



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

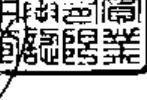
SPECIFICATION FOR APPROVAL

CUSTOMER: 達威

PART NAME: RF Antenna Cable Assembly

PART NO.: **REVISION:**

W. Y. P/NO.: C753-510007-A **REV.:** X2

	MANUFACTURER SIGNATURE	CUSTOMER SIGNATURE
APPROVED BY :	 	
DATE :	 	

WHA YU GROUP

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

譁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

DONGGUAN AEON TECH CO., LTD. (CHINA)

東莞台霖電子通訊有限公司

Address: Lakeside Industrial Park, Da Ling Shan Town, Dong Guan City, GuangDong, China

Tel: + 86-769-85655858 Fax: + 86-769-8565525

TAI HWA ELECTRONIC FACTORY

台桦電業制品廠

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

Tel: + 86-769-85599375 + 86-769-85912375 Fax: + 86-769-85599376

HUA HONG INTERNATIONAL LTD.

華弘國際有限公司

Address: 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)

上海譁裕電子有限公司

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

<i>Item</i>	<i>Description</i>	<i>Page</i>
1.	天線規格表	1
2.	成品圖	2
3.	測試報告	3~5
4.	Cable 規格	6~8
5.	SGS測試	9~45
6.	RoHS排外條款	46

Specification

1. Electrical Properties :

- 1.1 Frequency Range.....2.4GHz~2.5GHz
- 1.2 Impedance50 Nominal
- 1.3 VSWR1.92Max
- 1.4 Return Loss.....-10dB Maximum
- 1.5 RadiationOmni-directional
- 1.6 Gain(peak).....1.8dBi (excluding cable loss)
- 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°C ~ +65°C
- 2.6 Storage Temp.-30°C ~ +75°C
- 2.7 Color White DuPont LS033(W.Y-024)
- 2.8 Connecto.....SMA Plug Reverse

Swivel Omni-Directional Antenna for 2.4 GHz

Preliminary 0.1

BUF05-050900

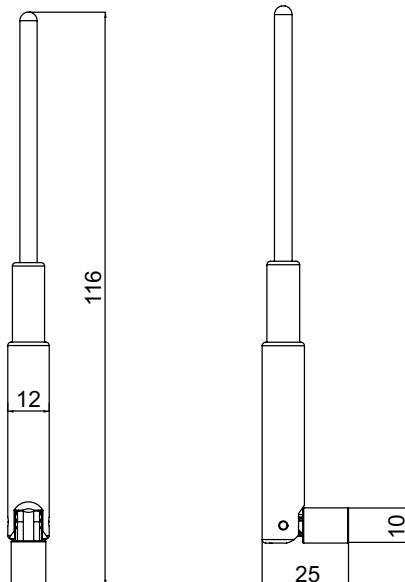
Electrical Specification

Frequency range	2400 MHz - 2500 MHz
Gain	4 dBi
VSWR	2.0 : 1 Max.
Polarization	Linear, vertical
HPBW / horizontal	360°
HPBW / vertical	35°
Power handling	2 W (cw)
Impedance	50 Ohms
Connector	RP SMA Plug

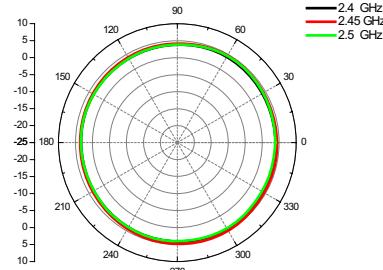


Environmental & Mechanical Characteristics

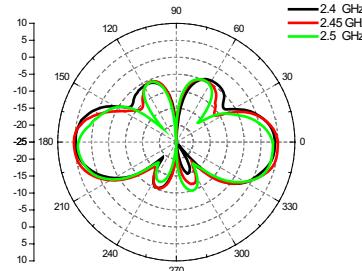
Temperature	- 10° C to +55° C
Humidity	95% @ 25° C
Radome color	WHITE
Weight	TBD
Dimensions	166 x Ø12 mm



H-plane Co-polarization Pattern



V-plane Co-polarization Pattern



CG- 1 2 3 4 5 6

A		B		C		D		E		F		G	
												DESCRIPTION	
												REV	DATE
												X1	12/27/2006
												X2	2/9/2007
												New Issue	
												Modify length	

150±3 Δ 2

105

82.5

2.50

3.0±0.1

8.9±0.1

CO.5

3±0.25

1±0.25

1±0.25

Detail A

Tin Plated

PE Bag

Shrink Line

1 2 3 4 5

CG- 1 2 3 4 5 6

NO	DESCRIPTION	QTY	REMARK
5	Cable	1	
4	Rivet	2	
3	Antenna Base	1	
2	Antenna Base	1	
1	Antenna Body	1	

Packing : 25 pcs/bag

XX 5 APPROVED *W.Y. 1/21* CUSTOMER: 達威

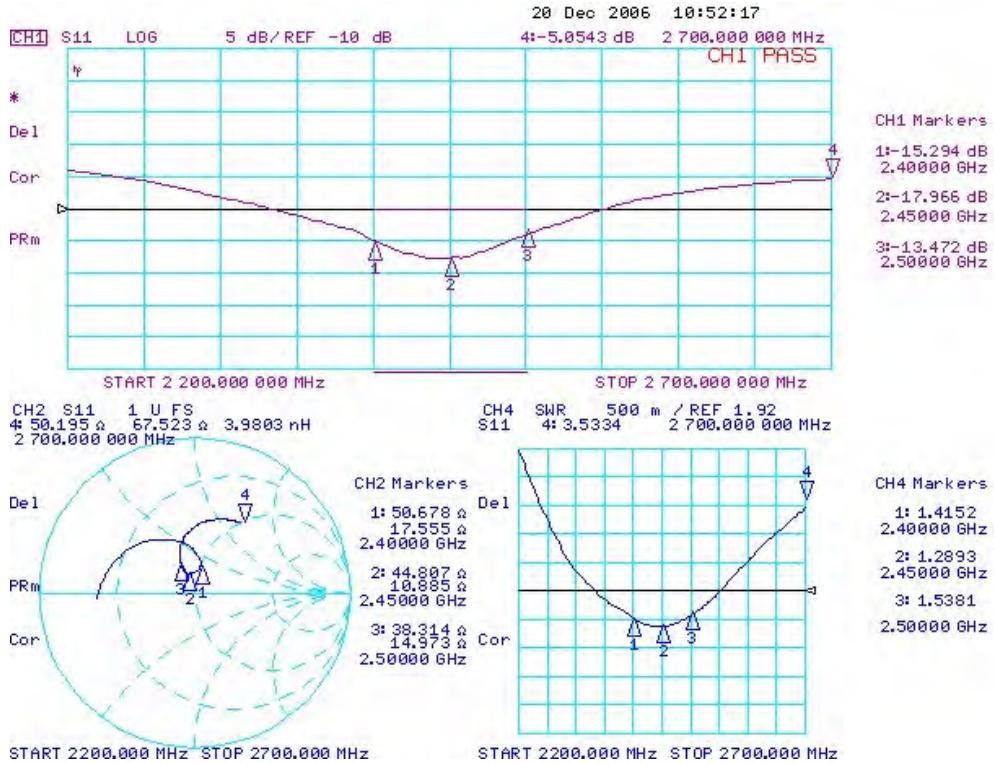
CUSTOMER'S SIGNATURE	PART NO :	REV	UNIT	FILE
		X	1.0	
		X	±1.0	
		XX	±0.5	
		XXX	±0.1	
				X2 mm

Wha Yu Group

All.gear

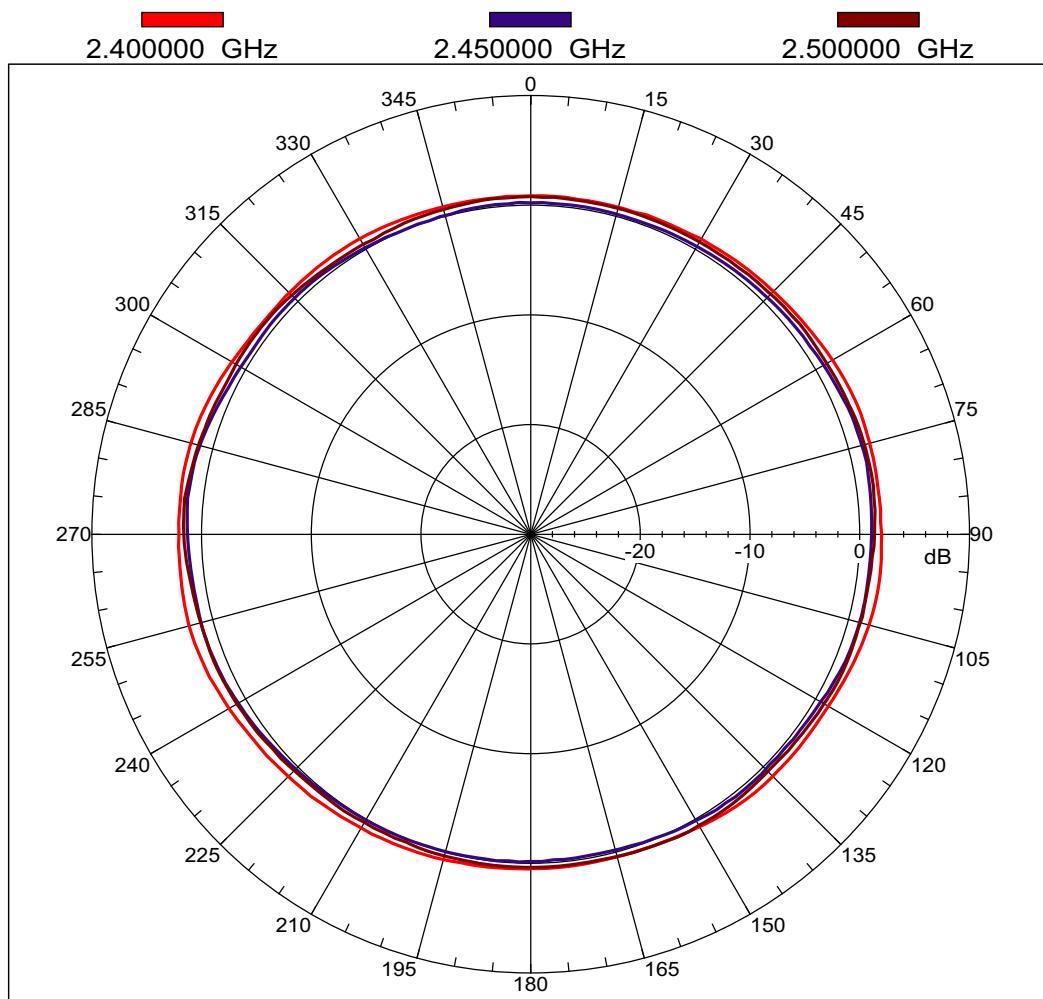
THIS DRAWING, AND ITS INHERANT DESIGN CONCEPTS, ARE THE PROPERTY OF WHA YU, AND AS SUCH, MAY NOT BE COPIED, REPRODUCED, OR GIVEN TO THIRD PARTIES WITHOUT THE WRITTEN CONSENT OF WHA YU.

RF Antenna Assembly
P/NO :C753-510007-A SPEC :2.4GHz

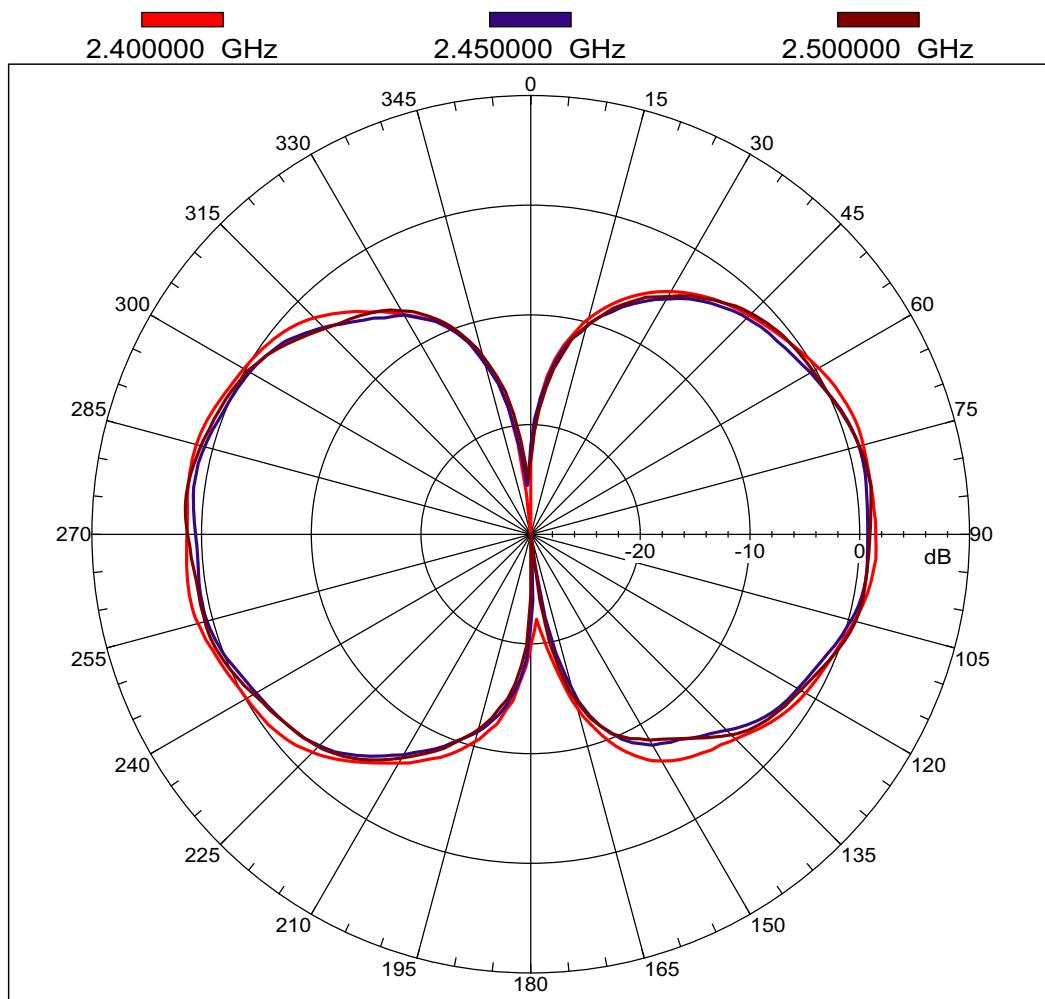


2006/12/27

Far-field amplitude of C753-510007-A-V.nsi



Far-field amplitude of C753-510007-A-H.nsi



Date : 2005/02/02

Our Spec. No. WS05-M016

MESSRS.

SPECIFICATION
FOR
HIGH FREQUENCY COAXIAL CABLE
" KHCX - 32AWG - SB - TA " GRAY

SHOWA ELECTRIC WIRE & CABLE CO., LTD.

TORANOMON

TOKYO JAPAN

T. Mori

T. Mori
Manager, Engineering Section
Engineering Dept.
Electronic Wire Business Unit

1. 適用(SCOPE)

本仕様書は電子機器などの内部配線に使用される細径同軸“KHCX-32AWG-SB-TA”の構造と特性について定める。

This specification covers the construction and characteristics of coaxial cable “KHCX-32AWG-SB-TA” for internal wiring of electronic equipment.

2. ケーブル型名の説明 (EXPLANATION OF CABLE TYPE)

KHCX-32AWG-SB-TA

(1) (2) (3) (4)

(1) ケーブル略称 (Cable Abbreviation)

(2) 導体サイズ (Conductor Size)

(3) Inner Conductor Type (4) Outer Conductor Type.

3. 構造(CONSTRUCTION)

項目 Item	要求特性 Requirement	
内部導体 Inner conductor	材質 Material	銀めっき軟銅線 Silver coated annealed copper wire
	構成 Stranding	7/0.08mm
	外径 Diameter	標準 0.24mm Nom. 0.24mm
絶縁体 Insulation	材質 Material	FEP
	色別 Color	自然色 Natural
	厚さ Thickness	標準 0.22mm Nom. 0.22mm
	外径 Diameter	0.68 +0.04/ -0.02mm
外部導体 Outer conductor	材質 Material	錫めっき銅合金線編組 Tinned copper alloy wire braid shield
	構成 Stranding	16/4/0.05 mm
	編組密度 Coverage	Approx. 90%
シース Sheath	材質 Material	FEP
	色別 Color	灰・白・黒 Gray・White・Black
	厚さ Thickness	標準 0.10mm Nom. 0.10mm
仕上外径 Overall diameter	1.13mm +0.08/ -0.05mm	
概算質量 Approximate mass	3 kg/km	

4. 特性 (CHARACTERISTICS)

項目 Item	単位 Unit	要求特性 Requirements
導体抵抗 Conductor Resistance	Ω/km	597 以下 (20°C) Max. 520 (at 20°C)
絶縁抵抗 Insulation Resistance	MΩkm	1,500 以上 (DC 500V 1 分間充電後, 20°C) Min. 1,500 (After charge DC 500V for 1 min. at 20°C)
耐電圧 Dielectric Strength	-	絶縁体 : AC.1.5kV/0.15 秒間 (スパークテスト) Dielectric core : No breakdown at AC.1.5kV for 0.15sec by spark test. シース : AC.1.5kV/0.15 秒間 (スパークテスト) Jacket : No breakdown at AC.1.5kV for 0.15sec by spark test. 内部導体-外部導体間 : AC.500V/1 分間 No breakdown at AC.500V for 1 min between outer conductor and inner conductor.
静電容量 Capacitance	pF/m	標準 98 (at 1kHz) Nom. 98 (at 1kHz)
特性インピーダンス Characteristic Impedance	Ω	50±2 (at TDR)
減衰量 Attenuation	dB/m	2.0GHz : 2.9 以下 Max.2.9 2.4GHz : 3.2 以下 Max.3.2 3.0GHz : 3.7 以下 Max.3.7 4.0GHz : 4.3 以下 Max.4.3 5.0GHz : 4.8 以下 Max.4.8 6.0GHz : 5.3 以下 Max.5.3
VSWR	--	2.4~2.5GHz : 1.20 以下 Max.1.20 4.8~6.0GHz : 1.40 以下 Max.1.40
耐はんだ性 Heat resistance for solder	--	絶縁体およびシースの寸法変化は 0.2mm 以下のこと。 Shrink and expansion of dielectric core or jacket should not be more than 0.2mm. 試験条件(test condition) : 255°C ±5°C * 3 sec.

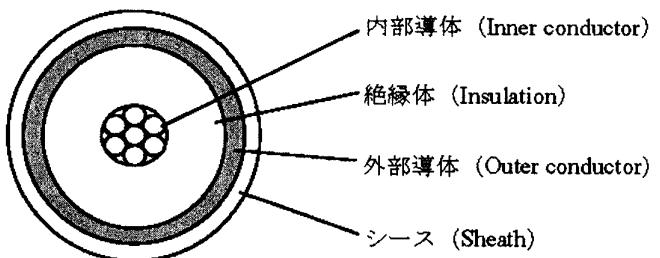


図 1. ケーブル構造図

Fig.1. Cable Cross-Section

SGS Test Report

Product : RF Antenna

Contents

No	Description		Report No.	Page
1	Cable	φ 1.13mm Cable	CE/2006/B3245 CE/2006/B3239A~C	P.10~21
2	Antenna Body	TPE EL-630	CE/2006/C0382	P.22~25
3	Antenna Base	PC L-1250Z	CE/2006/68353 2057844/EC	P.26~34
4	Antenna Base	PBT	GC060701704	P.35~36
5	Rivet	Brass , Ni Plated	CE/2006/41344	P.37~38
6	Ground Tube	Ni Plated + POM	CE/2006/97550 CE/2006/A1121	P.39~45

Result for RoHS : PASS

Test Report

No : CE/2006/B3245 Date : 2006/11/21 Page: 1 of 3

SWCC SHOWA DEVICE TECHNOLOGY CO., LTD.
NO. 1-8, TORANOMON 1-CHOME, MINATO-KU, TOKYO
105-8444



Report on the submitted sample said to be ANTENNA COAXIAL CABLE UL-STYLE 11032.

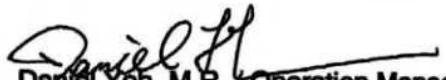
Style/Item No : FOR KHCX-32AWG-SB-TA / KHCX-32AWG-WSB-TA /
KHCX-30AWG-SB-TA KHCX-36AWG-SB-TA GRAY
Sample Receiving Date : 2006/11/14
Testing Period : 2006/11/14 TO 2006/11/21

=====

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

Test Method : (1) With reference to BS EN 1122:2001, Method B for Cadmium Content. Analysis was performed by ICP-AES.
(2) With reference to US EPA Method 3050B for Lead Content. Analysis was performed by ICP-AES.
(3) With reference to US EPA Method 3052 for Mercury Content. Analysis was performed by ICP-AES.
(4) With reference to US EPA Method 3060A & 7196A for Hexavalent Chromium. Analysis was performed by UV/Vis Spectrometry.
(5) With reference to US EPA 3540C for PBB/PBDE Content. Analysis was performed by GC/MS and screening via US EPA 3550C with HPLC/DAD/MS.

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


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

The content of this PDF file is in accordance with the original issued reports for reference only. This Test Report cannot be reproduced, except in full, without prior written permission of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law.

Test Report

No : CE/2006/B3245 Date : 2006/11/21 Page: 2 of 3

SWCC SHOWA DEVICE TECHNOLOGY CO., LTD.
NO. 1-8, TORANOMON 1-CHOME, MINATO-KU, TOKYO
105-8444



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

Test Item (s):	Method (Refer to)	Result	MDL
		No.1	
Cadmium (Cd)	(1)	n.d.	2
Lead (Pb)	(2)	n.d.	2
Mercury (Hg)	(3)	n.d.	2
Hexavalent Chromium (CrVI)	(4)	n.d.	2
Sum of PBBs		n.d.	-
Monobromobiphenyl		n.d.	5
Dibromobiphenyl		n.d.	5
Tribromobiphenyl		n.d.	5
Tetrabromobiphenyl		n.d.	5
Pentabromobiphenyl		n.d.	5
Hexabromobiphenyl		n.d.	5
Heptabromobiphenyl		n.d.	5
Octabromobiphenyl		n.d.	5
Nonabromobiphenyl		n.d.	5
Decabromobiphenyl		n.d.	5
Sum of PBDEs (Mono to Nona) (Note 4)		n.d.	-
Monobromobiphenyl ether		n.d.	5
Dibromobiphenyl ether		n.d.	5
Tribromobiphenyl ether		n.d.	5
Tetrabromobiphenyl ether		n.d.	5
Pentabromobiphenyl ether		n.d.	5
Hexabromobiphenyl ether		n.d.	5
Heptabromobiphenyl ether		n.d.	5
Octabromobiphenyl ether		n.d.	5
Nonabromobiphenyl ether		n.d.	5
Decabromobiphenyl ether		n.d.	5
Sum of PBDEs (Mono to Deca)		n.d.	-

Test Part Description:

NO.1 : GRAY PLASTIC JACKET

Note : 1. mg/kg = ppm

2. n.d. = Not Detected

3. MDL = Method Detection Limit

4. Sum of Mono to NonabDE & according to 2005/717/EC DecaBDE is exempt.

5. "-" = Not Regulated

Test Report

No : CE/2006/B3245 Date : 2006/11/21 Page: 3 of 3

SWCC SHOWA DEVICE TECHNOLOGY CO., LTD.
NO. 1-8, TORANOMON 1-CHOME, MINATO-KU, TOKYO
105-8444



** End of Report **

The content of this PDF file is in accordance with the original issued reports for reference only. This Test Report cannot be reproduced, except in full, without prior written permission of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law.

Test Report

No : CE/2006/B3239A Date : 2006/11/28 Page: 1 of 3

SWCC SHOWA DEVICE TECHNOLOGY CO., LTD.
NO. 1-8, TORANOMON 1-CHOME, MINATO-KU, TOKYO
105-8444



Report on the submitted sample said to be ANTENNA COAXIAL CABLE UL-STYLE 11032.

Style/Item No : KHCX-32AWG-SB-TA KHCX-32AWG-WSB-TA
KHCX-30AWG-SB-TA KHCX-36AWG-SB-TA
Sample Receiving Date : 2006/11/14
Testing Period : 2006/11/14 TO 2006/11/21

=====

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

Test Method : (1) With reference to BS EN 1122:2001, Method B for Cadmium Content. Analysis was performed by ICP-AES.
(2) With reference to US EPA Method 3050B for Lead Content. Analysis was performed by ICP-AES.
(3) With reference to US EPA Method 3052 for Mercury Content. Analysis was performed by ICP-AES.
(4) With reference to US EPA Method 3060A & 7196A for Hexavalent Chromium. Analysis was performed by UV/Vis Spectrometry.
(5) With reference to US EPA 3540C for PBB/PBDE Content. Analysis was performed by GC/MS and screening via US EPA 3550C with HPLC/DAD/MS.

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


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

The content of this PDF file is in accordance with the original issued reports for reference only. This Test Report cannot be reproduced, except in full, without prior written permission of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law.

Test Report

No : CE/2006/B3239A Date : 2006/11/28 Page: 2 of 3

SWCC SHOWA DEVICE TECHNOLOGY CO., LTD.
NO. 1-8, TORANOMON 1-CHOME, MINATO-KU, TOKYO
105-8444



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

Test Item (s):	Method (Refer to)	Result		MDL
		No.1		
Cadmium (Cd)	(1)	n.d.		2
Lead (Pb)	(2)	n.d.		2
Mercury (Hg)	(3)	n.d.		2
Hexavalent Chromium (CrVI)	(4)	n.d.		2
Sum of PBBs		n.d.		-
Monobromobiphenyl		n.d.		5
Dibromobiphenyl		n.d.		5
Tribromobiphenyl		n.d.		5
Tetrabromobiphenyl		n.d.		5
Pentabromobiphenyl		n.d.		5
Hexabromobiphenyl		n.d.		5
Heptabromobiphenyl		n.d.		5
Octabromobiphenyl		n.d.		5
Nonabromobiphenyl		n.d.		5
Decabromobiphenyl		n.d.		5
Sum of PBDEs (Mono to Nona) (Note 4)	(5)	n.d.		-
Monobromobiphenyl ether		n.d.		5
Dibromobiphenyl ether		n.d.		5
Tribromobiphenyl ether		n.d.		5
Tetrabromobiphenyl ether		n.d.		5
Pentabromobiphenyl ether		n.d.		5
Hexabromobiphenyl ether		n.d.		5
Heptabromobiphenyl ether		n.d.		5
Octabromobiphenyl ether		n.d.		5
Nonabromobiphenyl ether		n.d.		5
Decabromobiphenyl ether		n.d.		5
Sum of PBDEs (Mono to Deca)		n.d.		-

Test Part Description:

NO.1 : TRANSPARENT PLASTIC

Note : 1. mg/kg = ppm
 2. n.d. = Not Detected
 3. MDL = Method Detection Limit
 4. Sum of Mono to NonaBDE & according to 2005/717/EC DecaBDE is exempt.
 5. "-" = Not Regulated

Test Report

No : CE/2006/B3239A Date : 2006/11/28 Page: 3 of 3

SWCC SHOWA DEVICE TECHNOLOGY CO., LTD.
NO. 1-8, TORANOMON 1-CHOME, MINATO-KU, TOKYO
105-8444



** End of Report **

The content of this PDF file is in accordance with the original issued reports for reference only. This Test Report cannot be reproduced, except in full, without prior written permission of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law.

Test Report

No : CE/2006/B3239B Date : 2006/11/28 Page: 1 of 3

SWCC SHOWA DEVICE TECHNOLOGY CO., LTD.
NO. 1-8, TORANOMON 1-CHOME, MINATO-KU, TOKYO
105-8444



Report on the submitted sample said to be ANTENNA COAXIAL CABLE UL-STYLE 11032.

Style/Item No : KHCX-32AWG-SB-TA KHCX-32AWG-WSB-TA
KHCX-30AWG-SB-TA KHCX-36AWG-SB-TA
Sample Receiving Date : 2006/11/14
Testing Period : 2006/11/14 TO 2006/11/21

=====

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

Test Method : (1) With reference to BS EN 1122:2001, Method B for Cadmium Content. Analysis was performed by ICP-AES.
(2) With reference to US EPA Method 3050B for Lead Content. Analysis was performed by ICP-AES.
(3) With reference to US EPA Method 3052 for Mercury Content. Analysis was performed by ICP-AES.
(4) With reference to US EPA Method 3060A & 7196A for Hexavalent Chromium. Analysis was performed by UV/Vis Spectrometry.

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


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

The content of this PDF file is in accordance with the original issued reports for reference only. This Test Report cannot be reproduced, except in full, without prior written permission of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law.

Test Report

No : CE/2006/B3239B Date : 2006/11/28 Page: 2 of 3

SWCC SHOWA DEVICE TECHNOLOGY CO., LTD.
NO. 1-8, TORANOMON 1-CHOME, MINATO-KU, TOKYO
105-8444



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

Test Item (s):	Method (Refer to)	Result		MDL
		No.1		
Cadmium (Cd)	(1)	n.d.		2
Lead (Pb)	(2)	n.d.		2
Mercury (Hg)	(3)	n.d.		2
Hexavalent Chromium (CrVI)	(4)	n.d.		2

Test Part Description:

NO.1 : SILVER COLORED METAL WIRE

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

Test Report

No : CE/2006/B3239B Date : 2006/11/28 Page: 3 of 3

SWCC SHOWA DEVICE TECHNOLOGY CO., LTD.
NO. 1-8, TORANOMON 1-CHOME, MINATO-KU, TOKYO
105-8444



** End of Report **

The content of this PDF file is in accordance with the original issued reports for reference only. This Test Report cannot be reproduced, except in full, without prior written permission of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law.

Test Report

No : CE/2006/B3239C Date : 2006/11/28 Page: 1 of 3

SWCC SHOWA DEVICE TECHNOLOGY CO., LTD.
NO. 1-8, TORANOMON 1-CHOME, MINATO-KU, TOKYO
105-8444



Report on the submitted sample said to be ANTENNA COAXIAL CABLE UL-STYLE 11032.

Style/Item No : KHCX-32AWG-SB-TA KHCX-32AWG-WSB-TA
KHCX-30AWG-SB-TA KHCX-36AWG-SB-TA
Sample Receiving Date : 2006/11/14
Testing Period : 2006/11/14 TO 2006/11/21

=====

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

Test Method : (1) With reference to BS EN 1122:2001, Method B for Cadmium Content. Analysis was performed by ICP-AES.
(2) With reference to US EPA Method 3050B for Lead Content. Analysis was performed by ICP-AES.
(3) With reference to US EPA Method 3052 for Mercury Content. Analysis was performed by ICP-AES.
(4) With reference to US EPA Method 3060A & 7196A for Hexavalent Chromium. Analysis was performed by UV/Vis Spectrometry.

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


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

The content of this PDF file is in accordance with the original issued reports for reference only. This Test Report cannot be reproduced, except in full, without prior written permission of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law.

Test Report

No : CE/2006/B3239C Date : 2006/11/28 Page: 2 of 3

SWCC SHOWA DEVICE TECHNOLOGY CO., LTD.
NO. 1-8, TORANOMON 1-CHOME, MINATO-KU, TOKYO
105-8444



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

Test Item (s):	Method (Refer to)	Result		MDL
		No.1		
Cadmium (Cd)	(1)	n.d.		2
Lead (Pb)	(2)	n.d.		2
Mercury (Hg)	(3)	n.d.		2
Hexavalent Chromium (CrVI)	(4)	n.d.		2

Test Part Description:

NO.1 : SILVER COLORED METAL FOIL

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

Test Report

No : CE/2006/B3239C Date : 2006/11/28 Page: 3 of 3

SWCC SHOWA DEVICE TECHNOLOGY CO., LTD.
NO. 1-8, TORANOMON 1-CHOME, MINATO-KU, TOKYO
105-8444



** End of Report **

The content of this PDF file is in accordance with the original issued reports for reference only. This Test Report cannot be reproduced, except in full, without prior written permission of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law.



Test Report

No : CE/2006/C0382 Date : 2006/12/11 Page: 1 of 4

DSM ENGINEERING PLASTICS



Report on the submitted sample said to be ARNITEL EL630.

Sample Receiving Date

: 2006/12/4

Testing Period

: 2006/12/4 TO 2006/12/11

Test Requested

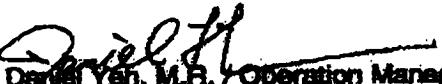
: In accordance with the RoHS Directive 2002/95/EC, and its amendment directives.

Test Method

: (1) With reference to US EPA Method 3052 for Cadmium Content. Analysis was performed by ICP-AES.
(2) With reference to US EPA Method 3052 for Lead Content. Analysis was performed by ICP-AES.
(3) With reference to US EPA Method 3052 for Mercury Content. Analysis was performed by ICP-AES.
(4) With reference to US EPA Method 3060A & 7196A for Hexavalent Chromium for non-metallic samples. Analysis was performed by UV/Vis Spectrometry.
(5) With reference to US EPA 3540C for PBBs/PBDEs Content. Analysis was performed by GC/MS.

Test Result(s)

: Please refer to next page(s).


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

The content of this PDF file is in accordance with the original issued reports for reference only. This Test Report cannot be reproduced, except in full, without prior written permission of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS TAIWAN LTD. NO. 136-1, Wu Kung Road, Wukui Industrial Zone, Taipei county, Taiwan.
1(886-2) 22893939 (886-2) 2289-3237 www.sgs.com.tw



Test Report

No : CE/2006/C0382 Date : 2006/12/11 Page: 2 of 4

DSM ENGINEERING PLASTICS

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

Test Item (s):	Method (Refer to)	Result	
		No.1	MDL
Cadmium (Cd)	(1)	n.d.	2
Lead (Pb)	(2)	n.d.	2
Mercury (Hg)	(3)	n.d.	2
Hexavalent Chromium (CrVI)	(4)	n.d.	2
Sum of PBBs		n.d.	-
Monobromobiphenyl	✓	n.d.	5
Dibromobiphenyl		n.d.	5
Tribromobiphenyl		n.d.	5
Tetrabromobiphenyl		n.d.	5
Pentabromobiphenyl		n.d.	5
Hexabromobiphenyl		n.d.	5
Heptabromobiphenyl		n.d.	5
Octabromobiphenyl		n.d.	5
Nonabromobiphenyl		n.d.	5
Decabromobiphenyl		n.d.	5
Sum of PBDEs (Mono to Nona) (Note 4)		n.d.	-
Monobromobiphenyl ether		n.d.	5
Dibromobiphenyl ether		n.d.	5
Tribromobiphenyl ether		n.d.	5
Tetrabromobiphenyl ether		n.d.	5
Pentabromobiphenyl ether	(5)	n.d.	5
Hexabromobiphenyl ether		n.d.	5
Heptabromobiphenyl ether		n.d.	5
Octabromobiphenyl ether		n.d.	5
Nonabromobiphenyl ether		n.d.	5
Decabromobiphenyl ether		n.d.	5
Sum of PBDEs (Mono to Deca)		n.d.	-

Test Part Description:

NO.1 : WHITE PLASTIC PELLETS

Note : 1. mg/kg = ppm

2. n.d. = Not Detected

3. MDL = Method Detection Limit

4. Sum of Mono to NonaBDE & according to 2005/717/EC DecaBDE is exempt.

5. "-" = Not Regulated

The content of this PDF file is in accordance with the original issued reports for reference only. This Test Report cannot be reproduced, except in full, without prior written permission of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS TAIWAN LIMITED NO. 136-1, Wu Kung Road, WuKu Industrial Zone, Taipei county, Taiwan
(0865-2) 22993039 (0866-2) 2299-3237 www.sgs.com.tw



Test Report

No : CE/2006/C0382 Date : 2006/12/11 Page: 3 of 4

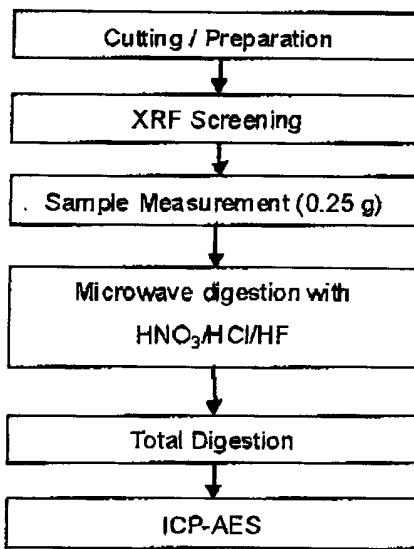
DSM ENGINEERING PLASTICS

XXXXXXXXXXXX

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)



The content of this PDF file is in accordance with the original issued reports for reference only. This Test Report cannot be reproduced, except in full, without prior written permission of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS TAIWAN LTD.

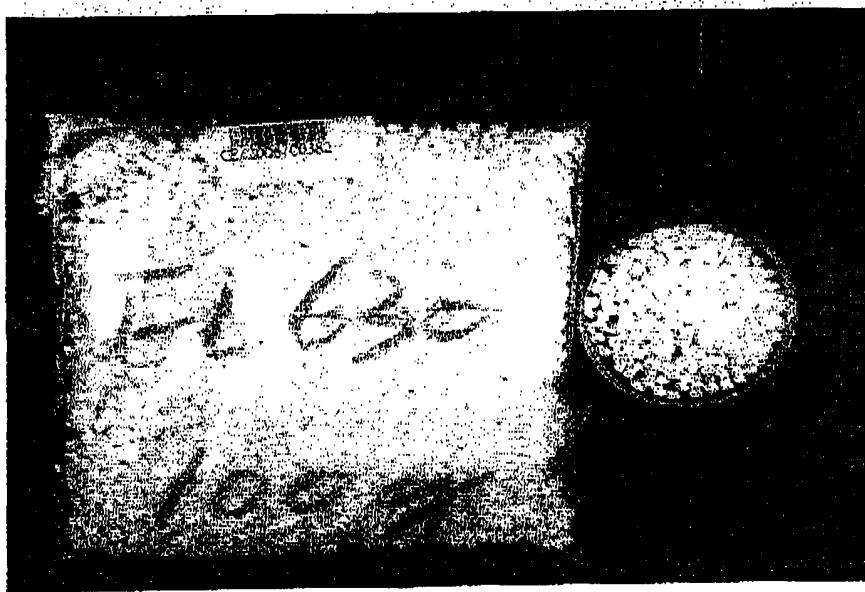
NO. 136-1, Wu Kung Road, Wukou Industrial Zone, Taipei county, Taiwan.

(086-2) 22993938 (086-2) 2299-323 / www.sgs.com.tw

SGS**Test Report**

No : CE/2006/C0382 Date : 2006/12/11 Page: 4 of 4

DSM ENGINEERING PLASTICS

**** End of Report ****

Test Report

PRO WONDERFUL INCORPORATION
RM. 1115, 152 SUNG KIANG ROAD, TAIPEI, TAIWAN.

Report No. : CE/2006/68353

Date : 2006/07/03

Page : 1 of 5



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

Sample Description : PC
Style/Item No : L-1250Y, L-1225Y, L-1225L, L-1225LM, L-1225LL,
AD-5503, L-1225Z-100, L-1250Z-100, L-1250VX,
L-1225T, K-1300Y, K-1285ZF
Sample Received : 2006/06/26
Testing Period : 2006/06/26 TO 2006/07/03

=====

Test Result(s) : - Please see the next page(s) -


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

The content of this PDF file is in accordance with the original issued reports for reference only. This Test Report cannot be reproduced, except in full, without prior written permission of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law.

Test Report

PRO WONDERFUL INCORPORATION
RM. 1115, 152 SUNG KIANG ROAD, TAIPEI, TAIWAN.

Report No. : CE/2006/68353
Date : 2006/07/03
Page : 2 of 5



Test Result(s)

PART NAME NO.1 : TRANSPARENT PLASTIC PELLETS

Test Item (s):	Unit	Method	MDL	Result
				No.1
PBBs (Polybrominated biphenyls)	---	With reference to USEPA3540C. Analysis was performed by HPLC/DAD, LC/MS or GC/MS. (prohibited by 2002/95/EC (RoHS), 83/264/EEC, and 76/769/EEC)	---	---
Monobromobiphenyl	%		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.
Total PBBs (Polybrominated biphenyls)/Sum of above	%		-	N.D.
PBBEs(PBDEs) (Polybrominated biphenyl ethers)	---	With reference to USEPA3540C. Analysis was performed by HPLC/DAD, LC/MS or GC/MS. (prohibited by 2002/95/EC (RoHS), 83/264/EEC, and 76/769/EEC)	---	---
Monobromobiphenyl ether	%		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.
Total PBBEs(PBDEs) (Polybrominated biphenyl ethers)/Sum of above	%		-	N.D.
Total of Mono to Nonabrominated biphenyl ether. (Note 4)	%		-	N.D.

The content of this PDF file is in accordance with the original issued reports for reference only. This Test Report cannot be reproduced, except in full, without prior written permission of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law.

Test Report

PRO WONDERFUL INCORPORATION
RM. 1115, 152 SUNG KIANG ROAD, TAIPEI, TAIWAN.

Report No. : CE/2006/68353
Date : 2006/07/03
Page : 3 of 5



Test Item (s):	Unit	Method	MDL	Result
				No.1
Chromium VI (Cr+6)	ppm	UV-VIS(US EPA 7196A) 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) Decabromobiphenyl 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

(7) " --- " = Not Applicable

Test Report

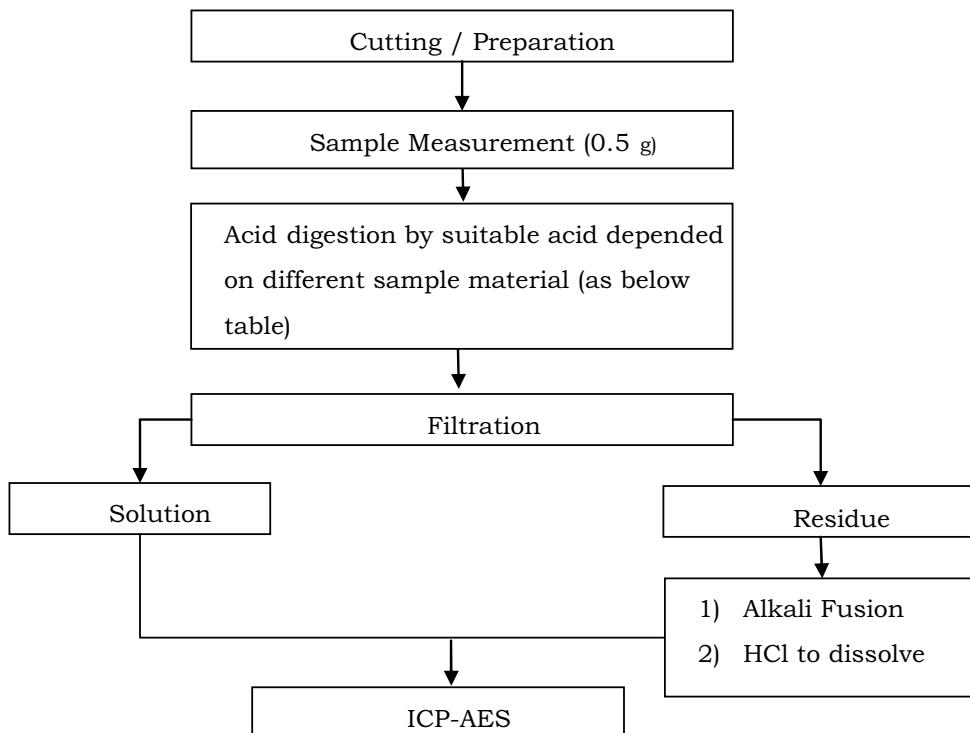
PRO WONDERFUL INCORPORATION
RM. 1115, 152 SUNG KIANG ROAD, TAIPEI, TAIWAN

Report No. : CE/2006/68353
Date : 2006/07/03
Page : 4 of 5



- 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

Method 1: Flow Chart of Digestion for Cd、Pb analysis



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

The content of this PDF file is in accordance with the original issued reports for reference only. This Test Report cannot be reproduced, except in full, without prior written permission of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law.

Test Report

PRO WONDERFUL INCORPORATION
RM. 1115, 152 SUNG KIANG ROAD, TAIPEI, TAIWAN.

Report No. : CE/2006/68353

Date : 2006/07/03

Page : 5 of 5



** End of Report **

The content of this PDF file is in accordance with the original issued reports for reference only. This Test Report cannot be reproduced, except in full, without prior written permission of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law.

Test Report

No. 2057844/EC

Date : May 06 2006

Page 1 of 4

LEOTER CHEMICAL COMPANY LIMITED
RM 2007, 20/F., PAKPOLEE COMMERCIAL CENTRE,
1A-1K SAI YEUNG CHOI STREET SOUTH, MONGKOK,
KOWLOON HONG KONG

Report on the submitted sample said to be P702 WHITE POWDER.

SGS Job No. : 1012537
Sample Receiving Date : APR 22 2006
Testing Period : APR 22 - MAY 02 2006

Test Requested : With reference to SONY SS-00259
1) To determine the Cadmium Content in the submitted sample.
2) To determine the Lead Content in the submitted sample.
3) To determine the Mercury Content in the submitted sample.
4) To determine the Hexavalent Chromium Content on the submitted sample.
5) Determination of PBBs (polybrominated biphenyls), PBDEs (Polybrominated diphenylethers) of the submitted sample.

Pre-conditioning and Measurement Method : 1-3) With reference to EPA Method 3051/ 3052/ dry ashing.
Analysis was performed by Inductively Coupled Argon Plasma-Atomic Emission Spectrometry (ICP-AES).
4) With reference to EPA Method 3060A & 7196A.
The sample was alkaline digested by using EPA Method 3060A, and then analyzed by using Colorimetric method 7196A (by UV-Vis Spectrophotometer).
5) With reference to EPA Method 3540C/ 3550C. Analysis was performed by GC/MS or LC/ MS.

Test Results : 1-5) Please refer to next page.

Signed for and on behalf of
SGS Hong Kong Ltd

Ho Ka Ting, Family
Laboratory Executive

Test Report

No. 2057844/EC

Date : May 06 2006

Page 2 of 4

Test Results

Test Item	White Powder	Detection Limit
1) Cadmium (Cd)	ND	2 ppm
2) Lead (Pb)	9 ppm	2 ppm
3) Mercury (Hg)	ND	2 ppm
4) Hexavalent Chromium (Cr ⁺⁶)	ND	2 ppm

(Results shown are of the total weight of samples)

Note : ppm = mg/kg

ND = Not Detected

Not detected is reported when the reading is less than detection limit value

5)

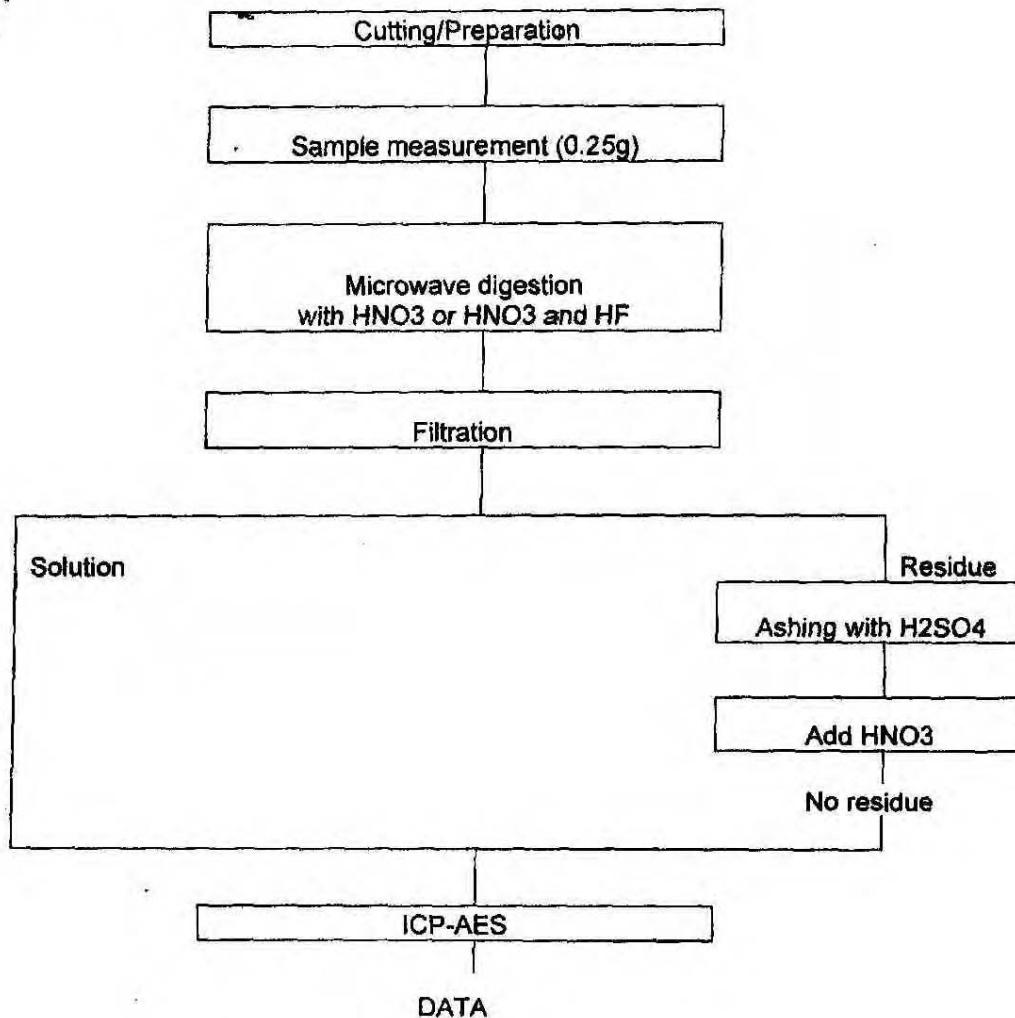
Flame Retardants	White Powder	Detection Limit
Polybrominated Biphenyls (PBBs)	---	---
Monobromobiphenyl	ND	5 ppm
Dibromobiphenyl	ND	5 ppm
Tribromobiphenyl	ND	5 ppm
Tetrabromobiphenyl	ND	5 ppm
Pentabromobiphenyl	ND	5 ppm
Hexabromobiphenyl	ND	5 ppm
Heptabromobiphenyl	ND	5 ppm
Octabromobiphenyl	ND	5 ppm
Nonabromobiphenyl	ND	5 ppm
Decabromobiphenyl	ND	5 ppm
Polybrominated Diphenylethers (PBDEs)	---	---
Monobromodiphenyl ether	ND	5 ppm
Dibromodiphenyl ether	ND	5 ppm
Tribromodiphenyl ether	ND	5 ppm
Tetrabromodiphenyl ether	ND	5 ppm
Pentabromodiphenyl ether	ND	5 ppm
Hexabromodiphenyl ether	ND	5 ppm
Heptabromodiphenyl ether	ND	5 ppm
Octabromodiphenyl ether	ND	5 ppm
Nonabromodiphenyl ether	ND	5 ppm
Decabromodiphenyl ether	ND	5 ppm

Note : ppm = mg/kg

ND = Not Detected

Not detected is reported when the reading is less than detection limit value

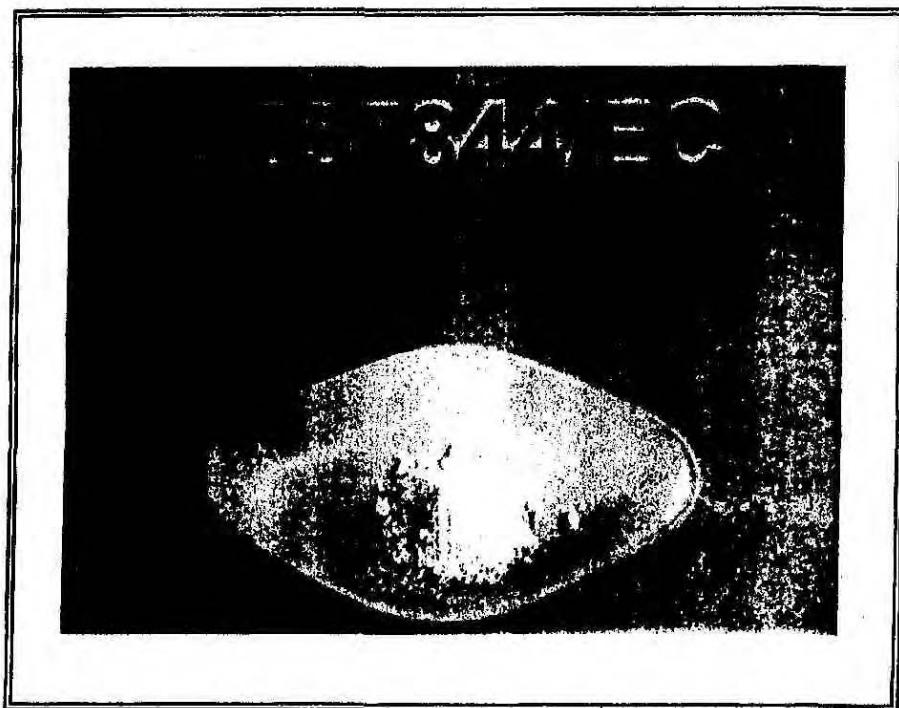
Flow chart of digestion for Cd, Pb
(Ashing after EPA3051/3052 for Cd, Pb)



The samples were dissolved totally by pre-conditioning method according to above flow chart.

Operator Chow Fuk Fung

Section Chief Wan Chi Wai, Leo

PHOTO APPENDIX

SGS authenticate the photo on original report only

*** End of Report ***



Test Report

No.: GC060701704

Date: AUG 04, 2006

Page 1 of 2

PIN SHINE ELECTRONIC & PLASTIC PRODUCTS (DONGGUAN) CO., LTD.
WEST PART OF LIU WU INDUSTRIAL ARER, SAN HENG ROAD, NEW DISTRICT OF SHI JIE TOWN,
DONG GUAN CITY, GUANG DONG PROVINCE

Report on the submitted sample said to be PBT 310SEO 白色

SGS Ref No. : GZ0607117438/CHEM

Sample Receiving Date : JUL 31, 2006

Testing Period : JUL 31, 2006 TO AUG 04, 2006

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 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 & EPA 7473: 1998 & other acid digestion.
Hexavalent Chromium content - With reference to EPA 3060A: 1996 & EPA 7196A: 1992.
Analysis was performed by Atomic Absorption Spectrometer & Inductively Coupled Plasma Atomic Emission Spectrometer (ICP-AES) & Direct Mercury analyzer & UV-VIS Spectrophotometer.
(2) With reference to EPA 3540C & EPA 3550C. Analysis was performed by GC-MS.

Results : Please refer to next page.

Conclusion : When tested as specified, the results shown on the report do not exceed the limit in commission decision of 18 Aug 2005 amending Directive 2002/95/EC (RoHS) notified under document 2005/618/EC.

Signed for and on behalf of
SGS-CSTC Ltd.

May Huo
Engineer

This Test Report is issued by the Company subject to its General Conditions of Service printed overleaf or attached. Said Conditions are also available upon request or are accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification and jurisdictional policies defined therein. The results shown in this Test Report refer only to the sample(s) tested unless otherwise stated and such sample(s) are retained for 90 days only. This Test Report shall not be reproduced except in full, without written approval of the Company.



Test Report

No.: GC060701704

Date: AUG 04, 2006

Page 2 of 2

Results :

(1)

Item	Unit	MDL	White plastic grains	Limit
Lead Content (Pb)	ppm	2	23	< 1000ppm
Cadmium Content (Cd)	ppm	2	N.D.	< 100ppm
Mercury Content (Hg)	ppm	2	N.D.	< 1000ppm
Hexavalent Chromium Content (Cr VI)	ppm	2	N.D.	< 1000ppm

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

- MDL = Method Detection Limit

- ppm = mg/kg

(2)

Item	Unit	MDL	White plastic grains	Limit
Flame Retardants				
Polybrominated Biphenyls (PBBs)				< 1000ppm
Monobromobiphenyl	ppm	5	N.D.	
Dibromobiphenyl	ppm	5	N.D.	
Tribromobiphenyl	ppm	5	N.D.	
Tetrabromobiphenyl	ppm	5	N.D.	
Pentabromobiphenyl	ppm	5	N.D.	
Hexabromobiphenyl	ppm	5	N.D.	
Heptabromobiphenyl	ppm	5	N.D.	
Octabromobiphenyl	ppm	5	N.D.	
Nonabromodiphenyl	ppm	5	N.D.	
Decabromodiphenyl	ppm	5	N.D.	
Polybrominated Diphenylethers (PBDEs)(Mon-Non)				< 1000ppm
Monobromodiphenyl ether	ppm	5	N.D.	
Dibromodiphenyl ether	ppm	5	N.D.	
Tribromodiphenyl ether	ppm	5	N.D.	
Tetrabromodiphenyl ether	ppm	5	N.D.	
Pentabromodiphenyl ether	ppm	5	N.D.	
Hexabromodiphenyl ether	ppm	5	N.D.	
Heptabromodiphenyl ether	ppm	5	N.D.	
Octabromodiphenyl ether	ppm	5	N.D.	
Nonabromodiphenyl ether	ppm	5	N.D.	
Decabromodiphenyl ether [△]	ppm	5	N.D.	

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

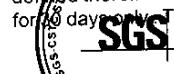
- MDL = Method Detection Limit

- ppm = mg/kg

- [△] : Decabromodiphenyl ether (DecaBDE) in polymeric applications is exempted by Commission Decision of 13 Oct 2005 amending Directive 2002/95/EC notified under 2005/717/EC.

*** End of Report ***

This Test Report is issued by the Company subject to its General Conditions of Service printed overleaf or attached. Said Conditions are also available upon request or are accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification and jurisdictional policies defined therein. The results shown in this Test Report refer only to the sample(s) tested unless otherwise stated and such sample(s) are retained for 60 days only. This Test Report shall not be reproduced except in full, without written approval of the Company.



SGS-CHINA Standards Technical Services Co., Ltd.
Guangzhou Branch Testing Service Materials Laboratory

198 KEZHU Road, SCIENTECH Park Guangzhou Economic & Technology Development District, Guangzhou, China 510663 t (86-20)82155678 f (86-20)82075080 www.cn.sgs.com
中国·广州·经济技术开发区科学城科珠路198号 邮编510663 t (86-20)82155678 f (86-20)82075080 e sgs.china@sgs.com

GZML 017514

Member of the SGS Group (SGS SA)

Test Report

WHA YU INDUSTRIAL CO., LTD
NO. 326, SEC 2, KUNG TAO 5. ROAD, HSIN CHU CITY,
TAIWAN, R. O. C.

Report No. : CE/2006/41344
Date : 2006/04/11
Page : 1 of 2

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

Type of Product : BRASS MATERIAL RIVET, PLATING Ni
Style/Item No : 100-4003011-AZ, 壬裕
Sample Received : 2006/04/06
Testing Date : 2006/04/06 TO 2006/04/11

=====

Test Result

PART NAME NO.1 : SILVER COLORED METAL

Test Item (s):	Unit	Method	MDL	Result
				No.1
Chromium VI (Cr+6)	ppm	UV-VIS(US EPA 7196A) 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	38.6
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	32836.8

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.

The content of this PDF file is in accordance with the original issued reports for reference only. This Test Report cannot be reproduced, except in full, without prior written permission of the Company.

Test Report

WHA YU INDUSTRIAL CO., LTD
NO. 326, SEC 2, KUNG TAO 5. ROAD, HSIN CHU CITY,
TAIWAN, R. O. C.

Report No. : CE/2006/41344
Date : 2006/04/11
Page : 2 of 2



The content of this PDF file is in accordance with the original issued reports for reference only. This Test Report cannot be reproduced, except in full, without prior written permission of the Company.

測試報告

號碼 : CE/2006/97550 日期 : 20061005 頁數 : 1 of 3

壬裕企業有限公司

REN-YUH ENTERPEISE CO., LTD.

*238 台北縣樹林市東順街36巷3號

NO. 3, LANE 36, DONG-SHUN ST., SHE-LIN, TAIPEI, TAIWAN



本報告為客戶所委託的樣品，樣品名稱為"銀色金屬-銅鍍鎳"所做的測試。

Report on the submitted sample said to be 銀色金屬-銅鍍鎳.

樣品型號 : 銅~系列產品

Style/Item No : 銅~系列產品

收件日期(Sample Receiving Date) : 2006/9/28

測試期間(Testing Period) : 2006/9/28 TO 2006/10/05

=====

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 : (1) 參考BS EN 1122方法B:2001, 用感應耦合電漿原子發射光譜儀檢測鎘含量. / With reference to BS EN 1122:2001, Method B for Cadmium Content. Analysis was performed by ICP-AES.
(2) 參考US EPA 3050B方法, 用感應耦合電漿原子發射光譜儀檢測鉛含量. / With reference to US EPA Method 3050B for Lead Content. Analysis was performed by ICP-AES.
(3) 參考US EPA 3052方法, 用感應耦合電漿原子發射光譜儀檢測汞含量. / With reference to US EPA Method 3052 for Mercury Content. Analysis was performed by ICP-AES.
(4) 參考US EPA 3060A方法, 用UV-VIS (US EPA 7196A)檢測六價鉻含量. / With reference to US EPA Method 3060A & 7196A for Hexavalent Chromium. Analysis was performed by UV/Vis Spectrometry.

測試結果 / Test Result(s) : 請見下一页.


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

The content of this PDF file is in accordance with the original issued reports for reference only. This Test Report cannot be reproduced, except in full, without prior written permission of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law.

測試報告

號碼 : CE/2006/97550 日期 : 20061005 頁數 : 2 of 3

壬裕企業有限公司



REN-YUH ENTERPEISE CO., LTD.

*238 台北縣樹林市東順街36巷3號

NO. 3, LANE 36, DONG-SHUN ST., SHE-LIN, TAIPEI, TAIWAN

測試結果 (單位: mg/kg) / Test Result(s)

測試項目 / Test Item (s):	測試方法 Method (Refer to)	結果 / Result	方法偵測 極限值 (MDL)
		No.1	
鎘 / Cadmium (Cd)	(1)	42.9	2
鉛 / Lead (Pb)	(2)	25934.5	2
汞 / Mercury (Hg)	(3)	n.d.	2
六價鉻 / Chromium VI (Cr+6)	(4)	n.d.	2

測試部位描述 / Test Part Description:

測試部位 / NO.1 : 銀色金屬 / SILVER COLORED METAL

Note : 1. mg/kg = ppm

2. n.d. = Not Detected / 未檢出

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

測試報告

號碼 : CE/2006/97550 日期 : 20061005 頁數 : 3 of 3

壬裕企業有限公司

REN-YUH ENTERPEISE CO., LTD.

*238 台北縣樹林市東順街36巷3號

NO. 3, LANE 36, DONG-SHUN ST., SHE-LIN, TAIPEI, TAIWAN



** 報告結尾 **

The content of this PDF file is in accordance with the original issued reports for reference only. This Test Report cannot be reproduced, except in full, without prior written permission of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law.

測試報告

號碼 : CE/2006/A1121 日期 : 2006/10/16 頁數 : 1 of 4

壬裕企業有限公司

REN-YUH ENTERPEISE CO., LTD.

*238 台北縣樹林市東順街36巷3號

NO. 3, LANE 36, DONG-SHUN ST., SHE-LIN, TAIPEI, TAIWAN



本報告為客戶所委託的樣品，樣品名稱為"白色POM"所做的測試。

Report on the submitted sample said to be **白色POM**.

樣品型號 : POM系列產品

Style/Item No : POM系列產品

收件日期(Sample Receiving Date) : 2006/10/05

測試期間(Testing Period) : 2006/10/05 TO 2006/10/16

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 : (1) 參照BS EN 1122方法B:2001, 用感應耦合電漿原子發射光譜儀檢測鎘含量. / With reference to BS EN 1122:2001, Method B for Cadmium Content. Analysis was performed by ICP-AES.
(2) 參照US EPA 3050B方法, 用感應耦合電漿原子發射光譜儀檢測鉛含量. / With reference to US EPA Method 3050B for Lead Content. Analysis was performed by ICP-AES.
(3) 參照US EPA 3052方法, 用感應耦合電漿原子發射光譜儀檢測汞含量. / With reference to US EPA Method 3052 for Mercury Content. Analysis was performed by ICP-AES.
(4) 參照US EPA 3060A方法, 用UV-VIS (US EPA 7196A)檢測六價鉻含量. / With reference to US EPA Method 3060A & 7196A for Hexavalent Chromium. Analysis was performed by UV/Vis Spectrometry.
(5) 參照US EPA 3550C方法萃取, 以高效液相層析儀/二極體陣列偵測器/質譜儀初篩, 再進一步參考US EPA 3540C方法, 以氣相層析儀/質譜儀檢測多溴聯苯和多溴聯苯醚含量. / With reference to US EPA 3540C for PBB/PBDE Content. Analysis was performed by GC/MS and screening via US EPA 3550C with HPLC/DAD/MS.

測試結果 / Test Result(s) : 請見下一页.


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

The content of this PDF file is in accordance with the original issued reports for reference only. This Test Report cannot be reproduced, except in full, without prior written permission of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law.

測試報告

號碼 : CE/2006/A1121 日期 : 20061016 頁數 : 2 of 4

壬裕企業有限公司

REN-YUH ENTERPEISE CO., LTD.

*238 台北縣樹林市東順街36巷3號

NO. 3, LANE 36, DONG-SHUN ST., SHE-LIN, TAIPEI, TAIWAN



測試結果 (單位: mg/kg) / Test Result(s)

測試項目 / Test Item (s):	測試方法 Method (Refer to)	結果 / Result	方法偵測 極限值 (MDL)
		No.1	
鎘 / Cadmium (Cd)	(1)	n.d.	2
鉛 / Lead (Pb)	(2)	n.d.	2
汞 / Mercury (Hg)	(3)	n.d.	2
六價鉻 / Chromium VI (Cr+6)	(4)	n.d.	2
多溴聯苯總和 / Sum of PBBs		n.d.	-
一溴聯苯 / Monobromobiphenyl		n.d.	5
二溴聯苯 / Dibromobiphenyl		n.d.	5
三溴聯苯 / Tribromobiphenyl		n.d.	5
四溴聯苯 / Tetrabromobiphenyl		n.d.	5
五溴聯苯 / Pentabromobiphenyl		n.d.	5
六溴聯苯 / Hexabromobiphenyl		n.d.	5
七溴聯苯 / Heptabromobiphenyl		n.d.	5
八溴聯苯 / Octabromobiphenyl		n.d.	5
九溴聯苯 / Nonabromobiphenyl		n.d.	5
十溴聯苯 / Decabromobiphenyl		n.d.	5
多溴聯苯醚總和 (一至九溴) / Sum of PBDEs (Mono to Nona) (Note 4)		n.d.	-
一溴聯苯醚 / Monobromobiphenyl ether		n.d.	5
二溴聯苯醚 / Dibromobiphenyl ether		n.d.	5
三溴聯苯醚 / Tribromobiphenyl ether		n.d.	5
四溴聯苯醚 / Tetrabromobiphenyl ether		n.d.	5
五溴聯苯醚 / Pentabromobiphenyl ether		n.d.	5
六溴聯苯醚 / Hexabromobiphenyl ether		n.d.	5
七溴聯苯醚 / Heptabromobiphenyl ether		n.d.	5
八溴聯苯醚 / Octabromobiphenyl ether		n.d.	5
九溴聯苯醚 / Nonabromobiphenyl ether		n.d.	5
十溴聯苯醚 / Decabromobiphenyl ether		n.d.	5
多溴聯苯醚總和 (一至十溴) / Sum of PBDEs (Mono to Deca)		n.d.	-

(5)

測試部位描述 / Test Part Description:

NO.1 : 白色塑膠 / WHITE PLASTIC

The content of this PDF file is in accordance with the original issued reports for reference only. This Test Report cannot be reproduced, except in full, without prior written permission of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law.

測試報告

號碼 : CE/2006/A1121 日期 : 20061016 頁數 : 3 of 4

壬裕企業有限公司



REN-YUH ENTERPEISE CO., LTD.

*238 台北縣樹林市東順街36巷3號

NO. 3, LANE 36, DONG-SHUN ST., SHE-LIN, TAIPEI, TAIWAN

Note : 1. mg/kg = ppm

2. n.d. = Not Detected / 未檢出

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

4. Sum of Mono to NonaBDE & according to 2005/717/EC DecaBDE is exempt.

根據2005年10月13日歐盟會議公佈2005/717/EC，修訂2002/95/EC內容，通過解除
高分子材質中十溴聯苯醚之使用限制。

5. "-" = Not Regulated / 無規格值

測試報告

號碼 : CE/2006/A1121 日期 : 20061016 頁數 : 4 of 4

壬裕企業有限公司

REN-YUH ENTERPEISE CO., LTD.

*238 台北縣樹林市東順街36巷3號

NO. 3, LANE 36, DONG-SHUN ST., SHE-LIN, TAIPEI, TAIWAN



** 報告結尾 **

The content of this PDF file is in accordance with the original issued reports for reference only. This Test Report cannot be reproduced, except in full, without prior written permission of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law.



**RoHS 排外條款說明
RoHS Exclusive item Hazardous Substance**

本公司保證，本產品均屬環保產品，皆符合 RoHS 法規要求，並適用於 RoHS 規定之排除條款。

We hereby confirm and assure that all parts and sub-materials delivered to your company comply with RoHS Standard and apply to RoHS Exclusive item.

RoHS 合金類排除條款要求如下：

RoHS Exclusive item :

合金種類 alloys item	鉛允許含量(ppm) Lead acceptance concentration
鋼材 steel	<3,500ppm
鋁合金 aluminum alloys	<4,000ppm
銅合金 copper alloys	<40,000ppm
焊錫 solder	<1,000ppm

立承諾書人

公司名稱：譁裕實業股份有限公司
company name: WHA YU INDUSTRIAL CO., LTD

公司地址：新竹市公道五路二段 326 號
company address: No.326. Sec 2. Kung Tao 5 Road. Hsin Chu City, Taiwan

聯絡電話：03-5714225
TEL: +886-3-5714225

負責人：林祺生 董事長
sign by

立約日期：西元 2006 年 9 月 05 日
Date : 2006. 09. 05

