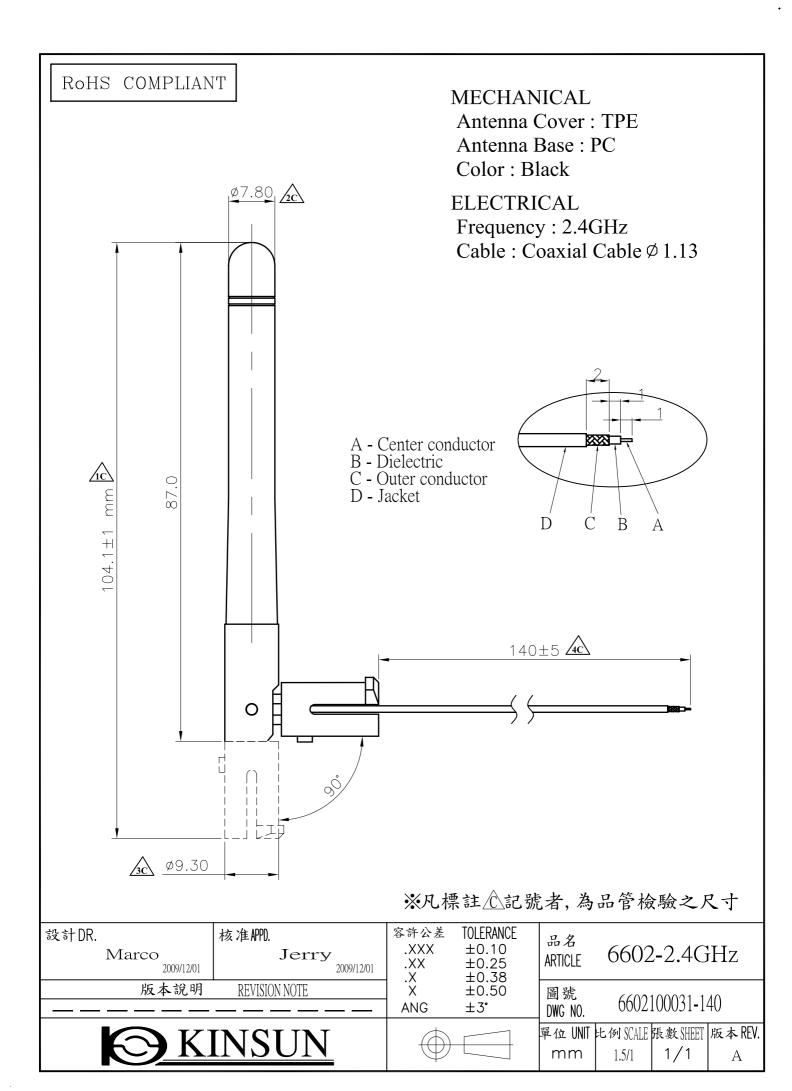
#### **Mechanical Properties**

**Antenna Cover: TPE** 

Color: BLACK

**Operation Temperature:-20** ~+65

**Storage Temperature:-30** ~+75



## **KINSUN**

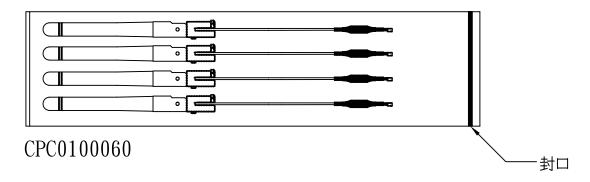
## 慶陞公司標準

主題 Subject	CCO2性的十分壯	文件編號 NO.	EN-6602-	P0101	版本 REV.	A
Subject	6602帶線式包裝	核准 APPD.	Jerry	製作者 DR.	Hay	ato

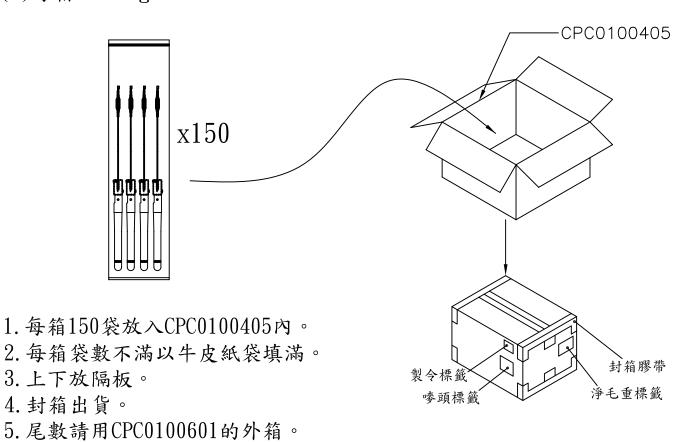
(1)天線朝同一個方向,10pcs一袋



(2)每個防水袋使用封口機於袋口處封口(封口前空氣需漏掉)



(3)每箱150 Bag

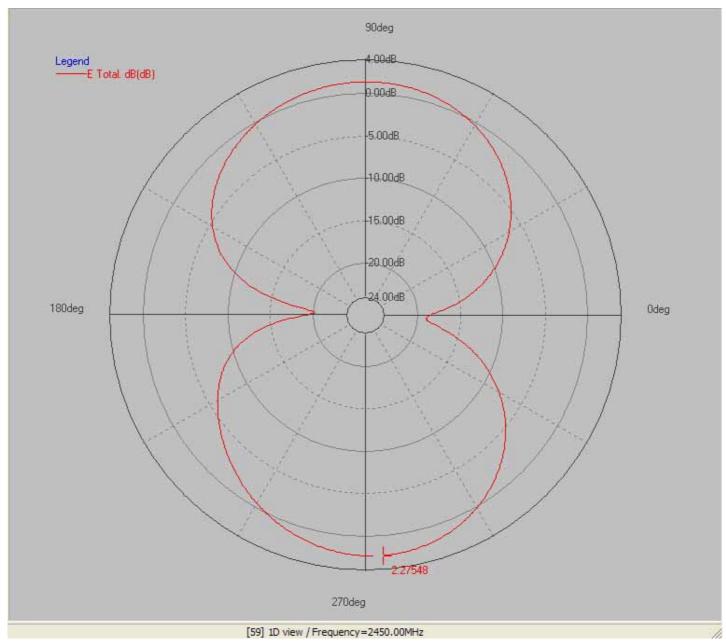




http://www.kinsun.com TEL: (03) 4353551 FAX: (03) 4353951

Brand / Model: 6602100031-140

Remark: 2450MHz Tested by: Nick Dai



--: Max. deg \*Unit: dBi

Frequency(MHz): 2450.00 Pattern Field: E plane Average Gain(dB): -3.01dB

Maximum Gain(dB): 2.28dB Maximum Gain(degree): -85.71

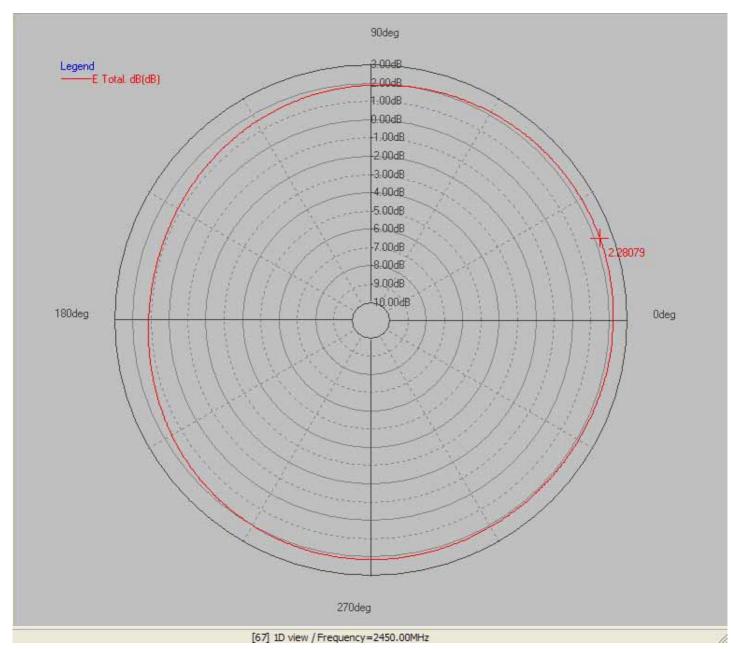
Minimum Gain(dB): -20.40dB Minimum Gain(degree): 177.14



http://www.kinsun.com TEL: (03) 4353551 FAX: (03) 4353951

Brand / Model: 6602100031-140

Remark: 2450MHz Tested by: Nick Dai



--: Max. deg \*Unit: dBi

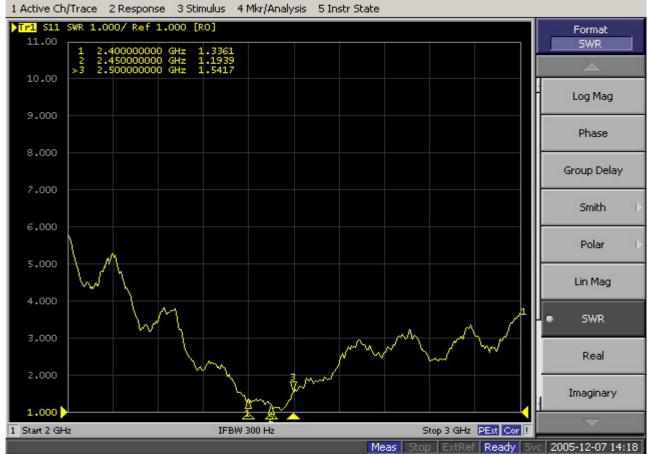
Frequency(MHz): 2450.00 Pattern Field: H plane Average Gain(dB): 1.84dB

Maximum Gain(dB): 2.28dB Maximum Gain(degree): 19.53

Minimum Gain(dB): 1.07dB Minimum Gain(degree): 167.42

#### 6602100031-140 S11





#### KEYFLEX BT-1063D



#### **Applications**

Fuel tanks, gears, tubes, hose

#### Description

KEYFLEX BT-1063D has flexibility and elastic resiliency similar to those of rubber as well as mechanical strength ,heat-resistnace and weather-resistance better than those of rubber. All grade of KEYFLEX BT are block copolymers consisting of a hard(crystaline)segment of polybutylene-terephthalate and a soft(amorphous) segment based on long-chain polyether glycol. Properties are determined by the ratio of hard to soft segment.

Properties	Test Method	Test Condition	Unit	Value
Physical				
Hardness	ASTM D2240	Shore D	_	63
Specific Gravity	ASTM D792		-	1.22
Water Absorption	ASTM D570	24hr, 23℃	%	0.3
Mold Shrinkage	ASTM D955		%	1.5
lechanical				
			kg/cm²	410
Tensile Strength at break	ASTM D638	<del>-</del>	MPa	40.2
		<del>-</del>	psi	5830
Elongation at break	ASTM D638		%	550
			kg/cm²	200
Tensile Strength at yield	ASTM D638	<del>-</del>	MPa	19.6
		_	psi	2850
			kg/cm²	110
Tensile Strength (5% Elongation)	ASTM D638		MPa	10.8
(376 Elongation)			psi	1570
			kg/cm²	3100
Flexural modulus	ASTM D790	_	MPa	304
		_	10 <sup>3</sup> ×psi	4410
			kg·cm/cm	NB
		Noched, 23℃	J/m	NB
IZOD Incompant Otropposth	ACTM DOEC	_	ft·lb/in	NB
IZOD Impact Strength	ASTM D256		kg·cm/cm	10
		Noched, -40℃	J/m	98
			ft·lb/in	1.8
Tana Otana ath	ACTM DC04	R-Scale -	kg/cm	165
Tear Strength	ASTM D624	n-Scale -	lb/in	925
hermal				
Melt Flow Index(MI)	ASTM D1238	2.16kgf	g/10min	28 <sup>*3</sup>
Molt Tomporature	Dec	0.45 MPa —	°C	210
Melt Temperature	DSC	U.43 MFd —	°F	410
Heat Deflection Temperature	ASTM D648	0.45 MPa —	°C	124
rieat Defiection remperature	ASTIVI U040	U.43 WIA —	°F	256

2005年10月13日

台灣帝人化成(股)有限公司

#### パンライト試験成績表

拝啓 貴社ますますご清祥の事と、お慶び申し上げます。 平素は、パンライトをお引き立て賜り厚く御礼申し上げます。 さて、標記の件につきまして、下記の通りご報告いたします。

記

G R A D E :LN-1250G COLOR NO. : NAT

#### 項目;分子量測定

LOT NO.	Q'TY(KGS)	規格値	測定值	合否判定
H4605928	9,750	21,600±1000	21,630	OK

#### MFR測定

LOT NO.	Q'TY(KGS)	規格値	測定値	合否判定
H4605928	9,750	10.0±3.0%	11.5	OK



UL International Services Ltd.--Taiwan Branch 4th Floor No. 260 Da-Yeh Road Pei Tou, Taipei, Taiwan 112 Telephone: 886-2-2896-7790 Fax: 886-2-2891-7644 Email: ul.tw@tw.ul.com



MR S N WONG
WONDERFUL HI-TECH CO LID
CHUNG LI INDUSTRIAL PARK
17 PEI YUAN RD
CHUNG-LI, FU SHING LEE
TAOYUAN HSIEN TAIWAN

Date: 2003/09/22 Subscriber: 699947002 File No: E77981 Project No: 03CA21293

PD No: 03015304

Type: L

PO Number: S WONG

Subject: Procedure And/Or Report Material

The following material resulting from the investigation under the above numbers is enclosed.

Issue

 Date
 Vol
 Sec
 Pages
 Revised Date

 1981/04/09
 1
 1
 Revised Tble of Authorized Styles H, J
 2003/09/18

 1981/04/09
 1
 1
 New Facing Pages 1745, 1979
 2003/09/18

Inspections at your plant will be conducted under the supervision of Mr. Hank Su, Field Supervisor, 4th Fl. 260 Da-Yeh Road, Pei Tou District, Taipei 112 Taiwan, PHONE: 886 2 28938008 ext. 108, FAX: 886 2 28978628.

Marks as needed may be obtained from: UL International Service Ltd., 4th Fl., 260 Da-Yeh Road, Peitou, Taipei City, Taiwan 112, PHONE: 886 2 28967790, FAX: 886 2 28917644, ATTN: Iris Tseng.

Please file revised pages and illustrations in place of material of like identity. New material should be filed in its proper numerical order.

NOTE: Follow-Up Service Procedure revisions DO NOT include Cover Pages, Test Records and Conclusion Pages. Report revisions DO NOT include Authorization Pages, Indices, Section General Pages and Appendixes.

Please review this material and report any inaccuracies to LAURA CHANG (886-2-2896-7790), referring to the above Project and/or PD Numbers.

c: TPI File

UL INSPECTION CENTER 408

-

UNDERWRITERS LABORATORIES INC.

File E77981 Vol. 1

-

Section 1 Page H

FACTORY INSPECTION PROCEDURE

Issued: 1981-04-09

Revised: 2003-09-18

## TABLE OF AUTHORIZED STYLES SINGLE-CONDUCTOR THERMOPLASTIC-INSULATED WIRE

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UNDERWRITERS LABORATORIES INC. File E77981

Section 1

FACTORY INSPECTION PROCEDURE Page J

Issued: 1981-04-09

Vol. 1

Revised: 2003-09-18

#### TABLE OF AUTHORIZED STYLES SINGLE-CONDUCTOR THERMOPLASTIC-INSULATED WIRE

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		1974			1999	
1924	1949				10000	
1925	1950	1975			10000	

## SPECIFICATION FOR APPROVAL

DOCUMENT: A3132SP003

**COAXIAL CABLE** 

STYLE:  $105^{\circ}$ C 30V

SIZE: 32AWG×1C

**BRAID** : SP

RECOGNIZED: UL 1979



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

WU KU IND. DISTRICT CHUNG-LI IND. PARK TAIPEI HSIEN,TAIWAN TAIWAN, R.O.C.

TEL: (02)22988033 TEL: (03)4527777 FAX: (02)22988031-2 FAX: (03)4517214

FACTORY: 17 PEI YUAN ROAD,

# WONDERFUL HI-TECH CO., LTD. SPECIFICATION

STYLE	105°C 30V	DOCUM	MENT NO:
STILL	UL 1979	A3132S	P003
SIZE	32AWG	ESTABI	LISHED DATE:
SIZE	J2AWU	2008/06/	/23
STANDARI	D:		
	Size	AWG	32
Conductor	Material		Silver Cover Copper
Conductor	Conductors No.		7
	Conductors Size	mm	0.080
	O.D.	mm	0.24
	Average Thickness	mm	0.22
Insulation	Diameter	mm	$0.68 \pm 0.02$
	Material		FEP
	Color		Clear
Braid	Material		Silver Cover Copper
Diaid	Construction	mm	16 / 4 / 0.050
	Coverage	%	91.3
	Average Thickness	mm	0.13
Jacket	Diameter	mm	$1.13 \pm 0.05$
	Material		FEP
	Color		According to custom
Marking	Non		
Drawing			
AK001/210X29′	7/1 ()		PAGE · 1

AK001/210X297/1.0 PAGE: 1

EDITION: 1.1

MAKER: 7. C. XUO CONFIRM: C. Y. Chen APPROVAL: W.J. Wang

# WONDERFUL HI-TECH CO., LTD. SPECIFICATION

Electrical &	& Physic	al Properties						
Item			32AWG					
Rating Ter	np Volta	ge	105°C 30	VC				
Conductor	Resistan	ce	850 OHN	I/KM/20°	C MAX.			
Insulation	Resistanc	ce	1000 ME	GA OHM	I-KM MII	N.		
Dielectric	Strength		AC 500 V	V/Minute				
Spark Test			2.5 KV					
	Unaged	Tensile Strength	2500 PSI	MIN.( 1.	76 Kg/1	m m²)		
Insulation	Unaged	Elongation	200% MI	N.				
	Aged	Tensile Strength	UNAGED MIN. 75%(168HRS×232°C)					
	Aguu	Elongation UNAGED MIN. 75%(168F		(168HRS)	[RS×232°C)			
	Unaged	Tensile Strength	2500 PSI MIN.( 1.76 Kg / m m²)			m m²)		
Jacket	Unaged	Elongation	200% MIN.					
	Aged	Tensile Strength	UNAGED	MIN.75%	(168HRS×	232°C)		
	Aguu	Elongation	UNAGED	MIN.75%	(168HRS×	232°C)		
Nom. Impe	edance		$50 \pm 3 \text{ O}$	hms				
Nom. Capa	acitance		96 ± 3 pF/m					
Nom. Vel.	of Prop.		69%					
VSWR Test (0 – 6 GHZ)		Max 1.3						
Flame Test	t	-	VW-1 OF	X				
Attenuation	n	2.0GHZ	2.4GHZ	2.5GHZ	5.0GHZ	6.0 <b>GHZ</b>		
(dB/1m)		2.80	3.10	3.15	4.85	5.20		

AK001/210X297/1.0 PAGE: 2

EDITION: 1.1

MAKER: 7. C. XUO CONFIRM: C.Y. Chen APPROVAL: W.J. Wang



http://www.kinsun.com TEL: (03) 4353551

#### 銅管材質證明

東莞信泰隆五金制品有限公司 SHIN TAY LONG FIVEMETAL PRODUCT CO.,LTD.

	THEFT	產品質量	證明書	oci co.,	LTD.
各户:	\$ to \$1	7	日期:	2007.8	12
品名	規格	狀態	制造方法	數	
H65	,	H		-	
化學成	銅(Cu)	鐵(Fe)	鉛(pb)	鋅(Zn)	雜質
59	64.878%	0.012%			
機械	抗拉强度 (不少士)	延伸率 (不少士)	直徑公差	IN LONG	<del>0.003</del> /6
性能			(3)	超	THE CO
	主管: 渊体	7	化驗員: 為	12	4.8

<u>http://www.kinsun.com</u> TEL: (03) 4353551 FAX: (03) 4353951

# 6303100031-140

# SGS REPORT

1	Cabla		$\mathbf{D}\mathbf{F}\mathbf{D}\mathbf{\Omega}\mathbf{D}$		1 1
1.	Cable	202	REPOR	<b>Z~</b> 4	H

2. TPE SGS REPORT ----- 42~44

3. PC SGS REPORT ----- 45~50

4. 銅管 SGS REPORT----- 51~54



號碼(No.): CE/2009/11501C 日期(Date): 2009/01/15 頁數(Page): 1 of 21

萬泰科技股份有限公司 WONDERFUL HI-TECH CO., LTD. 桃園縣中壢市工業區北園路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户送樣,且由客户聲稱並經客户確認如下 (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-316U MINI 0.8mm, 1.13mm, 1.32mm, 1.37mm, 1.48mm, RF405A UL 1330, 1331, 1332, 1333, 1726, 1867, 10231, 10064

樣品型號(Style/Item No.)

: BLACK(BK4025), BROWN(BN4027), RED(RD4026), ORANGE(OR4020), YELLOW(YE4029), GREEN(GN4023), BLUE(BL4021), PURPLE(PU4024), GRAY(GY4028), WHITE(WT4022)

收件日期(Sample Receiving Date)

: 2009/1/9

測試期間(Testing Period)

2009/1/9 TO 2009/1/15

\_\_\_\_\_

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

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明,此報告結果僅對測試之樣品負責。本報告未經本公司書面許可,不可部分複製

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號碼(No.): CE/2009/11501C 日期(Date): 2009/01/15 頁數(Page): 2 of 21

萬泰科技股份有限公司

WONDERFUL HI-TECH CO., LTD.

桃園縣中壢市工業區北園路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 黑色塑膠粒 (BLACK PLASTIC PELLETS) 測試部位(PART NAME) NO.2 棕色塑膠粒 (BROWN PLASTIC PELLETS) 測試部位(PART NAME) NO.3 紅色塑膠粒 (RED PLASTIC PELLETS) 測試部位(PART NAME) NO.4 橘色塑膠粒 (ORANGE PLASTIC PELLETS) 測試部位(PART NAME) NO.5 黄色塑膠粒 (YELLOW PLASTIC PELLETS) 測試部位(PART NAME) NO.6 綠色塑膠粒 (GREEN PLASTIC PELLETS) 測試部位(PART NAME) NO.7 藍色塑膠粒 (BLUE PLASTIC PELLETS) 測試部位(PART NAME) NO.8 紫色塑膠粒 (PURPLE PLASTIC PELLETS) 測試部位(PART NAME) NO.9 灰色塑膠粒 (GRAY PLASTIC PELLETS) 測試部位(PART NAME) 白色塑膠粒 (WHITE PLASTIC PELLETS)

測試項目	單位	測試方法	方法偵測 極限値	結	果(Resul	lt)
(Test Items)	(Unit) (Method)		他DL)	NO.1	NO.2	NO.3
鎘 / Cadmium (Cd)		参考IEC 62321: 2008方法,用 感應藕合電漿原子發射光譜儀檢 測./With reference to IEC 62321: 2008 and performed by ICP-AES.		n.d.	n.d.	n.d.
鋁 / Lead (Pb)	mg/kg	參考IEC 62321: 2008方法, 用 感應藕合電漿原子發射光譜儀檢 測. / With reference to IEC 62321: 2008 and performed by ICP-AES.		n.d.	n.d.	n.d.
汞 / Mercury (Hg)	mg/kg	参考IEC 62321: 2008方法,用 感應藕合電漿原子發射光譜儀檢 測./With reference to IEC 62321: 2008 and performed by ICP-AES.		n.d.	n.d.	n.d.
六價鉻 / Hexavalent Chromium Cr(VI) by alkaline extraction	mg/kg	参考IEC 62321: 2008方法,用 UV-VIS檢測. / With reference to IEC 62321: 2008 and performed by UV-VIS.	2	n.d.	n.d.	n.d.

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萬泰科技股份有限公司

WONDERFUL HI-TECH CO., LTD.

桃園縣中壢市工業區北園路17號

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

測試項目	單位	測試方法	方法偵測	結	果(Resul	lt)
(Test Items)	(Unit)	(Method)	極限値 (MDL)	NO.1	NO.2	NO.3
磷 / Phosphorus (P)	mg/kg	参考US EPA 3052 方法,用感應 耦合電漿原子發射光譜儀檢測磷 含量. / With reference to US EPA Method 3052 for Phosphorus Content. Analysis was performed by ICP-AES.	2	n.d.	n.d.	18
三氧化二錦 / Antimony trioxide (Sb <sub>2</sub> O <sub>3</sub> )*** (CAS No.: 001309-64-4)	mg/kg	参考US EPA 3050B方法,用感應 耦合電漿原子發射光譜儀檢測銻 含量. / With reference to US EPA Method 3050B for Antimony Content. Analysis was performed by ICP-AES.	2	n.d.	n.d.	n.d.
全氟辛烷磺酸 / Perfluorooctane sulfonates (PFOS) PFOS — Acid PFOS — Metal Salt PFOS — Amide	mg/kg	參考US EPA 3540C: 1996方法, 以液相層析質譜儀檢測全氟辛烷 磺酸含量. / With reference to US EPA 3540C: 1996 method for PFOS Content. Analysis was performed by LC/MS.	10	n.d.		
全氟辛酸(銨) / PFOA (CAS No.: 000335-67-1)	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.		
鹵素(氣)/ Halogen-Chlorine (C1) (CAS No.: 022537-15-1)	mg/kg	參考BS EN 14582:2007, 以離子 層析儀分析氣含量. / With reference to BS EN 14582:2007. Analysis was performed by IC method for Chlorine content.	50	n.d.	n.d.	n.d.

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萬泰科技股份有限公司

WONDERFUL HI-TECH CO., LTD.

桃園縣中壢市工業區北園路17號

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

測試項目	單位	   測試方法	方法偵測	結果 (Result)			
(Test Items)			極限値 (MDL)	NO.1	NO.2	NO.3	
鹵素(溴)/ Halogen-Bromine (Br) (CAS No.: 010097-32-2)	mg/kg	参考BS EN 14582:2007, 以離子 層析儀分析溴含量. / With reference to BS EN 14582:2007. Analysis was performed by IC method for Bromine content.	50	n.d.	n.d.	n.d.	
鹵素(碘)/ Halogen-Iodine (I) (CAS No.: 014362-44-8)	mg/kg	参考BS EN 14582:2007, 以離子 層析儀分析碘含量. / With reference to BS EN 14582:2007. Analysis was performed by IC method for Iodine content.	50	n.d.	n.d.	n.d.	
多溴聯苯總和 / Sum of PBBs			-	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		参考IEC 62321: 2008方法,以	5	n.d.	n.d.	n.d.	
五溴聯苯 / Pentabromobiphenyl	mg/kg	氣相層析儀/質譜儀檢測./ With reference to IEC 62321:	5	n.d.	n.d.	n.d.	
六溴聯苯 / Hexabromobiphenyl		2008 and performed by GC/MS.	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.	

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十溴聯苯醚

/ Decabromodiphenyl ether

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

測試項目	単位   測試力法		方法偵測	結果 (Result)		
(Test Items)	(Unit)	(Method)	極限値 (MDL)	NO.1	NO.2	NO.3
多溴聯苯醚總和 / Sum of PBDEs			-	n.d.	n.d.	n.d.
一溴聯苯醚 / Monobromodiphenyl ether		參考IEC 62321: 2008方法,以	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	mor/kor	氣相層析儀/質譜儀檢測./ With reference to IEC 62321:	5	n.d.	n.d.	n.d.
六溴聯苯醚 / Hexabromodiphenyl ether		2008 and performed by GC/MS.	5	n.d.	n.d.	n.d.
七溴聯苯醚 / Heptabromodiphenyl ether		2000 and periormed by derms.	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.

5

n.d.

測試項目	測試項目 單位 測試方法		測試項目 單位 測試方法		方法偵測	結	果(Resul	lt)
(Test Items)	(Unit)	(Method)	極限値 (MDL)	NO.4	NO.5	NO.6		
鎬 / Cadmium (Cd)		参考IEC 62321: 2008方法,用 感應藕合電漿原子發射光譜儀檢 測./With reference to IEC 62321: 2008 and performed by ICP-AES.		n.d.	n.d.	n.d.		
鉛 / Lead (Pb)		參考IEC 62321: 2008方法, 用 感應藕合電漿原子發射光譜儀檢 測. / With reference to IEC 62321: 2008 and performed by ICP-AES.		n.d.	n.d.	n.d.		
汞 / Mercury (Hg)		参考IEC 62321: 2008方法,用 感應藕合電漿原子發射光譜儀檢 測. / With reference to IEC 62321: 2008 and performed by ICP-AES.		n.d.	n.d.	n.d.		

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n.d.



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萬泰科技股份有限公司

WONDERFUL HI-TECH CO., LTD.

桃園縣中壢市工業區北園路17號

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

測試項目	單位	測試方法	方法偵測	結果 (Result)			
(Test Items)	(Unit)		極限値 (MDL)	NO.4	NO.5	NO.6	
六價鉻 / Hexavalent Chromium Cr(VI) by alkaline extraction	mg/kg	参考IEC 62321: 2008方法,用 UV-VIS檢測. / With reference to IEC 62321: 2008 and performed by UV-VIS.	2	n.d.	n.d.	n.d.	
磷 / Phosphorus (P)	mg/kg	參考US EPA 3052 方法,用感應 耦合電漿原子發射光譜儀檢測磷 含量. / With reference to US EPA Method 3052 for Phosphorus Content. Analysis was performed by ICP-AES.	2	n.d.	n.d.	n.d.	
三氧化二銻 / Antimony trioxide (Sb <sub>2</sub> O <sub>3</sub> )*** (CAS No.: 001309-64-4)	mg/kg	参考US EPA 3050B方法,用感應 耦合電漿原子發射光譜儀檢測銻 含量. / With reference to US EPA Method 3050B for Antimony Content. Analysis was performed by ICP-AES.	2	n.d.	n.d.	n.d.	
鹵素(氣)/ Halogen-Chlorine (C1) (CAS No.: 022537-15-1)	mg/kg	参考BS EN 14582:2007, 以離子 層析儀分析氣含量. / With reference to BS EN 14582:2007. Analysis was performed by IC method for Chlorine content.	50	n.d.		n.d.	
鹵素(溴)/ Halogen-Bromine (Br) (CAS No.: 010097-32-2)	mg/kg	参考BS EN 14582:2007, 以離子 層析儀分析溴含量. / With reference to BS EN 14582:2007. Analysis was performed by IC method for Bromine content.	50	n.d.	n.d.	n.d.	

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萬泰科技股份有限公司 WONDERFUL HI-TECH CO., LTD. 桃園縣中壢市工業區北園路17號

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



方法偵測 結果 (Result) 測試項目 單位 測試方法 極限值 (Test Items) (Unit) (Method) NO.4 NO.5 NO.6 (MDL) 鹵素 (碘) / Halogen-Iodine (I) (CAS 參考BS EN 14582:2007, 以離子 mg/kg 50 n.d. n.d. n.d. No.: 014362-44-8) 層析儀分析碘含量. / With reference to BS EN 14582:2007. Analysis was performed by IC method for Iodine content. 多溴聯苯總和 / Sum of PBBs n.d. n.d. n.d. -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. 5 四溴聯苯 / Tetrabromobiphenyl 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. 5 七溴聯苯 / Heptabromobiphenyl 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. 參考IEC 62321: 2008方法,以 5 n.d.十溴聯苯 / Decabromobiphenyl 氣相層析儀/質譜儀檢測./ n.d. n.d. mg/kg With reference to IEC 62321: 多溴聯苯醚總和 / Sum of PBDEs n.d. n.d. n.d. 2008 and performed by GC/MS. -溴聯苯醚 / Monobromodiphenyl ether 5 n.d. n.d. n.d. 5 二溴聯苯醚 Dibromodiphenyl ether n.d. n.d. n.d. 三溴聯苯醚 5 Tribromodiphenyl ether 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. 5 六溴聯苯醚 / Hexabromodiphenyl ether 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 5 Octabromodiphenyl ether n.d. n.d. n.d. 九溴聯苯醚 5 Nonabromodiphenyl ether n.d. n.d. n.d. 5 n.d. 卜溴聯苯醚 Decabromodiphenyl ether n.d. n.d.

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萬泰科技股份有限公司

WONDERFUL HI-TECH CO., LTD.

桃園縣中壢市工業區北園路17號

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

測試項目	單位	id 測試方法		結	果(Resul	t)
(Test Items)	(Unit)	(Method)	極限値 (MDL)	NO.7	NO.8	NO.9
鎬 / Cadmium (Cd)	mg/kg	参考IEC 62321: 2008方法,用 感應藕合電漿原子發射光譜儀檢 測. / With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.	n.d.	n.d.
鉛 / Lead (Pb)	mg/kg	参考IEC 62321: 2008方法,用感應藕合電漿原子發射光譜儀檢測./With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.	n.d.	n.d.
汞 / Mercury (Hg)	mg/kg	參考IEC 62321: 2008方法, 用 感應藕合電漿原子發射光譜儀檢 測. / With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.	n.d.	n.d.
六價鉻 / Hexavalent Chromium Cr(VI) by alkaline extraction	mg/kg	參考IEC 62321: 2008方法,用 UV-VIS檢測. / With reference to IEC 62321: 2008 and performed by UV-VIS.	2	n.d.	n.d.	n.d.
磷 / Phosphorus (P)	mg/kg	參考US EPA 3052 方法,用感應 耦合電漿原子發射光譜儀檢測磷 含量. / With reference to US EPA Method 3052 for Phosphorus Content. Analysis was performed by ICP-AES.	2	n.d.		14
三氧化二銻 / Antimony trioxide (Sb <sub>2</sub> O <sub>3</sub> )*** (CAS No.: 001309-64-4)	mg/kg	参考US EPA 3050B方法,用感應 耦合電漿原子發射光譜儀檢測錦 含量. / With reference to US EPA Method 3050B for Antimony Content. Analysis was performed by ICP-AES.	2	n.d.	n.d.	n.d.

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



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



測試項目	蘭衍   測試方法		方法偵測	結	果(Resul	t)
(Test Items)	(Unit)	(Method)	極限値 (MDL)	NO.7	NO.8	NO.9
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		参考IEC 62321: 2008方法,以 氣相層析儀/質譜儀檢測./ mg/kg	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	mg/kg		5	n.d.	n.d.	n.d.
六溴聯苯醚 / Hexabromodiphenyl ether		With reference to IEC 62321: 2008 and performed by GC/MS.	5	n.d.	n.d.	n.d.
七溴聯苯醚 / Heptabromodiphenyl ether		2000 and performed by GO, Mo.	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 極限値 (MDL)	結果 (Result) NO.10
鎬 / Cadmium (Cd)	mg/kg	参考IEC 62321: 2008方法,用 感應藕合電漿原子發射光譜儀檢 測./With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
鉛 / Lead (Pb)	mg/kg	参考IEC 62321: 2008方法,用 感應藕合電漿原子發射光譜儀檢 測./With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
汞 / Mercury (Hg)	mg/kg	参考IEC 62321: 2008方法,用 感應藕合電漿原子發射光譜儀檢 測./With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.

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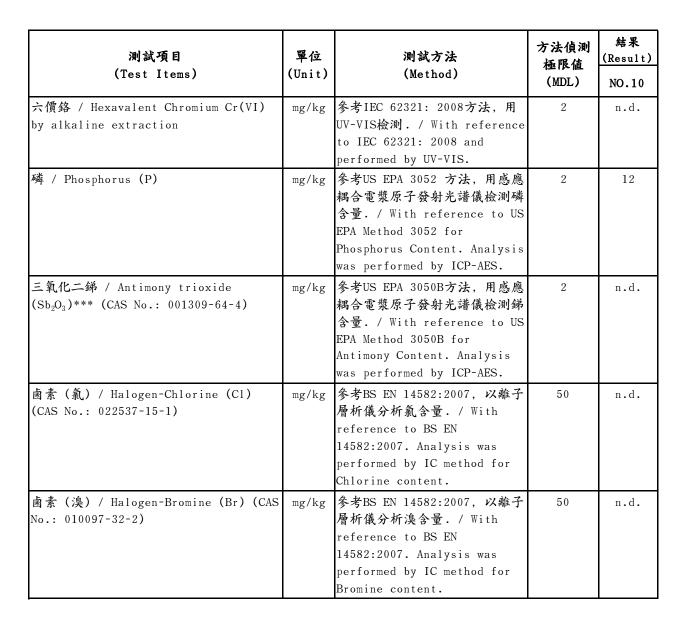
號碼(No.): CE/2009/11501C 日期(Date): 2009/01/15 頁數(Page): 11 of 21

萬泰科技股份有限公司

WONDERFUL HI-TECH CO., LTD.

桃園縣中壢市工業區北園路17號

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



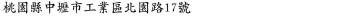
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萬泰科技股份有限公司 WONDERFUL HI-TECH CO., LTD.



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 極限値 (MDL)	結果 (Result) NO.10
鹵素(碘)/ Halogen-Iodine (I) (CAS No.: 014362-44-8)	mg/kg	参考BS EN 14582:2007, 以離子 層析儀分析碘含量. / With reference to BS EN 14582:2007. 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		参考IEC 62321: 2008方法,以	5	n.d.
十溴聯苯 / Decabromobiphenyl	] ,,	氣相層析儀/質譜儀檢測./	5	n.d.
多溴聯苯醚總和 / Sum of PBDEs	mg/kg	With reference to IEC 62321:	-	n.d.
一溴聯苯醚 / Monobromodiphenyl ether		2008 and performed by GC/MS.	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	1		5	n.d.

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萬泰科技股份有限公司

WONDERFUL HI-TECH CO., LTD.

桃園縣中壢市工業區北園路17號

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

#### 備註(Note):

- 1. mg/kg = ppm ; 0.1wt% = 1000ppm
- 2. n.d. = Not Detected (未检出)
- 3. MDL = Method Detection Limit (方法偵測極限值)
- 4. "-" = Not Regulated (無規格值)
- 5. \*\*\*: 該物質是由"三丁基錫", "三苯基錫"或各别元素(例如: 錦、鈹、矽、鋅、銛或磷)之測試結果計算得知. 其MDL是針對"三丁基錫", "三苯基錫"或元素(例如: 錦、鈹、矽、鋅、銛或磷)之評估. (The substance is calculated by the test results of Tributyl Tin, Triphenyl Tin or element (Ex. Antimony、Beryllium、Silicon、Zinc、Cobalt or Phosphorus respectively). The MDL is evaluated for Tributyl Tin, Triphenyl Tin or element (Ex. Antimony、Beryllium、Silicon、Zinc、Cobalt or Phosphorus respectively.))

#### PFOS参考資訊(Reference Information): 指令 2006/122/EC (Directive 2006/122/EC)

- (1) 該物質不可置於市場上或使用於特殊物質或配置成分重量濃度等於或大於0.005%.
  (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) 該物質不可置於市場上的半成品或商品或其物件;假若零件上明顯地具有PFOS並參照結構上及微細構造上計算 PFOS重量濃度等於或大於0.1%,而紡織品或其他覆蓋物質,如果PFOS在覆蓋物質中含量等於或大於1μg/m². (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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SGS Taiwan Ltd.



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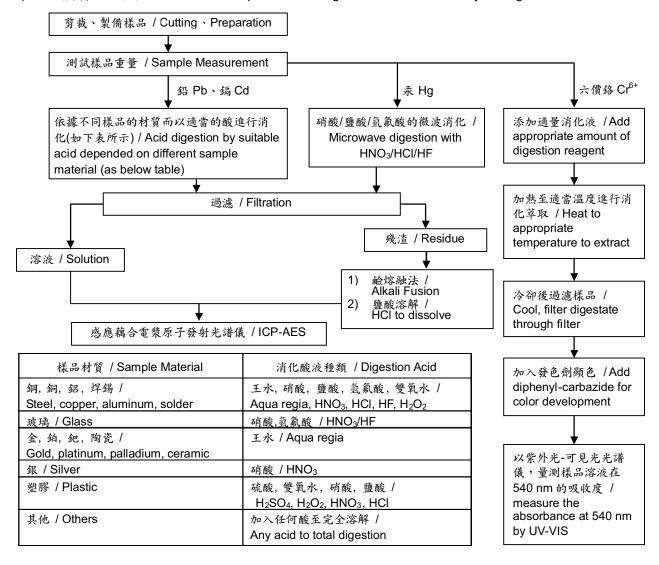
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桃園縣中壢市工業區北園路17號

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

- 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. (Cr<sup>6+</sup> test method excluded )
- 2) 測試人員:楊登偉 / Name of the person who made measurement: Climbgreat Yang
- 3) 測試負責人:張啓興 / Name of the person in charge of measurement: Troy Chang



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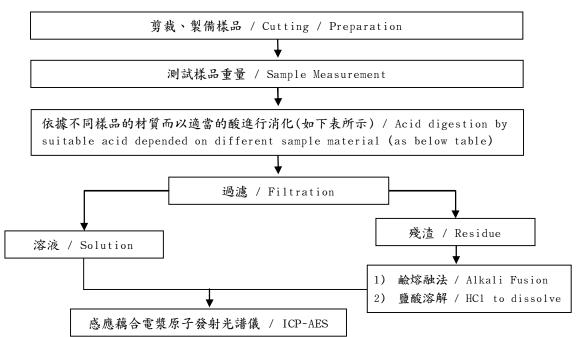
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- 1) 根據以下的流程圖之條件,樣品已完全溶解。 / These samples were dissolved totally by pre-conditioning method according to below flow chart.
- 2) 測試人員:楊登偉 / Name of the person who made measurement: Climbgreat Yang
- 3) 測試負責人:張啓興 / Name of the person in charge of measurement: Troy Chang

#### 元素的消化流程圖 (Flow Chart of Digestion for elements analysis)



鋼,銅,鋁,焊錫 / Steel, copper, aluminum, solder	王水,硝酸,鹽酸,氫氟酸,雙氧水 /
	Aqua regia, HNO3, HC1, HF, H2O2
玻璃 / Glass	硝酸,氫氟酸 / HNO3/HF
金,鉑,鲃,陶瓷 / Gold, platinum, palladium, ceramic	王水 / Aqua regia
銀 / Silver	硝酸 / HNO3
塑膠 / Plastic	硫酸,雙氧水,硝酸,鹽酸 / H2SO4, H2O2, HNO3, HC1
其他 / Others	加入任何酸至完全溶解 / Any acid to total digestion

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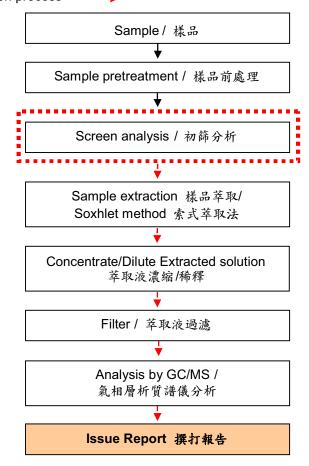
#### 

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

- 1) 測試人員: 翁賜彬 / Name of the person who made measurement: Roman Wong
- 2) 測試負責人: 陳新智 / Name of the person in charge of measurement: Shinjyh Chen 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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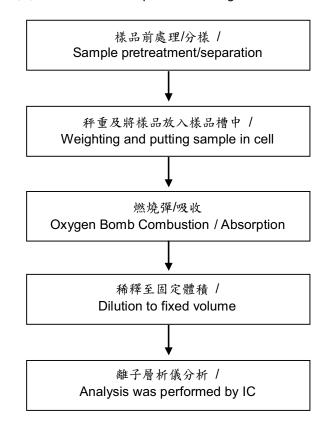
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#### 鹵素分析流程圖 / Analytical flow chart of halogen content

- 1) 測試人員: 陳立倫 / Name of the person who made measurement: Alan Chen
- 2) 測試負責人:張啓興 / Name of the person in charge of measurement: Troy Chang



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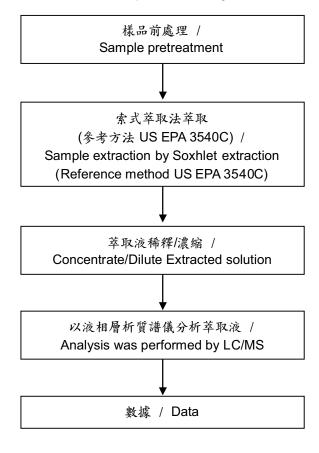
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### 全氟辛酸(銨)/全氟辛烷磺酸分析流程圖/ Analytical flow chart of PFOA/PFOS content

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





\*\* 報告結尾(End of Report) \*\*

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號碼(No.): CE/2008/C4566 日期(Date): 2008/12/24 頁數(Page): 1 of 4

有春雷線股份有限公司

YEOU CHUEN WIRE CO., LTD.

桃園縣平鎮市中豐路南勢二段460巷112號

112, LANE 460, NAN HSEN 2ND SECTION, CHUNG FENG RD., PING CHEN CITY,

TAOYUAN HSIEN TAIWAN REPUBLIC OF CHINA

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

樣品名稱(Sample Description) 收件日期(Sample Receiving Date)

測試期間(Testing Period)

鍍銀銅包鋼線 (SILVER-PLATED COPPER CLAD STEEL WIRE)

2008/12/17

2008/12/17 TO 2008/12/24

測試需求(Test Requested)

參照 RoHS 2002/95/EC 及其修定指令要求. (In accordance with the RoHS Directive 2002/95/EC, and its amendment directives).

測試方法(Test Method)

- 參考IEC 62321/2nd CDV (111/95/CDV)方法檢測. (With reference to IEC 62321/2nd CDV (111/95/CDV). Procedures for the Determination of Levels of Regulated Substances in Electrotechnical Products).
  - (1) 用感應藕合電漿原子發射光譜儀檢測鎬含量. / Determination of Cadmium by ICP-AES.
  - (2) 用感應藕合電漿原子發射光譜儀檢測鉛含量. / Determination of Lead by
  - (3) 用感應藕合電漿原子發射光譜儀檢測汞含量. / Determination of Mercury by ICP-AES.
  - (4) 針對金屬材質之樣品,用Spot test / boiling water extraction方法檢測 六價鉻含量. / Determination of Hexavalent Chromium for metallic samples by Spot test / boiling water extraction Method.

測試結果(Test Results)

請見下一頁 (Please refer to next pages).

Nicole Chien / Supervisor Signed for and on behalf of SGS TAIWAN LTD. Chemical Laboratory - Taipei

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### **Test Report**

有春雷線股份有限公司

YEOU CHUEN WIRE CO., LTD.

桃園縣平鎮市中豐路南勢二段460巷112號

112, LANE 460, NAN HSEN 2ND SECTION, CHUNG FENG RD., PING CHEN CITY,

TAOYUAN HSIEN TAIWAN REPUBLIC OF CHINA

### 測試結果(Test Results) 單位(Unit): mg/kg

測試項目	測試方法	結果 (Result)	方法偵測
(Test Items)	Method (Refer to)	No.1	極限値 (MDL)
鎬 / Cadmium (Cd)	(1)	n.d.	2
鉛 / Lead (Pb)	(2)	n.d.	2
汞 / Mercury (Hg)	(3)	n.d.	2
六價鉻 / Hexavalent Chromium Cr(VI) by	(4)	Negative	See Note 4
Spot test / boiling water extraction			

號碼(No.): CE/2008/C4566

日期(Date): 2008/12/24

頁數(Page): 2 of 4

#### 測試部位描述 (TEST PART DESCRIPTION):

銀色金屬線 (SILVER COLORED METAL WIRE) NO.1

#### 備註(Note):

- 1. mg/kg = ppm ; 0.1wt% = 1000ppm
- 2. n.d. = Not Detected (未檢出)
- 3. MDL = Method Detection Limit (方法偵測極限值)
- 4. 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 cm<sup>2</sup> sample surface area.

該溶液濃度≧0.02 mg/kg with 50 cm² (sample surface area)

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### **Test Report**

有春電線股份有限公司

YEOU CHUEN WIRE CO., LTD.

桃園縣平鎮市中豐路南勢二段460巷112號

112, LANE 460, NAN HSEN 2ND SECTION, CHUNG FENG RD., PING CHEN CITY,

TAOYUAN HSIEN TAIWAN REPUBLIC OF CHINA

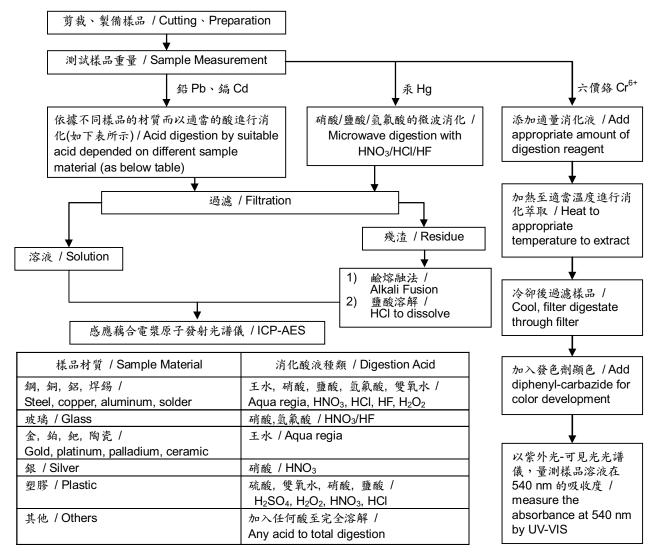
1) 根據以下的流程圖之條件,樣品已完全溶解。( 六價鉻測試方法除外 ) / These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr<sup>6+</sup> test method excluded )

日期(Date): 2008/12/24

頁數(Page): 3 of 4

- 2) 測試人員:楊登偉 / Name of the person who made measurement: Climbgreat Yang
- 3) 測試負責人:張啓興 / Name of the person in charge of measurement: Troy Chang

號碼(No.): CE/2008/C4566



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SGS Taiwan Ltd.



號碼(No.): CE/2008/C4566 日期(Date): 2008/12/24 頁數(Page): 4 of 4

有春電線股份有限公司

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\*\* 報告結尾(End of Report) \*\*

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慕明企業有限公司

MOLECULE ENTERPRISE CO., LTD. 台北市中山北路二段112號11樓之4

11F-4, NO. 112, CHUNG SHAN N, RD., SEC. 2, TAIPEI, TAIWAN

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

樣品名稱(Sample Description) 樣品型號(Style/Item No.)

收件日期(Sample Receiving Date)

測試期間(Testing Period)

: FEP氟碳聚合物顆粒

: NP-102

: 2008/12/29

: 2008/12/29 TO 2009/1/7

\_\_\_\_\_\_

測試結果(Test Results)

結論(Conclusion)

: 請見下一頁 (Please refer to next pages).

: 根據客户所提供的樣品,其鎬、鉛、汞、六價鉻、多溴聯苯及多溴聯苯醚的測 試結果符合RoHS(2002/95/EC)及其修定指令之要求 (Based on the performed tests on submitted samples, the test results of Cadmium, Lead, Mercury, Hexavalent Chromium Cr(VI), PBBs and PBDEs are compliant with the limits of RoHS Directive 2002/95/EC and its subsequent amendments).

Chenyu Kung / Operation Manager Signed for and on behalf of

SGS TAIWAN LTD.

Chemical Laboratory – Taipei

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#### 測試結果(Test Results)

測試部位(PART NAME) NO.1 透明色塑膠粒(TRANSPARENT PLASTIC PELLETS)

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result) NO.1	法規 限値 (Limit)
鎬 / Cadmium (Cd)	mg/kg	参考IEC 62321: 2008方法, 用感應藕合電漿原子發射光譜儀檢測. / With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.	100
鉛 / Lead (Pb)	mg/kg	参考IEC 62321: 2008方法, 用感應藕 合電漿原子發射光譜儀檢測. / With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.	1000
汞 / Mercury (Hg)	mg/kg	参考IEC 62321: 2008方法, 用感應藕 合電漿原子發射光譜儀檢測. / With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.	1000
六價鉻 / Hexavalent Chromium Cr(VI) by alkaline extraction	mg/kg	参考IEC 62321: 2008方法, 用UV-VIS 檢測. / With reference to IEC 62321: 2008 and performed by UV- VIS.	2	n.d.	1000
磷 / Phosphorus (P)	mg/kg	参考US EPA 3052 方法,用感應耦合 電漿原子發射光譜儀檢測磷含量./ With reference to US EPA Method 3052 for Phosphorus Content. Analysis was performed by ICP-	2	n.d.	-
三氧化二銻 / Antimony trioxide (Sb <sub>2</sub> O <sub>3</sub> )*** (CAS No.: 001309-64-4)	mg/kg	参考US EPA 3050B方法,用感應耦合 電漿原子發射光譜儀檢測銻含量./ With reference to US EPA Method 3050B for Antimony Content. Analysis was performed by ICP- AES.	2	n.d.	-

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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result) NO.1	法規 限値 (Limit)
氯化石蠟 / Chlorinated Paraffin (C10~C13) (CAS No.: 010871-26-2)	%	參考US EPA 3540C方法,以氣相層析質譜儀(GC/MS)檢測. / With reference to US EPA 3540C method. Analysis was performed by GC/MS.	0.01	n.d.	-
聚氯乙烯 / PVC	**	以紅外光譜分析及焰色法檢測. / Analysis was performed by FTIR and FLAME Test.	-	Negative	-
全氟辛烷磺酸 / Perfluorooctane sulfonates (PFOS) PFOS — Acid PFOS — Metal Salt PFOS — Amide	mg/kg	参考US EPA 3540C: 1996方法,以液相層析質譜儀檢測全氟辛烷磺酸含量. / With reference to US EPA 3540C: 1996 method for PFOS Content. Analysis was performed by LC/MS.	10	n.d.	-
全氟辛酸(銨) / PFOA (CAS No.: 000335-67-1)	mg/kg	参考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.	-
鹵素 / Halogen		参考BS EN 14582:2007, 以離子層析 儀分析氣, 氣, 溴, 碘含量. / With reference to BS EN 14582:2007. Analysis was performed by IC method for F, Cl, Br, I content.			
鹵素(氟)/ Halogen-Fluorine (F) (CAS No.: 014762-94-8)	mg/kg	參考BS EN 14582:2007, 以離子層析 儀分析氣含量. / With reference to BS EN 14582:2007. Analysis was performed by IC method for Fluorine content.	50	222000	-
鹵素(氣)/ Halogen-Chlorine (C1) (CAS No.: 022537-15-1)	mg/kg	参考BS EN 14582:2007, 以離子層析 儀分析氣含量. / With reference to BS EN 14582:2007. Analysis was performed by IC method for Chlorine content.	50	n.d.	-

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MOLECULE ENTERPRISE CO., LTD. 台北市中山北路二段112號11樓之4

11F-4, NO. 112, CHUNG SHAN N, RD., SEC. 2, TAIPEI, TAIWAN

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result) NO.1	法規 限値 (Limit)
鄰苯二甲酸二異癸酯 / DIDP (Di-isodecyl phthalate) (CAS No.: 026761-40-0)	%	本測試參考EN 14372: 2004, 以氣相 層析儀/質譜儀檢測之. / With reference to EN 14372: 2004. Analysis was performed by GC/MS.	0.01	n.d.	-
多溴聯苯總和 / Sum of PBBs			-	n.d.	1000
一溴聯苯 / Monobromobiphenyl			5	n.d.	-
二溴聯苯 / Dibromobiphenyl			5	n.d.	-
三溴聯苯 / Tribromobiphenyl			5	n.d.	-
四溴聯苯 / Tetrabromobiphenyl			5	n.d.	-
五溴聯苯 / Pentabromobiphenyl			5	n.d.	-
六溴聯苯 / Hexabromobiphenyl			5	n.d.	-
七溴聯苯 / Heptabromobiphenyl			5	n.d.	-
八溴聯苯 / Octabromobiphenyl			5	n.d.	-
九溴聯苯 / Nonabromobiphenyl		參考 IEC 62321: 2008方法, 以氣相層	5	n.d.	-
十溴聯苯 / Decabromobiphenyl	mar / 1 s as	mg/kg 析儀/質譜儀檢測. / With reference to IEC 62321: 2008 and performed	5	n.d.	-
多溴聯苯醚總和 / Sum of PBDEs	mg/kg		-	n.d.	1000
一溴聯苯醚 / Monobromodiphenyl ether		by GC/MS.	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.	-

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台北市中山北路二段112號11樓之4

11F-4, NO. 112, CHUNG SHAN N, RD., SEC. 2, TAIPEI, TAIWAN

#### 備註(Note):

- 1. mg/kg = ppm ; 0.1wt% = 1000ppm
- 2. n.d. = Not Detected (未检出)
- 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. 若為氯化石蠟中單一化合物,則偵測極限為5ppm (The MDL is 5ppm for the single compound of CP)
- 8. \*\*\*: 該物質是由"三丁基錫", "三苯基錫"或各别元素(例如: 錦、鈹、矽、鋅、鈷或磷)之測試結果計算 得知. 其MDL是針對"三丁基錫", "三苯基錫"或元素(例如: 銻、鈹、矽、鋅、銛或磷)之評估. (The substance is calculated by the test results of Tributyl Tin, Triphenyl Tin or element (Ex. Antimony Beryllium Silicon Zinc Cobalt or Phosphorus respectively). The MDL is evaluated for Tributyl Tin, Triphenyl Tin or element (Ex. Antimony Beryllium · Silicon · Zinc · Cobalt or Phosphorus respectively.))

#### PFOS参考資訊(Reference Information): 指令 2006/122/EC (Directive 2006/122/EC)

- (1) 該物質不可置於市場上或使用於特殊物質或配置成分重量濃度等於或大於0.005%. (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) 該物質不可置於市場上的半成品或商品或其物件;假若零件上明顯地具有PFOS並參照結構上及微細構造上計算 PFOS重量濃度等於或大於0.1%,而紡織品或其他覆蓋物質,如果PFOS在覆蓋物質中含量等於或大於1µg/m². (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  $1\mu g/m^2$  of the coated material.)

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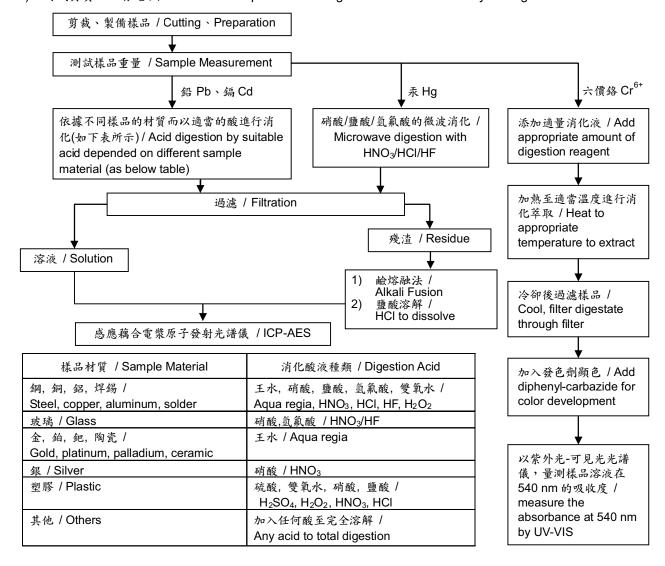
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- 1) 根據以下的流程圖之條件,樣品已完全溶解。( 六價鉻測試方法除外 ) / These samples were dissolved totally by pre-conditioning method according to below flow chart. ( Cr<sup>6+</sup> test method excluded )
- 2) 測試人員:楊登偉 / Name of the person who made measurement: Climbgreat Yang
- 3) 測試負責人: 張啓興 / Name of the person in charge of measurement: Troy Chang



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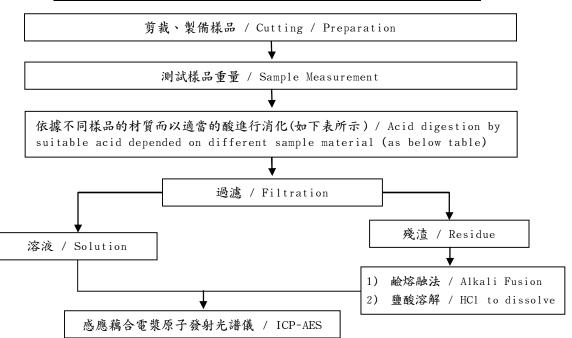
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- 3) 測試負責人:張啓興 / Name of the person in charge of measurement: Troy Chang

#### 元素的消化流程圖 (Flow Chart of Digestion for elements analysis)



鋼,銅,鋁,焊錫 / Steel, copper, aluminum, solder	王水,硝酸,鹽酸,氫氟酸,雙氧水/
	Aqua regia, HNO3, HC1, HF, H2O2
玻璃 / Glass	硝酸,氫氟酸 / HNO3/HF
金,鉑,鮑,陶瓷 / Gold, platinum, palladium, ceramic	王水 / Aqua regia
銀 / Silver	硝酸 / HNO3
塑膠 / Plastic	硫酸,雙氧水,硝酸,鹽酸 / H2SO4, H2O2, HNO3, HC1
其他 / Others	加入任何酸至完全溶解 / Any acid to total digestion

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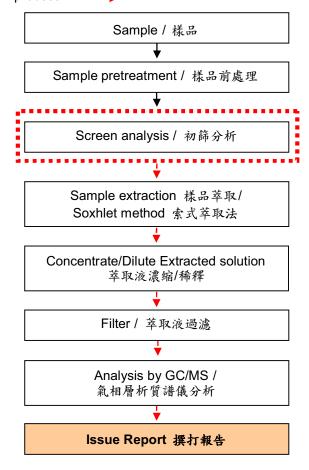
11F-4, NO. 112, CHUNG SHAN N, RD., SEC. 2, TAIPEI, TAIWAN

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

- 1) 測試人員: 翁賜彬 / Name of the person who made measurement: Roman Wong
- 2) 測試負責人: 陳新智 / Name of the person in charge of measurement: Shinjyh Chen 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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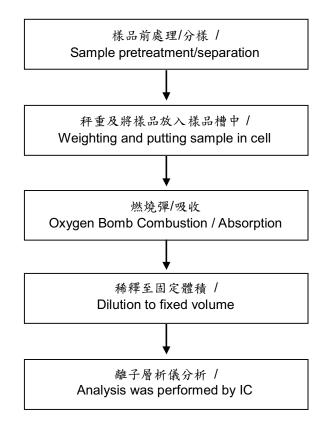
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# 鹵素分析流程圖 / Analytical flow chart of halogen content

- 1) 測試人員:陳立倫 / Name of the person who made measurement: Alan Chen
- 2) 測試負責人:張啓興 / Name of the person in charge of measurement: Troy Chang



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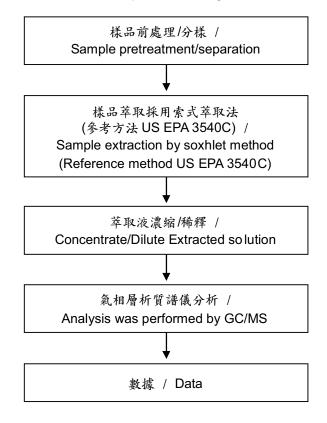
號碼(No.): CE/2008/C7175 日期(Date): 2009/01/07 頁數(Page): 11 of 15

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

- 1) 測試人員:徐毓明 / Name of the person who made measurement: Andy Shu
- 2) 測試負責人: 陳新智 / Name of the person in charge of measurement: Shinjyh Chen



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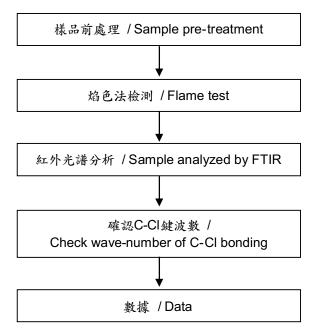
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### 聚氯乙烯物質判定分析流程圖 /

### 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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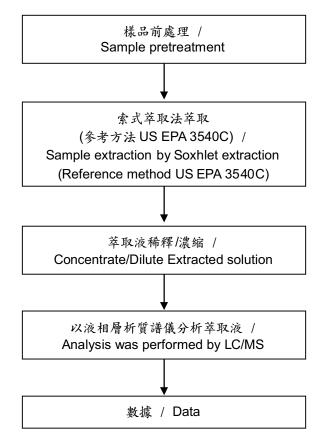


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### 全氟辛酸(銨)/全氟辛烷磺酸分析流程圖/ Analytical flow chart of PFOA/PFOS content

- 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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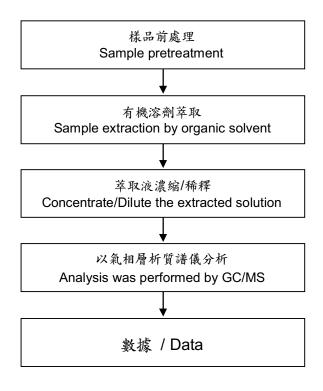
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### 

### 含氯阻燃劑分析流程 / Chlorinated Flame retardant analytical flow chart

- 1) 測試人員:劉桓易 / Name of the person who made measurement: Max Liu
- 2) 測試負責人: 陳新智 / Name of the person in charge of measurement: Shinjyh Chen
- 参考方法(Reference method): US EPA 8270D, US EPA 3540
- 測試項目(Test Items): PCBs, PCNs, PCTs, Mirex, CP, MCCP / 多氯聯苯, 多氯奈, 多氯三聯苯, 減蟻靈, 氯化石蠟, 中鏈氯化石蠟



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\*\* 報告結尾(End of Report) \*\*

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### Test Report No. F690501/LF-CTSAYAA09-06052

To: LG CHEM. LTD.

70-1

Hwachi-dong Yeosu-city JEONNAM Korea

The following merchandise was submitted and identified by the client as:

Product Name : KEYFLEX BT1063D

**SGS File No.** : AYAA09-06052

Received Date: March 05, 2009

Test Performing Date : March 06, 2009

Test Performed : SGS Testing Korea tested the sample(s) selected by applicant with following results

**Test Results**: For further details, please refer to following page(s)

SGS Testing Korea Co. Ltd.

Page 1 of 3

Issued Date: March 10, 2009

Pluto Kim Cindy Park Jinee Song/ Testing Person

Jeff Jang / Chemical Lab Mgr



### Test Report No. F690501/LF-CTSAYAA09-06052

Issued Date: March 10, 2009

Page 2 of 3

**Sample No.** : AYAA09-06052.001

Sample Description : KEYFLEX BT1063D

Item No./Part No. : N/A

#### **Heavy Metals**

Test Items	Unit	Test Method	MDL	Results
Cadmium (Cd)	mg/kg	With reference to IEC 62321:2008, ICP-OES	0.5	N.D.
Lead (Pb)	mg/kg	With reference to IEC 62321:2008, ICP-OES	5	N.D.
Mercury (Hg)	mg/kg	With reference to IEC 62321:2008, ICP-OES	2	N.D.
Hexavalent Chromium (Cr VI)	mg/kg	With reference to IEC 62321:2008, UV-VIS	1	N.D.

#### Flame Retardants-PBBs/PBDEs

Test Items	Unit	Test Method	MDL	Results
Monobromobiphenyl	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Dibromobiphenyl	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Tribromobiphenyl	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Tetrabromobiphenyl	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Pentabromobiphenyl	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Hexabromobiphenyl	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Heptabromobiphenyl	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Octabromobiphenyl	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Nonabromobiphenyl	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Decabromobiphenyl	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Monobromodiphenyl ether	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Dibromodiphenyl ether	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Tribromodiphenyl ether	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Tetrabromodiphenyl ether	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Pentabromodiphenyl ether	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Hexabromodiphenyl ether	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Heptabromodiphenyl ether	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Octabromodiphenyl ether	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Nonabromodiphenyl ether	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Decabromodiphenyl ether	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.

NOTE:

- (1) N.D. = Not detected.(<MDL)
- (2) mg/kg = ppm
- (3) MDL = Method Detection Limit
- (4) = No regulation
- (5) \*\* = Qualitative analysis (No Unit)
- (6) Negative = Undetectable / Positive = Detectable

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### Test Report No. F690501/LF-CTSAYAA09-06052

Issued Date: March 10, 2009 Page 3 of 3



\*\*\* End \*\*\*

#### NOTE:

- (1) N.D. = Not detected.(<MDL)
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太松實業股份有限公司 DYNACHEM & CO., LTD.

台北市大同區重慶北路三段139號8樓

8F, NO. 139, SEC. 3, CHUNG CHING NORTH ROAD, TAIPEI, TAIWAN, R. O. C.

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

樣品名稱(Sample Description)

: 聚碳酸樹脂 (POLYCARBONATE (PC), DESIGNATED "PANLITE" FURNISHED AS PELLETS)

樣品型號(Style/Item No.)

: AD5503: K1300Y: L1225L: L1225LL: L1225LM: L1225T: L1225Y: L1225Z100: L1225ZL100; L1250VX; L1250Y; L1250ZH; L1250ZG; L1250ZW; L1250Z100; LN1250G; LN2250; LV2225Y; LV2225L; LV2250Y; LN2520A; LS2250; G3110PH; G3120PH; G3410H QG1901HX; G3420 QG1005X; G3430 QG1007X; Z1705ZH; ML1103 QF1232; MN3500; MN3600H; MN3705; MN3705M; DN3715F; SD1414;

生產或供應廠商(Manufacturer/Vendor)

: 帝人株式會社 (TEIJIN CHEMICALS LTD.)

收件日期(Sample Receiving Date)

: 2008/11/12

測試期間(Testing Period)

: 2008/11/12 TO 2008/11/19

\_\_\_\_\_\_

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

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### <u>測試結果(Test Results)</u>

測試部位(PART NAME) NO.1

透明塑膠粒 (TRANSPARENT PLASTIC PELLETS)

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result) NO.1
鈹 / Beryllium (Be)	mg/kg	参考US EPA 3050B 方法,用感應耦合電漿原子發射光譜儀檢測鈹含量. / With reference to US EPA Method 3050B for Beryllium Content. Analysis was performed by ICP-AES.	2	n.d.
绨 / Antimony (Sb)	mg/kg	参考US EPA 3050B 方法,用感應耦合電漿原子發射光譜儀檢測錦含量. / With reference to US EPA Method 3050B for Antimony Content. Analysis was performed by ICP-AES.	2	n.d.
可塑劑定量分析 / Phthalates				
鄰苯二甲酸二丁酯 / DBP (Dibutyl phthalate) (CAS No.: 000084-74-2)	%	本測試參考EN 14372: 2004, 以氣相 層析儀/質譜儀檢測之. / With reference to EN 14372: 2004. Analysis was performed by GC/MS.	0.003	n.d.
鄰苯二甲酸丁酯苯甲酯 / BBP (Benzyl butyl phthalate) (CAS No.: 000085-68-7)	%	本測試參考EN 14372: 2004, 以氣相層析儀/質譜儀檢測之. / With reference to EN 14372: 2004. Analysis was performed by GC/MS.	0.003	n.d.
鄰苯二甲酸二 (2-乙基己基)酯 / DEHP (Di- (2-ethylhexyl) phthalate) (CAS No.: 000117-81-7)	%	本測試參考EN 14372: 2004, 以氣相層析儀/質譜儀檢測之. / With reference to EN 14372: 2004. Analysis was performed by GC/MS.	0.003	n.d.

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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result) NO.1
鄰苯二甲酸二正辛酯 / DNOP (Di-n-octyl phthalate) (CAS No.: 000117-84-0)	%	本測試參考EN 14372: 2004, 以氣相 層析儀/質譜儀檢測之. / With reference to EN 14372: 2004. Analysis was performed by GC/MS.	0.003	n.d.
鄰苯二甲酸二異壬酯 / DINP (Di- isononyl phthalate) (CAS No.: 028553-12-0)	%	本測試參考EN 14372: 2004, 以氣相層析儀/質譜儀檢測之. / With reference to EN 14372: 2004. Analysis was performed by GC/MS.	0.01	n.d.
鄰苯二甲酸二異癸酯 / DIDP (Di- isodecyl phthalate) (CAS No.: 026761-40-0)	%	本測試參考EN 14372: 2004, 以氣相 層析儀/質譜儀檢測之. / With reference to EN 14372: 2004. Analysis was performed by GC/MS.	0.01	n.d.

#### 備註(Note):

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

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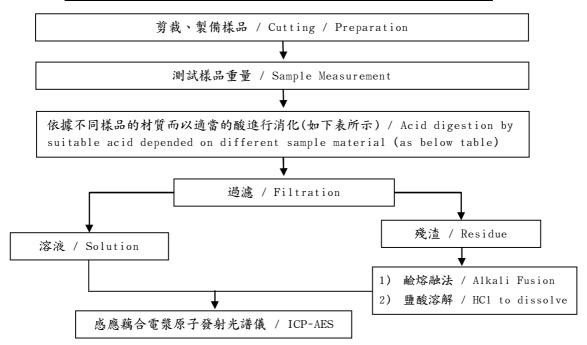
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- 1) 根據以下的流程圖之條件,樣品已完全溶解。 / These samples were dissolved totally by pre-conditioning method according to below flow chart.
- 2) 測試人員:楊登偉 / Name of the person who made measurement: Climbgreat Yang
- 3) 測試負責人:張啓興 / Name of the person in charge of measurement: Troy Chang

### 元素的消化流程圖 (Flow Chart of Digestion for elements analysis)



鋼,銅,鋁,焊錫 / Steel, copper, aluminum, solder	王水,硝酸,鹽酸,氫氟酸,雙氧水 /
	Aqua regia, HNO3, HC1, HF, H2O2
玻璃 / Glass	硝酸,氫氟酸 / HNO₃/HF
金,鉑,鈀,陶瓷 / Gold, platinum, palladium, ceramic	王水 / Aqua regia
銀 / Silver	硝酸 / HNO₃
塑膠 / Plastic	硫酸,雙氧水,硝酸,鹽酸 / H2SO4, H2O2, HNO3, HC1
其他 / Others	加入任何酸至完全溶解 / Any acid to total digestion

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太松實業股份有限公司 DYNACHEM & CO., LTD.

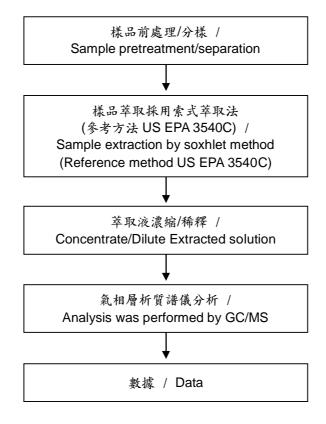
台北市大同區重慶北路三段139號8樓

8F, NO. 139, SEC. 3, CHUNG CHING NORTH ROAD, TAIPEI, TAIWAN, R. O. C.



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

- 1) 測試人員:徐毓明 / Name of the person who made measurement: Andy Shu
- 2) 測試負責人: 陳新智 / Name of the person in charge of measurement: Shinjyh Chen



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\*\* 報告結尾(End of Report) \*\*

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測試報告 號碼: CE/2009/71272 日期: 2009/07/14 頁數: 1 of 4

唐正企業有限公司

台北縣中和市中正路861巷11號

#### 以下測試樣品係由客户送樣, 且由客户聲稱並經客户確認如下:

樣品名稱 空心管之黄銅材質裸面處理

樣品型號 **∮**0.6-21 收件日期 2009/07/07

測試期間 2009/07/07 TO 2009/07/14

\_\_\_\_\_\_

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: 2008方法檢測.

- (1) 用感應藕合電漿原子發射光譜儀(ICP-AES)檢測鎬含量.
- (2) 用感應藕合電漿原子發射光譜儀(ICP-AES)檢測鉛含量.
- (3) 用感應藕合電漿原子發射光譜儀(ICP-AES)檢測汞含量.
- (4) 用Spot test / boiling water extraction方法檢測六價鉻含 量.

請見下一頁. 測試結果 :

Nicole Chien / Supervisor Signed for and on behalf of SGS TAIWAN LTD. **Chemical Laboratory - Taipei** 

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唐正企業有限公司 台北縣中和市中正路861巷11號



測試結果 (單位: mg/kg)

測試項目	測試方法 (請參考)	結果 No.1	方法偵測 極限値
鎬	(1)	n.d.	2
鉛	(2)	36	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 : 金色金屬

備註:1. mg/kg = ppm;0.1wt% = 1000ppm

2. n.d. = Not Detected (未檢出)

3. MDL = Method Detection Limit (方法偵測極限值)

4. 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; 該溶液濃度≧0.02 mg/kg with 50 cm² (sample surface area)

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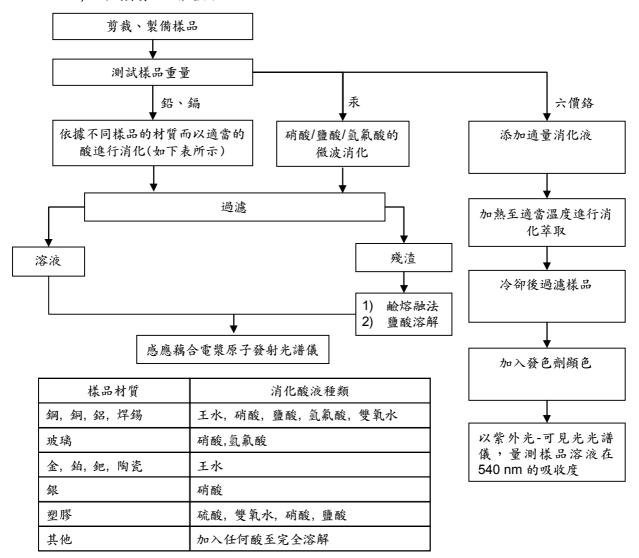
唐正企業有限公司 台北縣中和市中正路861巷11號



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)

2) 測試人員:楊登偉

3) 測試負責人:張啓興



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