

## ***Measurement of Maximum Permissible Exposure***

### **1. Foreword**

In adopt with the Human Exposure IEEE C95.1, and according to the FCC 1.1310. The *Maximum Permissible Exposure (MPE)* is obligated to measure in order to prove the safety of radiation harmfulness to the human body.

The *Gain* of the antenna used is measured in an *Anechoic chamber*. The *maximum total power to the antenna* is to be recorded. By adopting the ***Friis Transmission Formula*** and the *power gain of the antenna*, we can find the distance right away from the product, where the limit of the MPE is.

### **2. Description of EUT**

<b>FCC ID</b>	:	MSQWL600G
<b>Product Name</b>	:	All-in-1 Wireless ADSL2/2+ Home Gateway
<b>Model Name</b>	:	WL-600g
<b>Frequency Range</b>	:	2.412GHz ~ 2.462GHz
<b>Channel Spacing</b>	:	5MHz
<b>Support Channel</b>	:	11 Channels
<b>Modulation Skill</b>	:	DBPSK, DQPSK, CCK, OFDM
<b>Power Type</b>	:	Powered by the switching adapter,

1. Manufacture: UNIFIVE  
Model: US115-12  
I/P: 100-120VAC 50/60Hz 0.4A MAX.  
O/P: 12VDC 1.25A MAX.  
185cm length, non-shielded, no ferrite core
2. Manufacture: LEI  
Model: MU18-2120125-A1  
I/P: 100-240VAC 50/60Hz 0.6A MAX.  
O/P: 12VDC 1.25A MAX.  
188cm length, non-shielded, ferrite core

### 3. Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes)
<b>(A) Limits for Occupational/Controlled Exposure</b>				
0.3-3.0	614	1.63	100	6
3.0-30	1842/f	4.89/f	900/f <sup>2</sup>	6
30-300	61.4	0.163	1.0	6
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6
<b>(B) Limits for General Population/Uncontrolled Exposure</b>				
0.3-1.34	614	1.63	100	30
1.34-30	824/f	2.19/f	180/f <sup>2</sup>	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30

[The EUT is tested in transmit and receive modes and in the first, middle and the last channel separately.

The following shows only our observation have the greatest emissions.]

According to OET BULLETIN 56 Fourth Edition/August 1999, Equation for Predicting RF Fields:

$$\text{Friis Transmission Formula: } S = \frac{PG}{4\pi R^2} = \frac{280.54 \times 1.513}{4\pi(20)^2} = 0.084 \text{ mW/cm}^2$$

$$\text{Estimated safe separation: } R = \sqrt{\frac{PG}{4\pi}} = \sqrt{\frac{280.54 \times 1.513}{4\pi}} = 5.81 \text{ cm}$$

**Note: "The safe estimated separation that the user must maintain from the antenna is at least 6.5cm"**

Where: S = power density (in appropriate units, e.g. mW/cm<sup>2</sup>)

P = power input to the antenna (in appropriate units, e.g., mW)

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

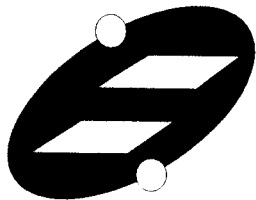
The Numeric gain G of antenna with a gain specified in dB is determined by:

$$G = \text{Log}^{-1} (\text{dB antenna gain} / 10)$$

$$G = \text{Log}^{-1} (1.80 / 10) = 1.513$$

## *Appendix*

### **Antenna Specification**



WHA YU INDUSTRIAL CO., LTD. (HEAD OFFICE)  
TAI HWA ELECTRONIC CO., LTD.(CHINA)  
SHANGHAI HUA YU ELECTRONIC CO., LTD.(CHINA)  
AEON TECH CO., LTD. (CHINA)

## SPECIFICATION FOR APPROVAL

**CUSTOMER:** 華碩電腦股份有限公司

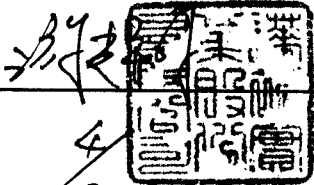
**PART NAME:** RF Antenna Assembly

**PART NO.:** 14G151028010

**REVISION:**

**W. Y. P/NO.:** C660-510103-A

**REV.:** XI

	MANUFACTURER SIGNATURE	CUSTOMER SIGNATURE
APPROVED BY :		
DATE :	18.06	

### WHA YU GROUP

WHA YU INDUSTRIAL CO., LTD.(HEAD OFFICE)

華裕實業股份有限公司

Address: No.326, Sec 2, Kung Tao 5 Road, Hsin Chu City, Taiwan, R.O.C.

Tel:+886-3-5714225(REP.)

Fax:+ 886-3-5713853 · + 886-3-5723600

TAI HWA ELECTRONIC CO., LTD. (CHINA)

台樺電業製品廠

Address: Pak Ho District, Hiu Street Town, Dong Guan City, Guangdong, China

Tel: + 86-769-5599375 · + 86-769-5912375

Fax: + 86-769-5599376

HUA HONG INTERNATIONAL LTD.

華弘國際有限公司

Rm.1103A,President Commercial Centre,608 Nathan Road,Mong Kok,Kowloon,Hong Kong

Tel: + 86-852-27712210

Fax: + 86-852-23843747

SHANGHAI HUA YU ELECTRONIC CO., LTD. (CHINA)

上海華裕電子有限公司

Address:3586,Wai Qing Song Road, Qing Pu County, Shanghai China

Tel: + 86-21-59741348 · + 86-21-59744101~4

Fax: + 86-21-59741347

SU ZHOU AEON TECH CO., LTD. (CHINA)

蘇州華廣電通有限公司

Address:Limin North Road, LiLi Town,LiLi Industrial Park,LinHu Economic Zone

Wujiang City,Jiangsu Province,China

Tel: + 86-512-63627980

Fax: + 86-512-63627981

# Contents

<b>Item</b>	<b>Description</b>	<b>Page</b>
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5. ....	<b>Connector</b> 材質特性	..... 8
6. ....	<b>SGS</b> 測試	..... 9~44

# RF Antenna Cable Assembly

## Specification

### 1. Electrical Properties :

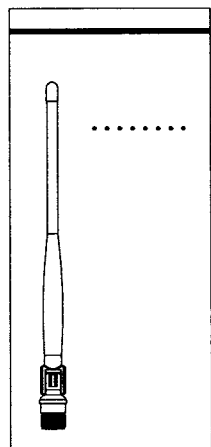
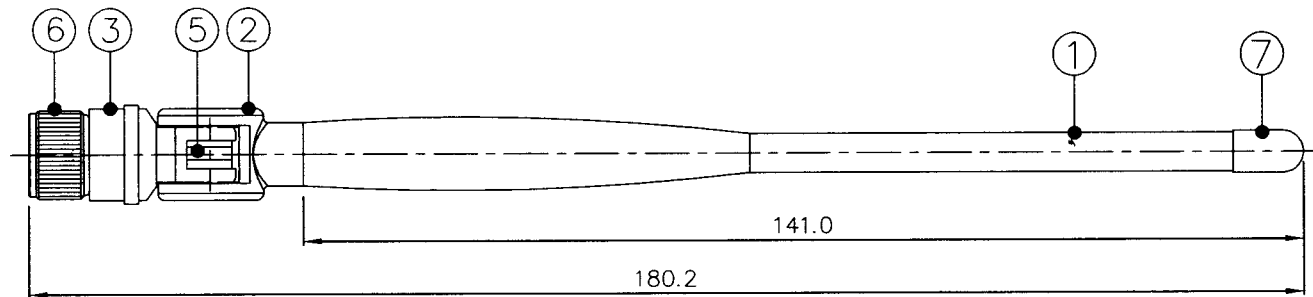
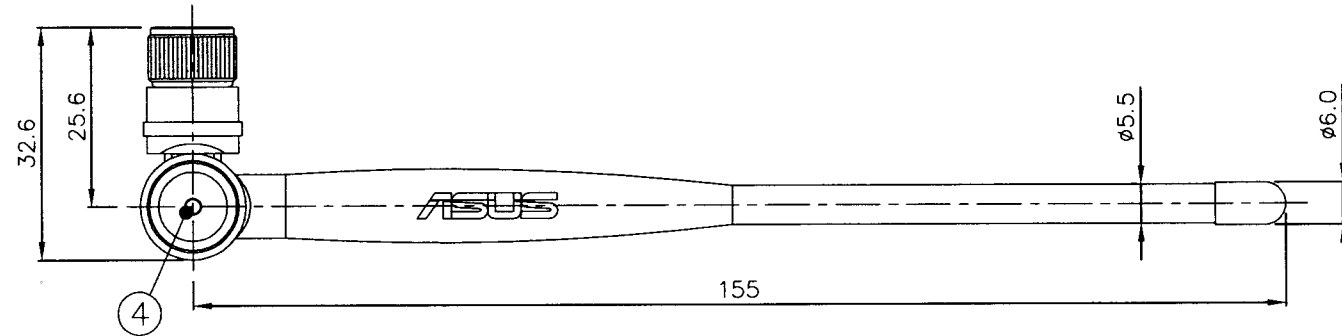
- 1.1 Frequency Range..... 2.4GHz ~ 2.5GHz
- 1.2 Impedance ..... 50Ω Nominal
- 1.3 VSWR ..... 1.92 Max.
- 1.4 Return Loss..... -10 dB Maximum
- 1.5 Radiation ..... Omni-directional
- 1.6 Gain(peak)..... 1.8dBi
- 1.7 Polarization..... Linear Vertical
- 1.8 Admitted Power..... 1W

### 2. Physical Properties :

- 2.1 Cable..... RG-178 Coaxial Cable
- 2.2 Antenna Cover..... TPE
- 2.3 Antenna Base..... PC
- 2.4 Antenna Base..... PBT
- 2.5 Operating Temp. .... -20 ~ +65
- 2.6 Storage Temp. .... -30 ~ +75
- 2.7 Color ..... White
- 2.8 Connector..... SMA Plug Reverse

CG-

REV	DATE	DESCRIPTION
X1	3/8-2006	New Issue



7	Antenna Head Cap	TPE ; Color : White	1	
6	Connector	SMA Plug Reverse(Ni Plated)	1	
5	Cable	RG-178 Cable	1	
4	Rivet	POM , White	2	
3	Antenna Base	PBT ; Color : White	1	
2	Antenna Base	PC ; Color : White	1	
1	Antenna Body	TPE ; Color : White	1	
NO	DESCRIPTION		QTY	REMARK

CUSTOMER'S SIGNATURE

XX.	$\pm 3.0$
X.	$\pm 2.0$
.X	$\pm 1.0$
.XX	$\pm 0.5$
.XXX	$\pm 0.1$

APPROVED  
CHECKED  
DRAWING  
程淑娟

CUSTOMER: ASUS

PART NO :

PARTNAME: RF Antenna Assembly

W.Y PNO : C660-510103-A

REV UNIT FILE :

X1 m/m SHEET : 1/1



Wha Yu  
INDUSTRIAL CO.,LTD.

華裕實業股份有限公司

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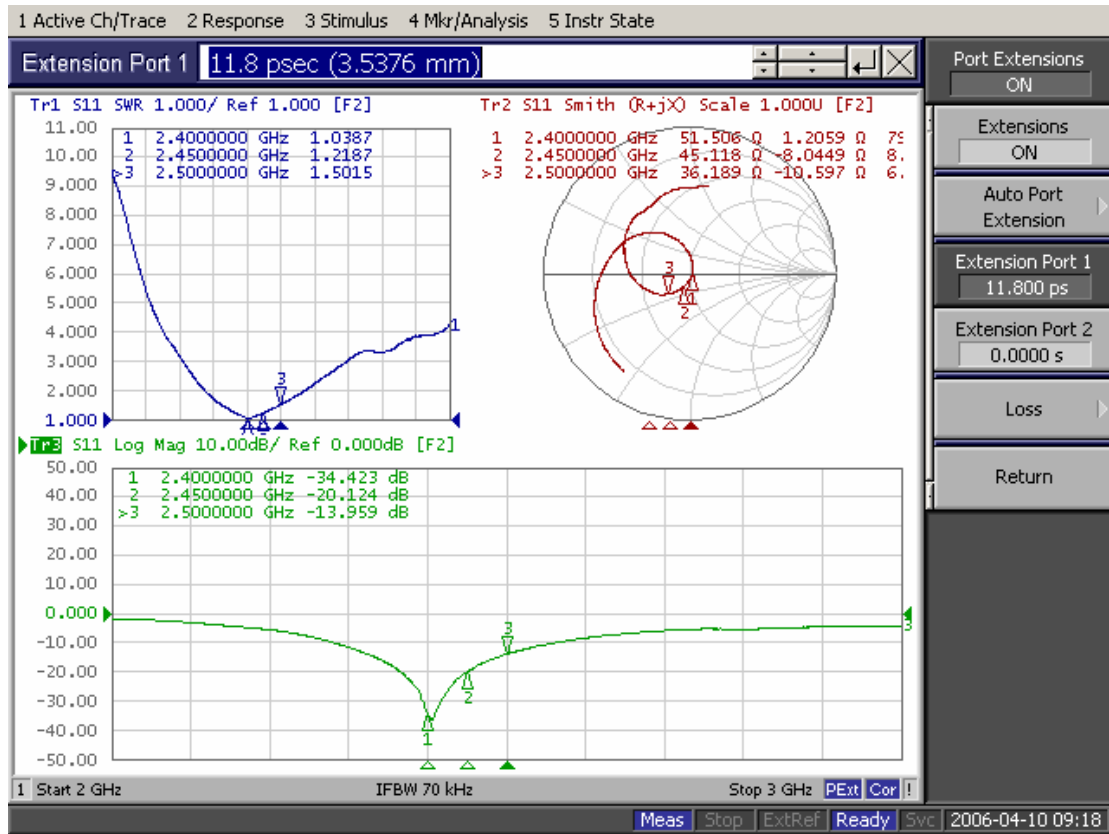


謹裕實業股份有限公司

WHA YU INDUSTRIAL CO., LTD

RF Antenna Assembly

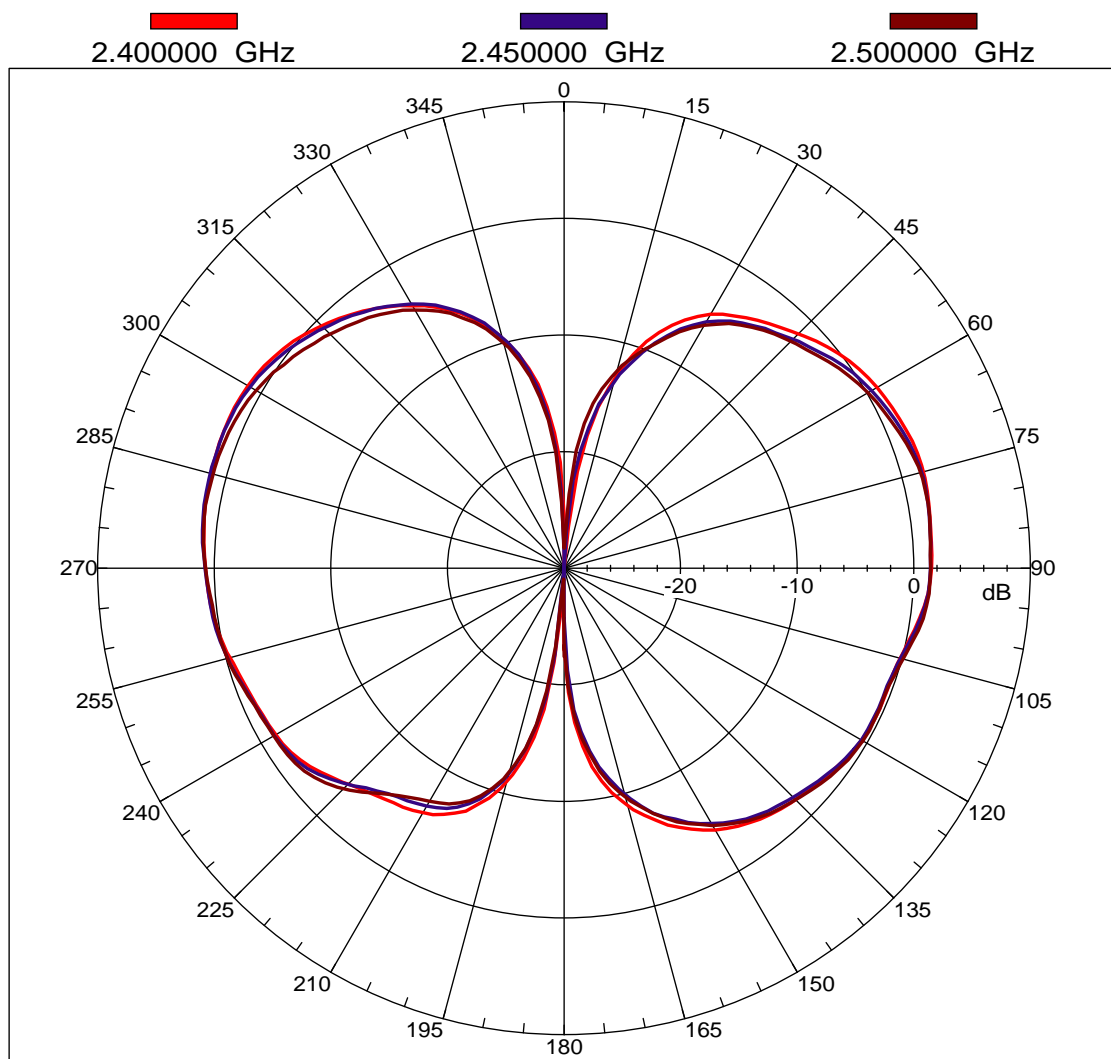
P/NO : C660-510103-A SPEC : 2.4GHz



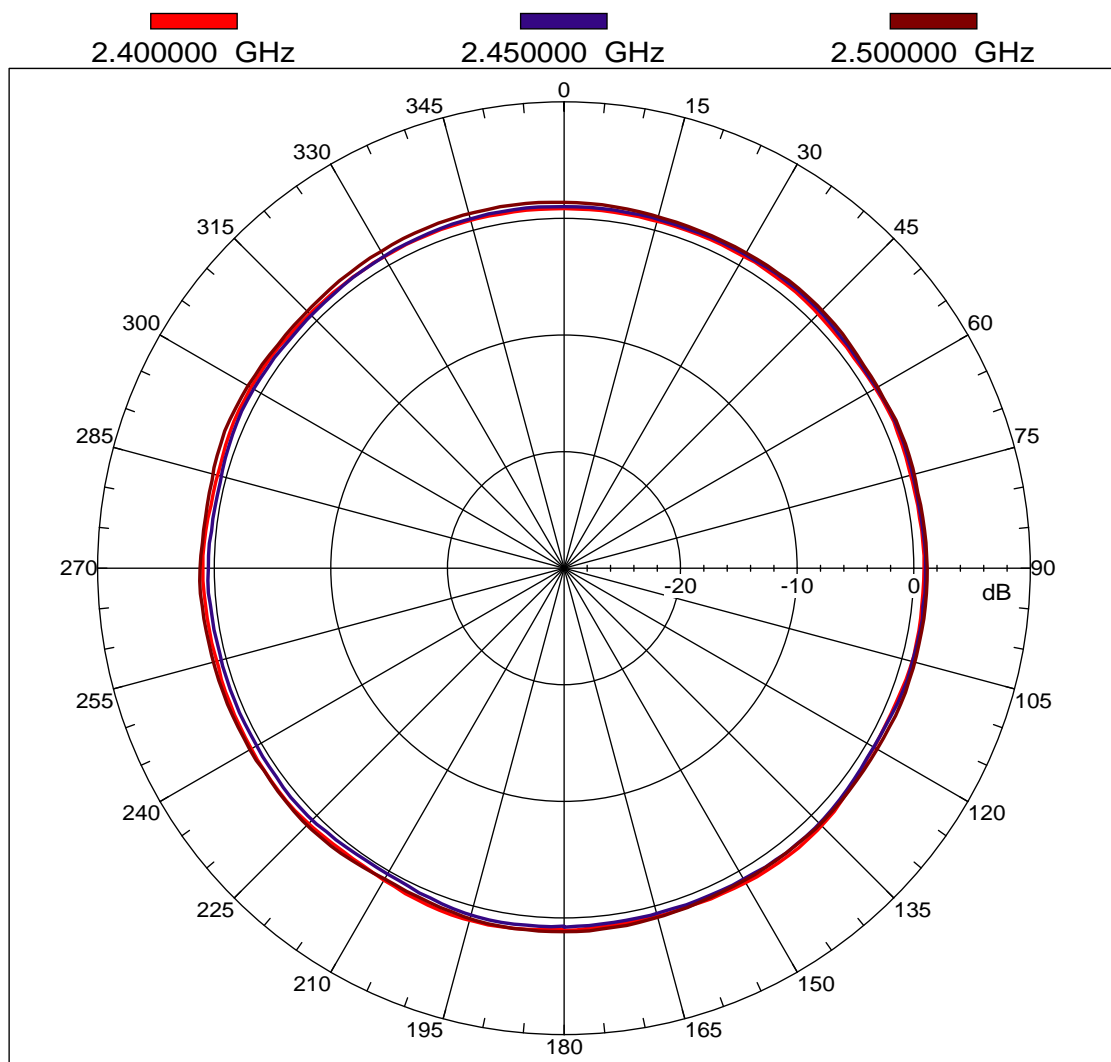
4/13/2006



## Far-field amplitude of C660-510103-A-H.nsi



## Far-field amplitude of C660-510103-A-V.nsi



PRODUCT SPECIFICATION	ISSUED DATE	July.12, 2000	PAGE	1/2
	REVISION		REVISION NO.	

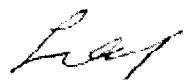
**PRODUCT NAME : Coaxial Cable**  
**RATING : -55℃ ~ 200℃**  
**ITEM : RG 178 B/U**

誠通

No.	Revised Date	Revised Details	Page	Report

REPORTED BY :

APPROVED BY :



Q.C Engineer HOON LEE



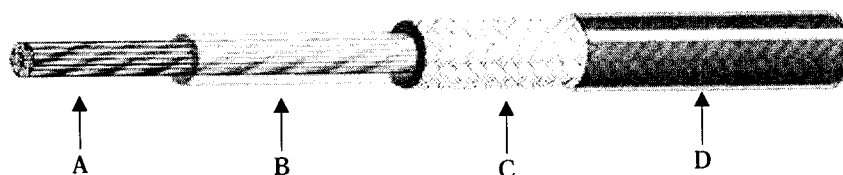
Q.C Manager SOON-MOK SHIN

PRODUCT SPECIFICATION	ISSUED DATE	July.12, 2000	PAGE	2/2
	REVISION		REVISION NO.	

## 1. APPLICATIONS

This specification is applies to Coaxial Cable manufactured by the YOUNG CHANG SILICONE CO.,LTD

## 2. STRUCTURE



- A. Conductor: SCCS
- B. Insulation : PFA
- C. Shield : Silver-Plated Copper
- D. Jacket : FEP

## 3. DIMENSION

Conductor (SCCS)			Insulation		Shield		Jacket	
Structure	Cross sectional area	Diameter	Material	Diameter	Material	Diameter	Material	Diameter
Q'ty/mmφ	mm <sup>2</sup> (SQ)	mmφ		mmφ		mmφ		mmφ
7/0.102	0.06	0.30	PFA	$0.84 \pm 0.05$	SPC	1.25	FEP	$1.80 \pm 0.10$

## 4. ELECTRIC PROPERTIES

Impedance	Capacitance	Maximum Attenuation (dB/100ft)				Dielectric Sterngth
		100Mhz	400Mhz	1Ghz	3Ghz	
ohms	pF/ft(Max)					V/1min
$50 \pm 2$	32	16.0	33.0	52.0	94.0	2000



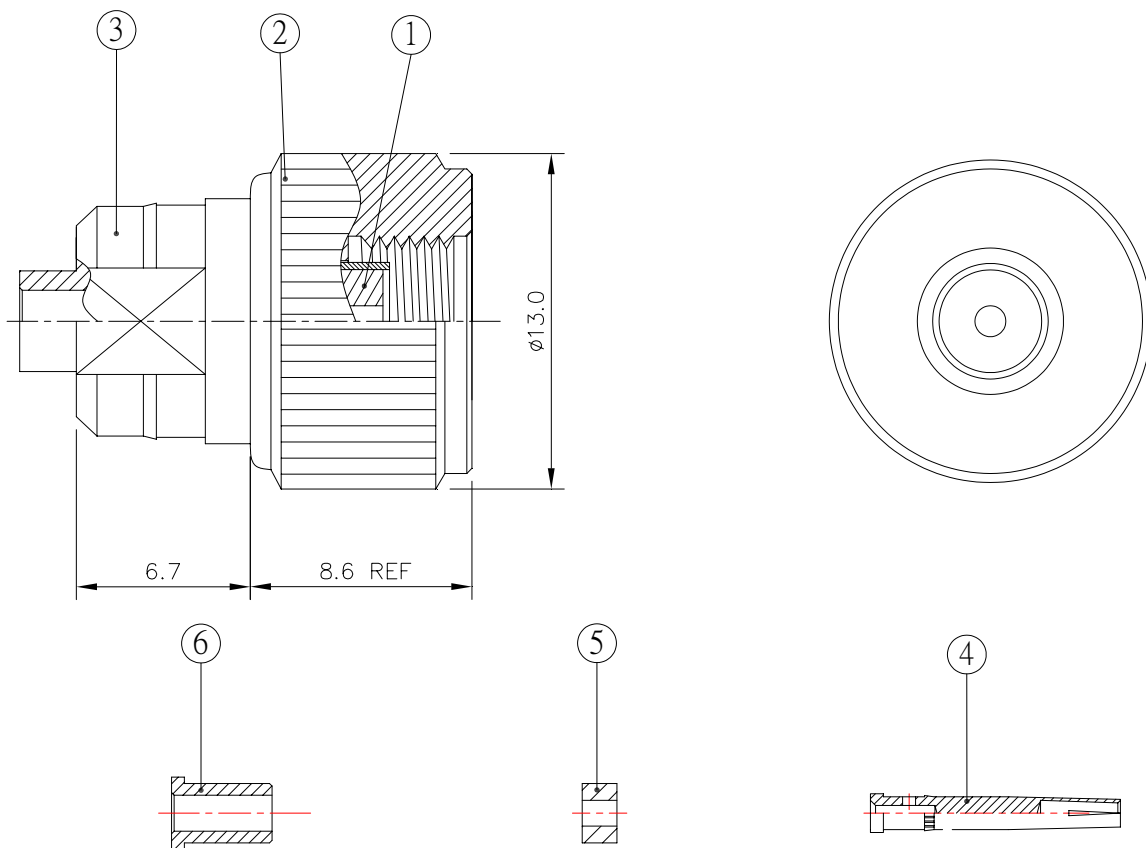
譚裕實業股份有限公司

WHA YU INDUSTRIAL CO., LTD

# Connector 材質證明書

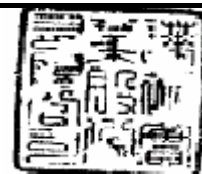
譚裕料號 Whayu P/N	100-2001182-AZ	產品名稱 Product Name	Big SMA Plug Reverse Straight For RG-178
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## Structural Drawing



Material									Surface
1	Dielectric	Teflon	PTFE						N/A
2	Shell	Brass	Cu	Pb	Fe	Fe+Sn	Zn		Nickel
3	Body	Brass	Cu	Pb	Fe	Fe+Sn	Zn		Nickel
4	Pin	Phosphor Bronze	Cu	Sn	P	Zn	Pb		Gold
5	Dielectric	Teflon	PTFE						N/A
6	Ferrule	Brass	Cu	Pb	Fe	Fe+Sn	Zn		Nickel

Remark :



# SGS Test Report

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## Product : RF Antenna

### Contents

No	Description		Report No.	Page
1	Cable	RG-178 Cable	F690501/LF-CTS500034 F690501/LF-CTS500035 F690501/LF-CTSGP06-0418 F690501/LF-CTSGP05-5552	P.10~19
2	Antenna Body Antenna Head Cap	TPE EL-550	CE/2005/B4712	P.20~24
3	Antenna Base	PC -110	KE/2006/10319	P.25~26
4	Antenna Base	PBT	GZSCR05060707862/LP	P.27~28
5	Rivet	POM ; White	CE/2005/96111	P.29~32
6	Connector	SMA Plug Reverse	SH570049/CHEM GZML060201325 KA/2006/20922A-01 KA/2006/20923A-01	P.33~40
7	Ground Tube	Ni Plated + POM	CE/2005/96122 CE/2005/96120 CE/2005/96111	P.41~44 P.29~32

**Result for RoHS : PASS**

**SGS****Test Report No. F690501/LF-CTS500034**

Date: September 22, 2005

Page 1 of 2

To: DO SOL CO., LTD  
1256-7  
Jungwang-dong  
Shiheung-city,  
KYUNGGI-DO 429-450  
Korea

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

Commodity : Please refer to the next page.  
SGS File No. : GP05-0026  
Received Date : September 14, 2005  
Test Performing Date : September 15, 2005  
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.



Jeff Jang / Technical Mgr

Jason Han / Lab Director

**SGS****Test Report No. F690601/LF-CTS500034**

Date: September 22, 2005

Page 2 of 2

Sample No. : GP05-0026.003

Sample Description : AgCu Wire

Style/Item No. :

Comments : Materials: METAL

**Heavy Metals**

Test Items	Unit	Test Method	MDL	Results
Cadmium(Cd)	mg/kg	USEPA 3050B, ICP-AES	0.5	N.D.
Lead (Pb)	mg/kg	USEPA 3050B, ICP-AES	5	N.D.
Mercury (Hg)	mg/kg	USEPA 3502, ICP-AES	2	N.D.
Hexavalent Chromium (Cr VI)	mg/kg	USEPA 3060, UV-vis	1	N.D.

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

NOTE: N.D. = Not detected.(<MDL)  
 ppm = mg/kg  
 MDL = Method Detection Limit  
 "-" = No Regulation  
 \*\* = Qualitative analysis (No Unit)  
 Negative = Undetectable / Positive = Detectable

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# SGS

**Test Report No. F690501/LF-CTS500035**

Date: September 22, 2005

Page 1 of 2

To: DO SOL CO., LTD  
1256-7  
Jungwang-dong  
Shiheung-city,  
KYUNGGI-DO 429-450  
Korea

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

**Commodity** : Please refer to the next page.

**SGS File No.** : GP05-0026

**Received Date** : September 14, 2005

**Test Performing Date** : September 15, 2005

**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.




**Test Report No. F690601/LF-CTS500035**

Date: September 22, 2005

Page 2 of 2

Sample No. : GP05-0026.004

Sample Description : AgCp40% Wire

Style/Item No. :

Comments : Materials: METAL

**Heavy Metals**

Test Items	Unit	Test Method	MDL	Results
Cadmium(Cd)	mg/kg	USEPA 3050B, ICP-AES	0.5	N.D.
Lead (Pb)	mg/kg	USEPA 3050B, ICP-AES	5	N.D.
Mercury (Hg)	mg/kg	USEPA 3502, ICP-AES	2	N.D.
Hexavalent Chromium (Cr VI)	mg/kg	USEPA 3060, UV-vis	1	N.D.

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

NOTE: N.D. = Not detected. (<MDL)  
 ppm = mg/kg  
 MDL = Method Detection Limit  
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 Negative = Undetectable / Positive = Detectable

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 1002 2, Hwasan-ri Onsan-eub, Ulsu-gun, Ulsan, Korea 689 690 t +82 (0)52 239 6908-10 f +82 (0)52 239 6913



# Test Report No. F690501/LF-CTSGP06-0418

Date: January 11, 2006

Page 1 of 3

To: **BOGO CHEMICAL CORPORATION**  
123-4  
Samsung-dong  
Gangnam-gu  
SEOUL  
Korea

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

**Commodity** : AP-210 (DAIKIN)  
**SGS File No.** : GP06-0418  
**Received Date** : January 06, 2006  
**Test Performing Date** : January 09, 2006  
**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)

Brendan Lee  
Monet Jeong  
Jully Oh  
Jerry Jung  
/Testing Person

Jeff Jang / Technical Mgr

SGS Testing Korea Co. Ltd.

Jason Han / Lab Director



## Test Report No. F690501/LF-CTSGP06-0418

Date: January 11, 2006

Page 2 of 3

Sample No. : GP06-0418.001  
Sample Description : AP-210 (DAIKIN)  
Style/Item No. : N/A  
Comments : Material is PFA RESIN

### Heavy Metals

Test Items	Unit	Test Method	MDL	Results
Cadmium(Cd)	mg/kg	US EPA 3050B(1996), US EPA 6010B(1996)	0.5	N.D.
Lead (Pb)	mg/kg	US EPA 3050B(1996), US EPA 6010B(1996)	5	N.D.
Mercury (Hg)	mg/kg	US EPA 3052(1996), US EPA 6010B(1996)	2	N.D.
Hexavalent Chromium (Cr VI)	mg/kg	US EPA 3060A(1996), US EPA 7196A(1992)	1	N.D.

### Flame Retardants-PBBs/PBDEs

Test Items	Unit	Test Method	MDL	Results
Monobromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Dibromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Tribromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Tetrabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Heptabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Hexabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Pentabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Octabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Nonabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Decabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Monobromobiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Dibromobiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Tribromobiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Tetrabromobiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Heptabromobiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Hexabromobiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Pentabromobiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Octabromobiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Nonabromobiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Decabromobiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	6.10

NOTE: N.D. = Not detected.(<MDL)  
ppm = mg/kg  
MDL = Method Detection Limit  
"- " = No Regulation  
\*\* = Qualitative analysis (No Unit)  
Negative = Undetectable / Positive = Detectable

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**Picture of Sample as Received:**



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

NOTE: N.D. = Not detected.(<MDL)  
ppm = mg/kg  
MDL = Method Detection Limit  
"- " = No Regulation  
\*\* = Qualitative analysis (No Unit)  
Negative = Undetectable / Positive = Detectable

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# Test Report No. F690501/LF-CTSGP05-5552

Date: January 04, 2006

Page 1 of 3

To: **BOGO CHEMICAL CORPORATION**  
123-4  
Samsung-dong  
Gangnam-gu  
SEOUL  
Korea

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

---

**Commodity** : NP-21 (DAIKIN)  
**SGS File No.** : GP05-5552  
**Received Date** : January 02, 2006  
**Test Performing Date** : January 03, 2006  
**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.

Jeff Jang / Technical Mgr

Jason Han / Lab Director



## Test Report No. F690501/LF-CTSGP05-5552

Date: January 04, 2006

Page 2 of 3

Sample No. : GP05-5552.001  
Sample Description : NP-21 (DAIKIN)  
Style/Item No. : N/A  
Comments : Material is FEP Resin.

### Heavy Metals

Test Items	Unit	Test Method	MDL	Results
Cadmium(Cd)	mg/kg	EN 1122(2001), US EPA 6010B(1996)	0.5	N.D.
Lead (Pb)	mg/kg	US EPA 3050B(1996), US EPA 6010B(1996)	5	N.D.
Mercury (Hg)	mg/kg	US EPA 3052(1996), US EPA 6010B(1996)	2	N.D.
Hexavalent Chromium (Cr VI)	mg/kg	US EPA 3060A(1996), US EPA 7196A(1992)	1	N.D.

### Flame Retardants-PBBs/PBDEs

Test Items	Unit	Test Method	MDL	Results
Monobromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Dibromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Tribromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Tetrabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Heptabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Hexabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Pentabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Octabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Nonabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Decabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Monobromobiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Dibromobiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Tribromobiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Tetrabromobiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Heptabromobiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Hexabromobiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Pentabromobiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Octabromobiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Nonabromobiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Decabromobiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.

NOTE: N.D. = Not detected.(<MDL)  
ppm = mg/kg  
MDL = Method Detection Limit  
"- " = No Regulation  
\*\* = Qualitative analysis (No Unit)  
Negative = Undetectable / Positive = Detectable

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**Picture of Sample as Received:**



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

NOTE: N.D. = Not detected.(<MDL)  
 ppm = mg/kg  
 MDL = Method Detection Limit  
 "-" = No Regulation  
 \*\* = Qualitative analysis (No Unit)  
 Negative = Undetectable / Positive = Detectable

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# Test Report

DSM ENGINEERING PLASTICS

Report No. : CE/2005/B4712

Date : 2005/11/28

Page : 1 of 5

**The following merchandise was (were) submitted and identified by the client as :**

Type of Product : ARNITEL TPE-E EL550 NATURAL  
Buyer/Order No : SONY  
Sample Received : 2005/11/21  
Testing Date : 2005/11/21 TO 2005/11/28

=====

**Test Result** : - Please see the next page -

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

# Test Report

DSM ENGINEERING PLASTICS

Report No. : CE/2005/B4712

Date : 2005/11/28

Page : 2 of 5

## Test Result

PART NAME NO.1 : WHITE PLASTIC PELLETS

Test Item (s):	Unit	Method	MDL	Result
				No.1
Monobromobiphenyl	%	With reference to USEPA3540C or USEPA3550C. Analysis was performed by HPLC/DAD, LC/MS or GC/MS. (prohibited by 2002/95/EC (RoHS), 83/264/EEC, and 76/769/EEC)	0.0005	N.D.
Dibromobiphenyl	%		0.0005	N.D.
Tribromobiphenyl	%		0.0005	N.D.
Tetrabromobiphenyl	%		0.0005	N.D.
Pentabromobiphenyl	%		0.0005	N.D.
Hexabromobiphenyl	%		0.0005	N.D.
Heptabromobiphenyl	%		0.0005	N.D.
Octabromobiphenyl	%		0.0005	N.D.
Nonabromobiphenyl	%		0.0005	N.D.
Decabromobiphenyl	%		0.0005	N.D.
<b>Total PBBs (Polybrominated biphenyls)/Sum of above</b>	%		-	N.D.
Monobromobiphenyl ether	%	With reference to USEPA3540C or USEPA3550C. Analysis was performed by HPLC/DAD, LC/MS or GC/MS. (prohibited by 2002/95/EC (RoHS), 83/264/EEC, and 76/769/EEC)	0.0005	N.D.
Dibromobiphenyl ether	%		0.0005	N.D.
Tribromobiphenyl ether	%		0.0005	N.D.
Tetrabromobiphenyl ether	%		0.0005	N.D.
Pentabromobiphenyl ether	%		0.0005	N.D.
Hexabromobiphenyl ether	%		0.0005	N.D.
Heptabromobiphenyl ether	%		0.0005	N.D.
Octabromobiphenyl ether	%		0.0005	N.D.
Nonabromobiphenyl ether	%		0.0005	N.D.
Decabromobiphenyl ether	%		0.0005	N.D.
<b>Total PBBEs(PBDEs) (Polybrominated biphenyl ethers)/Sum of above</b>	%		-	N.D.
<b>Total of Mono to Nona-brominated biphenyl ether. (Note 4)</b>	%		-	N.D.

# Test Report

DSM ENGINEERING PLASTICS

Report No. : CE/2005/B4712

Date : 2005/11/28

Page : 3 of 5

Test Item (s):	Unit	Method	MDL	Result
				No.1
Chromium VI (Cr+6)	ppm	UV-VIS after reference to US EPA 3060A.	2	N.D.
Cadmium (Cd)	ppm	ICP-AES after reference to US EPA 3052 or other acid digestion.	2	N.D.
Mercury (Hg)	ppm	ICP-AES after reference to US EPA 3052 or other acid digestion.	2	N.D.
Lead (Pb)	ppm	ICP-AES after reference to US EPA 3052 or other acid digestion.	2	N.D.

NOTE: (1) N.D. = Not detected (<MDL)

(2) ppm = mg/kg

(3) MDL = Method Detection Limit

(4) Decabromodiphenyl ether (DecaBDE) in polymeric applications is exempted by Commission Decision of 13 Oct 2005 amending Directive 2002/95/EC notified under document 2005/717/EC.

(5) PBBEs=PBDEs=Polybrominated Diphenyl Ethers=PBDOs=PBBOs.

(6) " - " = Not Regulation

# Test Report

DSM ENGINEERING PLASTICS

Report No. : CE/2005/B4712

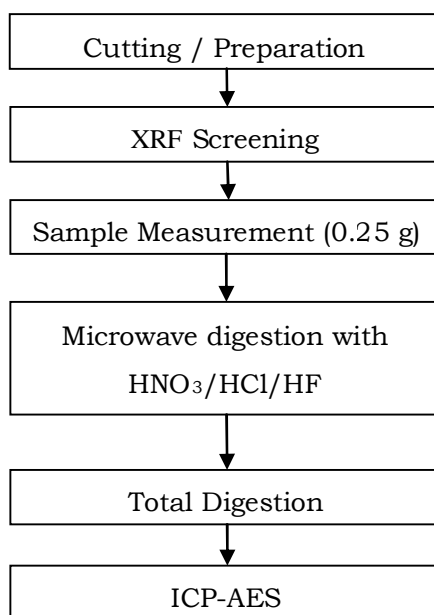
Date : 2005/11/28

Page : 4 of 5

Per requirements of SONY QAR-05-002:

- 1) These samples were dissolved totally by pre-conditioning method according to below flow chart.
- 2) Name of the person who made measurement: Anren Lee
- 3) Name of the person in charge of measurement: Daniel Yeh

**Flow Chart of Digestion for Plastic –EPA3052 for Pb、Cd (without residue)**



## Test Report

DSM ENGINEERING PLASTICS

Report No. : CE/2005/B4712

Date : 2005/11/28

Page : 5 of 5





Chemical Laboratory - Kao.,SGS Taiwan Ltd.

## TEST REPORT

REPORT NO.KE/2006/10319

DATE: 2006/1/11

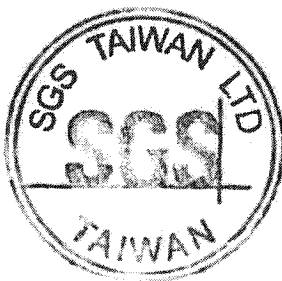
PAGE: 1 OF 2

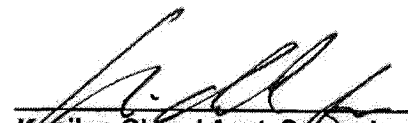
THE FOLLOWING MERCHANDISE WAS(WERE) SUBMITTED ON BEHALF OF THE CLIENT AND IDENTIFIED AS :

**CLIENT** : CHI MEI CORPORATION..  
**ADDRESS** : 59-1,SAN CHIA,JEN TE HSIANG,TAINAN COUNTY,TAIWAN,R.O.C.  
**PRODUCT DESCRIPTION** : POLYCARBONATE.  
: (AS ATTACHED SAMPLE PHOTO).  
**COLOR** : NATURAL.  
**STYLE/ITEM NO.** : WONDERLITE® PC-110.  
**TESTING DATE** : 2006/01/05 TO 2006/1/11 .  
**SAMPLE RECEIVED** : 2006/01/05.

WE HAVE TESTED THE SAMPLE(S) SUBMITTED AS REQUESTED AND THE FOLLOWING RESULTS WERE OBTAINED.

TEST ITEM(S)	UNIT	METHOD	DET. LMT	RESULT
Cadmium (Cd)	ppm	ICP-AES after reference to EN 1122, method B:2001 or other acid digestion.	2	n.d.
Lead (Pb)	ppm	ICP-AES after reference to US EPA 3050B or other acid digestion.	2	n.d.
Mercury (Hg)	ppm	ICP-AES after reference to US EPA 3052 or other acid digestion.	2	n.d.
Chromium VI (Cr+6)	ppm	As per US EPA 7196A and US EPA 3060A.	2	n.d.



  
Kuellan Chen / Asst. Supervisor  
Signed for and on behalf of  
SGS Taiwan Limited

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TW 2582368

SGS Taiwan Ltd.  
台灣檢驗科技股份有限公司

No. 208, Chung Hwa 2nd Road San Min District Kaohsiung, Taiwan. / 高雄市三民區中華二路208號  
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## TEST REPORT

REPORT NO.KE/2006/10319

DATE: 2006/1/11

PAGE: 2 OF 2

TEST ITEM(S)	UNIT	METHOD	DET. LMT	RESULT
<b>PBBs</b> (Polybrominated biphenyls)	---	---	---	---
Monobromobiphenyl	%	With reference to USEPA3540C or USEPA3550C. Analysis was performed by HPLC/DAD, LC/MS or GC/MS. (prohibited by 2002/95/EC (RoHS), 83/264/EEC, and 76/769/EEC)	0.0005	n.d.
Dibromobiphenyl	%		0.0005	n.d.
Tribromobiphenyl	%		0.0005	n.d.
Tetrabromobiphenyl	%		0.0005	n.d.
Pentabromobiphenyl	%		0.0005	n.d.
Hexabromobiphenyl	%		0.0005	n.d.
Heptabromobiphenyl	%		0.0005	n.d.
Octabromobiphenyl	%		0.0005	n.d.
Nonabromobiphenyl	%		0.0005	n.d.
Decabromobiphenyl	%		0.0005	n.d.
<b>PBDEs</b> (Polybrominated biphenyl ethers)	---	---	---	---
Monobromobiphenyl ether	%	With reference to USEPA3540C or USEPA3550C. Analysis was performed by HPLC/DAD, LC/MS or GC/MS. (prohibited by 2002/95/EC (RoHS), 83/264/EEC, and 76/769/EEC)	0.0005	n.d.
Dibromobiphenyl ether	%		0.0005	n.d.
Tribromobiphenyl ether	%		0.0005	n.d.
Tetrabromobiphenyl ether	%		0.0005	n.d.
Pentabromobiphenyl ether	%		0.0005	n.d.
Hexabromobiphenyl ether	%		0.0005	n.d.
Heptabromobiphenyl ether	%		0.0005	n.d.
Octabromobiphenyl ether	%		0.0005	n.d.
Nonabromobiphenyl ether	%		0.0005	n.d.
Decabromobiphenyl ether	%		0.0005	n.d.

NOTE : n.d. = not detected.

<END>



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TW2582367

SGS Taiwan Ltd.  
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## Test Report

No.: GZSCR05060707862/LP Date: JUN 13 2005

Page 1 of 2

NAGASE WAHLEE PLASTICS CORP.  
ERHUAN ROAD, CHANG AN,  
DONGGUAN CITY GUANGDONG PROVINCE  
P.R.C CHANG-AN TAI WANESE BUSINESS PEOPLE'S GUIL

Report on the submitted samples said to be PBT 310SE0-10011

SGS Ref No. : SZ050602351EC-13.2  
Manufacture /Supplier : GE / 长华  
Sample Receiving Date : JUN 6 2005  
Testing Period : JUN 6 2005 TO JUN 13 2005

Test Requested : (1) As specified by client, to determine the Lead, Cadmium, Mercury & Hexavalent Chromium content in the submitted sample  
(2) Determination of PBBs (polybrominated biphenyls), PBDEs (Polybrominated diphenylethers) of the submitted sample.

Test Method : (1) Lead content - with reference to EPA Method 3050B:1996.  
Cadmium content - with reference to BS EN1122:2001 method B.  
Mercury content - with reference to EPA 3052:1996.  
Hexavalent Chromium content - with reference to EPA 3060A & EPA 7196A.  
Analysis was performed by Atomic Absorption Spectrometer and Inductively Coupled Plasma Atomic Emission Spectrometer (ICP-AES)/UV-VIS Spectrophotometer.  
(2) With reference to SGS in-house method. Analysis was performed by GC/MS.

RESULTS : Please refer to next page.

Signed for and on behalf of  
SGS CSTC Ltd.

He Xiaoyan, Jane  
Tech Manager

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GZCM 14156

SGS (China) Limited  
Incorporated in Hong Kong

25, Szechu Yung Industrial Park, Jing Shan Road, Zhi Chong Pu Area, Tianhe District, Guangzhou, China 510650  
中国: 广州 天河区东圃镇 智冲埔工业区 25 楼 010600

(86-20) 22188300 / (86-20) 22165558 [www.sgs.com](http://www.sgs.com)  
(86-20) 22188300 / (86-20) 22165558 传真: (86-20) 22188300

Member of the SGS Group (Société Générale de Surveillance)



## Test Report

No.: GZSCR05060707882/LP

Date :JUN 13.2005

Page 2 of 2

### Results :

(1)

#### White plastic grains

Lead Content (Pb)	N.D.
Cadmium Content (Cd)	N.D.
Mercury Content (Hg)	N.D.
Hexavalent Chromium Content Cr(VI)]	N.D.

Note:- N.D.=Not Detected(<2 ppm)  
- ppm=mg/kg

(2)

Flame Retardants	White Plastic grains	Detection Limit(ppm)
<b>Polybrominated Biphenyls (PBBs)</b>		
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.	6
Decabromobiphenyl	N.D.	5
<b>Polybrominated Diphenylethers (PBDEs)</b>		
Monobromodiphenyl ether	ND	5
Dibromodiphenyl ether	ND	5
Tribromodiphenyl ether	ND	5
Tetrabromodiphenyl ether	ND	5
Pentabromodiphenyl ether	ND	5
Hexabromodiphenyl ether	ND	5
Heptabromodiphenyl ether	ND	5
Octabromodiphenyl ether	ND	5
Nonabromodiphenyl ether	ND	6
Decabromodiphenyl ether	ND	5

Note: -N.D. = Not Detected (<5ppm)  
-ppm = mg/kg

\*\*\* End of Report \*\*\*

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GZCM 14156E

SGS (China) Co., Ltd. (Shanghai Branch) 185-2010210000 185-2010210000 185-2010210000  
中国 广州 天河区 珠江新城 珠江东路 10 号 185-2010210000 185-2010210000 185-2010210000

Member of the SGS Group (Société Générale de Surveillance)

# Test Report


REN-YUH ENTERPRISE CO., LTD.  
NO. 3, LANE 36, DONG-SHUN ST., SHE-LIN, TAIPEI,  
TAIWAN

Report No. : CE/2005/96111  
Date : 2005/10/04  
Page : 1 of 4

**The following merchandise was (were) submitted and identified by the client as :**

Type of Product : WHITE POM  
Sample Received : 2005/09/27  
Testing Date : 2005/09/27 TO 2005/10/04

**Test Result** : - Please see the next page -

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

# Test Report

REN-YUH ENTERPRISE CO., LTD.  
NO. 3, LANE 36, DONG-SHUN ST., SHE-LIN, TAIPEI,  
TAIWAN

Report No. : CE/2005/96111  
Date : 2005/10/04  
Page : 2 of 4

## Test Result

PART NAME NO.1 : WHITE PLASTIC (PLEASE REFER TO THE PHOTO ATTACHED)

Test Item (s):	Unit	Method	MDL	Result
				No.1
Monobromobiphenyl	%	With reference to USEPA3540C or USEPA3550C. Analysis was performed by HPLC/DAD, LC/MS or GC/MS. (prohibited by 2002/95/EC (RoHS), 83/264/EEC, and 76/769/EEC)	0.0005	N.D.
Dibromobiphenyl	%		0.0005	N.D.
Tribromobiphenyl	%		0.0005	N.D.
Tetrabromobiphenyl	%		0.0005	N.D.
Pentabromobiphenyl	%		0.0005	N.D.
Hexabromobiphenyl	%		0.0005	N.D.
Heptabromobiphenyl	%		0.0005	N.D.
Octabromobiphenyl	%		0.0005	N.D.
Nonabromobiphenyl	%		0.0005	N.D.
Decabromobiphenyl	%		0.0005	N.D.
<b>Total PBBs (Polybrominated biphenyls)/Sum of above</b>	%		-	N.D.
Monobromobiphenyl ether	%	With reference to USEPA3540C or USEPA3550C. Analysis was performed by HPLC/DAD, LC/MS or GC/MS. (prohibited by 2002/95/EC (RoHS), 83/264/EEC, and 76/769/EEC)	0.0005	N.D.
Dibromobiphenyl ether	%		0.0005	N.D.
Tribromobiphenyl ether	%		0.0005	N.D.
Tetrabromobiphenyl ether	%		0.0005	N.D.
Pentabromobiphenyl ether	%		0.0005	N.D.
Hexabromobiphenyl ether	%		0.0005	N.D.
Heptabromobiphenyl ether	%		0.0005	N.D.
Octabromobiphenyl ether	%		0.0005	N.D.
Nonabromobiphenyl ether	%		0.0005	N.D.
Decabromobiphenyl ether	%		0.0005	N.D.
<b>Total PBBEs(PBDEs) (Polybrominated biphenyl ethers)/Sum of above</b>	%		-	N.D.

# Test Report

REN-YUH ENTERPRISE CO., LTD.  
NO. 3, LANE 36, DONG-SHUN ST., SHE-LIN, TAIPEI,  
TAIWAN

Report No. : CE/2005/96111  
Date : 2005/10/04  
Page : 3 of 4

Test Item (s):	Unit	Method	MDL	Result
				No. 1
Chromium VI (Cr+6)	ppm	UV-VIS after reference to US EPA 3060A.	2	N.D.
Cadmium (Cd)	ppm	ICP-AES after reference to EN 1122, method B:2001 or other acid digestion.	2	N.D.
Mercury (Hg)	ppm	ICP-AES after reference to US EPA 3052 or other acid digestion.	2	N.D.
Lead (Pb)	ppm	ICP-AES after reference to US EPA 3050B or other acid digestion.	2	N.D.

NOTE: (1) N.D. = Not detected (<MDL)  
(2) ppm = mg/kg  
(3) MDL = Method Detection Limit  
(4) " - " = No Regulation

# Test Report

REN-YUH ENTERPRISE CO., LTD.  
NO. 3, LANE 36, DONG-SHUN ST., SHE-LIN, TAIPEI,  
TAIWAN

Report No. : CE/2005/96111  
Date : 2005/10/04  
Page : 4 of 4



## Test Report

No. SH570049/CHEM

Date: 9.29.2005

Page 1 of 2

FLUOTECH INDUSTRIES CO., LTD  
NO.26, DIN HU 2ST, KUEI-SHAN HSIANG, TAO YUAN HSIEN, TAIWAN

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

Sample Name : PTFE PART  
SGS Ref No. : SHEC0050926317  
Model : ROD/TUBE  
Main Substance : FLUOROPOLYMER  
Material : PTFE  
Supplier : DAIKIN

Sample Receiving Date : September 26, 2005  
Testing Period : September 26 to September 29, 2005

Test Requested : 1) To determine the Cadmium Content of the submitted sample.  
2) To determine the Lead content of the submitted sample.  
3) To determine Mercury Content of the submitted sample.  
4) To determine Hexavalent Chromium content of the submitted sample.  
5) To determine the PBBs(Polybrominated biphenyls) PBBEs(PBDEs)  
(Polybrominated biphenyl ethers) Content of the submitted sample.

Test method : 1) With reference to BS EN 1122:2001, Method B or other acid digestion  
Analysis was performed by Inductively Coupled Argon Plasma – Atomic Emission Spectrometry (ICP-AES) or Atomic Absorption Spectrometry.  
2) With reference to US EPA Method 3050B or other acid digestion  
Analysis was performed by Inductively Coupled Argon Plasma – Atomic Emission Spectrometry (ICP-AES) or Atomic Absorption Spectrometry.  
3) With reference to US EPA 3052 or other acid digestion, Analysis was performed by Inductively Coupled Argon Plasma – Atomic Emission Spectrometry (ICP-AES) or US EPA7473 Analysis was performed by Hg Analyzer.  
4) With reference to US EPA3060A and US EPA7196A  
Analysis was performed by UV-VIS Spectrometric method.  
5) With reference to USEPA 8081A/8270C/3540C/3550B, Analysis was performed by GC/MS.

Test Results : Please refer to next page

Signed for and on behalf of  
SGS-CSTC Chemicals



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SHCH 337286

## Test Report

No. SH570049/CHEM

Date: 9.29.2005

Page 2 of 2

### Test Results

No.	Item	Unit	MDL	A*
1	Cadmium (Cd)	ppm	2	N.D.
2	Lead (Pb)	ppm	2	N.D.
3	Mercury (Hg)	ppm	2	N.D.
4	Hexavalent Chromium (Cr VI)	ppm	2	N.D.
5	PBBs(Polybrominated biphenyls)	---	---	---
	PBBs(Bromobiphenyl)	ppm	5	N.D.
	PBBs(Dibromobiphenyl)	ppm	5	N.D.
	PBBs(Tribromobiphenyl)	ppm	5	N.D.
	PBBs(Tetrabromobiphenyl)	ppm	5	N.D.
	PBBs(Pentabromobiphenyl)	ppm	5	N.D.
	PBBs(Hexabromobiphenyl)	ppm	5	N.D.
	PBBs(Heptabromobiphenyl)	ppm	5	N.D.
	PBBs(Octabromobiphenyl)	ppm	5	N.D.
	PBBs(Nonabromobiphenyl)	ppm	5	N.D.
	PBBs(Decabromobiphenyl)	ppm	5	N.D.
	PBBEs(PBDEs)(Polybrominated biphenyl ethers)	---	---	---
	PBBEs(PBDEs)(Monobromobiphenyl ether)	ppm	5	N.D.
	PBBEs(PBDEs)(Dibromobiphenyl ether)	ppm	5	N.D.
	PBBEs(PBDEs)(Tribromobiphenyl ether)	ppm	5	N.D.
	PBBEs(PBDEs)(Tetrabromobiphenyl ether)	ppm	5	N.D.
	PBBEs(PBDEs)(Pentabromobiphenyl ether)	ppm	5	N.D.
	PBBEs(PBDEs)(Hexabromobiphenyl ether)	ppm	5	N.D.
	PBBEs(PBDEs)(Heptabromobiphenyl ether)	ppm	5	N.D.
	PBBEs(PBDEs)(Octabromobiphenyl ether)	ppm	5	N.D.
	PBBEs(PBDEs)(Nonabromobiphenyl ether)	ppm	5	N.D.
	PBBEs(PBDEs)(Decabromobiphenyl ether)	ppm	5	N.D.

### Sample Appearance Description:

A. White solid stick

Note : ppm=mg/kg

MDL= Method Detection Limit

N.D. = Not detected.(<MDL)

\*Only for reference

\*\*\* End of Report \*\*\*

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SHCH 337489



# Test Report

No.: GZML060201325

Date. FEB 24, 2008

Page 1 of 2

ZHONG SHAN SHI YANG METAL PRODUCTS CO., LTD.  
THE THIRD INDUSTRIAL AREA, NAN LANG TOWN, ZHONG SHAN CITY, GUANGDONG PROVINCE,  
P.R. CHINA

Report on the submitted sample said to be COPPER (铜棒) C3804

SGS Ref No. : GZ0602015827/CHEM

Sample Receiving Date : FEB 17, 2006

Testing Period : FEB 17, 2006 TO FEB 23, 2006

Test Requested : (1) As specified by client, to determine the Lead, Cadmium & Mercury content in the submitted sample.  
(2) Determination of the presence of Hexavalent Chromium Cr(VI) in the submitted metallic samples.

Test Method : (1) Lead content - With reference to EPA method 3050B: 1996 / other acid digestion.  
Cadmium content - With reference to BS EN1122: 2001 method B / other acid digestion.  
Mercury content - With reference to EPA 3052: 1996 / 7473: 1998 / other acid digestion.  
Analysis was performed by Atomic Absorption Spectrometer / Inductively Coupled  
Plasma Atomic Emission Spectrometer (ICP-AES).  
(2) With reference to the Committee Draft of IEC 62321, Ed.1 (Sec. 9.7.2 – Boiling-water-  
extraction method)

Results : Please refer to next page.

Signed for and on behalf of  
SGS-CSTC Ltd.

Cathy Peng  
Tech Engineer

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中国·广州·经济技术开发区科学城科珠路198号 邮编 510663

Member of the SGS Group (SGS SA:

FAX NO. : 0760 5214769

MAR-16-2006 16:40 FROM:



## Test Report

No.: GZML060201325

Date: FEB 24, 2003 Page 2 of 2

### Results:

(1)

Lead Content (Pb)(ppm)  
Cadmium Content (Cd)(ppm)  
Mercury Content (Hg)

Golden metal rod

3.10x10<sup>-4</sup>  
19  
N.D.

Note : - N.D. = Not Detected (< 2 ppm)  
- ppm = mg/kg

(2)

Hexavalent Chromium Content [Cr(VI)]

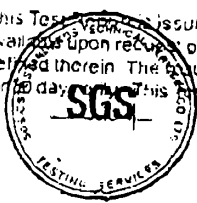
Golden metal rod

Negative

Note : - Negative means the concentration of Hexavalent Chromium extracted from 50cm<sup>2</sup> sample is less than the detection limit.  
- Detection limit of Cr(VI) in solution = 0.02 mg/kg Cr(VI) extracted from 50cm<sup>2</sup> sample surface area by boiling-water-extraction method

\*\*\* End of Report \*\*\*

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SGS (Shanghai) Metal Products Co., Ltd. (SGS) 中国上海  
地址: 上海市浦东新区外高桥保税区科苑路199号 邮编: 201315  
电话: 021-20215573 021-20215573 021-20215573 021-20215573  
www.sgs.com

FEB. 25 2006 10:50

FAX NO.: 0760 5214769

FROM: SHIYANG METAL PRODUCTS CO., LTD

# SGS

## TEST REPORT

REPORT NO. KA/2006/20922A-01

DATE: 2006/2/22

PAGE: 1 OF 2



THE FOLLOWING MERCHANDISE WAS(WERE) SUBMITTED ON BEHALF OF THE CLIENT AND IDENTIFIED AS:

CLIENT : DING MING INDUSTRY LTD.  
 PRODUCT DESCRIPTION : GOLD PLATING PRODUCT.  
 SAMPLE : AS ATTACHED PHOTO.  
 TESTING DATE : 2006/2/15 TO 2006/2/22 .  
 SAMPLE RECEIVED : 2006/02/15.

WE HAVE TESTED THE SAMPLE(S) SUBMITTED AS REQUESTED AND THE FOLLOWING RESULTS WERE OBTAINED.

TEST ITEM(S)	UNIT	METHOD	MDL	RESULT
Cadmium (Cd)	ppm	ICP-AES after reference to EN 1122 :2001 or other acid digestion.	2	n.d.
Chromium VI (Cr+6)	ppm	As per US EPA 7196A and US EPA 3060A.	2	n.d.
Mercury (Hg)	ppm	ICP-AES after reference to US EPA 3052 or other acid digestion.	2	n.d.
Lead (Pb)	ppm	ICP-AES after reference to US EPA 3050B or other acid digestion.	2	n.d.
PBBs(Polybrominated biphenyls)	---	---	---	---
Monobromobiphenyl	%	With reference to USEPA3540C or USEPA3550C. Analysis was performed by HPLC/DAD, LC/MS or GC/MS. (prohibited by 2002/95/EC (RoHS), 83/264/EEC, and 76/769/EEC)	0.0005	n.d.
Dibromobiphenyl	%		0.0005	n.d.
Tribromobiphenyl	%		0.0005	n.d.
Tetrabromobiphenyl	%		0.0005	n.d.
Pentabromobiphenyl	%		0.0005	n.d.
Hexabromobiphenyl	%		0.0005	n.d.
Heptabromobiphenyl	%		0.0005	n.d.
Octabromobiphenyl	%		0.0005	n.d.
Nonabromobiphenyl	%		0.0005	n.d.
Decabromobiphenyl	%		0.0005	n.d.
PBDEs(Polybrominated biphenyl ethers)	---	---	---	---
Monobromobiphenyl ether	%	With reference to USEPA3540C or USEPA3550C. Analysis was performed by HPLC/DAD, LC/MS or GC/MS. (prohibited by 2002/95/EC (RoHS), 83/264/EEC, and 76/769/EEC)	0.0005	n.d.
Dibromobiphenyl ether	%		0.0005	n.d.
Tribromobiphenyl ether	%		0.0005	n.d.
Tetrabromobiphenyl ether	%		0.0005	n.d.
Pentabromobiphenyl ether	%		0.0005	n.d.
Hexabromobiphenyl ether	%		0.0005	n.d.
Heptabromobiphenyl ether	%		0.0005	n.d.
Octabromobiphenyl ether	%		0.0005	n.d.
Nonabromobiphenyl ether	%		0.0005	n.d.
Decabromobiphenyl ether	%		0.0005	n.d.

NOTE: (1) n.d. = not detected  
 (2) ppm = mg/kg  
 (3) MDL = Method Detection Limit



*Kueilan Chen*  
 Kueilan Chen / Asst. Supervisor  
 Sign for and on behalf of  
 SGS Taiwan Limited

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2593367

SGS Taiwan Ltd.  
 台灣檢驗科技股份有限公司

No. 208, Chung Hwa 2nd Road San Min District Kaohsiung, Taiwan. / 高雄市三民區中華二路208號  
 t (886-7) 323-0920 f (886-7) 315-7484 www.tw.sgs.com

Member of SGS Group



## TEST REPORT

REPORT NO.KA/2006/20922A-01

DATE: 2006/2/22

PAGE:2 OF 2



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TW2593385

SGS Taiwan Ltd.  
台灣檢驗科技股份有限公司

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Member of SGS Group



## TEST REPORT

REPORT NO. KA/2006/20923A-01

DATE: 2006/2/22

PAGE: 1 OF 2



THE FOLLOWING MERCHANDISE WAS(WERE) SUBMITTED ON BEHALF OF THE CLIENT AND IDENTIFIED AS :

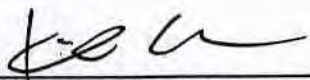
CLIENT : DING MING INDUSTRY LTD.  
PRODUCT DESCRIPTION : NICKEL PLATING PRODUCT.  
SAMPLE : AS ATTACHED PHOTO.  
TESTING DATE : 2006/2/15 TO 2006/2/22 .  
SAMPLE RECEIVED : 2006/02/15.

WE HAVE TESTED THE SAMPLE(S) SUBMITTED AS REQUESTED AND THE FOLLOWING RESULTS WERE OBTAINED.

TEST ITEM(S)	UNIT	METHOD	MDL	RESULT
Cadmium (Cd)	ppm	ICP-AES after reference to EN 1122 :2001 or other acid digestion.	2	n.d.
Chromium VI (Cr+6)	ppm	As per US EPA 7196A and US EPA 3060A.	2	n.d.
Mercury (Hg)	ppm	ICP-AES after reference to US EPA 3052 or other acid digestion.	2	n.d.
Lead (Pb)	ppm	ICP-AES after reference to US EPA 3050B or other acid digestion.	2	n.d.
<b>PBBs(Polybrominated biphenyls)</b>	---	---	---	---
Monobromobiphenyl	%	With reference to USEPA3540C or USEPA3550C. Analysis was performed by HPLC/DAD, LC/MS or GC/MS. (prohibited by 2002/95/EC (RoHS), 83/264/EEC, and 76/769/EEC)	0.0005	n.d.
Dibromobiphenyl	%		0.0005	n.d.
Tribromobiphenyl	%		0.0005	n.d.
Tetrabromobiphenyl	%		0.0005	n.d.
Pentabromobiphenyl	%		0.0005	n.d.
Hexabromobiphenyl	%		0.0005	n.d.
Heptabromobiphenyl	%		0.0005	n.d.
Octabromobiphenyl	%		0.0005	n.d.
Nonabromobiphenyl	%		0.0005	n.d.
Decabromobiphenyl	%		0.0005	n.d.
<b>PBDEs(Polybrominated biphenyl ethers)</b>	---	---	---	---
Monobromobiphenyl ether	%	With reference to USEPA3540C or USEPA3550C. Analysis was performed by HPLC/DAD, LC/MS or GC/MS. (prohibited by 2002/95/EC (RoHS), 83/264/EEC, and 76/769/EEC)	0.0005	n.d.
Dibromobiphenyl ether	%		0.0005	n.d.
Tribromobiphenyl ether	%		0.0005	n.d.
Tetrabromobiphenyl ether	%		0.0005	n.d.
Pentabromobiphenyl ether	%		0.0005	n.d.
Hexabromobiphenyl ether	%		0.0005	n.d.
Heptabromobiphenyl ether	%		0.0005	n.d.
Octabromobiphenyl ether	%		0.0005	n.d.
Nonabromobiphenyl ether	%		0.0005	n.d.
Decabromobiphenyl ether	%		0.0005	n.d.

NOTE: (1) n.d. = not detected  
(2) ppm = mg/kg  
(3) MDL = Method Detection Limit



  
Kueilan Chen / Asst. Supervisor  
Sign for and on behalf of  
SGS Taiwan Limited

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TW2593381



## TEST REPORT

REPORT NO. KA/2006/20923A-01

DATE: 2006/2/22

PAGE: 2 OF 2



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**TW2593380**

# Test Report

REN-YUH ENTERPRISE CO., LTD.  
NO. 3, LANE 36, DONG-SHUN ST., SHE-LIN, TAIPEI,  
TAIWAN

Report No. : CE/2005/96122  
Date : 2005/10/05  
Page : 1 of 2

**The following merchandise was (were) submitted and identified by the client as :**

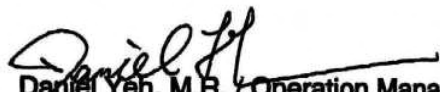
Type of Product : 金色金屬-銅素材  
Sample Received : 2005/09/28  
Testing Date : 2005/09/28 TO 2005/10/05

## Test Result

PART NAME NO.1 : GOLDEN COLORED METAL (PLEASE REFER TO THE PHOTO ATTACHED)

Test Item (s):	Unit	Method	MDL	Result
				No.1
Chromium VI (Cr+6)	ppm	UV-VIS after reference to US EPA 3060A.	2	N.D.
Cadmium (Cd)	ppm	ICP-AES after reference to EN 1122, method B:2001 or other acid digestion.	2	60.8
Mercury (Hg)	ppm	ICP-AES after reference to US EPA 3052 or other acid digestion.	2	N.D.
Lead (Pb)	ppm	ICP-AES after reference to US EPA 3050B or other acid digestion.	2	31977.7

NOTE: (1) N.D. = Not detected (<MDL)  
(2) ppm = mg/kg  
(3) MDL = Method Detection Limit

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

## Test Report

REN-YUH ENTERPRISE CO., LTD.  
NO. 3, LANE 36, DONG-SHUN ST., SHE-LIN, TAIPEI,  
TAIWAN

Report No. : CE/2005/96122  
Date : 2005/10/05  
Page : 2 of 2



# Test Report

REN-YUH ENTERPRISE CO., LTD.  
NO. 3, LANE 36, DONG-SHUN ST., SHE-LIN, TAIPEI,  
TAIWAN

Report No. : CE/2005/96120  
Date : 2005/10/05  
Page : 1 of 2

**The following merchandise was (were) submitted and identified by the client as :**

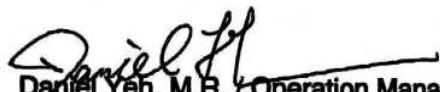
Type of Product : 銀色金屬-鍍鎳  
Sample Received : 2005/09/28  
Testing Date : 2005/09/28 TO 2005/10/05

## **Test Result**

PART NAME NO.1 : SILVER COLORED METAL (PLEASE REFER TO THE PHOTO ATTACHED)

Test Item (s):	Unit	Method	MDL	Result
				No.1
Chromium VI (Cr+6)	ppm	UV-VIS after reference to US EPA 3060A.	2	N.D.
Cadmium (Cd)	ppm	ICP-AES after reference to EN 1122, method B:2001 or other acid digestion.	2	42.0
Mercury (Hg)	ppm	ICP-AES after reference to US EPA 3052 or other acid digestion.	2	N.D.
Lead (Pb)	ppm	ICP-AES after reference to US EPA 3050B or other acid digestion.	2	34463.3

NOTE: (1) N.D. = Not detected (<MDL)  
(2) ppm = mg/kg  
(3) MDL = Method Detection Limit

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



# Test Report

REN-YUH ENTERPRISE CO., LTD.  
NO. 3, LANE 36, DONG-SHUN ST., SHE-LIN, TAIPEI,  
TAIWAN

Report No. : CE/2005/96120  
Date : 2005/10/05  
Page : 2 of 2

