

承 認 書
SPECIFICATION FOR APPROVAL

客 戶
CUSTOMER

中磊電子股份有限公司

日 期
DATE

2006/5/12

品 名
DESCRIPTION

WSL002 RG-178 Flying Lead 1/4
Dipole Antenna With L44 (white)

客 戶 料 號
CUSTOMER P/N

61720085WS

成 品 編 號
Part NO.

TWW1593A1



萬旭電業股份有限公司

WANSHIH ELECTRONIC CO., LTD.

台北縣五股鄉五工六路 72 號 3 樓

3F 72 WU KONG 6TH RD., WU KU INDUSTRIAL DISTRICT

TAIPEI HSIEN, TAIWAN, R.O.C.

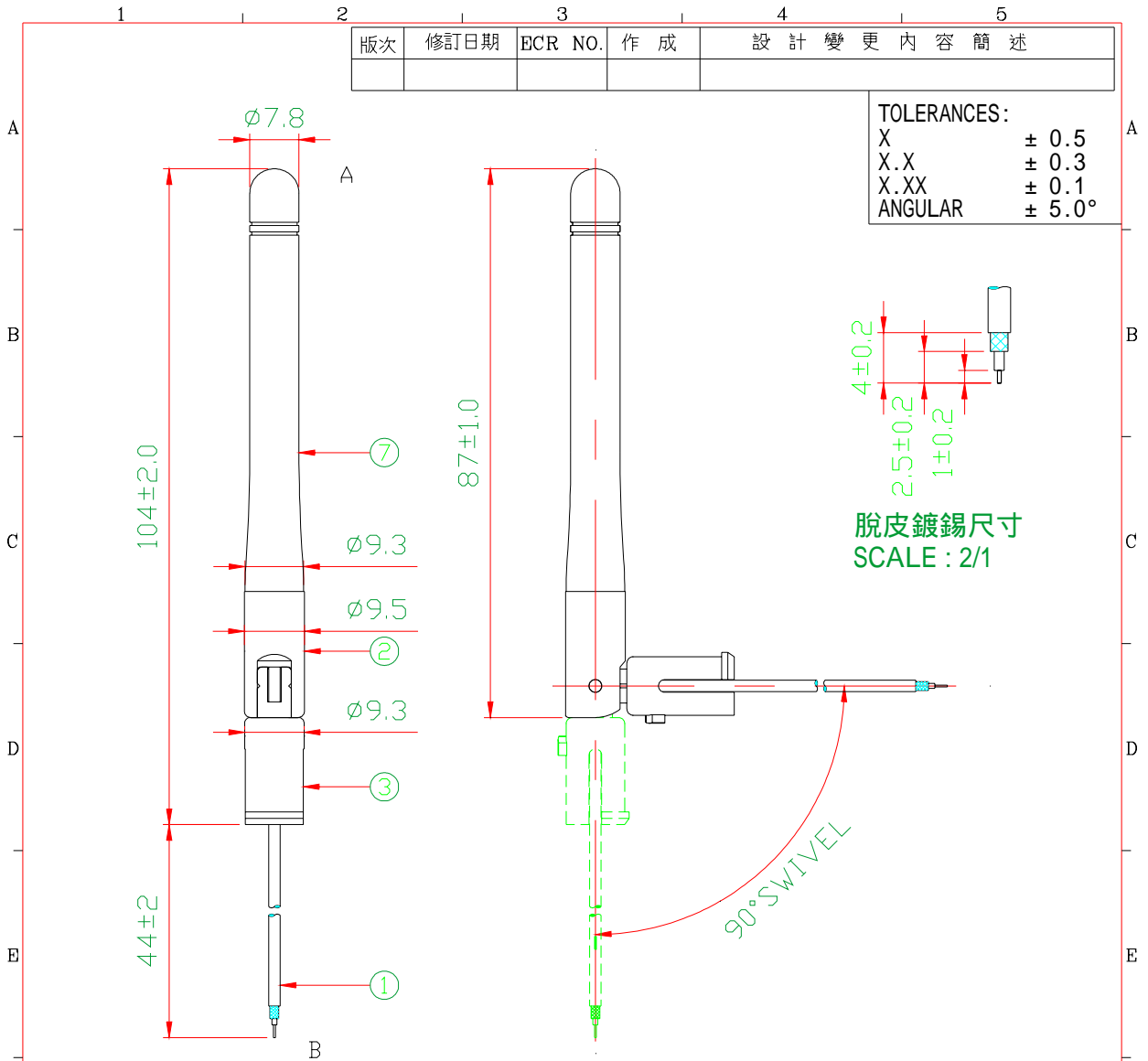
TEL : (02) 22988066 (5 LINE) FAX : (02)22981102

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SPECIFICATION

1. Description : 2.4 GHz Flying Lead , $1/4\lambda$
Dipole Antenna
2. Customer : 中磊電子股份有限公司
3. Model No. : WSL002
4. Part No. : TTWW1593A1
5. Standard : IEEE 802.11 b/g Wireless LAN
6. Antenna Profile : 44 mm (see Drawing)
7. Color : white (DuPont LS033)
8. Electrical Characteristics
 - Operating Frequency : 2.4~2.5GHz
 - Antenna Type : $1/4\lambda$ Dipole Sleeve
 - Polarization Type : Linear
 - Type of Radiation : Toroidal
 - Peak Gain : 2.0 dBi Typical
 - Impedance : 50 Ohm nominal
 - V.S.W.R. : 2.0:1 Max.
9. Mechanical Characteristics
 - Connector : N/A
 - Core : N/A
10. Raw Material
 - Coaxial Cable : RG-178
 - Housing : TPE
 - Hinge : PC+ALLOY



作業說明：

1.天線本體，WSW0011A WFL 2dBi天線作業標準指導書規定製作。
 依據 AQ-0011A QC管理工程圖，執行品質管制。

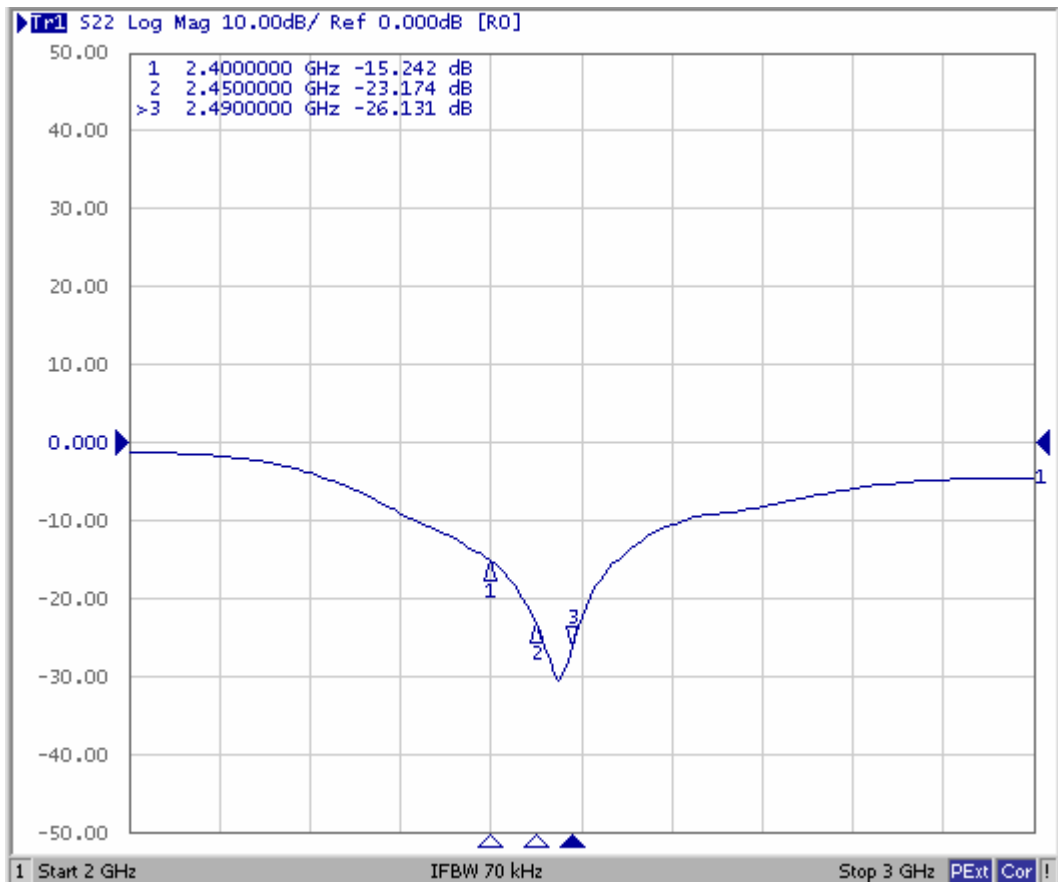
7	外套<白>	B093750L6790TM	@9.3 *75L(67L) 外套白<DuPont LS033>TPE	白	1	或同級品
6	銅管連接軸	B265L7402000TM	@6.5 *7.4L For WSL005用銅管連接軸	黑	1	或同級品
5	銅管	B0520220L25TWQ	@5.2 *22.0L*0.25t 銅管	銀	1	或同級品
4	固定鉚釘(亮鍍)	!	B02892200180ME 028922001-8 3.80*1.90 固定鉚釘(小)(亮鍍)	銀	2	或同級品
3	下座白	B093247LLS03WT	@9.3 *24.7L 下座白< DuPont LS033 >	白	1	或同級品
2	上座白	B093200LLS03WT	@9.5 *20.0L上座白< DuPont LS033>	白	1	或同級品
1	RG-178 Coaxial Cable	19RG17800030AE	@RG-178 CABLE 105SV(萬泰)	橙	125	1 或同級品
NO	材料名稱	環材	電腦編號	零件規格	顏色	切斷尺寸 用量 備註

修訂日期：		制訂日期：2006/05/11		承認圖號			
頁數：1/1	核准	審查	作成	品名			
第三角法	Ryan	Lingo	郭雅珍	RG-178 Flying Lead , SWIVEL TYPE , 1/4 Dipole Antenna L44mm(Dupont LS033)			
單位：mm				成品編號	TWW1593	REV	VERSION
比例：FREE				A	1		

萬旭電業股份有限公司 [53] 文件編號：FMT-0513-D7

Electrical Properties

Return Loss (Test on board)



Electrical Properties

V.S.W.R (Test on board)



Electrical Properties

Radiation Pattern – H Plane

(Test on board)

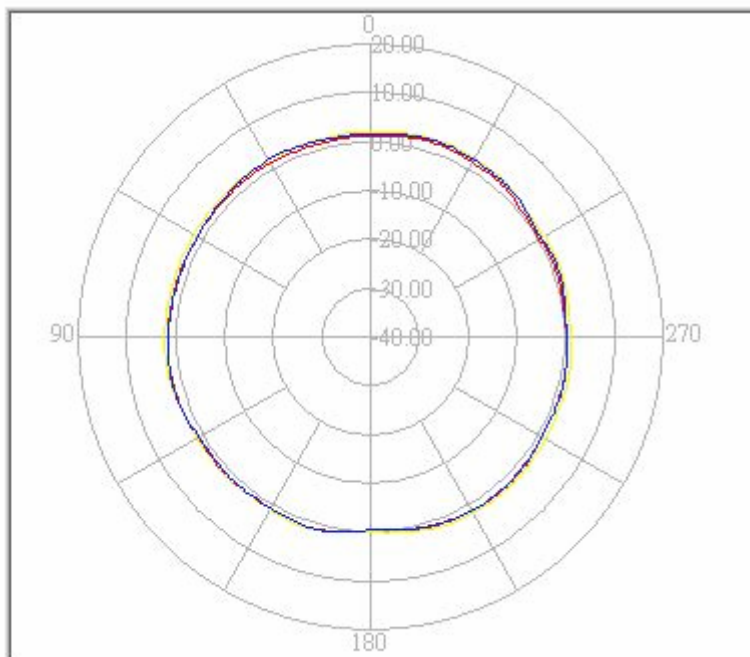


萬旭電業股份有限公司

Model No: cl-060427-FL

Antenna Position: Vertical

Test Mode: H-Plane



Freq (MHz)	peak (dBi)	Angle (o)	Avg (dBi)
2400.00	2.47	17.08	1.59
2450.00	1.75	17.08	0.95
2490.00	2.34	20.75	1.13

Electrical Properties

Radiation Pattern – E Plane

(Test on board)

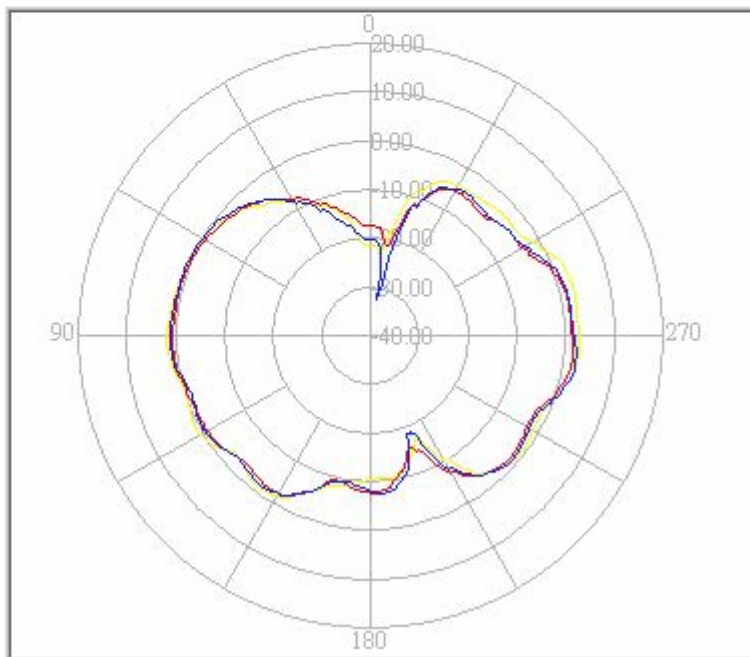


萬旭電業股份有限公司

Model No: c1-060427-FL

Antenna Position: Horizontal

Test Mode: E-Plane



Freq(MHz)	peak(dBi)	Angle(o)	Avg(dBi)
2400.00	2.86	94.86	-1.79
2450.00	1.72	96.08	-2.75
2490.00	2.45	98.51	-2.38

Material Data Sheet

RG-178 Coaxial Cable

SPECIFICATION FOR APPROVAL

DOCUMENT: A30178B001

STYLE : 105°C 30V
RG-178B/U

SIZE: 7/0.102 SCCS

RECOGNIZED: UL 1979



WONDERFUL HI-TECH CO.,LTD


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

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

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

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

 **WONDERFUL HI-TECH CO., LTD**
SPECIFICATION

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

AK001/210X297/1.0

PAGE : 1

EDITION : 1.2

MAKER : C.Y.CHEN

CONFIRM : S.N.WONG

APPROVAL : W.J.WANG

 **WONDERFUL HI-TECH CO., LTD.**
SPECIFICATION

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

AK001/210X297/1.0

PAGE : 2

EDITION : 1.2

MAKER : C.Y.CHEN

CONFIRM : S.N.WONG

APPROVAL : W.J.WANG



Test Report

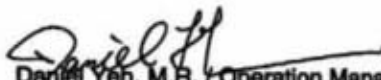
WONDERFUL HI-TECH CO., LTD.
NO. 17, PEI-YUAN ROAD., CHUNG-LI IND, PARK,
TAOYUAN TAIWAN, R. O. C.

Report No. : CE/2004/C1637
Date : 2004/12/16
Page : 1 of 3

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

Type of Product : RG-178 B/U 36AWG SERIES
Sample Received : 2004/12/09
Testing Date : 2004/12/09 TO 2004/12/16

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


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

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Test Report

WONDERFUL HI-TECH CO., LTD.
NO. 17, PEI-YUAN ROAD., CHUNG-LI IND, PARK,
TAOYUAN TAIWAN, R. O. C.

Report No. : CE/2004/C1637
Date : 2004/12/16
Page : 2 of 3

Test Result

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

Test Item (s):	Unit	Method	MDL	Result		
				No.1		
PBBs(Polybrominated biphenyls)(CAS NO:059536-65-1)	%	With reference to USEPA3540 or USEPA3550. 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.		
PBBEs(PBDEs)(Polybrominated biphenyl ethers)	%	With reference to USEPA3540 or USEPA3550. 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.		

Test Item (s):	Unit	Method	MDL	Result		
				No.1		
Chromium VI (Cr+6)	ppm	As per US EPA 7196A and US EPA 3060A.	2	N.D.		
Cadmium (Cd)	ppm	ICP-AES after as per EN 1122, method B:2001 or other acid digestion.	2	N.D.		
Mercury (Hg)	ppm	ICP-AES after as per US EPA 3052 or other acid digestion.	2	N.D.		
Lead (Pb)	ppm	ICP-AES after as per 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

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Test Report

WONDERFUL HI-TECH CO., LTD.
NO. 17, PEI-YUAN ROAD., CHUNG-LI IND, PARK,
TAOYUAN TAIWAN, R. O. C.

Report No. : CE/2004/C1637
Date : 2004/12/16
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SGS TAIWAN LIMITED

NO. 136-1, Wu Kung Road, Wuku Industrial Zone, Taipei county, Taiwan.
(886-2) 22993939 (886-2) 2299-3237 www.sgs.com.tw

Housing Material Data Sheet

- Housing(外套)- TPE

KEYFLEX BT-1055D

Ester type TPE



Item	Test method	Test Condition	Unit	Value
PHYSICAL				
Specific Gravity	ASTM D297	23°C		1.19
Melt Index	ASTM D1238	200°C/2.16kg	g/10min	28
Density	ASTM D1505	Density Gradient Tube	g/10min	
Water Absorbance	ASTM D570	23°C	%	0.5
Mold Shrinkage	ASTM D955		%	1.2
MECHANICAL				
Tensile Strain at Break	ASTM D412	500mm/min	kg/cm ²	340
			MPa	33.3
Tensile Elongation	ASTM D412	500mm/min	%	650
Tensile Strength	ASTM D638	500mm/min	kg/cm ²	140
			MPa	13.7
5% Tensile Stress	ASTM D638	500mm/min	kg/cm ²	65
			MPa	6.4
Flexural Modulus(initial)	ASTM D790	15mm/min	kg/cm ²	2,100
			MPa	206
Tear Strength	ASTM D624	JIS B type	kg/cm	150
Izod Impact Strength (Notched)	ASTM D256	23°C	kg-cm/cm	NB
			J/m	NB
		-40 °C	kg-cm/cm	20
			J/m	NB
Elongation	ASTM D395		%	
Compression Set	ASTM D395	25°C x 22hr	%	
		70°C x 22hr	%	54
Hardness	ASTM D2240	shore A		
		shore D		55

*Note : 1)The values of properties in the above table have been obtained by the test pieces(natural color) manufactured under certain of injection.

2)The listed values should be used for referential purposed only.



Test Report

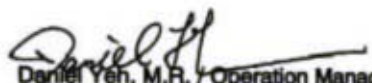
WGJ COMPANY LTD.
NO. 5, TING FU 5 TH STREET, KWEI SHAN HSIANG,
TAOYUAN HSIEN, TAIWAN

Report No. : CE/2005/70439
Date : 2005/07/11
Page : 1 of 4

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

Type of Product : LG KEYFLEX TPEE
Style/Item No : BT1055DNC, BT1063DNC
Sample Received : 2005/07/04
Testing Date : 2005/07/04 TO 2005/07/11

Conclusion : The test results of Pb, Cd, Hg, Cr+6, PBB and PBDE for the submitted sample comply with the requirements of RoHS (2002/95/EC).


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

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Test Report

WGJ COMPANY LTD.
NO. 5, TING FU 5 TH STREET, KWEI SHAN HSIANG,
TAOYUAN HSIEN, TAIWAN

Report No. : CE/2005/70439
Date : 2005/07/11
Page : 2 of 4

Test Result

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

PASS

Test Item (s):	Unit	Method	MDL	Result	Limit of ROHS
				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.	-
Total PBBs (Polybrominated biphenyls)/Sum of above	%		-	N.D.	0.1
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.	-
Total PBBEs(PBDEs)(Polybrominated biphenyl ethers)/Sum of above	%		-	N.D.	0.1

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Test Report

WGJ COMPANY LTD.
NO. 5, TING FU 5 TH STREET, KWEI SHAN HSIANG,
TAOYUAN HSIEN, TAIWAN

Report No. : CE/2005/70439
Date : 2005/07/11
Page : 3 of 4

PASS

Test Item (s):	Unit	Method	MDL	Result	Limit of ROHS
				No.1	
Chromium VI (Cr+6)	ppm	UV-VIS after reference to US EPA 3060A.	2	N.D.	1000
Cadmium (Cd)	ppm	ICP-AES after reference to EN 1122, method B:2001 or other acid digestion.	2	N.D.	100
Mercury (Hg)	ppm	ICP-AES after reference to US EPA 3052 or other acid digestion.	2	N.D.	1000
Lead (Pb)	ppm	ICP-AES after reference to US EPA 3050B or other acid digestion.	2	N.D.	1000

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

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SGS TAIWAN LIMITED | NO. 136-1, Wu Kung Road, WuFu Industrial Zone, Taipei county, Taiwan.
AS06-D 2299-0039 0886-21 2299-0237 www.sgs.com.tw

Test Report

WGJ COMPANY LTD.
NO. 5, TING FU 5 TH STREET, KWEI SHAN HSIANG,
TAOYUAN HSIEN, TAIWAN

Report No. : CE/2005/70439
Date : 2005/07/11
Page : 4 of 4



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• Hinge(上座/下座)- PC+ALLOY

SHINBLEND [®] ALLOY ENGINEERING PLASTIC DIVISION	SHINKONG SYNTHETIC FIBERS CORPORATION 新光合成纖維股份有限公司 8th Fl., 123, Sec.2, Nanking East Road, Taipei, Taiwan Tel: 886-2-2507-0131, 886-2-2507-1234, 0Lines: 886-3-4932133-1750 Fax: 886-2-2506-8047, 886-3-491-5969
---	---

Technical Data

SHINBLEND [®] A724NA High Impact Grade / 超韌級 AD4011
--

		Unit	Test Method	Values
Mechanical properties		機械性質		
Izod Impact(Notched) 23°C	衝擊強度	Kg-cm/cm	ASTM D256	85
-20°C	衝擊強度	Kg-cm/cm	ASTM D256	70
-40°C	衝擊強度	Kg-cm/cm	ASTM D256	65
Tensile Strength	拉伸強度	Kg/cm ²	ASTM D638	540
Elongation	拉伸率	%	ASTM D638	100
Flexural Strength	彎曲強度	Kg/cm ²	ASTM D790	800
Flexural Modulus	彎曲模數	Kg/cm ²	ASTM D790	20000
Thermal properties		熱性質		
Heat Deflection Temperature	熱變形溫度		ASTM D648	
66psi		°C		-
264psi		°C		100
Flammability	防火性	-	UL94	-
Melting Point	熔點	°C	DSC	223
Electrical properties		電氣性質		
Dielectric Strength	介電強度	KV/MM	ASTM D149	-
Dielectric Constant	介電常數	...	ASTM D150	-
Volume Resistivity	體積電阻	Ω-CM	ASTM D257	-
Other properties		其它性質		
Specific Gravity	比重	-	ASTM D792	1.19
Water Absorption	吸水率	%	ASTM D570	0.14
Mold Shrinkage	成形收縮率		ASTM D955	
Flow	流動方向	%		0.4~0.6
Cross Flow	垂直方向	%		0.5~0.7

"Nothing in this information shall be construed as a recommendation for any use that may infringe on any patent right or as an endorsement of any material supplied by Shinkong Synthetic Fibers Corporation. We do not guarantee the applicability or the accuracy of this information or the performance of our products in any specific situation. We recommend each user of our products make its own tests to determine if the material is suitable for a particular use. The data show here are within the normal range of product properties, but they are NOT SPECIFICATION LIMITS. Additives of any kind alter some or all of the properties."

2002/6



Test Report

SHINKONG SYNTHETIC FIBERS CORPORATION
8F., NO.123, SEC. 2, NANKING E. RD., TAIPEI, TAIWAN

Report No. : CE/2006/13401
Date : 2006/01/19
Page : 1 of 5

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

<u>Type of Product</u>	:	THERMOPLASTIC POLYESTER RESIN
<u>Style/Item No</u>	:	A724NA
<u>Manufacturer/Vendor</u>	:	SHINKONG SYNTHETIC FIBERS CORPORATION
<u>Sample Received</u>	:	2006/01/12
<u>Testing Date</u>	:	2006/01/12 TO 2006/01/19

Test Result

: Please see the next page -


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

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SGS TAIWAN (INC.) NO. 123, Wu Kung Road, Wu Kung Industrial Zone, Tainan county, Taiwan
10948-01 22993839 (Fax) 3 1299-9237 www.sgs.com.tw



Test Report

SHINKONG SYNTHETIC FIBERS CORPORATION
8F., NO.123, SEC. 2, NANKING E. RD., TAIPEI, TAIWAN

Report No. : CE/2006/13401
Date : 2006/01/19
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	%		0.0003	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	%			N.D.	
Total PBBs (Polybrominated biphenyls)/Sum of above	%				
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	%			N.D.	
Total PBEEs(PBDEs) (Polybrominated biphenyl ethers)/Sum of above	%				
Total of Mono to Nonabrominated biphenyl ether. (Note 4)	%				N.D.

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TEL: 886-2 22962339 FAX: 886-2 22962337 www.sgs.com.tw



Test Report

SHINKONG SYNTHETIC FIBERS CORPORATION
8F., NO.123, SEC. 2, NANKING R. RD., TAIPEI, TAIWAN

Report No. : CE/2006/13401
Date : 2006/01/19
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

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13 2006 13:11 FAX 00
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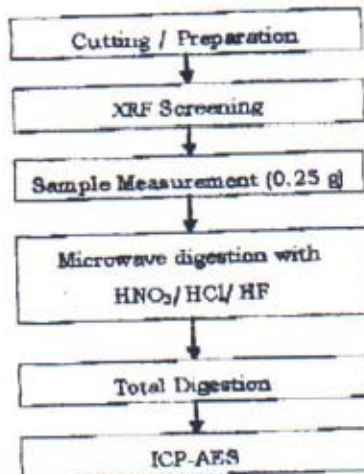
Test Report

SHINKONG SYNTHETIC FIBERS CORPORATION
8F., NO.123, SEC. 2, NANKING E. RD., TAIPEI, TAIWAN

Report No. : CE/2006/13401
Date : 2006/01/19
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

Flow Chart of Digestion for Plastic -EPA3052 for Pb - Cd (without residual)



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Test Report

SHINKONG SYNTHETIC FIBERS CORPORATION
8F., NO.123, SEC. 2, NANKING E. RD., TAIPEI, TAIWAN

Report No. : CE/2006/13401
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Page : 5 of 5



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Sleeve



Test Report No.: GZSC051191892/LP Date: NOV 29, 2005 Page 1 of 2

NEW-MINGTAI ELECTRONIC HARDWARE ELECTROPLATE FACTORY
OLD VILLAGE HALL (LAOXIANGFU), TONG-LE VILLAGE, LONG-GANG TOWN, SHENZHEN

Report on the submitted sample said to be 环保锡/GP Sn

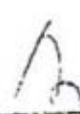
SGS Ref No. SZ051125313EC-3.1
Sample Receiving Date NOV 23, 2005
Testing Period NOV 23, 2005 TO NOV 29, 2005

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: 1995 / other acid digestion.
Cadmium content - With reference to BS EN1122: 2001 method B / other acid digestion.
Mercury content - With reference to EPA 1631: 1998 / 7473: 1999 / other acid digestion.
Hexavalent Chromium content - With reference to ISO 15713: 2000 (Class 6 B).
Analysis was performed by Atomic Absorption Spectrometer / Inductively Coupled Plasma Atomic Emission Spectrometer (ICP-AES). UV-VIS Spectrophotometer
(2) With reference to EPA 3540C / 3550C. Analysis was performed by GC/MS

RESULTS Please refer to next page

Signed for and on behalf of
SGS-USTC Ltd


Zhang Li Amy
Sr Engineer

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GZCM 370029

TEL: 86 755 2618 8888

PHONE NO.: 84292867

FROM: Xiangxin



Test Report

No.: GZSCR051191692/LP

Date: NOV 29, 2005

Page 2 of 2

Results:

(1)

Item	Unit	MDL	Silvery metal part
Lead Content (Pb)	ppm	2	2a
Cadmium Content (Cd)	ppm	2	N.D.
Mercury Content (Hg)	ppm	2	N.D.
Hexavalent Chromium (Cr VI)	ug/cm ²	0.02	N.D.

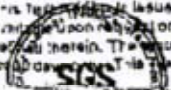
Note : - N.D. = Not Detected (< MDL)
 - MDL = Method Detection Limit
 - ppm = mg/kg

(2)

	Silvery metal can
Flame Retardants	
Polybrominated Biphenyls (PBBs)	
Monobromobiphenyl	N.D.
Dibromobiphenyl	N.D.
Tribromobiphenyl	N.D.
Tetrabromobiphenyl	N.D.
Pentabromobiphenyl	N.D.
Hexabromobiphenyl	N.D.
Heptabromobiphenyl	N.D.
Octabromobiphenyl	N.D.
Nonabromobiphenyl	N.D.
Decabromobiphenyl	N.D.
Polybrominated Diphenylethers (PBDEs)	
Monobromodiphenyl ether	N.D.
Dibromodiphenyl ether	N.D.
Tribromodiphenyl ether	N.D.
Tetrabromodiphenyl ether	N.D.
Pentabromodiphenyl ether	N.D.
Hexabromodiphenyl ether	N.D.
Heptabromodiphenyl ether	N.D.
Octabromodiphenyl ether	N.D.
Nonabromodiphenyl ether	N.D.
Decabromodiphenyl ether	N.D.

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

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GZCM 379028

SGS**Test Report**

No.: GZ0602013169/CHEM

Date: FEB 17, 2006

Page 1 of 1

SHEN ZHEN HUEYNITEH CO., LTD

5/F BUILDING, BAI SHI ZHOU YUAN ZINENG INDUSTRIAL ZONE, SHAHE TOWN, SHEN ZHEN CITY

Report on the submitted sample said to be 黃銅

SGS Ref No. : SZ060204487RS-4.1
 Material : Cu
 Buyer : SONY
 Sample Receiving Date : FEB 13, 2006
 Testing Period : FEB 13, 2006 TO FEB 17, 2006

Test Requested : As specified by client, to determine the Lead, Cadmium, Mercury & Hexavalent Chromium content in the submitted sample.

Test Method : 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
 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.


Results

Item	Unit	MDL	Golden metal
Lead Content (Pb)	ppm	2	186
Cadmium Content (Cd)	ppm	2	N.D.
Mercury Content (Hg)	ppm	2	N.D.
Hexavalent Chromium (Cr VI)	ppm	2	N.D.

Note : - N.D. = Not Detected (< MDL)
 - MDL = Method Detection Limit
 - ppm = mg/kg

*** End of Report ***

Signed for and on behalf of
 SGS-CSTC Ltd.


 Huang Fang, Sr. Engineer

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GZCM G21860

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Member of the SGS Group (SGS SA)

Rivet



Test Report

WANSIH ELECTRONIC CO., LTD.
3F 72 WU KONG 6TH RD., WU KU INDUSTRIAL DISTRICT
TAIPEI HSIEN, TAIWAN. R. O. C.

報告號碼 : CE/2005/B4807
日期 : 2005/11/28
頁數 : 1 of 2

以下測試樣品乃供應廠商所提供及確認：

樣品名稱 : 固定鉚釘 (黑鐵)
收件日期 : 2005/11/21.
測試日期 : 2005/11/21 TO 2005/11/28

測試結果

測試部位 NO.1 : 黑色鉚釘

測試項目	單位	測試方法	偵測極限值	結果
				NO.1
六價鉻	ppm	依照US EPA 3050A方法, 用UV-VIS 做分析	2	N.D.
鎘	ppm	依照 EN1122 方法B:2001或其他酸 消化方法, 用感應耦合電漿原子發 射光譜儀(ICP-AES)做分析	2	N.D.
汞	ppm	依照 US EPA 3052 方法或其他酸 消化方法, 用感應耦合電漿原子發 射光譜儀(ICP-AES)做分析	2	N.D.
鉛	ppm	依照 US EPA 3050B 方法或其他酸 消化方法, 用感應耦合電漿原子發 射光譜儀(ICP-AES)做分析	2	29.5

備註: (1) N.D. = Not detected. (<MDL) / 未檢出(低於偵測極限值)
(2) ppm = mg/kg / 百萬分之一
(3) MDL= Method Detection Limit(偵測極限值)


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

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Test Report

WANSHIH ELECTRONIC CO., LTD.
3F 72 WU KONG 6TH RD., WU KU INDUSTRIAL DISTRICT
TAIPEI HSIEN, TAIWAN, R. O. C.

報告號碼 : CE/2005/B4807
日期 : 2005/11/28
頁數 : 2 of 2



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