

亞旭電腦股份有限公司

樣品確認單

一般承認
 條件承認
 退件
 94年5月13日

料號：3907-001850 序號：研 9406209

種類：ANTENNA 使用機種：RTA1025W

廠牌：WHA YU 是否指定 YES NO 供應商：譚裕

規格：ANTENNA,SMD,C407-510316-A,2.4~2.5GHz 50R 1.5+-0.25dBi φ 1.13 CABLE L=85mm murky gray,WHA YU譚裕

外觀	<input checked="" type="checkbox"/> 完全確認 <input type="checkbox"/> 條件確認 <input type="checkbox"/> 退件		
驗證結果：			
電氣	<input checked="" type="checkbox"/> 完全確認 <input type="checkbox"/> 條件確認 <input type="checkbox"/> 退件		
驗證結果：			
模具	<input checked="" type="checkbox"/> 完全確認 <input type="checkbox"/> 條件確認 <input type="checkbox"/> 退件		
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印刷	<input checked="" type="checkbox"/> 完全確認 <input type="checkbox"/> 條件確認 <input type="checkbox"/> 退件		
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顏色	<input checked="" type="checkbox"/> 完全確認 <input type="checkbox"/> 條件確認 <input type="checkbox"/> 退件		
驗證結果：			
零件環保狀態	<input type="checkbox"/> 無	<input type="checkbox"/> 有化驗報告：	說明：
PCB LAYOUT方式：	<input type="checkbox"/> Power PCB <input type="checkbox"/> Pads <input type="checkbox"/> THE OTHERS: _____		
安規控制零件	<input type="checkbox"/> 是 <input type="checkbox"/> 否		
安規證書如下：	<input type="checkbox"/> UL <input type="checkbox"/> CUL <input type="checkbox"/> CSA <input type="checkbox"/> TUV <input type="checkbox"/> VDE <input type="checkbox"/> BSI <input type="checkbox"/> BAPT <input type="checkbox"/> SEMKO <input type="checkbox"/> NEMKO <input type="checkbox"/> FIMKO <input type="checkbox"/> DEMKO <input type="checkbox"/> THE OTHERS: _____		
證書期限	<input type="checkbox"/> 是何種證書: _____ <input type="checkbox"/> 否		
品檢重點及其它應特別注意事項：		附樣欄：	
整行文字需與控管字元完全相同，不可有多字或少字			
1.請依承認書檢驗			
			輸入編號 RD0940628-02
確認單位	產品工程： <input type="checkbox"/> 台灣 <input type="checkbox"/> 大陸 研展： <input type="checkbox"/> 台灣 <input type="checkbox"/> 大陸 平面： <input type="checkbox"/> 台灣 <input type="checkbox"/> 大陸		
分發單位	<input checked="" type="checkbox"/> 供應商 <input type="checkbox"/> THE OTHERS:		
核准	余逸光	確認	工程師 陳建政

PRBD05-AH

亞旭電腦股份有限公司

原物料樣品測試報告

17 線材、機構、雜項類 (REV.01)

DATE: 94 / 05 / 13

料 號	3907-001850	品名規格	ANTENNA,SMD,C407-510316-A,2.4~2.5GHz 50R 1.5+-0.25dBi § 1.13 CABLE L=85mm murky gray,WHA YU 譚裕
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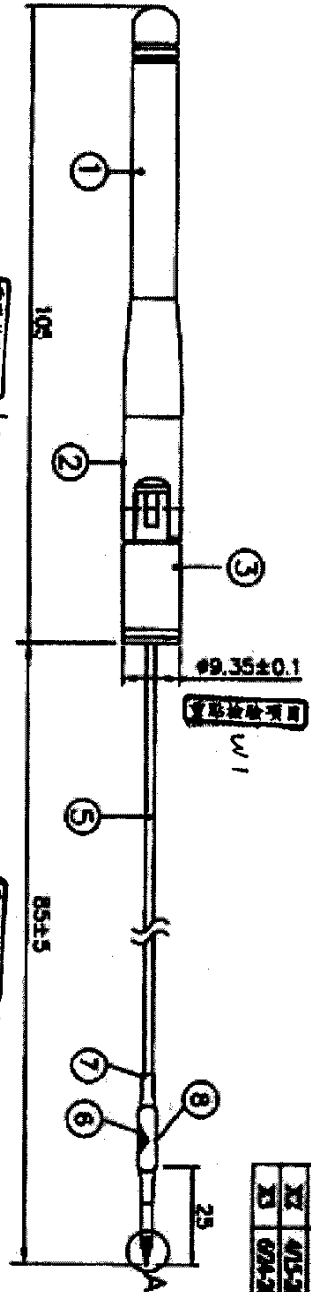
一.機構測量(單位: <u>mm</u>)&電氣測量								
實 測 項 目	規 格	# 1	# 2	# 3	# 4	# 5	結 果	
◎ 長度	L1 105+ 5	104.50	104.68	104.66	104.73	104.60	■OK□FAIL	
◎ 底部直徑	W1 9.35+-0.1	9.34	9.34	9.36	9.33	9.34	■OK□FAIL	
◎ 高度							□OK□FAIL	
○ PIN 腳Φ值							□OK□FAIL	
○ PIN 腳之長度							□OK□FAIL	
◎ PIN 腳之距離							□OK□FAIL	
天線長度	L2 85+-5	85.64	86.47	86.30	85.37	85.86	■OK□FAIL	
頂端直徑	W2 7.8+-1	7.79	7.78	7.80	7.78	7.78	■OK□FAIL	
底部至 90° 長度	L3 82.5+-1	82.83	82.43	82.69	82.96	82.89	■OK□FAIL	
							□OK□FAIL	
							□OK□FAIL	
							□OK□FAIL	
							□OK□FAIL	
							□OK□FAIL	
							□OK□FAIL	
◎ 焊錫性(Solderability)							□OK□FAIL	
◎ 抗焊錫熱(Resistance to Soldering Heat)							□OK□FAIL	
○ 外觀		OK	OK	OK	ok	ok	■OK□FAIL	
○ 實裝於產品上，確認機構尺寸							□OK□FAIL	

重要項目：◎

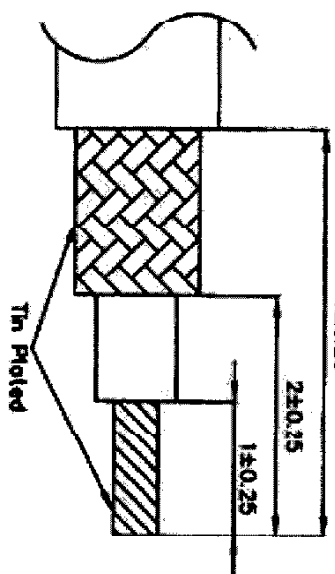
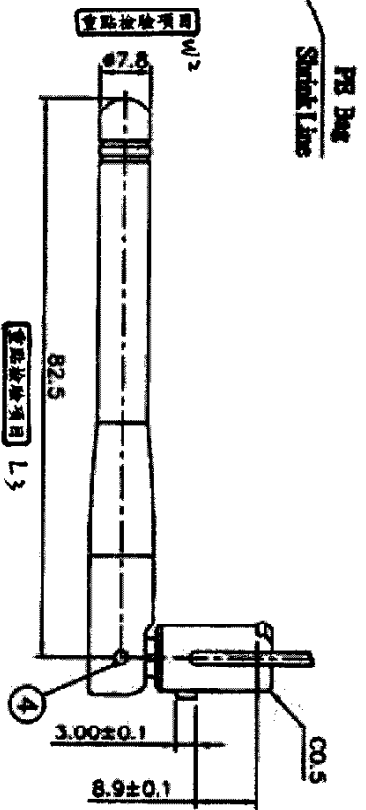
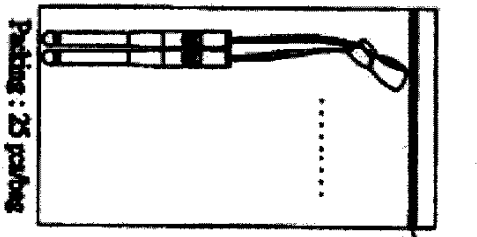
次要項目：○

工程師 陳東波

CG-



Detail A



NO	DESCRIPTION	QTY	REMARK
3	Tube	1	
7	Heat Shrink Tube	1	
6	Cap	1	
5	Cap	1	
4	Rivet	2	
3	Autumn Bush	1	
2	Autumn Bush	1	
1	Autumn Body	1	

CUSTOMER: 華裕實業股份有限公司
 PART NO.:
 PACKAGE: 30 Autumn Cans Assembly
 W/TEND: CADP-SYD16A

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 華裕實業股份有限公司
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REV	DATE	DESCRIPTION
IX	4/19	
X	4/19	
XI	4/19	
XII	4/19	
XIII	4/19	



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: 亞旭科技股份有限公司

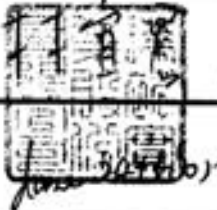
PART NAME: RF Antenna Cable Assembly

PART NO.:

REVISION:

W. Y. P/NO.: C407-510316-A

REV.: X3

	MANUFACTURER SIGNATURE	CUSTOMER SIGNATURE
APPROVED BY :		
DATE :		

WHA YU GROUP

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蘇州華廣電通有限公司

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Wujiang City,Jiangsu Province,China

Tel: + 86-512-63627980

Fax: + 86-512-63627981

Contents

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1.	天線規格表 1
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5.	天線桿套材質特性 13~19
6.	天線固定座材質特性 20
7.	鐵粉芯材質特性 21~22
8.	熱縮套管材質特性 23~24
9.	SGS測試 25~51

RF Antenna Cable Assembly

Specification

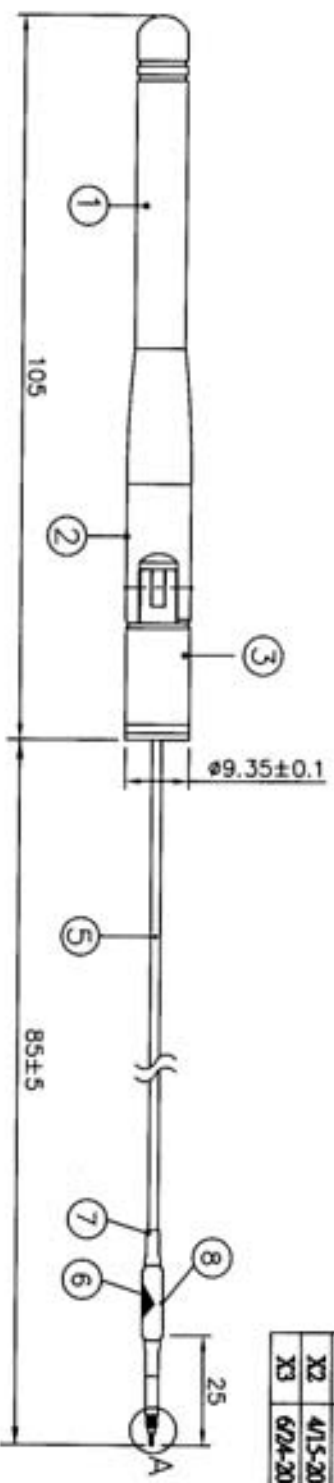
1. Electrical Properties :

- 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 Electrical Wave..... $1/2 \lambda$ Dipole
- 1.6 Antenna Gain..... 1.5 ± 0.25 dBi
- 1.7 Admitted Power..... 1W
- 1.8 Polarization..... Linear

2. Physical Properties :

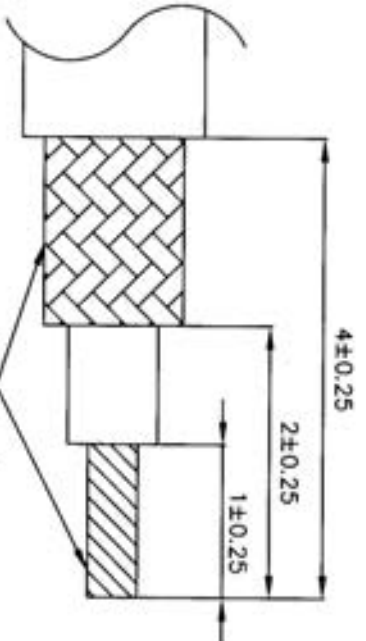
- 2.1 Cable..... $\phi 1.13$ Coaxial Cable
- 2.2 Antenna Cover..... TPE
- 2.3 Antenna Base..... PC
- 2.4 Operating Temp. $-20^{\circ}\text{C} \sim +65^{\circ}\text{C}$
- 2.5 Storage Temp. $-30^{\circ}\text{C} \sim +75^{\circ}\text{C}$
- 2.6 Color Murky Gray
- 2.7 Core..... RH 4*10*2

CG-

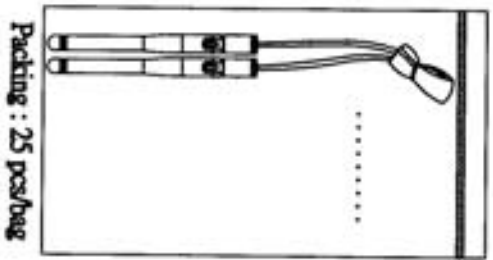
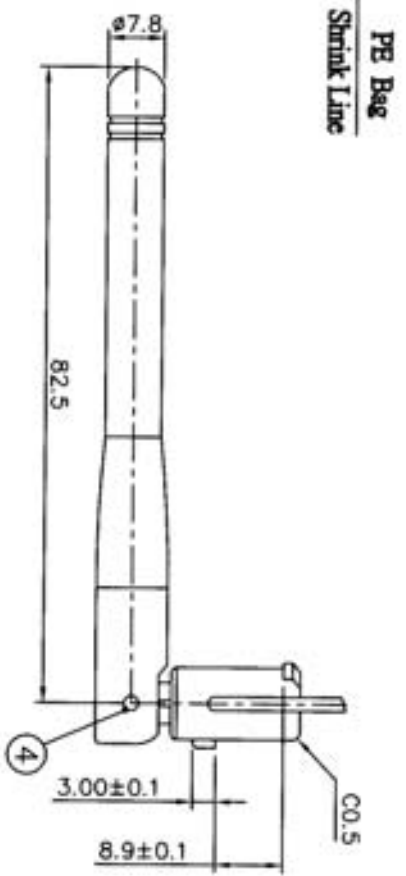


REV	DATE	DESCRIPTION
X1	2/4-2005	New Issue
X2	4/15-2005	Modify Rivet Material
X3	6/24-2005	Modify Core location

Detail A



NO	DESCRIPTION	QTY	REMARK
8	Tube	1	
7	Heat Shrink Tube	1	
6	Core	2	
5	Cable	1	
4	Rivet	1	
3	Antenna Base	2	
2	Antenna Base	1	
1	Antenna Body	1	



CUSTOMER: 亞旭科技股份有限公司

PART NO. : _____

PARTNAME: RP Antenna Cable Assembly

W.Y PNO : CA07-510316-A

REV : X3 UNIT : mm SHEET : 1/1

APPROVED: [Signature]

CHECKED: [Signature]

DRAWING: [Signature]

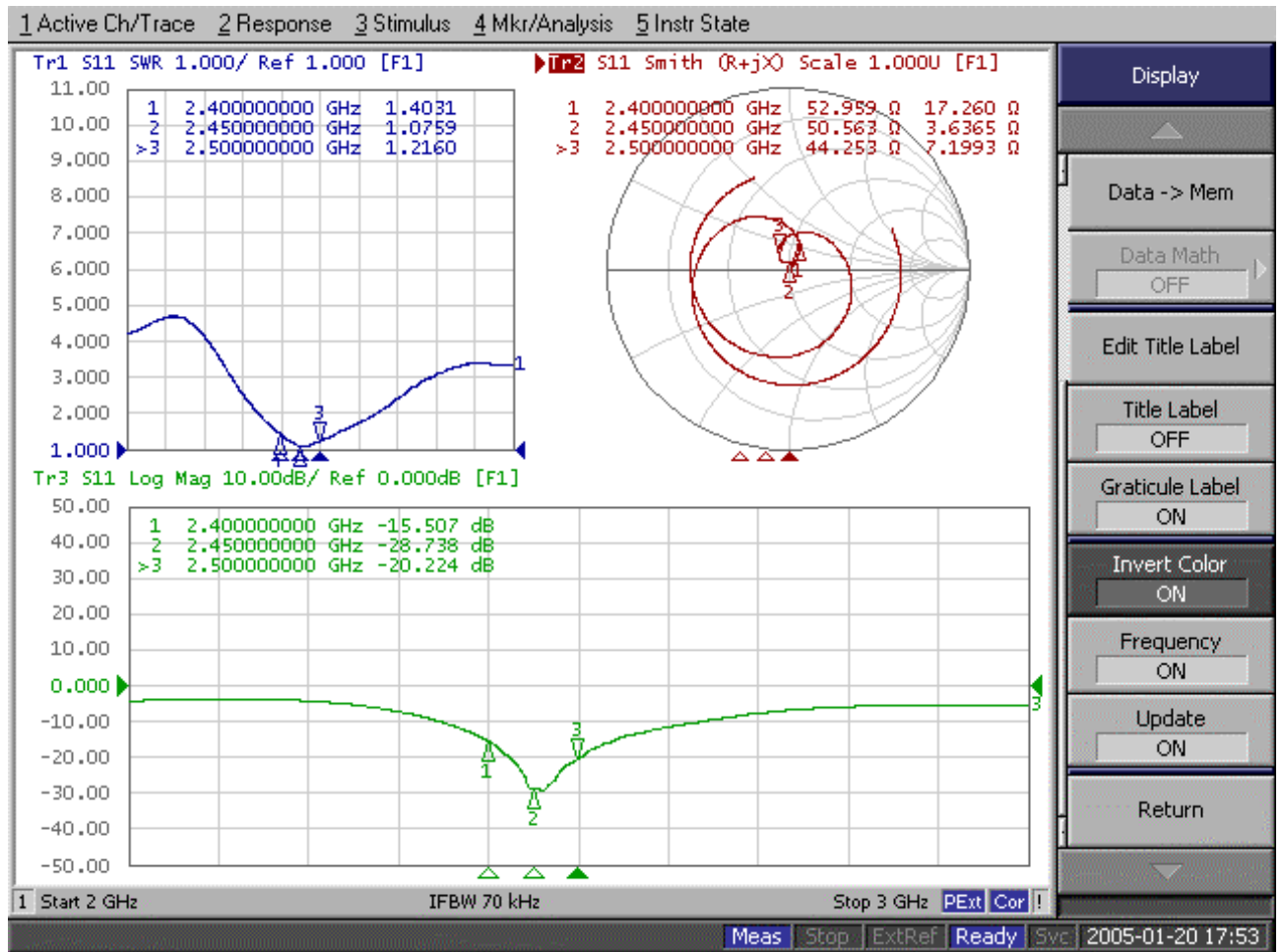
DATE: 2005.10.11

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RF Antenna Assembly
P/NO :C407-510316-A SPEC : 2.4GHz



Display

Data -> Mem

Data Math OFF

Edit Title Label

Title Label OFF

Graticule Label ON

Invert Color ON

Frequency ON

Update ON

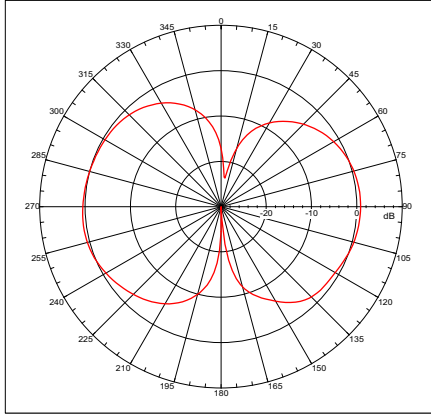
Return



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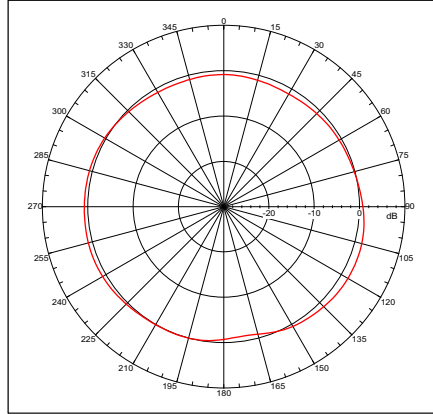
WHA YU INDUSTRIAL CO., LTD

Far-field amplitude of C407-510316-A-H.nsi

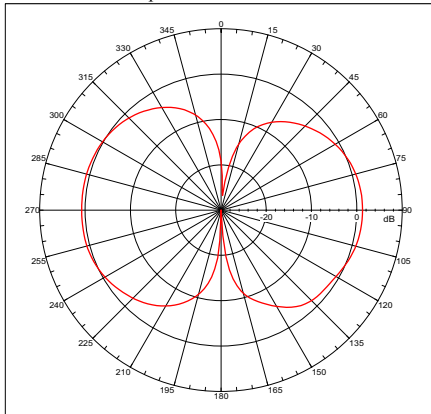


2.4GHz Gain = 0.7922 dBi
Far-field amplitude of C407-510316-A-H.nsi

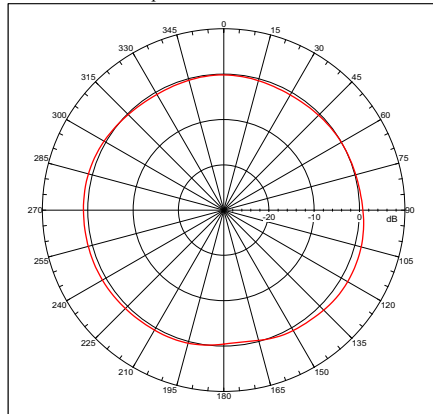
Far-field amplitude of C407-510316-A-V.nsi



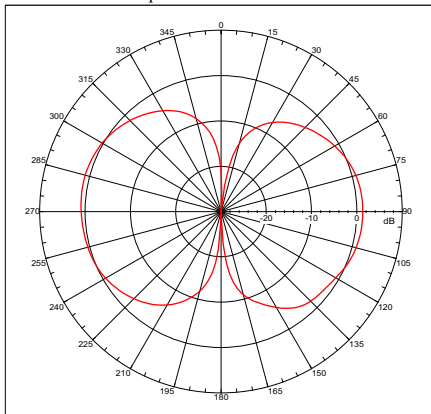
2.4GHz Gain = 1.64414 dBi
Far-field amplitude of C407-510316-A-V.nsi



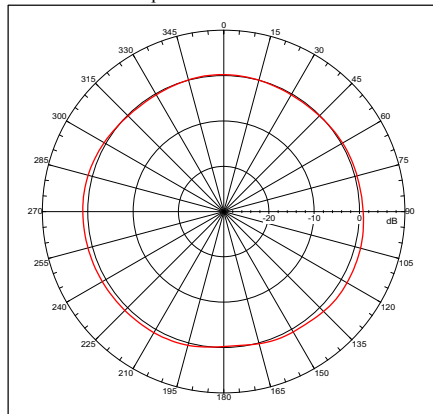
2.45GHz Gain = 1.21506 dBi
Far-field amplitude of C407-510316-A-H.nsi



2.45GHz Gain = 1.56572 dBi
Far-field amplitude of C407-510316-A-V.nsi



2.5GHz Gain = 1.26798 dBi



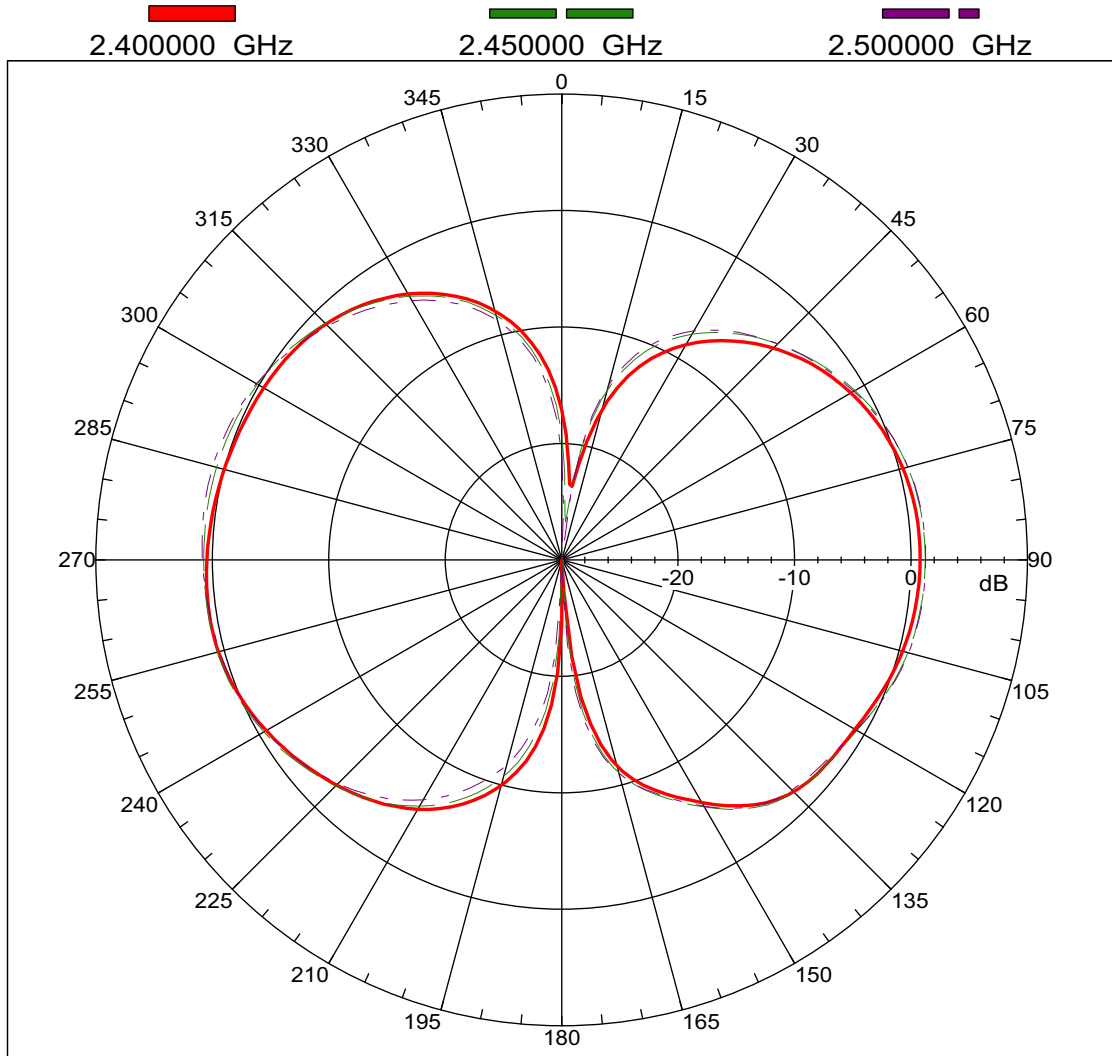
2.5GHz Gain = 1.42087 dBi



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Far-field amplitude of C407-510316-A-H.nsi

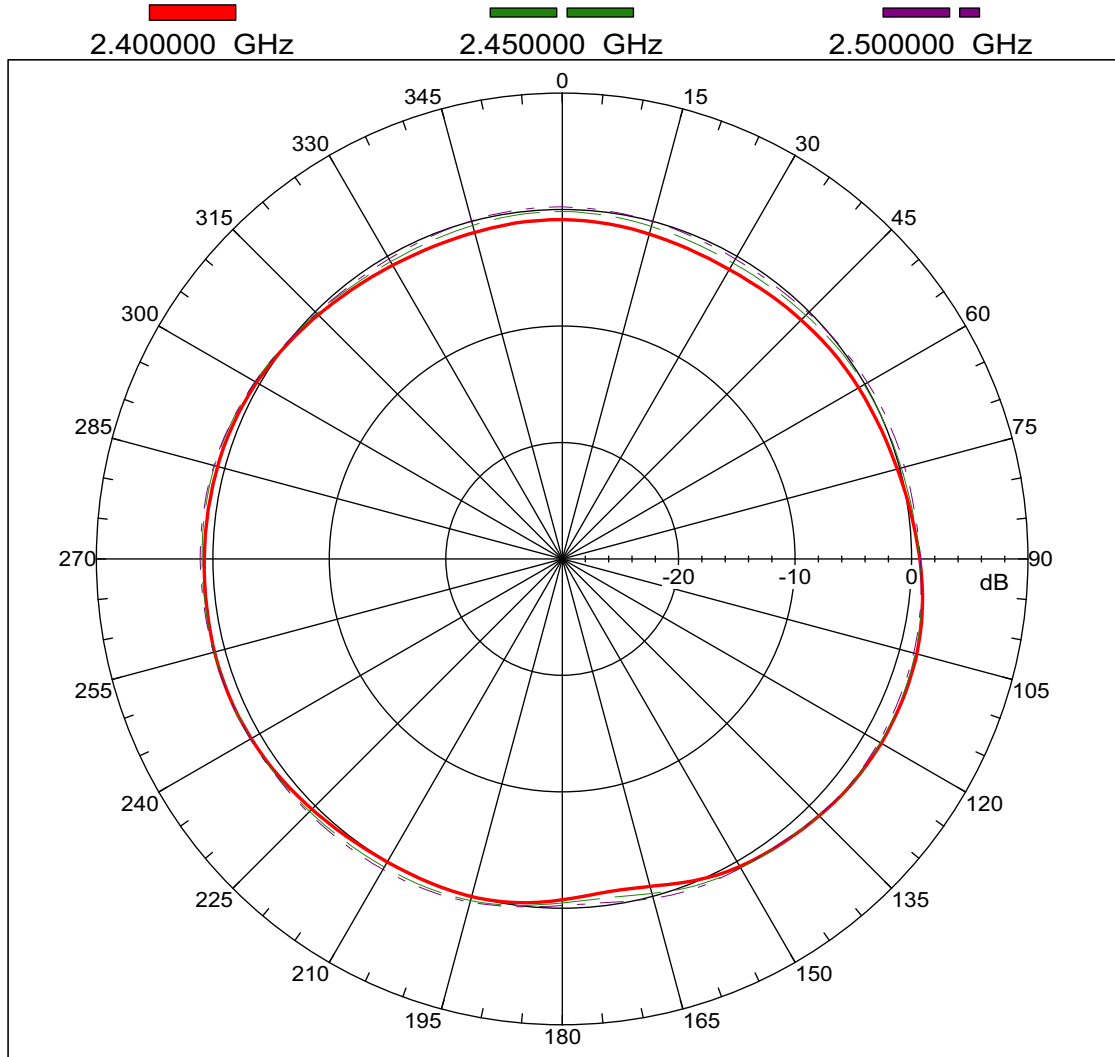




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Far-field amplitude of C407-510316-A-V.nsi

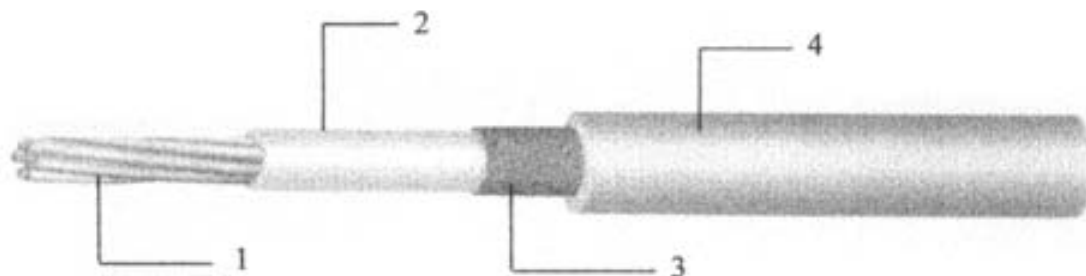


A3132PS001	FEP INSULATED HIGH-FREQUENCY COAXIAL CABLE	PAGE	1 / 2
PRODUCT STANDARD		ISSUED	21. Oct. 2003
		REVISED	

I - Scope

This specification presents a FEP insulated high-frequency coaxial cable AWG 32, 1.13 mm O.D. for internal wiring of electronic equipment, such as Computer / Notebook with wireless communication systems.

II - Construction



Item	Unit	Details
1. Inner Conductor	Material	— Silver coated copper
	Composition	No./mm AWG 32 or 7 × 0.08
	Dia. (approx.)	mm 0.24
2. Dielectric	Material	— Extruded FEP
	Thickness	mm 0.22
	Nom. O.D.	mm 0.68 ± 0.02
	Color	— Natural
3. Outer Conductor	Material	— Silver coated copper
	Composition	— Braided (16 / 4 / 0.05)
	Dia. (approx)	mm 0.90 ± 0.03
4. Jacket	Material	— Extruded FEP
	Thickness	mm 0.10
	Dia.	mm 1.13 + 0.05 / -0.08
	Color	— Standard colors are Light Grey, Black, Dark Grey

Note :



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A3132PS001	FEP INSULATED HIGH-FREQUENCY COAXIAL CABLE	PAGE	2 / 2
PRODUCT STANDARD		ISSUED	21. Oct. 2003
		REVISED	

III – Characteristics

Item	Unit	Specified Value	Note
Temperature Rating	°C	200	
Voltage Lasting	V	250	
Dielectric strength	—	Dielectric core: No breakdown at AC 1.5 kV for 0.15 sec.	Spark test
		Jacket: No breakdown at AC 1.5 kV for 0.15 sec.	Spark test
		No breakdown at AC 500V for 1 min.	Outer conductor to inner conductor
Inner conductor resistance	Ω / km	525	at 20°C
Insulation resistance	MΩ / km	Min. 1500	at 20°C
Characteristic Impedance	Ω	50 ± 2	TDR method
Capacitance	pF / m	98	at 1 kHz
Attenuation. (nom.)	dB / m	2.0	1.0 GHz
		2.9	2.0 GHz
		3.6	3.0 GHz
		4.2	4.0 GHz
		4.7	5.0 GHz
		5.2	6.0 GHz
Approx. Weight	g / m	3.15	

Note :



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SP3831K		PAGE	1/4
PRODUCT STANDARD		ISSUED	17-10-2003

1. SCOPE

This standard covers "FEP insulated High-Frequency coaxial cable".

These cable are approved by UL as Style 1979 AWM (File E-46702)

[UL1979:105°C, 30V]

Use: Internal wiring of Class 2 Circuits of Electronic Equipment.

2. CONSTRUCTION

Construction and dimensions of the cable are shown in Figure.1 and Table 1.

3. PERFORMANCE

Performance of the finished cable is shown in Table 2. The test methods are in accordance with applicable test methods described in JIS C 3005.

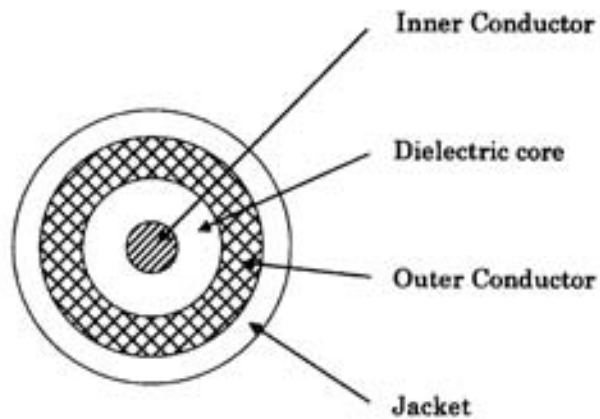


Figure 1.

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SP3831K		PAGE	2/4
PRODUCT STANDARD		ISSUED	17-10-2003

Table 1. Construction

Item	Unit	Specified Value
Inner Conductor	Material	—
	Stranding	No./mm
	Dia.(approx.)	mm
Dielectric Core	Material	—
	Thick.(nom.)	mm
	Dia.	mm
	Color	—
Outer Conductor	Material	—
	Type	—
	Dia.(approx)	mm
Jacket	Material	—
	Thick.(nom.)	mm
	Dia.	mm
	Color	—

Table 2. Performance

Item	Unit	Specified Value	Note
Appearance	—	Faultless in visible	
Inner conductor resistance	Ω/km	Max.597	at 20°C
Insulation resistance	MΩ · km	Min.1500	at 20°C
Dielectric strength	—	Dielectric core: No breakdown at AC1.5kV for 0.15sec.	Spark test
		Jacket: No breakdown at AC1.5kV for 0.15sec.	Spark test
		No breakdown at AC500V for 1min.	Outer conductor to inner conductor
Heat resistance for solder	—	Shrink or expansion of dielectric core are not more than 0.5mm	※
Capacitance	pF/m	nom. 98	at 1kHz
Characteristic impedance	Ω	50 ± 2	TDR method
Attenuation (nom.)	dB/m	2.0	1.0GHz
		2.9	2.0GHz
		3.2	2.4GHz
		3.7	3.0GHz
		4.3	4.0GHz
		4.8	5.0GHz
		5.3	6.0GHz

※ After immersion of dielectric core, 10mm into soldering pot which is 255°C ± 5°C for 5 seconds, shrinkage or expansion of the dielectric core must not exceed 0.5mm.

NOTE :	MADE BY	
	APPROVALS	

KURABE INDUSTRIAL CO., LTD

SP3831K		PAGE	3/4
PRODUCT STANDARD		ISSUED	17-10-2003
<p>4. INSPECTION</p> <p>An inspection is took place in accordance with applicable test methods. The cable has to pass the specifications described Table 1 and Table 2.</p> <p>5. TEST METHOD</p> <p>The test methods are in accordance with applicable test methods described in JIS C 3005 (Test methods for rubber or plastic insulated wires and cables).</p> <p>6. TEMPERATURE RATING</p> <p>105 °C</p> <p>7. VOLATGE RATING</p> <p>30 V</p> <p>8. MARKING ON TAG</p> <p>Each reel of finished cable is tagged to indicate following information:</p> <ol style="list-style-type: none"> (1) Designation of the cable (Style No. designation),, (2) Maximum working voltage, (3) Maximum working temperature, (4) Conductor size, (5) Nominal insulation thickness, (6) Length, (7) Date of manufacture or LOT No., (8) Manufacture's name, (9) Specification No.,and (10) Use of cable, and <p>9. PACKAGE</p> <p>The finished cables are cut into a shipping length of 200 meters, reeled to paper bobbin and packed securely to prevent injuries during transportation.</p> <p>Note: Odd length of the finished wires, which are not shorter than 50 meters may be accepted for shipping.</p>			
NOTE :		MADE BY	
		APPROVALS	

KURABE INDUSTRIAL CO., LTD

SP3831K	FEP INSULATED HIGH-FREQUENCY COAXIAL CABLE (FWS 5030) UL 1979	PAGE	4/4
PRODUCT STANDARD		ISSUED	17-10-2003
		REVISED	
<p>10. APPLICATION NOTES</p> <p>10-1. For use other than the use mutually agreed, compatibility should be carefully confirmed in each practical use by user.</p> <p>10-2. It is recommended to make a trial run for each practical application.</p> <p>10-3. In case a design for use of cable is changed, please contact our sales department, if necessary. Do not use under extreme mechanical stress such as hard bending, tightening, and twisting. The use under extreme mechanical stress may cause not only shortening the life span of cable but also troubles such as decline of dielectric strength.</p> <p>10-4. Handling precautions</p> <p>① Do not hurt the insulation and sheath of the cable by making holes and scratches. And avoid any sharp edge when wiring so as not to injure cables.</p> <p>② Avoid unnecessary excessive force to cable, such as pulling, twisting, bending or tightening.</p> <p>10-5. Storage precautions</p> <p style="padding-left: 20px;">Avoid continuous exposure to sunlight.</p>			
NOTE :		MADE BY	
		APPROVALS	

Arnitel
polyether esters
polyetherester
esters de polyether



Units Einheiten Unites	EM400	EM460	EL550	EL630	EL740	PL380
	1.12	1.16	1.20	1.23	1.27	1.18
°C	195	185	202	212	221	197
μm/m.k	220	160	180	140	110	150
°C	\	\	110	115	120	\
°C	130	150	180	200	200	145
°C	\	50	85	115	150	\
%	0.30	0.30	0.20	0.20	0.15	0.40
%	0.75	0.70	0.55	0.60	0.90	7.0
*	HB	HB	HB	HB	HB	HB
Mpa	55	110	220	375	900	60
Mpa	4.0	7.1	13.2	20.2	26.9	3.5
Mpa	5.4	9.0	15.7	23	22.6	5.2
Mpa	8.4	11.4	16.6	22.0	26.3	8.5
Mpa	17	21	32	40	45	16
%	700	800	600	600	360	450
kJ/m ²	NB	NB	NB	NB	NB	NB
kJ/m ²	NB	NB	NB	NB	200	NB
kJ/m ²	NB	NB	NB	NB	9	NB
kJ/m ²	NB	NB	20	4	4	NB
	38	45	55	63	74	38
MV/m	\	\	\	\	\	\
Ω.cm	5*10 ¹⁴	10 ¹⁴	10 ¹⁴	10 ¹⁴	10 ¹²	10 ¹²
Ω	>10 ¹³	>10 ¹⁴	>10 ¹⁴	>10 ¹⁴	>10 ¹⁰	>10 ¹³
\	4.1	\	\	3.8	\	4.7
\	4.0	4.4	4.0	3.4	3.3	4.4
x10 ¹⁴	10	\	\	3.8	\	310
x10 ¹⁴	170	350	400	350	300	350
\	800	800	600	600	600	800
\	600	600	600	800	800	600

Arnitel

2.2 Product coding

The structure of the Arnitel productcodes is illustrated with the following example:

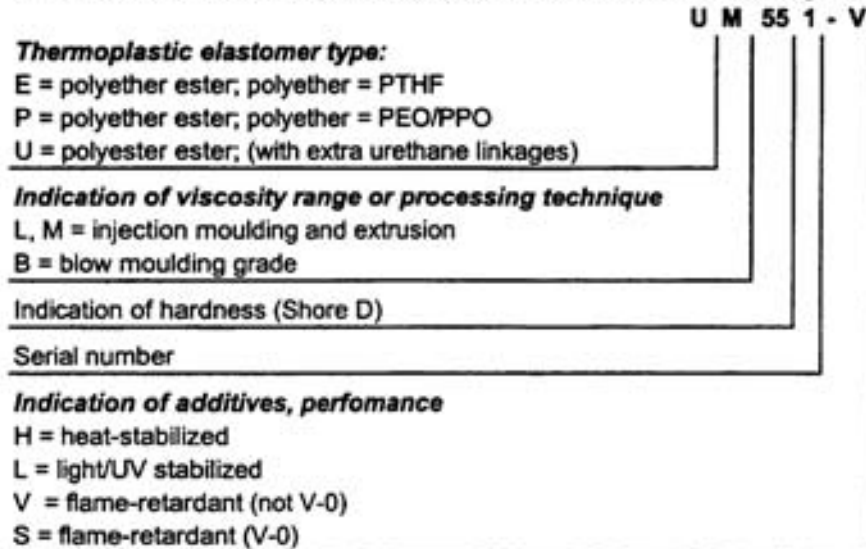


Figure 2.2: Arnitel product coding

2.3 Product portfolio

The Arnitel productrange is available with a hardness from 38 to 74 Shore D. The general Arnitel grades are shown in table 2.2. In order to enhance the flexibility of the portfolio a set of masterbatches (a.o. for heat, UV, etc) are on offer (refer to § 2.4).

Because of the development of these masterbatches heat stabilised Arnitel P is suggested for application areas where thermo-oxidative stability is an issue. For applications where colour and UV stability is required, the Arnitel E range is advised.

	Shore D					
	38	40	46	55	63	74
Arnitel E		EM400	EM460	EL550 EM550	EL630 EM630	EL740 EM740
Arnitel P	PL380		PL460	PL580 PM581		
Arnitel U				UM551 UM551-V UM552 UM552-V	UM622	

Table 2.2: Arnitel productrange for general purpose

Besides these multi-purpose grades, speciality grades can be offered for specific purposes and/or application areas. These grades are not intended for regular sales and are therefore restricted. Permission from marketing is needed before sampling is initiated.

	A'tel E	A'tel P	A'tel U
Automotive			
• CVJ boots	EB460 EB463 EB464		
• Boyplugs		PL380-M0	
Extrusion			
• Roofing foil	EM402-L		

Table 2.3: Examples of speciality grades

Arnitel® EL630/EM630

2.8.31 General:

Arnitel is the brand name of a series polyester based thermoplastic elastomers. These polymers combine excellent processability with good elastomeric properties between -40 and 200°C. Arnitel EL630 and EM630 are excellent materials for injection moulding and extrusion applications respectively. The chemical structure of Arnitel EL630/EM630 is shown below.

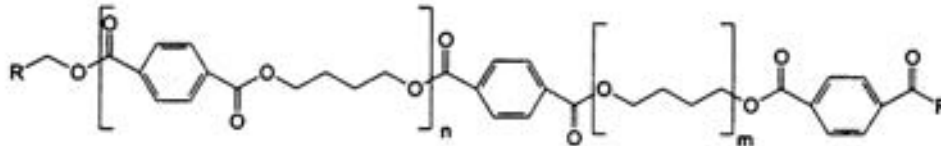


Figure 2.9: Chemical structure of Arnitel EL630/EM630.

Another way of writing the structure of Arnitels is shown below in Figure 2.



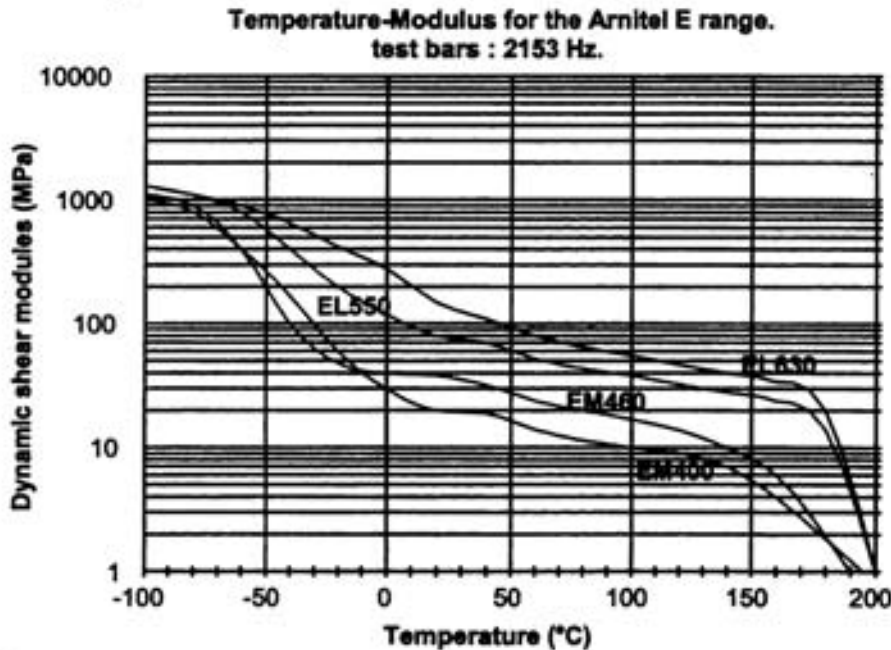
Figure 2.10: Simplified structure of Arnitel EL630/EM630 .

Arnitel EL630/EM630 is TOSCA registered (including DSL-Canada) under CAS 37282-12-5

2.8.32 Thermal properties:

• **Modulus-temperature behaviour:**

The materials have a glass transition at circa -40°C and a typical melting point at 213°C. The modulus-temperature behaviour is shown in graph 2.76, for comparison, accompanied by other Arnitel E types.



Graph 2.76: Modulus-temperature behaviour of Arnitel EL630/EM630.

Arnitel® EL630/EM630

Although information on performance at higher temperatures may be extracted from the above shown graph, a Vicat or HDT are shown in table 2.29.

analysis	SI unit	typical data	test method
Vicat A	(°C)	200	ISO 306/A
Vicat B	(°C)	125	ISO 306/B
HDT-B	(°C)	115	ISO 75-1

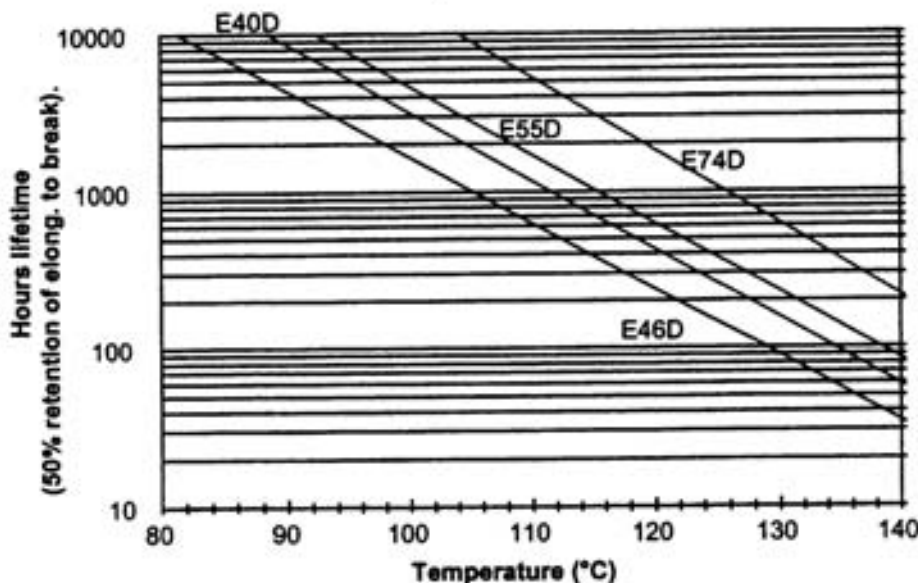
Table 2.29: Vicat and HDT data on Arnitel® EL630 and EM630

Arnitel EL630 and EM630 have a melting point of 213°C as found in the second heating curve of a DSC. The polymer will crystallize at 155°C using a 20°C/min cooling rate. The thermal expansion coefficient of Arnitel EL630/EM630 and is $140 \cdot 10^{-4} \mu\text{m/m.K}$.

• **Heat aging:**

Arnitel EL630/EM630 shows an optimum between heat resistance and colour stability. Heat aging for EL630/EM630 is under test at this moment, however the data will be between EL550 and EL740. Arrhenius curves of thermo-oxidative heat aging are shown in graph 2.77. Criterium chosen is retention of 50% original elongation at break.

Heat aging of Arnitel E40D, 46D, 55D and 74D.
Natural products, Arrhenius plot.



Graph 2.77: Heat stability for Arnitel E-range.

Heat ageing can be improve using a stabilisation masterbatch, however for heat stabilisation the P-range is preferred for it's excellence in performance. These data can be found in the Arnitel properties summary or an Arnitel P datasheet.

2.8.33 Processing and Handling:

Arnitel EL630/EM630 is a polyester with a density of 1.12 g/cm³ according ISO 1183. Due to the polyester nature of these materials it is of major importance to store the material dry prior to processing. Materials packaged in sealed packaging should have a moisture content lower then 500 ppm. The polymer will contain 0.12% moisture in 50% RH and 0.58% water after saturation in water. Both numbers are in equilibrium. If samples have become wet during storage a drying step of 24 hours 120°C (or 6 hours 140°C) prior to use will prevent degradation of the material during processing combined with an eventual loss of properties. The air or nitrogen will have to have a dew point of at least -30°C.

Arnitel® EL630/EM630

• **Processing:**

Arnitel EL630/EM630 shows a single melting point at 195°C in DSC. Processing conditions are shown in the table below.

polymer	zone 1	zone 2	zone 3	additional	melt	mold
EL630	225	230	235	235	225-235	20-50
EM630	225	230	235	235	235	50

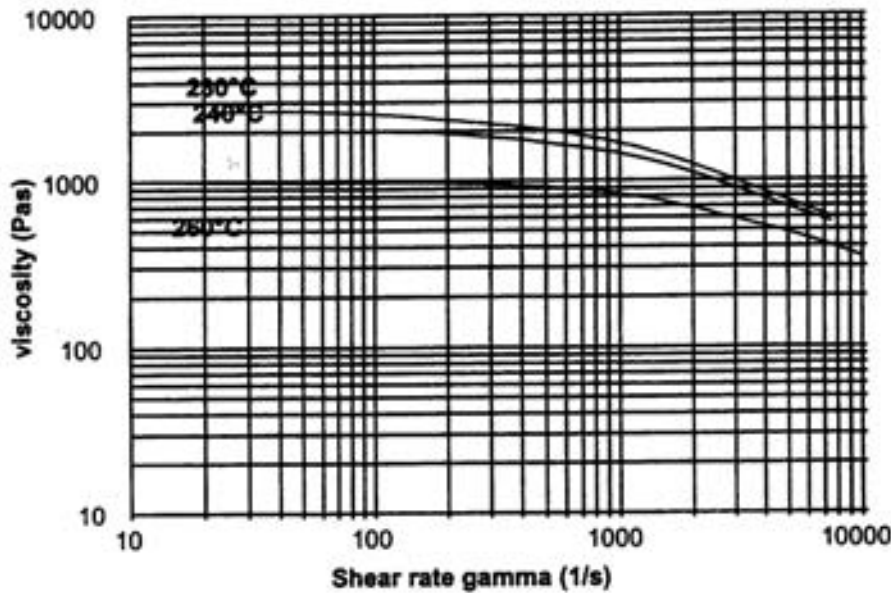
All temperatures are in °C.

Table 2.30: Processing conditions for Arnitel EL630 and Arnitel EM630.

• **Rheology:**

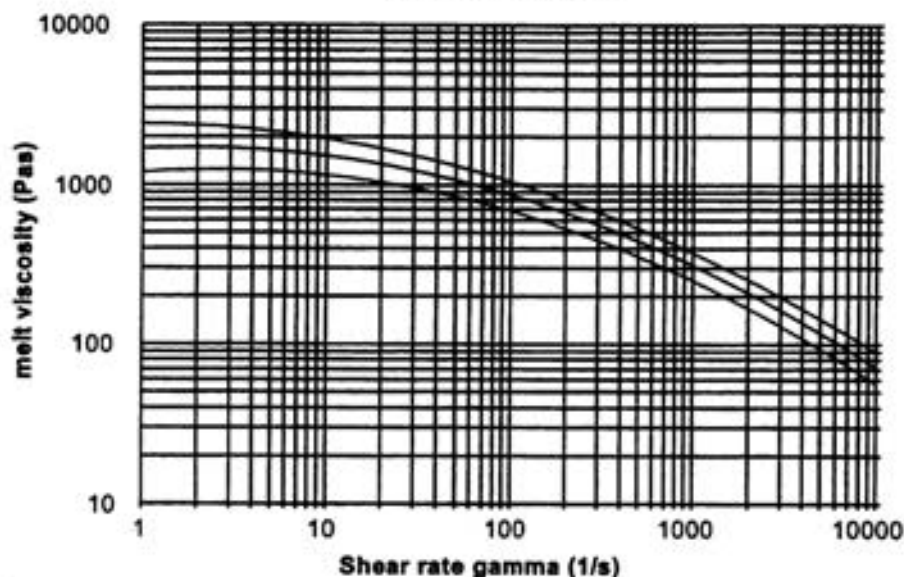
The temperature depending melt viscosity of Arnitel EL630/EM630 and are shown below in graph 2.80 and 2.81 respectively.

**Shear rate dependent of the melt viscosity of Arnitel EL630.
Effect of melt temperature.**



Amitel® EL630/EM630

Capillar melt viscosity of Amitel EM630.
240, 250 and 260°C.



Graph 2.80 and 2.81: Temperature dependency of the melt viscosity for Amitel EL630 and EM630 .

The MFI values are shown in table 2.31.

		EL630	EM630	
MFI 230°C	g/10 min		7	ISO 1133
MFI 240°C	g/10 min	30		ISO 1133

Table 2.31: MFI for Amitel EL630/EM630.

• **Use of regrind:**

Amitel can readily be recycled. If the MFI of the regrind is up or down to four points higher, 20% can be recycled. A difference of 2 MFI points allows up to 50% of regrind. Obviously the regrind should be dried properly before use.

2.8.34 Mechanical properties:

If Amitel EL630 or Amitel EM630 are processed properly the materials will have mechanical properties as shown in table 2.32.

Mechanical property	SI Unit	typica data*		test method
		EL630	EM630	
Hardness	Shore D	63	63	ISO 868
Tensile modulus (1 mm/min)	MPa	330	330	ISO 527
Tensile strength (50 mm/min)	MPa	30	30	ISO 527
Strain at break	%	350	350	ISO 527
Tensile stress at 5% strain	Mpa	11.5	11.5	
Tensile stress at 10% strain	Mpa	15.9	15.9	
Tensile stress at 50% strain	Mpa	17.3	17.3	
Tear strength Graves	KN/m	145	145	DIN53515
Izod notched 23°C (73°F)	KJ/m ²	NB	NB	ISO 180/1A
Izod notched -30°C (-22°F)	KJ/m ²	4	4	ISO 180/1A
Charpy notched 23°C (73°F)	KJ/m ²	NB	NB	ISO 179/1eA
Charpy notched -30°C (-22°F)	KJ/m ²	12	12	ISO 179/1eA

Data for dry natural materials.

* NB: No Break

Table 2.32: mechanical properties of Amitel® EL630.

Amitel® EL630/EM630

- **Abrasion:**

Amitels show good abrasion resistance in both Taber and DIN 53516 abrasion tests. Data are shown in the Amitel general property overview (also included in the EPIC)

2.8.35 Flame retardancy:

Amitel EL630 and EM630 show in an ISO1210/A flammability test a burning rate leading to a classification FH-1. Flame retardancy can be improved using a halogenated or halogen free FR masterbatch.

2.8.36 Electrical properties:

Amitel EL630/EM630 can be used for cable jacketing applications. If the material is in permanent contact with copper a copper stabilisation package should be added. If the copper wires are coated with a tin layer, no stabilisation is necessary. The electrical properties are shown in table 33.

Electrical property	SI Unit	typical data*		test method
		EL630	EM630	
Dielectric strength	KV/mm	22	22	IEC 243-1
Relative permittivity (ϵ_r) at 1 kHz	-	4.4	4.4	IEC 250
Dissipation factor ($\tan \delta$) at 1kHz	-	0.019	0.019	IEC 250
Comparative tracking index	-	600	600	IEC 112
Volume resistivity	$10^{14} \Omega \cdot \text{cm}$	1	1	IEC 93
Surface resistivity	$10^{14} \Omega$	1	1	IEC 93

Table 2.33: Typical electrical properties of Amitel® EL630 and EM630.

2.8.37 Chemical resistance:

Amitel EL630 and EM630 are sensitive to strong bases and strong acids, especially at elevated temperatures. In some halogenated hydrocarbons (like tetrachloroethane), the materials (partially) dissolve. For a full review on chemical resistance of Amitel EL630 and EM630 request the chemical resistance brochure.

- **Hydrolysis**

Like all polyesters Amitel are sensitive to moisture, however Amitels are more stable to water than e.g. PET and PBT. graph 2.84 shows the hydrolytic stability of Amitel EL630 at 100°C and in steam (120°C). For improved hydrolysis stability, using a polycarbodiimid containing masterbatch like Stabaxol® in an option. To maintain all other properties use a masterbatch based on polyester. Data on the Stabaxol stabilised grade are shown in graph 2.85.

■Panlite L-1250Z

Category	Unit	Test Method	Condition	L-1250Z 100
Melt volume flow rate	cm ³ /10min	ISO 1133	300°C load 1.2kg	8
Density	kg/m ³	ISO 1183	—	1200
Water absorption rate	%	ISO 62	in water 23°C24h	0.2
Light transmission	%	ASTM D 1003	thickness 3mm	88
Refractive index	—	ASTM D 542	—	1.585
Tensile modulus	MPa	ISO 527-1 and ISO 527-2	1mm/min	2400
Tensile stress at yield	MPa		50mm/min	61
Tensile strain at yield	%		50mm/min	6
Nominal tensile strain at break	%		50mm/min	>50
Flexural modulus	MPa	ISO 178	2mm/min	2350
Flexural strength	MPa		2mm/min	93
Charpy impact strength	KJ/m ²	ISO 179	unnotched	NB
			notched	76
Heat deflection temperature	°C	ISO 75-1 and ISO 75-2	1.80MPa	129
			0.45MPa	142
Vicat softening temperature	°C	ISO 306	50°C/h 50N	149
Mold shrinkage	%	In-house method	parallel	0.5~0.7
			vertical	0.5~0.7
Coefficient of linear expansion	× 10 ⁻⁴ /°C	ISO 11359-2	parallel	0.7
			vertical	0.7
Specific inductive capacity	—	IEC 60250	100Hz	3.1
	—		1MHz	3
Dielectric loss tangent	× 10 ⁻⁴	IEC 60250	100Hz	10
	× 10 ⁻⁴		1MHz	90
Volume resistivity	Ω·m	IEC 60093	—	>1 × 10 ¹³
Surface resistivity	Ω	IEC 60093	—	>1 × 10 ¹⁵
Withstand voltage	MV/m	IEC 60243-1	short time test	30
Tracking resistance	—	IEC 60112	—	250
Flammability	—	UL 94	—	V-2(0.40mm) HB(1.5mm)
Temperature index	°C	UL 746B	electric 1.47mmt	125
			impact 1.47mmt	115
			non-impact 1.47mmt	125

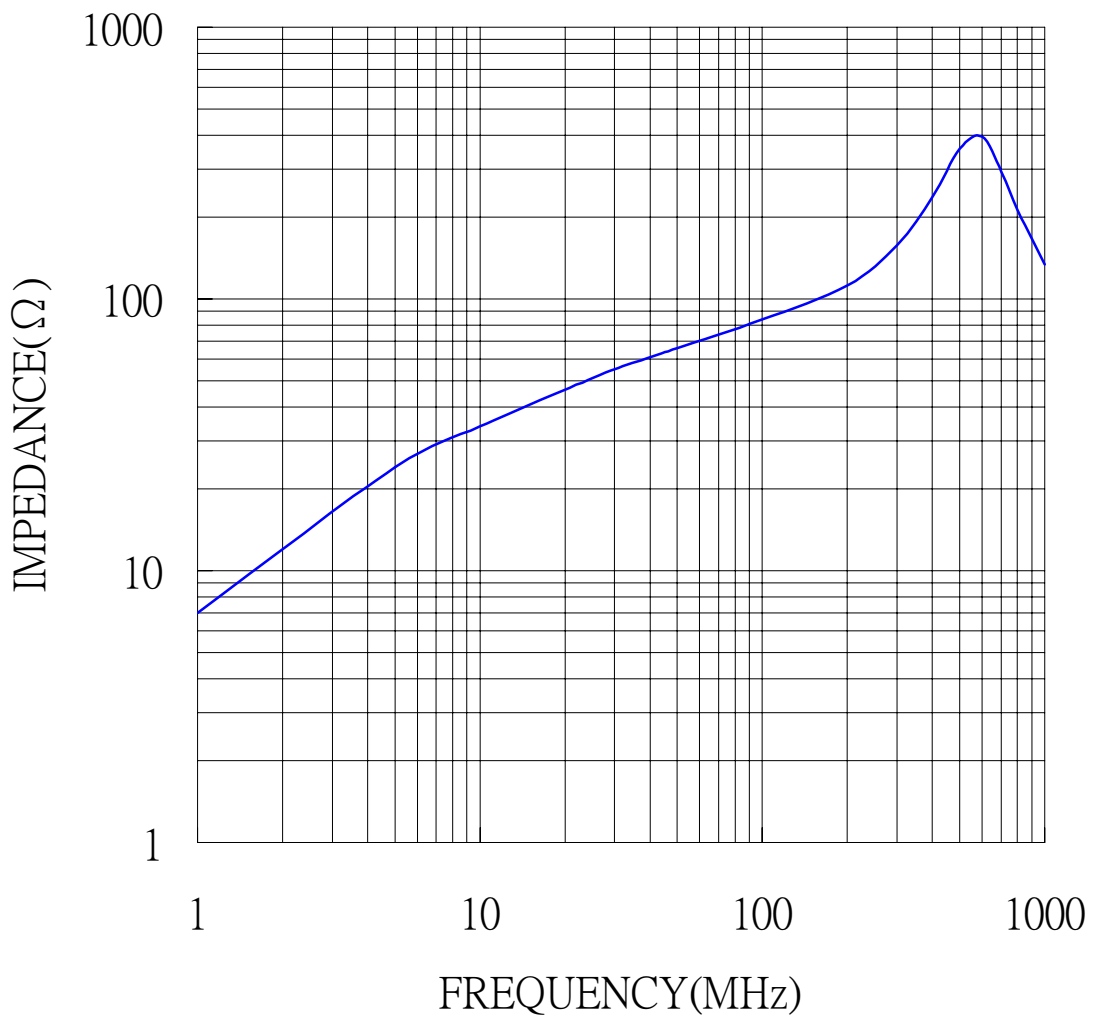
※The values listed are specification values, not certified values.

SPECIFICATION

CUSTOMER:		CUST.P/N:	
ITEM:	K5B RH 4x10x2	K.C.P/N:	PS0404IA
(1) SHAPE :		A	4±0.2 m/m
		B	10±0.4 m/m
		C	2±0.15 m/m
		D	m/m
		E	m/m
		F	m/m
		G	m/m
(2) ELECTRICAL REQUIREMENTS:		(3) TEST CONDITIONS:	
Z ₁ = 37 ⁻⁰ OHM AT 25 MHz		1 IMPEDANCE ANALYZER: HP4191A	
Z ₂ = 63 ⁻⁰ OHM AT 100 MHz		TEST FIXTURE: HP16092A	
		2. WIRE: Ø0.65 T.C.W*63m/m1/2TS	
		3. DRAWING:	
(4) PACKING		(5) APPEARANCE	
<input checked="" type="checkbox"/> IN BULK <input type="checkbox"/> VACUUM <input type="checkbox"/> INSERTION		(1) AREA OF BREAK : <2 m/m ²	
2000 PCS/BAGS* 4 BAG/INNER BOX* 4 BOXES/CARTON = 32000 PCS		(2) SUM OF BREAKING AREA : <3 m/m ²	
PCS/PLATE* PLATES/CARTON= PCS		(3) DEPTH OF BREAK : <1 m/m	
PCS/TRAY* TRAYS/CARTON= PCS			
(6) REMARK:		Approved by	
		Checked by	
		Drawn by	
		DWG.NO.	

K5B RH 4x10x2

PS0404IA



King Core Electronics Inc.

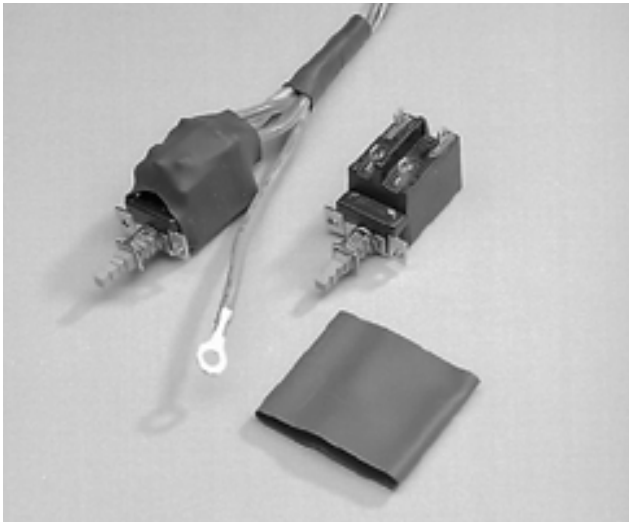
Tel: 886-3-4782511 (Rep.)

Fax: 886-3-4759923

E-mail : kc@mail.kingcore.com.tw

Versafit V2

Highly flame-retardant, very flexible, low-shrink-temperature polyolefin tubing



Fax-on-Demand: (800) 260-9099
(650) 361-6523

FAX ID	Description
2222	Data sheet
2221	RT-1136

Before ordering check with factory for most current data.

Applications

Cost-effective choice for many commercial and military applications; electrically insulates and protects in-line components, disconnect terminals, and splices. Bundles wires for very flexible light-duty harnesses. Strain-relieves electrical wire connections for commercial applications. Identifies or color-codes wires, cables, terminals, and components.

Operating Temperature Range

-55°C to 125°C

Features/Benefits

- 2:1 shrink ratio.
- Low shrink temperature reduces installation time and the risk of damage to temperature-sensitive components.
- Very flexible; doesn't easily wrinkle when bent.
- Hot stamps extremely well.
- Free of polybrominated biphenyls (PBBs) and polybrominated biphenyl oxides and ethers (PBBOs and PBBEs), which are classified as environmentally hazardous substances.
- Higher temperature rating, better thermal stability, and higher resistance to physical abuse than noncrosslinked materials.

Installation

Minimum shrink temperature: 70°C

Minimum full recovery temperature: 90°C

Specifications/Approvals

Series	UL	CSA	Raychem
Versafit	E35586 VW-1 600 V, 125°C	LR31929 OFT 600 V, 125°C	RW-3023

Product Dimensions (mm)

Size	As supplied		After shrinkage	
	Inside diameter	Wall thickness (nominal)	Inside diameter (max.)	Wall thickness* (min.)
1.0	1.6 ±0.2	0.2	0.5	0.33
1.5	2.1 ±0.2	0.2	0.75	0.35
2.0	2.6 ±0.2	0.25	1.0	0.43
2.5	3.1 ±0.2	0.25	1.25	0.43
3.0	3.6 ±0.2	0.25	1.5	0.43
3.5	4.1 ±0.3	0.25	1.75	0.43
4.0	4.6 ±0.3	0.25	2.0	0.43
5.0	5.6 ±0.3	0.3	2.5	0.56
6.0	6.6 ±0.3	0.3	3.0	0.56
7.0	7.6 ±0.3	0.3	3.5	0.56
8.0	8.6 ±0.3	0.3	4.0	0.56
9.0	9.6 ±0.3	0.3	4.5	0.56
10.0	10.4 ±0.3	0.3	5.0	0.56

*Wall thickness will be less if tubing recovery is restricted during shrinkage.

Size	As supplied		After shrinkage	
	Inside diameter	Wall thickness (nominal)	Inside diameter (max.)	Wall thickness* (min.)
11.0	11.4 ±0.3	0.3	5.5	0.56
12.0	12.7 ±0.3	0.3	6.0	0.56
13.0	13.5 ±0.3	0.35	6.5	0.66
14.0	14.4 ±0.4	0.35	7.0	0.68
15.0	15.7 ±0.4	0.35	7.5	0.68
16.0	16.9 ±0.4	0.35	8.0	0.68
18.0	19.0 ±0.4	0.4	9.0	0.76
20.0	21.4 ±0.4	0.4	10.0	0.76
22.0	23.2 ±0.4	0.45	11.0	0.89
25.0	26.8 ±0.4	0.45	12.5	0.89
27.0	28.2 ±0.5	0.45	12.5	0.89
28.0	30.0 ±0.5	0.45	14.0	0.89
30.0	32.1 ±0.5	0.45	15.0	0.89

Ordering Information

Color	Standard Black (-0), white (-9), red (-2), blue (-6), yellow (-4), green (-5) Nonstandard Orange (-3), violet (-7), brown (-1), gray (-8)
Size selection	Always order the largest size that will shrink snugly over the component to be covered. Special order sizes are available upon request.
Standard packaging	On spools.
Marking	Marked with UL/CSA/F- legends.
Ordering description	Specify product name, size, and color (for example, Versafit V2-3.0-0).

Versafit is a trademark of Raychem Corporation.

3-50 Tubing **Raychem**

Users should independently evaluate the suitability of the product for their application.

Fax-on-Demand: (800) 260-9099
(650) 361-6523

Before ordering check with factory for most current data.

FAX ID	Description
2240	Data sheet
2590	RW-3010

Versafit V4

Very-thin-wall, very flexible, highly flame-retardant polyolefin tubing

Applications

Typically used where space saving is important. Offers the ability to pack components more closely than is possible with standard tubings. Cost-effective choice for many commercial applications; electrically insulates and protects in-line components, disconnect terminals, and splices. Used for strain relief on high-density connectors.

Operating Temperature Range

-55°C to 125°C

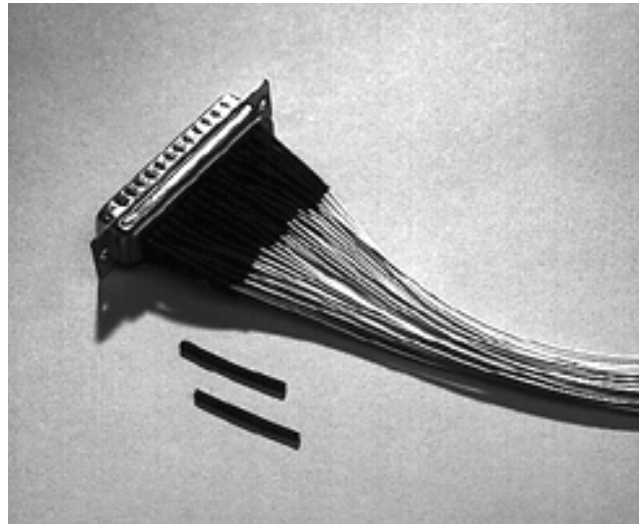
Features/Benefits

- 2:1 shrink ratio.
- Very thin wall provides space savings and rapid shrinking.
- Low shrink temperature further reduces installation time and risk of damage to temperature-sensitive components.
- Very flexible; doesn't easily wrinkle when bent.
- Free of polybrominated biphenyls (PBBs) and polybrominated biphenyl oxides and ethers (PBBOs and PBBEs), which are classified as environmentally hazardous substances.

Installation

Minimum shrink temperature: 70°C

Minimum full recovery temperature: 90°C



Specifications/Approvals



Series	UL	CSA	Raychem
Versafit V4	E35586 VW-1 300 V, 125°C	LR31929 OFT 150 V, 125°C	RW-3010

Product Dimensions

Metric sizes	As supplied		After shrinkage	
	Inside Diameter	Wall thickness (nominal)	Inside diameter (max.)	Wall thickness* (min.)
1.0/0.5	1.4 ±0.25	0.1	0.5	0.25
1.5/0.75	1.9 ±0.25	0.1	0.75	0.25
2.0/1.0	2.3 ±0.25	0.1	1.0	0.25
2.5/1.25	2.8 ±0.25	0.15	1.25	0.25
3.0/1.5	3.3 ±0.25	0.15	1.5	0.25
3.5/1.75	3.8 ±0.25	0.15	1.75	0.25
4.0/2.0	4.4 ±0.25	0.15	2.0	0.25

Inch sizes (mm/in)

3/64	1.2 (.046)	0.6 (.023)	.30 ±.05 (.012 ±.002)	
1/16	1.6 (.063)	0.8 (.031)	.30 ±.05 (.012 ±.002)	
3/32	2.4 (.093)	1.2 (.046)	.30 ±.05 (.012 ±.002)	
1/8	3.2 (.125)	1.6 (.062)	.33 ±.05 (.013 ±.002)	
3/16	4.8 (.187)	2.4 (.093)	.33 ±.05 (.013 ±.002)	

*Wall thickness will be less if tubing recovery is restricted during shrinkage.

Size	As supplied		After shrinkage	
	Inside diameter	Wall thickness	Inside diameter (max.)	Wall thickness* (min.)
5.0/2.5	5.5 ±0.25	0.15	2.5	0.25
6.0/3.0	6.5 ±0.4	0.15	3.0	0.28
7.0/3.5	7.5 ±0.4	0.15	3.5	0.28
8.0/4.0	8.5 ±0.4	0.15	4.0	0.28
9.0/4.5	9.5 ±0.4	0.15	4.5	0.28
10.0/5.0	10.5 ±0.5	0.15	5.0	0.28

1/4	6.4 (.250)	3.2 (.125)	.36 ±.05 (.014 ±.002)	
3/8	9.5 (.375)	4.8 (.187)	.36 ±.05 (.014 ±.002)	
1/2	12.7 (.500)	6.4 (.250)	.36 ±.05 (.014 ±.002)	
3/4	19.1 (.750)	9.5 (.375)	.46 ±.08 (.017 ±.003)	
1	25.4 (1.000)	12.7 (.500)	.51 ±.08 (.020 ±.003)	

Ordering Information

Color	Standard Black (-0) Nonstandard Other colors available upon request.
Size selection	Always order the largest size that will shrink snugly over the component to be covered. Special order sizes are available upon request.
Standard packaging	On spools.
Marking	Marked with UL/CSA/-F- legends.
Ordering description	Specify product name, size, and color (for example, Versafit V4-1.0-0).

Versafit is a trademark of Raychem Corporation.

Users should independently evaluate the suitability of the product for their application.

Raychem Tubing 3-51

SGS Test Report

Product : RF Antenna

Contents

No	Description		Report No.	Page
1	Cable	φ 1.13mm Cable	C411101	P.26~28
2	Antenna Body	TPE EL-630	CE/2004/B2799	P.29~30
3	Antenna Base	PC L-1250Z	CE/2004/C2403	P.31~33
4	Rivet	Brass , Zn Plated	CE/2005/12479A CE/2004/B4814B	P.34~38
5	Core	RH 4*10*2	CE/2004/C3816	P.39~41
6	H.S Tube	Heat Shrink Tube	SH519043/CHEM	P.42~51

Total Weight : 6.85g

Result for RoHS : PASS

TEST REPORT

APPLICANT

Kurabe Industrial Co., Ltd.
4830 Takatsuka-Cho Hamamatsu-Shi
Shizuoka-Ken, Japan

SAMPLE DESCRIPTION

One (1) group of submitted samples said to be :

Item name : FWS 5030 / FWS5032

Date sample received : Jul. 20, 2004

Date test started : Jul. 22, 2004

TEST CONDUCTED

As requested by the applicant, for details please refer to attached pages.

Prepared and checked by :
For Intertek Testing Services
Taiwan Limited



Jacob Lin
General Manager

This report shall not be reproduced except in full, without the written approval of the laboratory.

TEST CONDUCTED

(A) Test result summary :

<u>Testing item</u>	<u>Result (ppm)</u>
	<u>Submitted samples</u>
Cadmium (Cd) content / 鎘含量	ND
Lead (Pb) content / 鉛含量	ND
Mercury (Hg) content / 汞含量	ND
Chromium VI (Cr ⁶⁺) content / 六價鉻含量	ND
PBBs/PBDEs / 多溴聯苯/溴聯苯醚	ND
Polychlorinated biphenyls (PCBs) / 多氯聯苯	ND
Polychlorinated naphthalenes (PCNs) / 多氯化萘	ND
Chlorinated paraffins / 氯化石蠟 (C10~C13)	ND
Formaldehyde / 甲醛	ND
Polyvinyl chloride (PVC) / 聚氯乙烯和聚氯乙烯混合物	ND
Organic tin compounds (Tributyl tin compounds, triphenyl tin compounds) / 有機錫化合物 (三丁基錫化合物, 三苯基錫化合物)	ND
Asbestos / 石棉	ND
Azo compounds / 偶氮化合物	ND

Remarks : ppm = Parts per million

ND = Not detected

TEST CONDUCTED

(B) Test method :

<u>Testing item</u>	<u>Testing method</u>	<u>Reporting limit</u>
Cadmium (Cd) content 鎘含量	With reference to USEPA 3052, by microwave digestion and determined by ICP-OES	2 ppm
Lead (Pb) content 鉛含量	With reference to USEPA 3052, by microwave digestion and determined by ICP-OES	2 ppm
Mercury (Hg) content 汞含量	With reference to USEPA 3052, by microwave digestion and determined by ICP-OES	2 ppm
Chromium VI (Cr ⁶⁺) content 六價鉻含量	With reference to USEPA 3060A & 7196A, by alkaline digestion and determined by UV-Vis	1 ppm
PBBs/PBDEs 多溴聯苯/溴聯苯醚	With reference to USEPA 3540C, by solvent extraction and determined by GC-MSD	10 ppm
Polychlorinated biphenyls (PCBs) 多氯聯苯	With reference to USEPA 8082, by solvent extraction and determined by GC-ECD and GC-MSD	1 ppm
Polychlorinated naphthalenes (PCNs) 多氯化萘	With reference to USEPA 3540C, by solvent extraction and determined by GC-MSD	10 ppm
Chlorinated paraffins (C10~C13) 氯化石蠟	With reference to USEPA 3540C, by solvent extraction and determined by GC-ECD and GC-MSD	10 ppm
Formaldehyde 甲醛	As per applicant's request with reference to DIN 53315 and determined by UV-Vis	5 ppm
Polyvinyl chloride (PVC) 聚氯乙烯和聚氯乙烯混合物	Beilstein's test (flame test) and FT-IR analysis	NA
Organic tin compounds (Tributyl tin & triphenyl tin) 有機錫化合物 (三丁基錫化合物, 三苯基錫化合物)	With reference to ISO 17353, by solvent extraction and determined by GC-MSD	1 ppm
Asbestos 石棉	FT-IR analysis	NA
Azo compounds 偶氮化合物	As per ISO/TS 17234:2003, EN 14362-1:2003, EN 14362-2:2003, determined by GC-MSD	5 ppm

Remarks : NA = Not applicable

Reporting limit = Quantitation limit of analyte in sample solution

— END —



Test Report

DSM ENGINEERING PLASTICS.

Report No. : CE/2004/B2799


Date : 2004/11/23

Page : 1 of 2

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

Type of Product : EL630 WHITE (NC, 999999)
Style/Item No : DSM ARNITEL TPE-E
Sample Received : 2004/11/16
Testing Date : 2004/11/16 TO 2004/11/23

=====
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/2004/B2799

Date : 2004/11/23

Page : 2 of 2

Test Result

PART NAME NO.1 : WHITE PLASTIC PELTTETS

Test Item (s):	Unit	Method	MDL	Result			
				No. 1			
PBBs(Polybrominated biphenyls)(CAS NO:67774-32-7)	%	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



Test Report


TEIJIN KASEI TAIWAN CO., LTD.
10F-2., NO. 87, SONG JIANG ROAD, (EMPIRE BLDG)
TAIPEI, TAIWAN, R. O. C.

Report No. : CE/2004/C2403
Date : 2004/12/20
Page : 1 of 3

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

Type of Product : POLYCARBONATE(PC)
Material Designation : PANLITE®L-1250 Z100
Manufacturer/Vendor : TEIJIN CHEMICALS LTD
Sample Received : 2004/12/13
Testing Date : 2004/12/13 TO 2004/12/20

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


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



Test Report

TELJIN KASEI TAIWAN CO., LTD.

10F-2., NO. 87, SONG JIANG ROAD, (EMPIRE BLDG)
TAIPEI, TAIWAN, R. O. C.

Report No. : CE/2004/C2403

Date : 2004/12/20

Page : 2 of 3

Test Result

PART NAME NO.1 : TRANSLUCENT PLASTIC PELLETS(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

Test Report

TELJIN KASEI TAIWAN CO., LTD.

10F-2., NO. 87, SONG JIANG ROAD, (EMPIRE BLDG)

TAIPEI, TAIWAN, R. O. C.

Report No. : CE/2004/C2403

Date : 2004/12/20

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Test Report

K'UAN HONG ENTERPRISE CO., LTD.

Report No. : CE/2005/12479A

Date : 2005/01/21

Page : 1 of 3

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

Type of Product : 透明電鍍液-黑鋅
Sample Received : 2005/01/14
Testing Date : 2005/01/14 TO 2005/01/21

=====

Test Result : - Please see the next page -


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

Test Report

K'UAN HONG ENTERPRISE CO., LTD.

Report No. : CE/2005/12479A

Date : 2005/01/21

Page : 2 of 3

Test Result

PART NAME NO.1 : SEMI-TRANSPARENT LIQUID (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 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.
PBBEs(PBDEs)(Polybrominated biphenyl ethers)	%	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.

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

Test Report

K'UAN HONG ENTERPRISE CO., LTD.

Report No. : CE/2005/12479A

Date : 2005/01/21

Page : 3 of 3



Test Report

K'UAN HONG ENTERPRISE CO., LTD.

Report No. : CE/2004/B4814B

Date : 2004/12/02

Page : 1 of 2

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

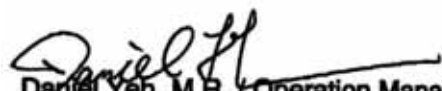
Type of Product : 鉚釘
Sample Received : 2004/11/25
Testing Date : 2004/11/25 TO 2004/12/02

=====
Test Result

PART NAME NO.1 : BLACK METAL (PLEASE REFER TO THE PHOTO ATTACHED)
PART NAME NO.2 : GOLDEN METAL (PLEASE REFER TO THE PHOTO ATTACHED)

Test Item (s):	Unit	Method	MDL	Result	
				No.1	No.2
Chromium VI (Cr+6)	ppm	As per US EPA 7196A and US EPA 3060A.	2	N.D.	N.D.
Cadmium (Cd)	ppm	ICP-AES after as per EN 1122, method B:2001 or other acid digestion.	2	75.9	64.9
Mercury (Hg)	ppm	ICP-AES after as per US EPA 3052 or other acid	2	N.D.	N.D.
Lead (Pb)	ppm	ICP-AES after as per US EPA 3050B or other acid digestion.	2	24987.5	23307.2

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

K'UAN HONG ENTERPRISE CO., LTD.

Report No. : CE/2004/B4814B

Date : 2004/12/02

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Test Report


KING CORE ELECTRONICS INC.
NO. 158, YANG HSIN ROAD, SEC. 2, YANG MEI
CHEN, TAO YUAN HSIEN, TAIWAN R. O. C.

Report No. : CE/2004/C3816
Date : 2004/12/28
Page : 1 of 3

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

Type of Product : FERRITE CORE
Style/Item No : MATERIAL CODE:K5B
Sample Received : 2004/12/21
Testing Date : 2004/12/21 TO 2004/12/28

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


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



Test Report

KING CORE ELECTRONICS INC.
 NO. 158, YANG HSIN ROAD, SEC. 2, YANG MEI
 CHEN, TAO YUAN HSIEN, TAIWAN R. O. C.

Report No. : CE/2004/C3816
 Date : 2004/12/28
 Page : 2 of 3

Test Result

PART NAME NO.1 : BLACK CORE (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	12.8				

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

Test Report

KING CORE ELECTRONICS INC.
NO. 158, YANG HSIN ROAD, SEC. 2, YANG MEI
CHEN, TAO YUAN HSIEN, TAIWAN R. O. C.

Report No. : CE/2004/C3816
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Test Report

No. SH519043/CHEM

Date: 4.18.2005

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RAYCHEM ELECTRONICS (SHANGHAI) LTD.
307 QINJIANG ROAD CAOHEJING HI-TECH DEVELOPMENT PARK

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

Sample Name : V2-13.0 VERSAFIT POLYOLEFIN TUBING
SGS Ref No. : SHEC0050306617
Model : VERSAFIT POLYOLEFIN TUBING


Sample Receiving Date : April 06, 2005
Testing Period : April 06 to April 18, 2005

Test Requested : 1) To determine the Cadmium, Lead, Mercury, Hexavalent Chromium Content of the submitted sample.
2) To determine the PBBs(Polybrominated biphenyls) PBBEs(PBDEs) (Polybrominated biphenyl ethers) Content of the submitted sample.
3) *To determine the Arsenic Content of the submitted sample.
4) ***As specified by client, to detection and determination of certain listed aromatic amines derived from Azo Colorants (EN14362-2:2003).
5) To determine the PCBs(Polychlorinated Biphenyls) Content of the submitted sample.
6) To determine the Polychlorinated Naphthalene Content of the submitted sample.
7) To determine the Chlorinated Paraffin content of the submitted sample.
8) To determine the Organic-tin compounds Content of the submitted sample.
9) * To determine the Asbestos Content of the submitted sample.
10) *To determine the TBBP-A-BIS(CAS NO:21850-44-2)Content of the submitted sample.
11) *To determine the Formaldehyde(CAS No:000050-00-0) Content of the submitted sample.
12) *To determine the CFC's(Chlorofluorocarbons), CHC's(Chlorinated hydrocarbon), HCFC's(Hydrogenated chlorofluorocarbons)Content of the submitted sample.

Conclusion : 4) *** According to the analysis as carried out, azo colorants which can release one or more of certain listed amines by cleavage of their azo group/s were not detected in the commodity submitted.

Test method/Test Results: Please refer to next page

Signed for and on behalf of
SGS-CSTC Chemical Laboratory


Ella Zhang
Supervisor



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SHCH 249179

Test Report

No. SH519043/CHEM

Date: 4.18.2005

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Test method

- : 1) Cadmium (Cd)
 With reference to BS EN 1122:2001, Method B see flowchart (1) for sample.
 Analysis was performed by Inductively Coupled Argon Plasma – Atomic Emission Spectrometry (ICP-AES) or Atomic Absorption Spectrometry.
- Lead (Pb)
 Ashing after wet decomposition see flowchart (2) for sample.
 Analysis was performed by Inductively Coupled Argon Plasma – Atomic Emission Spectrometry (ICP-AES) or Atomic Absorption Spectrometry.
- Mercury (Hg)
 With reference to US EPA 3052/EPA7473 or other acid digestion for sample.
 Analysis was performed by Inductively Coupled Argon Plasma – Atomic Emission Spectrometry (ICP-AES)/Hg Analyzer.
- Hexavalent Chromium (Cr⁶⁺)
 With reference to US EPA3060A and US EPA7196A for sample.
 Analysis was performed by UV-VIS Spectrometric method.
- 2) With reference to US EPA 8081, Analysis was performed by GC/MS.
 - 3) *ICP-AES after reference to US EPA 3052 or other acid digestion.
 - 4) *** Extraction test on coloured textile - Detection of the use of certain azo colorants in fibres with extractable dyes with the use of Gas Chromatographic Mass Spectrometry (GC-MS) / Thin Layer Chromatography (TLC) Technique.
 - 5) With reference to US EPA 8082, Analysis was performed by GC/MS.
 - 6) With reference to US EPA 8081, Analysis was performed by GC/MS.
 - 7) With reference to US EPA 8081, Analysis was performed by GC/MS.
 - 8) With reference to DIN 38407-13, Analysis was performed by GC/MS.
 - 9) * As per NIOSH 9000 method. Analysis was performed by XRD.
 - 10) * Analysis was performed by HPLC/DAD/MS
 - 11) * With reference to DIN 53315 & USEPA 8315A. Analysis was performed by HPLC/DAD/MS
 - 12) * With reference to US EPA 8260. Analysis was performed by GC/MS linked Headspace. (CFC's(Chlorofluorocarbons)) .(CHC's(Chlorinated hydrocarbon)), (CFC's(Chlorofluorocarbons)) (HCFC's(Hydrogenated chlorofluorocarbons))

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Test Results

1) Cadmium, Lead, Mercury, Hexavalent Chromium Content

Item	Unit	MDL	No.1
Cadmium (Cd)	ppm	2	N.D.
Lead (Pb)	ppm	2	5
Mercury (Hg)	ppm	2	N.D.
Hexavalent Chromium (Cr VI)	ppm	2	N.D.

(Result shown is of the total weight of sample)

2) PBBs(Polybrominated biphenyls) PBBEs(PBDEs) (Polybrominated biphenyl ethers) Content

Item	Unit	MDL	No. 1
Polybrominated biphenyls (PBBs)	ppm	---	---
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(Polybrominated biphenyls)	ppm	5	N.D.
Polybrominated biphenyl ethers (PBDEs)	---	---	---
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.

(Result shown is of the total weight of sample)

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Test Report

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3) *Arsenic Content

Test Item(s):	Unit	MDL	Result
			No.1
Arsenic (As)	ppm	2	N.D.

4) ***To detection and determination of certain listed aromatic amines derived from Azo Colorants (EN14362-2:2003).

No.	Amines Substances	CAS-No.	Result
			No.1
1.	4-aminodiphenyl/xenylamine/ Biphenyl-4-ylamine	92-67-1	n.d.
2.	Benzidin	92-87-5	n.d.
3.	4-chlor-o-toluidine	95-69-2	n.d.
4.	2-naphthylamine	91-59-8	n.d.
5.	o-aminoazotoluene/ 4-o-tolylazo-o-toluidine/ 4-amino-2',3-dimethylazobenzene	97-56-3	n.d.
6.	2-amino-4-nitrotoluol/5-nitro-o-toluidine	99-55-8	n.d.
7.	p-chloranilin/4-chloroaniline	106-47-8	n.d.
8.	2,4-diaminoanisol/ 4-methoxy-m-phenylenediamine	615-05-4	n.d.
9.	4,4'-diaminodiphenylmethane/ 4,4'-methylenedianiline	101-77-9	n.d.
10.	3,3'-dichlorobenzidine/ 3,3'-dichlorobiphenyl-4,4'-ylenediamine	91-94-1	n.d.
11.	3,3'-dimethoxybenzidine/o-dianisidine	119-90-4	n.d.
12.	3,3'-dimethylbenzidine/4,4'-bi-o-Toluidine	119-93-7	n.d.
13.	3,3'-dimethyl-4,4'-diaminodiphenylmethane/ 4,4'-methylenedi-o-toluidine	838-88-0	n.d.
14.	p-cresidin/6-methoxy-m-toluidine	120-71-8	n.d.
15.	4,4'-methylen-bis-(2-chloro-aniline)/ 2,2'-dichloro-4,4'methylene-dianiline	101-14-4	n.d.
16.	4,4'-oxydianiline	101-80-4	n.d.
17.	4,4'-thiodianiline	139-65-1	n.d.
18.	o-toluidine/2-aminotoluene	95-53-4	n.d.
19.	2,4-toluylendiamin/ 4-methyl-m-phenylenediamine	95-80-7	n.d.
20.	2,4,5-trimethylaniline	137-17-7	n.d.
21.	4-aminoazobenzene	60-09-3	n.d.
22.	o-anisidine/ 2-methoxyaniline	90-04-0	n.d.
23.	2,4-Xylidin	95-68-1	n.d.
24.	2,6-Xylidin	87-62-7	n.d.
Overall Rating			PASS

Note : n.d. = not detectable
 Detection Limit = 5 ppm (mg/kg)
 Requirement: no relevant amine exceeding 30 ppm (mg/kg).

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SHCH 249176

Test Report

No. SH519043/CHEM

Date: 4.18.2005

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Forbidden Arylamines for Azo Dye Regulations

□ No. 1-22-Commission of the European Communities: Directive 2002/61/EC adopted by the Council on 19 July 2002

□ No. 1-20, 22-24- Greening Label: Oko-Tex Standard 100-2002 edition (European Countries)

Remarks : Azo colorants that are able to form 4-aminoazobenzene (CASr: 60-09-3), generate under the testing condition into aniline and 1, 4-phenylenediamine. The detection of it can only be ascertained with the chemical structure of the colorant used.

5) PCBs(Polychlorinated Biphenyls) Content

Test Item(s):	No. 1
PCBs(Polychlorinated Biphenyls)	N.D.

(Result shown is of the total weight of sample)
N.D. = Non-detected (Detection limit <0.5 ppm)

6) Polychlorinated Naphthalene Content

Test Item(s):	No. 1
Polychlorinated Naphthalene	N.D.

(Result shown is of the total weight of sample)
N.D. = Non-detected (Detection limit <5 ppm)

7) Chlorinated Paraffin Content

Test Item(s):	No. 1
Chlorinated Paraffin	N.D.

(Result shown is of the total weight of sample)
N.D. = Non-detected (Detection limit <30 ppm)

8) Organic-tin compounds Content

Test Item(s):	No. 1
Triphenyl Tin(TPT)	N.D.
Tributyl Tin(TBT)	N.D.

(Result shown is of the total weight of sample)
N.D. = Non-detected (Detection limit <0.5 ppm)

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9)* Asbestos Content

Test Item(s):	Unit	MDL	Result
			No.1
Asbestos			
Anthrophyllite	**	-	Negative
Crocodolite	**	-	Negative
Amosite	**	-	Negative
Tremolite	**	-	Negative
Chrysotile	**	-	Negative
Actinolite	**	-	Negative

10) * TBBP-A-BIS content

Test Item(s):	Unit	MDL	Result
			No.1
TBBP-A-BIS(CAS NO:21850-44-2)	ppm	5	N.D.

11) * Formaldehyde Content

Test Item (s):	Unit	MDL	Result
			No.1
Formaldehyde(CAS No:000050-00-0)	ppm	0.2	N.D.

12) *CFC's(Chlorofluorocarbons), CHC's(Chlorinated hydrocarbon), HCFC's(Hydrogenated chlorofluorocarbons)Content

Test Item (s):	Unit	MDL	Result
			No.1
CFC's(Chlorofluorocarbons)			
Group I			
Chlorofluorocarbon-11(CAS No:000075-69-4)	ppm	1	N.D.
Chlorofluorocarbon-12(CAS No:000075-71-8)	ppm	1	N.D.
Chlorofluorocarbon-113(CAS No:000076-13-1)	ppm	1	N.D.
Chlorofluorocarbon-114(CAS No:000076-14-2)	ppm	1	N.D.
Chlorofluorocarbon-115(CAS No:000076-15-3)	ppm	1	N.D.
Group III			
Chlorofluorocarbon-13(CAS No:000075-72-9)	ppm	1	N.D.
Chlorofluorocarbon-111(CAS No:000354-56-3)	ppm	1	N.D.
Chlorofluorocarbon-112(CAS No:000076-12-0)	ppm	1	N.D.
Chlorofluorocarbon-211(CAS No:135401-87-5)	ppm	1	N.D.
Chlorofluorocarbon-212(CAS No:076564-99-3)	ppm	1	N.D.
Chlorofluorocarbon-213(CAS No:060285-54-3)	ppm	1	N.D.
Chlorofluorocarbon-214(CAS No:002268-46-4)	ppm	1	N.D.
Chlorofluorocarbon-215(CAS No:000076-17-5)	ppm	1	N.D.
Chlorofluorocarbon-216(CAS No:001652-80-8)	ppm	1	N.D.
Chlorofluorocarbon-217(CAS No:000422-86-6)	ppm	1	N.D.

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CHC's(Chlorinated hydrocarbon)			
1,1,1,2-Tetrachloroethane(CAS No.:000630-20-6)	ppm	1	N.D.
1,1,1-Trichloroethane(CAS No.:000071-55-6)	ppm	1	N.D.
1,1,2,2-Tetrachloroethane(CAS No.:000079-34-5)	ppm	1	N.D.
1,1,2-Trichloroethane(CAS No.:000079-00-5)	ppm	1	N.D.
1,1-Dichloroethane(CAS No.:000075-35-4)	ppm	1	N.D.
1,1-Dichloroethane(CAS No.:000075-35-3)	ppm	1	N.D.
1,1-Dichloropropene(CAS No.:000563-58-6)	ppm	1	N.D.
1,2,3-Trichloropropane(CAS No.:000096-19-5)	ppm	1	N.D.
1,2-Dichloroethane(CAS No.:000107-06-2)	ppm	1	N.D.
1,2-Dichloropropane(CAS No.:000078-87-5)	ppm	1	N.D.
1,3-Dichloropropane(CAS No.:000142-28-9)	ppm	1	N.D.
2,2-Dichloropropane(CAS No.:000594-20-7)	ppm	1	N.D.
Carbon tetrachloride(CAS No.:000056-23-5)	ppm	1	N.D.
Chloroethane(CAS No.:000075-00-3)	ppm	1	N.D.
Chloroform(CAS No.:000067-66-3)	ppm	1	N.D.
Chloromethane(CAS No.:000074-87-3)	ppm	1	N.D.
Cis-1,2-Dichloroethene(CAS No.:000156-59-2)	ppm	1	N.D.
Cis-1,3-Dichloropropene(CAS No.:010061-01-5)	ppm	1	N.D.
Hexachlorobutadiene(CAS No.:000087-68-3)	ppm	1	N.D.
Methylene Chloride(CAS No.:000075-09-2)	ppm	1	N.D.
Tetachloroethene(CAS No.:000630-20-6)	ppm	1	N.D.
trans-1,2-Dichloroethene(CAS No.:000156-60-5)	ppm	1	N.D.
trans-1,3-Dichloropropene(CAS No.:010061-02-6)	ppm	1	N.D.
Trichloroethylene(CAS No.:000079-01-6)	ppm	1	N.D.
HCFC's(Hydrogenated chlorofluorocarbons)			
Hydrochlorofluorocarbon-21(CAS No.:000075-43-4)	ppm	1	N.D.
Hydrochlorofluorocarbon-22(CAS No.:000075-45-6)	ppm	1	N.D.
Hydrochlorofluorocarbon-31(CAS No.:000593-70-4)	ppm	1	N.D.
Hydrochlorofluorocarbon-121(CAS No.:000354-14-3)	ppm	1	N.D.
Hydrochlorofluorocarbon-122(CAS No.:000354-21-2)	ppm	1	N.D.
Hydrochlorofluorocarbon-123(CAS No.:000306-83-1)	ppm	1	N.D.
Hydrochlorofluorocarbon-124(CAS No.:002837-89-0)	ppm	1	N.D.
Hydrochlorofluorocarbon-131(CAS No.:000359-28-4)	ppm	1	N.D.
Hydrochlorofluorocarbon-131b(CAS No.:000471-43-2)	ppm	1	N.D.
Hydrochlorofluorocarbon-133a(CAS No.:000075-88-7)	ppm	1	N.D.
Hydrochlorofluorocarbon-141b(CAS No.:001717-00-6)	ppm	1	N.D.
Hydrochlorofluorocarbon-221	ppm	1	N.D.
Hydrochlorofluorocarbon-222(CAS No.:000422-30-0)	ppm	1	N.D.
Hydrochlorofluorocarbon-223	ppm	1	N.D.
Hydrochlorofluorocarbon-224	ppm	1	N.D.
Hydrochlorofluorocarbon-225ca(CAS No.:000422-56-0)	ppm	1	N.D.
Hydrochlorofluorocarbon-225cb(CAS No.:000507-55-1)	ppm	1	N.D.
Hydrochlorofluorocarbon-226(CAS No.:000431-87-8)	ppm	1	N.D.
Hydrochlorofluorocarbon-231	ppm	1	N.D.
Hydrochlorofluorocarbon-232	ppm	1	N.D.

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Hydrochlorofluorocarbon-233	ppm	1	N.D.
Hydrochlorofluorocarbon-234	ppm	1	N.D.
Hydrochlorofluorocarbon-235(CAS No.:013838-16-9)	ppm	1	N.D.
Hydrochlorofluorocarbon-241	ppm	1	N.D.
Hydrochlorofluorocarbon-242	ppm	1	N.D.
Hydrochlorofluorocarbon-243(CAS No.:000338-75-0)	ppm	1	N.D.
Hydrochlorofluorocarbon-244	ppm	1	N.D.
Hydrochlorofluorocarbon-251	ppm	1	N.D.
Hydrochlorofluorocarbon-252	ppm	1	N.D.
Hydrochlorofluorocarbon-253(CAS No.:000354-06-1)	ppm	1	N.D.
Hydrochlorofluorocarbon-261(CAS No.:000420-97-3)	ppm	1	N.D.
Hydrochlorofluorocarbon-262(CAS No.:000420-97-3)	ppm	1	N.D.
Hydrochlorofluorocarbon-271	ppm	1	N.D.

Sample Description:

No.1. Black plastic tube with white printing

Note : ppm=mg/kg

N.D. = Not detected (<MDL)

MDL= Method Detection Limit

"---"= Not Applicable

"-" = Not Regulation

**= Qualitative analysis(No Unit)

Negative = Undetectable / Positive = Detectable.

***These tests were subcontracted to SGS-SHSL TEXTLIE LAB (Date of testing: 2005/04/06-04/08).

* These tests were subcontracted to SGS Taiwan Ltd (Date of testing: 2005/04/07-04/15).

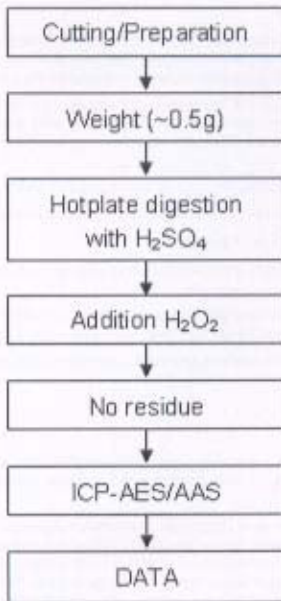
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ATTACHMENTS

Flow chart 1

Flow chart of digestion (EN 1122-2001 for Cd)



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

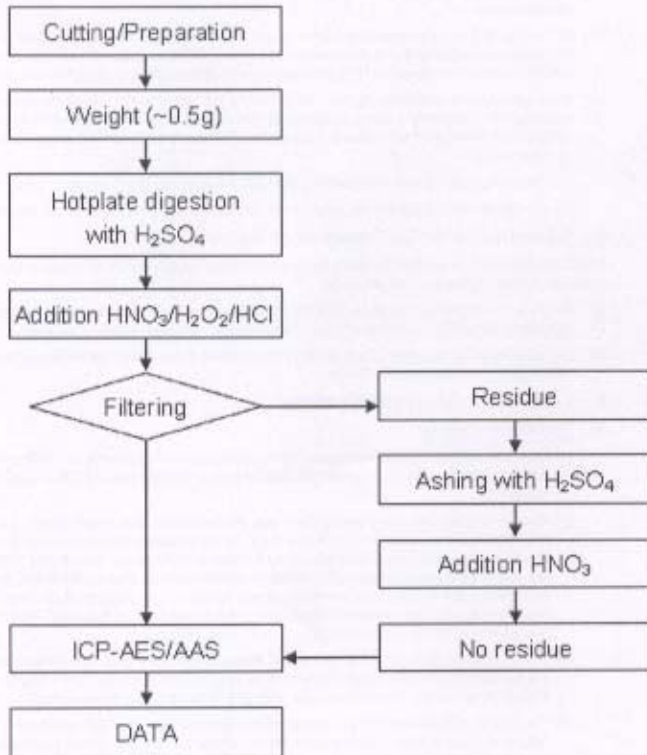
Tested by : Banyan Xu
 Checked by : Terry Wang

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Flow chart 2

Flow chart of digestion (Ashing after wet decomposition for Pb)



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

Tested by : Jeffery Dong
 Checked by : Terry Wang

*** End of Report ***

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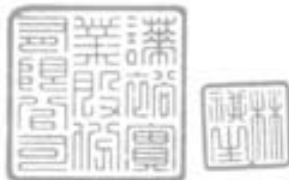
供應商環境管理物質保證書

Supplier Environment-Related Substances Guarantee Letter

茲保證各欄所填均屬實,如有因所填不實,造成可歸因於本公司之不良結果,本公司願負所衍生之責任

It is promised that the filled column is true. If it makes bad influence resulting from the false filling it caused by our company, we will be responsible for them.

公司名稱: 譚裕實業股份有限公司
(Company Name)



填表人: 柯美雪
(Contact Name)

填表說明: 本表請填高粉紅色的欄位,若無該項物質請填"0",若有則請填含量(單位:mg)。

Illustration:

Please fill in the pink space ("0" or "mg").

廠商名稱 (Supplier name)

譚裕實業

廠商代碼(若不確定可詢問本公司採購單位)廠商代碼請務必填寫正確,否則本公司將以此為辨識資料,若有錯誤由廠商自行負責。
(supplier code/you could ask our CE department)Please make it correct because we will identify all information by it. If it is wrong, you should be responsible for them.)

2279

填表人 (Contact Name)

柯美雪

填表日期 (Date of Fill)

2005年6月24日

預定回覆日(若可準時回覆,則不用填寫)(answer schedule)(If you could answer on time, you don't have to fill in)

此物料單piece 重量 (mg)(weight of one piece):

6850

料號(part number)

C407-510316-A

NO Chemical Category and Example Compounds 中文名稱 Chemical Formula 化學物質名稱 Example CAS Numbers (not all-inclusive)

等級A	等級A	中文名稱	化學物質名稱	化學式	CAS	Example CAS Numbers
A05	A05-Cadmium and its compounds	鎘及其化合物				
A05001	Cadmium	鎘	Cd	1.000	7440-43-9	75.0
A05002	Cadmium oxide	氧化鎘	CdO	0.875	1306-19-0	0
A05003	Cadmium sulfide	硫化鎘	CdS	0.778	1306-23-6	0
A05004	Cadmium chloride	氯化鎘	CdCl ₂	0.613	10108-64-2	0
A05005	Cadmium sulfate	硫酸鎘	CdSO ₄	0.539	10124-36-4	0
A05006	Cadmium carbonate	碳酸鎘	CdCO ₃	-	513-78-0	0
A05007	Cadmium fluoroborate	氟化鎘硼	-	-	14486-19-2	0
A05008	Cadmium nitrate	硝酸鎘	Cd(NO ₃) ₂	-	10325-94-7	0
A05009	Cadmium stearate	硬脂酸鎘	-	-	2223-93-0	0
A05010	Cadmium nitrate tetrahydrate	四水硝酸鎘	-	-	10023-68-1	0
A0500001	Other cadmium compound	-	-	-	-	0
A0500002	Other cadmium compound	-	-	-	-	0
A07	A07-Chromium (VI) and its compounds	六價鉻及其化合物				
A07001	Sodium dichromate	重鉻酸鈉	Na ₂ Cr ₂ O ₇	0.397	10588-01-9	0
A07002	Chromium(VI)oxide; Chromium trioxide; Chromium trioxide hexahydrate	三氧化鉻; 氧化鉻(六價); 酞化鉻	CrO ₃	0.520	1333-82-0	0
A07003	Calcium chromate	鉻酸鈣	CaCrO ₄	0.333	13765-19-0	0
A07004	Lead chromate; Chrome yellow	鉻酸鉛; 鉻黃	PbCrO ₄	0.161	7758-97-6	0
A07005	Potassium dichromate	重鉻酸鉀	K ₂ Cr ₂ O ₇	0.353	7778-50-9	0
A07006	Potassium chromate	鉻酸鉀	K ₂ CrO ₄	0.268	7789-00-6	0
A07007	Barium chromate	鉻酸鋇	BaCrO ₄	-	10294-40-3	0
A07008	Sodium chromate	鉻酸鈉	Na ₂ CrO ₄	-	7775-11-3	0
A07009	Strontium chromate	鉻酸銣	-	-	7789-06-2	0
A07010	Lithium chromate	鉻酸鋰	Li ₂ CrO ₄	-	14307-35-8	0
A07011	Potassium chlorochromate	氯鉻酸鉀	-	-	16037-50-6	0
A07012	Ammonium chromate	鉻酸銨	(NH ₄) ₂ CrO ₄	-	7788-98-9	0
A07013	Ceoxer chromate	鉻酸銻	CeCrO ₄	-	13548-42-0	0
A07014	Magnesium chromate	鉻酸鎂	MgCrO ₄	-	13423-61-5	0
A07015	Ammonium dichromate; Ammonium	重鉻酸銨	-	-	7789-09-5	0
A07016	Calcium dichromate; Calcium	重鉻酸鈣	-	-	14307-33-6	0
A07017	Zinc dichromate; Zinc bichromate	重鉻酸鋅	-	-	14018-95-2	0
A07018	Zinc chromate	鉻酸鋅	ZnCrO ₄	-	13530-65-9	0
A0700001	Other hexavalent chromium compound	-	-	-	-	0
A0700002	Other hexavalent chromium compound	-	-	-	-	0
A09	A09-Lead and its compounds	鉛及其化合物				
A09001	Lead	鉛	Pb	1.000	7439-92-1	26987.5
A09002	Lead carbonate	碳酸鉛	PbCO ₃	0.775	598-63-0	0
A09003	Lead (IV) oxide	二氧化鉛(四價)	PbO ₂	0.866	1309-60-0	0
A09004	Lead (II, IV) oxide	四氧化三鉛(二價,四價)	Pb ₃ O ₄	0.907	1314-41-6	0
A09005	Lead (II) sulfide	硫化鉛(二價)	PbS	0.866	1314-87-0	0

自製

柯美雪

NO	Chemical Category and Example Compounds 註: N 表示沒有資料, y 表示有資料但沒有量	中文名稱	Chemical Formula	全屬機算系 數	Example CAS Numbers (not all-inclusive)	PFH 含量	
						PFH 含量	PFH 含量
C05003	Diisononyl phthalate	鄰苯二甲酸二異壬酯	C ₂₄ H ₄₀ O ₄		28553-12-0		0
C05004	1,2-Benzenedicarboxylic acid diisodecyl	己二酸二異癸酯	C ₂₆ H ₄₄ O ₄		26761-40-0		0
C05005	Butyl benzyl phthalate	鄰苯二甲酸丁基苄酯	C ₁₈ H ₁₈ O ₄		85-68-7		0
C0500001	Other phthalate	其它鄰苯二甲酸鹽	-		-		0
C0500002	Other phthalate	-	-		-		0
D01	D01-Copper and its compounds	銅及其化合物		1.000	7440-50-8		0
D01001	Copper	銅	Cu				0
D0100001	Other copper compounds	-	-		-		0
D0100002	Other copper compounds	-	-		-		0
D02	D02-Gold and its compounds	金及其化合物		1.000	7440-57-5		0
D02001	Gold	金	Au				0
D0200001	Other gold compounds	-	-		-		0
D0200002	Other gold compounds	-	-		-		0
D03	D03-Palladium and its compounds	鉑及其化合物		1.000	7440-05-3		0
D03001	Palladium	鉑	Pd				0
D0300001	Other Palladium compounds	-	-		-		0
D0300002	Other Palladium compounds	-	-		-		0
D04	D04-Silver and its compounds	銀及其化合物		1.000	7440-22-4		0
D04001	Silver	銀	Ag				0
D0400001	Other silver compounds	-	-		-		0
D0400002	Other silver compounds	-	-		-		0
等級C	其它需要注意之物質						
C991	C991-Cobalt and its compounds	鈷及其化合物*2			7440-48-4		0
C991001	Cobalt(II)oxide	氧化鈷(二價)	CoO		1307-96-6		0
C991002	Cobalt oxide(II,III)	四氧化三鈷	Co ₃ O ₄		1308-06-1		0
C9910001	Other Cobalt Compounds	-	-		-		0
C9910002	Other Cobalt Compounds	-	-		-		0
C992001	C992-Chlorinated paraffin	CP 氯代烷烴			10871-26-2		0
C9920001							0
C9920002							0
C993001	C993-Tetrabromobisphenol-A-bis-(2,3-	四溴雙酚-A-雙(2,3-二溴丙酮)(TBBP-			21850-44-2		0
C9930001							0
C9930002							0
C994	C994-Polychlorinated naphthalene	PCN 聚氯化萘					0
C994001	Trichloronaphthalene	三氯化萘			1321-65-9		0
C994002	Tetrachloronaphthalene	四氯化萘			1335-88-2		0
C994003	Pentachloronaphthalene	五氯化萘			1321-64-8		0
C994004	Octachloronaphthalene	八氯化萘			2234-13-1		0
C9940001							0
C9940002							0
C995	C995-Polivinylchloride and	聚乙烯和聚乙稀混合物			9002-86-2		0
C996	C996-Formaldehyde:formalin:Formic	甲醛(單基物)	HCOOH		50-00-0		0
C997	C997-Misc.	滅蟻靈					0
C997001	Dodecachlorooctahydro-1,3,4-metheno-	十二氯八氫-1, 3, 4-英替諾-2H-環丁			2385-85-5		0
C997002	Aldrin	艾氏劑-殺蟲劑			309-00-2		0
C997003	Endrin	異狄氏劑-殺蟲劑			72-20-8		0
C997004	Dieldrin	狄氏劑-殺蟲劑			60-57-1		0
C997005	Toxarhene	毒殺芬-殺蟲劑					0
C9970001							0
C9970002							0
C998	C998-Cyanogen and its compounds	氰及其化合物					0
C998001	Acrylonitrile	丙烯腈			107-13-1		0
C998002	Sodium cyanides	氰化鈉	NaCN		143-33-9		0
C9980001							0
C9980002							0
C999	C999-其它需要注意的物質						0
C999001	Zinc and its compounds	鋅及其化合物	Zn				0
C999002	Manganese and its compounds	錳及其化合物	Mn				0
C999003	Sulfur hexafluoride (SF6)	六價硫化物					0
C999004	Thallium and its compounds	鉍及其化合物					0
C999005	Tellurium and its compounds	碲及其化合物					0
C999006	Picric Acid	苦味酸					0
C999007	Vanadium and its compounds	鈦及其化合物	V				0
C999008	Barium and its compounds	鋇及其化合物	Ba				0
C999009	Aluminum compounds (Soluble chloride)	鋁及其化合物	Al				0
C999010	Indium and its compounds	銦及其化合物					0
C999011	Zirconium and its compounds	鈷及其化合物	Zr				0
C999012	Tungsten and its compounds	鎢及其化合物	W				0
C999013	Boron and its compounds	硼及其化合物					0
C999014	Molybdenum and its compounds	鉬及其化合物					0
C9990001							0
C9990002							0

NO	Chemical Category and Example Compounds 註: N 表示沒有管理; y 表示有管理但沒有量	中文名稱	Chemical Formula	全球總產量 數	Example CAS Numbers (not all-inclusive)	ppm 含量
A13002	Selenous acid	亞硒酸	H ₂ SeO ₃	0.612	7783-00-8	0
A1300001	Other selenium compound	-	-	-	-	0
A1300002	Other selenium compound	-	-	-	-	0
A16	A16-Magnesium and its compounds	鎂及其化合物	-	-	-	0
A16001	Magnesium	金屬鎂	Mg	1.000	7439-95-4	0
A1600001	Other magnesium compound	-	-	-	-	0
A1600002	Other magnesium compound	-	-	-	-	0
B07	B07-Poly vinyl chloride (PVC)	聚氯乙烯(PVC)	-	-	-	0
B07001	Poly vinyl chloride(PVC)	聚氯乙烯(PVC)	(CH ₂ CHCl) _n	9002	86-2	0
B0700001	Other brominated flame retardant	-	-	-	-	0
B0700002	Other brominated flame retardant	-	-	-	-	0
B08	B08-Brominated flame retardant	含溴阻燃劑	-	-	-	0
B08001	Brominated flame retardant which comes	ISO 1043-4 編號FR(14)脂肪族/脂環	-	-	-	0
B08002	Brominated flame retardant which comes	ISO 1043-4 編號FR(15)脂肪族/脂環	-	-	-	0
B08003	Brominated flame retardant which comes	ISO 1043-4 編號FR(16)芳香族含溴化	-	-	-	0
B08004	Brominated flame retardant which comes	ISO 1043-4 編號FR(17)芳香族含溴化	-	-	-	0
B08005	Brominated flame retardant which comes	ISO 1043-4 編號FR(22)脂肪族/脂環	-	-	-	0
B08006	Brominated flame retardant which comes	ISO 1043-4 編號FR(42)含溴有機磷化	-	-	-	0
B08007	Poly(2,6-dibromo-phenylene oxide)	聚2,6-二溴苯醚	(C ₆ H ₂ Br ₂ O) _n	69882	11-7	0
B08008	Tetra-decaboro-diphenox-y-benzene	十四溴苯氧基苯	C ₁₈ H ₁₄ O ₂	58965	66-5	0
B08009	1,2-Bis(2,4,6-tribromo-phenoxy) ethane	1,2-雙(2,4,6-三溴苯氧基)乙烷	C ₁₄ H ₈ Br ₆ O ₂	37853	59-1	0
B08010	3,5,3',5'-Tetra-bromo-bisphenol A	3,5,3',5'-四溴雙酚A	C ₁₅ H ₁₂ Br ₄ O ₂	79	94-7	0
B08011	TBBA, unspecified	四溴雙酚A(結構不特定)	-	-	-	0
B08012	TBBA-epichlorohydrin oligomer	四溴雙酚A環氧氯丙烷低聚物	(C ₁₅ H ₁₂ Br ₄ O ₂ .C ₃ H ₅ O)	30496	13-0	0
B08013	TBBA-diethylol-ether oligomer	四溴雙酚A(環氧乙基)低聚物	-	40039	93-8	0
B08014	TBBA carbonate oligomer	四溴雙酚A(碳酸鹽)低聚物	-	70682	74-5	0
B08015	TBBA carbonate oligomer, phenoxy end	BC-52四溴雙酚A	(C ₁₅ H ₁₂ Br ₄ O ₂ .CCl ₂)	28906	13-0	0
B08016	TBBA carbonate oligomer, 2,4,6-	BC-58四溴雙酚A	(C ₇ H ₅ O ₂ .C ₁₆ H ₁₀ Br ₄)	94334	64-2	0
B08017	TBBA-bisphenol A-phenoxy polymer	四溴雙酚A-聚(2,6-二溴苯氧基)乙烷	(C ₇ H ₂ Br ₃ O ₃ .C ₁₆ H ₁₁ O)	71342	77-3	0
B08018	Brominated epoxy resin end-capped with	-	-	32844	27-2	0
B08019	Brominated epoxy resin end-capped with	-	-	139638	58-7	0
B08020	TBBA-(2,3-dibromo-propyl-ether)	四溴雙酚A(2,3-二溴丙基)醚	C ₂₁ H ₂₀ Br ₂ O ₂	135229	48-0	0
B08021	TBBA bis-(2-hydroxy-ethyl-ether)	四溴雙酚A雙(2-羥乙基)醚	C ₁₉ H ₂₀ Br ₄ O ₄	21850	44-2	0
B08022	TBBA-bis-(allyl-ether)	四溴雙酚A雙(烯丙基)醚	C ₂₁ H ₂₀ Br ₄ O ₂	4162	45-2	0
B08023	TBBA-dimethyl-ether	四溴雙酚A二甲醚	C ₁₇ H ₁₆ Br ₄ O ₂	25327	89-3	0
B08024	Tetrabromo-bisphenol S	四溴雙酚S	C ₁₂ H ₆ Br ₄ O ₄ S	37853	61-5	0
B08025	TBBS-bis-(2,3-dibromo-propyl-ether)	四溴雙酚S雙(2,3-二溴丙基)醚	C ₁₈ H ₁₄ Br ₈ O ₄ S	39635	79-5	0
B08026	2,4-Dibromo-phenol	2,4-二溴酚	C ₆ H ₄ Br ₂ O	42757	55-1	0
B08027	2,4,6-tribromo-phenol	2,4,6-三溴酚	C ₆ H ₃ Br ₃ O	615	58-7	0
B08028	Pentabromo-phenol	五溴酚	C ₆ H ₂ Br ₅ O	118	79-6	0
B08029	2,4,6-Tribromo-phenyl-allyl-ether	2,4,6-三溴酚丙基基醚	C ₉ H ₇ Br ₃ O	608	71-9	0
B08030	Tribromo-phenyl-allyl-ether, unspecified	三溴酚丙基基醚(結構不特定)	C ₉ H ₇ Br ₃ O	3278	89-5	0
B08031	Hexabromo-cyclo-dodecane (HBCD),	1,2,5,6,9,10-六溴環十二烷	C ₁₂ H ₁₈ Br ₆	26762	91-4	0
B08032	Tetrabromo-chloro-octane	溴化或氯化(7-12碳元素環)烷(Cl或Br)	C ₈ H ₁₂ Br ₄	3194	55-6	0
B08033	1,2-Dibromo-4-(1,2 dibromo-methyl)-	1,2-二溴-4-(1,2-二溴-甲基)-環乙烷	C ₈ H ₁₂ Br ₄	31454	48-5	0
B08034	TBPA Na salt	-	-	3322	93-8	0
B08035	Tetramethoxy-tetrabromo-antihydrin	四溴苯基醚	C ₈ H ₄ O ₄ Na ₂	25357	79-3	0
B08036	Bis(methyl)tetrabromo-phthalate	雙(甲基)四溴鄰苯二甲酸鹽	C ₈ H ₄ O ₃	632	79-1	0
B08037	Bis(2-ethylhexyl)tetrabromo-phthalate	雙(2-乙基己基)四溴鄰苯二甲酸鹽	C ₂₄ H ₃₄ Br ₄ O ₄	55481	60-2	0
B08038	2-Hydroxy-propyl-2-(2-hydroxy-ethoxy)-	2-羥基-丙基-2-(2-羥基-乙氧基)-乙基	C ₁₅ H ₁₆ Br ₄ O ₇	26040	51-7	0
B08039	TBPA, glycol-and propylene-oxide esters	-	-	20566	35-2	0
B08040	N,N'-Ethylene - bis-(tetrabromo-	-	-	75790	69-1	0
B08041	Ethylene-bis(5,6-dibromo-norbornane-	-	-	32588	76-4	0
B08042	2,3-Dibromo-2-butene-1,4-diol	2,3-二溴-2-烯-1,4-二醇	C ₂₀ H ₂₀ Br ₄ N ₂ O ₄	52907	07-0	0
B08043	Dibromo-neopentyl-glycol	二溴辛戊二醇	C ₄ H ₆ Br ₂ O ₂	3234	02-4	0
B08044	Dibromo-propanol	2,3-二溴丙醇	C ₅ H ₁₀ Br ₂ O ₂	3296	90-0	0
B08045	Tribromo-neopentyl-alcohol	三溴辛乙醇	C ₃ H ₆ Br ₃ O	96	13-9	0
B08046	Poly tribromo-styrene	聚三溴苯乙烯	C ₅ H ₉ Br ₃ O	36483	57-5	0
B08047	Tribromo-styrene	三溴苯乙烯	-	57137	10-7	0
B08048	Dibromo-styrene grafted PP	-	-	61368	34-1	0
B08049	Poly-dibromo-styrene	聚二溴苯乙烯	-	171091	06-8	0
B08050	Bromo-Chloro-paraffins	溴化/氯化石蠟	C ₈ H ₆ Br ₂	31780	26-4	0
B08051	Bromo-Chloro-olefin	溴化/氯化α-烯烴	-	68955	41-9	0
B08052	Vinylbromide	溴乙炔	-	82600	56-4	0
B08053	Tri-(2,3-dibromo-propyl)-isocyanurate	三(2,3-二溴丙基)異氰尿酸鹽	C ₂₇ H ₃ Br ₆	593	60-2	0
B08054	Tri(2,4-Dibromo-phenyl) phosphate	三(2,4-二溴苯基)磷酸鹽	C ₁₂ H ₁₅ Br ₆ N ₃ O ₃	52434	90-9	0
B08055	Tri(tribromo-neopentyl) phosphate	三(三溴-新戊基)磷酸鹽	C ₁₈ H ₁₉ Br ₆ O ₄ P	49690	63-3	0
B08056	Chlorinated and brominated phosphate	-	-	19186	97-1	0
B08057	Pentabromo-toluene	五溴甲苯	C ₇ H ₃ Br ₅	125997	20-8	0
B08058	Pentabromo-benzyl bromide	五溴-溴化苄	-	87	83-2	0
B08059	1,3-Butadiene homopolymer,brominated	-	-	38521	51-6	0
B08060	Pentabromo-benzyl-acrylate, monomer	五溴苄基丙烯酸(單體)	-	6844	46-3	0
B08061	Pentabromo-benzyl-acrylate, polymer	五溴苄基丙烯酸(聚合物)	C ₁₀ H ₅ Br ₅ O ₂	59447	55-1	0
B08062	Decabromo-diphenyl-ethane	十溴二苯乙烷	(C ₁₀ H ₅ Br ₅ O ₂) ₂	59447	57-3	0
B08063	Tribromo-phenyl-maleinimide	-	C ₁₄ H ₄ Br ₃ O ₂	84852	53-9	0
B08064	Brominated trimethylphenyl-lindane	-	C ₁₀ H ₄ Br ₃ N ₂ O ₂	59789	51-4	0
B0800001	Other Brominated Flame Retardant	-	-	-	-	0
B0800002	Other Brominated Flame Retardant	-	-	-	-	0
C05	C05-phthalate Salts	鄰苯二甲酸鹽	-	-	-	0
C05001	Dibutylphthalate	鄰苯二甲酸二丁酯	C ₂₀ H ₃₀ O ₄	84	74-2	0
C05002	Di(2-ethylhexyl)phthalate	鄰苯二甲酸二(2-乙基己基)酯	C ₂₈ H ₄₆ O ₄	117	81-7	0

NO	Chemical Category and Example Compounds		Chemical Formula	Example CAS Numbers		ppm 含量
	註: N 表示沒有管制; Y 表示有管制但沒有量	中文名稱		全屬機算系 數	(not all-inclusive)	
	HCFC-124	HCFC-124	-	-	-	0
	HCFC-124*2	HCFC-124*2	-	-	-	0
	HCFC-131	HCFC-131	-	-	-	0
	HCFC-132	HCFC-132	-	-	-	0
	HCFC-133	HCFC-133	-	-	-	0
	HCFC-141	HCFC-141	-	-	-	0
	HCFC-141b*2	HCFC-141b*2	-	-	-	0
	HCFC-142	HCFC-142	-	-	-	0
	HCFC-142b*2	HCFC-142b*2	-	-	-	0
	HCFC-151	HCFC-151	-	-	-	0
	HCFC-221	HCFC-221	-	-	-	0
	HCFC-222	HCFC-222	-	-	-	0
	HCFC-223	HCFC-223	-	-	-	0
	HCFC-224	HCFC-224	-	-	-	0
	HCFC-225	HCFC-225	-	-	-	0
	HCFC-225ca*2	HCFC-225ca*2	-	-	-	0
	HCFC-225cb*2	HCFC-225cb*2	-	-	-	0
	HCFC-226	HCFC-226	-	-	-	0
	HCFC-231	HCFC-231	-	-	-	0
	HCFC-232	HCFC-232	-	-	-	0
	HCFC-233	HCFC-233	-	-	-	0
	HCFC-234	HCFC-234	-	-	-	0
	HCFC-235	HCFC-235	-	-	-	0
	HCFC-241	HCFC-241	-	-	-	0
	HCFC-242	HCFC-242	-	-	-	0
	HCFC-243	HCFC-243	-	-	-	0
	HCFC-244	HCFC-244	-	-	-	0
	HCFC-251	HCFC-251	-	-	-	0
	HCFC-252	HCFC-252	-	-	-	0
	HCFC-253	HCFC-253	-	-	-	0
	HCFC-261	HCFC-261	-	-	-	0
	HCFC-262	HCFC-262	-	-	-	0
	HCFC-271	HCFC-271	-	-	-	0
CD400001	others					0
CD400002	others					0
C06	C06-Radioactive substances	放射性物質				0
C06001	Uranium	鈾	U	-	-	0
C06002	Plutonium	鈾	Pu	-	-	0
C06003	Radon	釷	Rn	-	-	0
C06004	Americium	錒	Am	-	-	0
C06005	Thorium	釷	Th	-	-	0
C06006	Cesium	銫	Cs	7440-46-2	-	0
C06007	Strontium	銣	Sr	7440-24-6	-	0
C0600001	Other radioactive substance					0
C0600002	Other radioactive substance					0
	等級B					0
A01	A01-Antimony and its compounds	銻及其化合物				0
A01001	Antimony	銻	Sb	1.000	7440-36-0	0
A01002	Antimony trichloride	三氯化銻	SbCl ₃	0.534	10025-91-9	0
A01003	Antimony trioxide	三氧化銻	Sb ₂ O ₃	0.835	1309-64-4	0
A01004	Antimony pentoxide	五氧化二銻	Sb ₂ O ₅	0.753	1314-60-9	0
A01005	Sodium antimonate	偏銻酸鈉	NaSbO ₃	0.632	15432-85-6	0
A0100001	Other antimony compound	其它銻化合物				0
A0100002	Other antimony compound	其它銻化合物				0
A02	A02-Arsenic and arsenic compounds	砷及其化合物				0
A02001	Arsenic	砷	As	1.000	7440-38-2	0
A02002	Gallium arsenide	鎵砷化合物	GaAs	0.518	1303-00-0	0
A02003	Arsenic pentoxide	五氧化二砷	As ₂ O ₅	0.652	1303-28-2	0
A02004	Arsenic trioxide	三氧化二砷	As ₂ O ₃	0.757	1327-53-3	0
A0200001	Other arsenic compound					0
A0200002	Other arsenic compound					0
A03	A03-Beryllium and its compounds	鈹及其化合物				0
A03001	Beryllium	鈹	Be	1.000	7440-41-7	0
A03002	Beryllium oxide	氧化鈹	BeO	0.360	1304-56-9	0
A0300001	Other beryllium compound					0
A0300002	Other beryllium compound					0
A04	A04-Bismuth and its compounds	銻及其化合物				0
A04001	Bismuth	銻	Bi		7440-69-9	0
A04002	Bismuth trioxide	三氧化銻	Bi ₂ O ₃		1304-76-3	0
A04003	Bismuth nitrate	硝酸銻	Bi(NO ₃) ₃		10361-44-1	0
A0400001	Other bismuth compound					0
A0400002	Other bismuth compound					0
A11	A11-Nickel and its compounds	鎳及其化合物				0
A11001	Nickel(II) oxide	氧化鎳	NiO	0.786	1313-99-1	0
A11002	Nickel(II) carbonate	碳酸鎳	NiCO ₃	0.494	3333-67-3	0
A11003	Nickel(II) Sulfate	硫酸鎳	NiSO ₄	0.379	7786-81-4	0
A11004	Nickel	金屬鎳	Ni	1.000	7440-02-0	0
A1100001	Other nickel compound					0
A1100002	Other nickel compound					0
A13	A13-Selenium and its compounds	硒及其化合物				0
A13001	Selenium	硒	Se	1.000	7782-49-2	0

NO	Chemical Category and Example Compounds 註: N 表示沒有管轄, P 表示有管轄但沒有量	中文名稱	Chemical Formula	全球總貿易 數	Example CAS Numbers (not all-inclusive)	GPM 合規管轄
C02011	5-nitro-o-toluidine	5-硝基-鄰甲苯胺	C ₇ H ₇ N ₂ O ₂	-	99-55-8	0
C02012	3,3'-dichloro-4,4'	3,3'-二氯-4,4'-二氨基二苯基甲烷	C ₁₂ H ₈ Cl ₂ N ₂	-	101-14-4	0
C02013	4,4-methylenedianiline	4,4-二苯二氨基甲烷	C ₁₂ H ₈ N ₂	-	101-77-9	0
C02014	4,4-diaminodibenzylether	4,4-二氨基二苯醚	C ₁₂ H ₈ N ₂ O	-	101-80-4	0
C02015	p-Chloroaniline	對氯苯胺	C ₆ H ₆ ClN	-	106-47-8	0
C02016	3,3-Dimethoxybenzidine	3,3-二甲氧基聯苯胺	C ₁₄ H ₁₂ N ₂ O ₂	-	119-90-4	0
C02017	3,3-Dimethylbenzidine	3,3-二甲基聯苯胺	C ₁₄ H ₁₄ N ₂	-	119-93-7	0
C02018	p-Cresidine(5-Methyl-o-anisidine)	氨基對甲苯甲醚	C ₈ H ₉ NO	-	120-71-8	0
C02019	2,4,5-Trimethylaniline	2,4,5-均三甲苯胺	C ₈ H ₉ N	-	137-17-7	0
C02020	4,4-Thiodianiline(4,4-	4,4-硫雙苯胺	C ₁₂ H ₈ N ₂ S	-	139-65-1	0
C02021	4-methoxy-m-phenylenediamine	2,4-二氨基苯甲醚	C ₈ H ₉ N ₂ O	-	615-05-4	0
C02022	3,3-Dimethyl-4,4-Diam-	3,3-二甲基-4,4-二氨基二苯基甲烷	C ₁₄ H ₁₄ N ₂	-	838-88-0	0
C020001	Other Azonitriles Compounds	-	-	-	-	0
C020002	Other Azonitriles Compounds	-	-	-	-	0
C04	C04-Ozone depleting substances	破壞臭氧層之物質	-	-	-	0
C04097	CFC-11	CFC-11	CFCl ₃	-	75-69-4	0
	CFC-12	CFC-12	CF ₂ Cl ₂	-	75-71-8	0
	CFC-113	CFC-113	C ₂ F ₃ Cl ₃	-	76-13-1	0
	CFC-114	CFC-114	C ₂ F ₄ Cl ₂	-	76-14-2	0
	CFC-115	CFC-115	C ₂ F ₅ Cl	-	76-15-3	0
C04098	Halon-1211	哈龍1211	CF ₃ BrCl	-	353-59-3	0
	Halon-1301	哈龍1301	CF ₃ Br	-	75-63-8	0
	Halon-2402	哈龍2402	C ₂ F ₄ Br ₂	-	124-73-2	0
C04099	CFC-13	CFC-13	CF ₃ Cl	-	75-72-9	0
	CFC-111	CFC-111	C ₃ FCl ₃	-	354-56-3	0
	CFC-112	CFC-112	C ₃ F ₂ Cl ₂	-	76-12-0	0
	CFC-211	CFC-211	C ₃ FCl ₂	-	422-78-6	0
	CFC-212	CFC-212	C ₃ F ₂ Cl ₂	-	3182-26-1	0
	CFC-213	CFC-213	C ₃ F ₂ Cl ₃	-	134237-31-3	0
	CFC-214	CFC-214	C ₃ F ₃ Cl ₂	-	29255-31-0	0
	CFC-215	CFC-215	C ₃ F ₃ Cl ₃	-	1599-41-3	0
	CFC-216	CFC-216	C ₃ F ₄ Cl ₂	-	661-97-2	0
	CFC-217	CFC-217	C ₃ F ₄ Cl	-	422-86-6	0
C04100	Carbon tetrachloride	四氯化碳	CCl ₄	-	-	0
C04101	1,1,1-Trichloroethane	1,1,1-三氯乙烷	C ₂ HCl ₃	-	-	0
C04102	Chlorobromomethane	氯溴甲烷	CH ₂ BrCl	-	-	0
C04103	Methyl bromide	溴甲烷	CH ₃ Br	-	74-83-9	0
C04104	HBFCs	HBFC	-	-	-	0
	Dibromofluoromethane	二溴氟甲烷	CHFBr ₂	-	-	0
	Bromodifluoromethane	溴二氟甲烷	CHF ₂ Br	-	-	0
	Bromofluoromethane	溴氟甲烷	CH ₂ FBr	-	-	0
	Tetrabromofluoroethane	四溴氟乙烷	C ₂ HFBr ₄	-	-	0
	Tribromodifluoroethane	三溴二氟乙烷	C ₂ HF ₂ Br ₃	-	-	0
	Dibromotrifluoroethane	二溴三氟乙烷	C ₂ HF ₃ Br ₂	-	-	0
	Bromotetrafluoroethane	溴四氟乙烷	C ₂ HF ₄ Br	-	-	0
	Tribromofluoroethane	三溴氟乙烷	C ₂ H ₂ FBr ₃	-	-	0
	Dibromodifluoroethane	二溴二氟乙烷	C ₂ H ₂ F ₂ Br ₂	-	-	0
	Bromotrifluoroethane	溴三氟乙烷	C ₂ H ₂ F ₃ Br	-	-	0
	Dibromofluoroethane	二溴氟乙烷	C ₂ H ₂ FBr ₂	-	-	0
	Bromodifluoroethane	溴二氟乙烷	C ₂ H ₂ F ₂ Br	-	-	0
	Bromofluoroethane	溴氟乙烷	C ₂ H ₃ FBr	-	-	0
	Hexabromofluoropropane	六溴氟丙烷	C ₃ HFBr ₆	-	-	0
	Pentabromodifluoropropane	五溴二氟丙烷	C ₃ HF ₂ Br ₅	-	-	0
	Tetrabromotrifluoropropane	四溴三氟丙烷	C ₃ HF ₃ Br ₄	-	-	0
	Tribromotetrafluoropropane	三溴四氟丙烷	C ₃ HF ₄ Br ₃	-	-	0
	Dibromopentafluoropropane	二溴五氟丙烷	C ₃ HF ₅ Br ₂	-	-	0
	Bromohexafluoropropane	溴六氟丙烷	C ₃ HF ₆ Br	-	-	0
	Pentabromofluoropropane	五溴氟丙烷	C ₃ H ₂ FBr ₅	-	-	0
	Tetrabromodifluoropropane	四溴二氟丙烷	C ₃ H ₂ F ₂ Br ₄	-	-	0
	Tribromotrifluoropropane	三溴三氟丙烷	C ₃ H ₂ F ₃ Br ₃	-	-	0
	Dibromotetrafluoropropane	二溴四氟丙烷	C ₃ H ₂ F ₄ Br ₂	-	-	0
	Bromopentafluoropropane	溴五氟丙烷	C ₃ H ₂ F ₅ Br	-	-	0
	Tetrabromofluoropropane	四溴氟丙烷	C ₃ H ₃ FBr ₄	-	-	0
	Tribromodifluoropropane	三溴二氟丙烷	C ₃ H ₃ F ₂ Br ₃	-	-	0
	Dibromotrifluoropropane	二溴三氟丙烷	C ₃ H ₃ F ₃ Br ₂	-	-	0
	Bromotetrafluoropropane	溴四氟丙烷	C ₃ H ₃ F ₄ Br	-	-	0
	Tribromofluoropropane	三溴氟丙烷	C ₃ H ₃ FBr ₃	-	-	0
	Dibromodifluoropropane	二溴二氟丙烷	C ₃ H ₃ F ₂ Br ₂	-	-	0
	Bromotrifluoropropane	溴三氟丙烷	C ₃ H ₃ F ₃ Br	-	-	0
	Dibromofluoropropane	二溴氟丙烷	C ₃ H ₃ FBr ₂	-	-	0
	Bromodifluoropropane	溴二氟丙烷	C ₃ H ₃ F ₂ Br	-	-	0
	Bromofluoropropane	溴氟丙烷	C ₃ H ₄ FBr	-	-	0
	Chlorobromomethane	氯溴丙烷	CH ₂ BrCl	-	-	0
C04105	HCFCs	HCFC	-	-	-	0
	HCFC-21	HCFC-21	-	-	-	0
	HCFC-22	HCFC-22	-	-	-	0
	HCFC-31	HCFC-31	-	-	-	0
	HCFC-121	HCFC-121	-	-	-	0
	HCFC-122	HCFC-122	-	-	-	0
	HCFC-123	HCFC-123	-	-	-	0
	HCFC-123*2	HCFC-123*2	-	-	-	0

NO	Chemical Category and Example Compounds 註: N 表示沒有資料, P 表示有資料但沒有量	中文名稱	Chemical Formula	金屬總量	Example CAS Numbers (not all-inclusive)	ppm 含量
				數		
A18013	Tributyltin laurate	月桂酸三丁基錫	(C ₄ H ₉) ₃ SnC ₁₇ H ₃₃ O ₂	-	3090-36-6	0
A18014	Bis(tributyltin) ethylate	鄰苯二甲酸三丁基錫	(C ₄ H ₉) ₆ (COO) ₂ (C ₂ H ₅)	-	4782-29-0	0
A18015	Copolymer of alkyl acrylate, methyl	烷基丙烯酸, 甲基丙基酸甲酯, 甲	-	-	-	0
A18016	Tributyltin sulfamate	磺酸三丁基錫	(C ₄ H ₉) ₃ SnSO ₂ NH ₂	-	6517-25-5	0
A18017	Bis(tributyltin) maleate	馬來酸三丁基錫	C ₇ H ₁₄ (COO) ₂ (C ₄ H ₉) ₂	-	14275-57-1	0
A18018	Tributyltin chloride	氯化三丁基錫	(C ₄ H ₉) ₃ SnCl	-	1461-22-9	0
A18019	Mixture of tributyltin	環戊烷甲酸甲酯三丁基錫及其異構	(C ₄ H ₉) ₃ SnCO ₂ C ₅ H ₉	-	-	0
A18020	Mixture of tributyltin	1,2,3,4,4a,4b,5,6,10,10a-十氧-7-異丙基-	-	-	-	0
A18021	Tributyl tin bromide	溴化三丁基錫	-	-	1461-23-0	0
A18022	Tripheyl tin	三苯基錫	-	-	668-34-8	0
A18023	Tripheyl tin chloroacetate	三苯基錫氯代乙酸鹽	-	-	7094-94-2	0
A18024	Tripheyl tin methacrylate	三丁基錫甲基丙基丙酸鹽	-	-	2155-70-6	0
A18025	Tripheyl tin fluoride	三丁基錫氟化物	-	-	1983-10-4	0
A18026	Bis(tributyl tin)2,3-Dibromosuccinate	雙(三丁基錫)2,3-二溴丁二酸鹽	-	-	31732-71-5	0
A18027	Tripheyl tin acetate	三丁基錫之醋酸(醋酸三丁基錫)	-	-	56-36-0	0
A18028	Bis(tributyltin)maleate	雙(三丁基錫)馬來酸鹽	-	-	14275-57-1	0
A18029	Mixture of tributyl tin	三丁基錫-環戊烷羧酸鹽和類似化合	-	-	85409-17-2	0
A1800001	Other Tributyl Tin & Triphenyl Tin	-	-	-	-	0
A1800002	Other Tributyl Tin & Triphenyl Tin	-	-	-	-	0
B02	B02-Poly-brominated biphenyls	PBB 多溴聯苯	C ₁₂ H ₁₀ Br _(x,y)	-	59536-65-1	0
B02001	Bromobiphenyl-1	-	-	-	2052-07-05	0
B02002	Bromobiphenyl-2	-	-	-	2113-57-7	0
B02003	Bromobiphenyl-3	-	-	-	92-66-0	0
B02004	Dibromobiphenyl	-	-	-	92-86-4	0
B02005	Tribromobiphenyl	-	-	-	-	0
B02006	Tetrabromobiphenyl	-	-	-	40088-45-7	0
B02007	Pentabromobiphenyl	-	-	-	-	0
B02008	Hexabromobiphenyl-1	-	-	-	59080-40-9	0
B02009	Hexabromobiphenyl-2	-	-	-	36355-01-8	0
B02010	Hexabromobiphenyl-3	-	-	-	6777-32-7	0
B02011	Heptabromobiphenyl	-	-	-	-	0
B02012	Octabromobiphenyl	-	-	-	61288-13-9	0
B02013	Nonabromobiphenyl	-	-	-	-	0
B02014	Decabromobiphenyl	-	-	-	13654-09-06	0
B0200001	Other Poly-brominated biphenyls	-	-	-	-	0
B0200002	Other Poly-brominated biphenyls	-	-	-	-	0
B03	B03-Polybrominated diphenyl ethers	PBDEs 多溴二苯醚	C ₁₂ H ₈ Br _(x,y) O	-	-	0
B03001	Bromobiphenyl Ether	-	-	-	101-55-3	0
B03002	Dibromobiphenyl Ether	-	-	-	2050-47-7	0
B03003	Tribromobiphenyl Ether	-	-	-	49690-94-0	0
B03004	Tetrabromobiphenyl Ether	-	-	-	40088-47-9	0
B03005	Pentabromobiphenyl Ether	五溴二苯醚	-	-	32534-81-9	0
B03006	Hexabromobiphenyl Ether	六溴二苯醚	-	-	36483-60-0	0
B03007	Heptabromobiphenyl Ether	-	-	-	68928-80-3	0
B03008	Octabromobiphenyl Ether	八溴二苯醚	-	-	32536-52-0	0
B03009	Nonabromobiphenyl Ether	-	-	-	63936-56-1	0
B03010	Decabromobiphenyl Ether	十溴二苯醚	-	-	1163-19-5	0
B0300001	Other Polybrominated diphenyl ethers	-	-	-	-	0
B0300002	Other Polybrominated diphenyl ethers	-	-	-	-	0
B05	B05-Polychlorinated biphenyls	多氯聯苯(PCB類)	-	-	-	0
B05001	Polychlorinated biphenyls	PCB(聚氯聯苯)	-	-	1336-36-3	0
B05002	Polychlorinated terphenyls	PCTT(多氯三聯苯)	-	-	61788-33-8	0
B0500001	Other Polychlorinated biphenyls	-	-	-	-	0
B0500002	Other Polychlorinated biphenyls	-	-	-	-	0
B06	B06-Polychlorinated biphenyls(Cl>3)	多氯化苯(氯原子數3個以上)	-	-	70776-03-3	0
B0600001	Other polychlorinated Naphthalene	-	-	-	-	0
B0600002	Other polychlorinated Naphthalene	-	-	-	-	0
B09	B09-Short Chain Chlorinated paraffine	短鏈氯化石蠟	-	-	-	0
B09001	Chlorinated paraffine(C10-13)	氯化石蠟	-	-	85535-84-8	0
B0900001	Other Short Chain Chlorinated Paraffin	-	-	-	-	0
B0900002	Other Short Chain Chlorinated Paraffin	-	-	-	-	0
C01	C01-Asbestor	石棉	-	-	-	0
C01001	Actinolite	陽起石	-	-	77536-66-4	0
C01002	Amosite	鐵石棉	-	-	12172-73-5	0
C01003	Anthophyllite	直閃石	-	-	77536-67-5	0
C01004	Chrysotile	溫石棉	-	-	12001-29-5	0
C01005	Crocidolite	藍石棉	-	-	12001-28-4	0
C01006	Tremolite	透閃石	-	-	77536-68-6	0
C0100001	Other asbesto	-	-	-	-	0
C0100002	Other asbesto	-	-	-	-	0
C02	C02-Azonitrides Compounds	偶氮化合物	-	-	-	0
C02001	4-Aminoozobenzene	4-氨基偶氮苯	C ₁₂ H ₁₁ N ₁	-	60-09-3	0
C02002	o-Anisidine	鄰氨基苯甲醚	C ₇ H ₇ NO	-	90-04-0	0
C02003	2-Naphthylamine	2-奈胺	C ₁₀ H ₉ N	-	91-39-8	0
C02004	3,3-Dichlorobenzidine	3,3-二氯聯苯胺	C ₁₂ H ₁₀ Cl ₂ N ₂	-	91-94-1	0
C02005	biphenyl-4-ylamine	4-氨基聯苯	C ₁₂ H ₁₁ N	-	92-67-1	0
C02006	Benzidine	聯苯胺	C ₁₂ H ₁₁ N ₂	-	92-87-5	0
C02007	o-Toluidine	鄰甲苯胺	C ₇ H ₉ N	-	95-53-4	0
C02008	4-chloro-o-toluidine	4-氯-鄰甲苯胺	C ₇ H ₇ ClN	-	95-69-2	0
C02009	2,4-toluenediamine	2,4-甲苯二胺	C ₇ H ₁₀ N ₂	-	95-80-7	0
C02010	o-Aminoazotoluene	鄰氨基偶氮甲苯	C ₁₀ H ₉ N ₁	-	97-56-3	0

NO	Chemical Category and Example Compounds 註: N 表示沒有管理; y 表示有管理但沒有量	中文名稱	Chemical Formula	分子量 數	Example CAS Numbers (not all-inclusive)	PPM 含量 限制
A09006	Lead (II) oxide	氧化鉛(二價)	PbO	0.928	1317-36-8	0
A09007	Lead(II) carbonate basic	鹼式碳酸鉛	2PbCO ₃ ·Pb(OH) ₂	0.801	1319-46-6	0
A09008	Lead hydroxycarbonate	羥基碳酸鉛	2PbCO ₃ ·Pb(OH) ₂	0.801	1344-36-1	0
A09009	Lead(II) sulfide	硫化鉛	PbS	0.683	7446-14-2	0
A09010	Lead(II) phosphate	磷酸鉛	Pb ₃ (PO ₄) ₂	0.766	7446-27-7	0
A09011	Lead(II) chromate	鉻酸鉛	PbCrO ₄	0.641	7758-97-6	0
A09012	Lead(II) titanate	鈦酸鉛	PbTiO ₃	0.688	12060-00-3	0
A09013	Lead sulfate, sulphuric acid, Lead salt	鉛的硫酸鹽	Pb ₂ SO ₄	1.000	15739-80-7	0
A09014	Lead sulphate, tribasic	三鹽基硫酸鉛	PbSO ₄ ·H ₂ O	0.850	12202-17-4	0
A09015	Lead stearate	硬脂酸鉛	Pb(C ₁₇ H ₃₅ COO) ₂	0.268	1072-35-1	0
A09016	Lead stearate, dibasic	二鹽基硫酸鉛	2PbO	0.410	56189-09-4	0
A09017	Lead tin alloy	鉛錫合金	-	-	39412-44-7	0
A09018	Dilead trioxide	三氧化二鉛	Pb ₃ O ₄	-	-	0
A09019	Lead azide	疊氮化鉛	-	-	13424-46-9	0
A09020	Lead (II) fluoride	氟化鉛(二價)	PbF ₂	7783-46-2	0	0
A09021	Lead (II) chloride	氯化鉛(二價)	PbCl ₂	7758-95-4	0	0
A09022	Lead (II) chloride	四氯化鉛	PbCl ₄	13463-30-4	0	0
A09023	Lead (II) iodide	碘化鉛(二價)	PbI ₂	10101-63-0	0	0
A09024	Lead (II) cyanide	氰化鉛(二價)	Pb(CN) ₂	592-05-2	0	0
A09025	Lead fluoroborate	氟化硼鉛	-	-	13814-96-5	0
A09026	Lead fluosilicate	氟化矽鉛	-	-	25808-74-6	0
A09027	Lead nitrate	硝酸鉛	Pb(NO ₃) ₂	30099-74-8	0	0
A09028	Lead perchlorate	高氯酸鉛	-	-	13637-76-8	0
A09029	Lead thiocyanate	硫氰酸鉛	-	-	592-87-0	0
A09030	Lead (II) sulfide	硫化鉛(二價)	PbS	7446-14-2	0	0
A09031	Lead hydrocarbonate	氫氧碳酸鉛	-	-	1319-46-6	0
A09032	Lead (II) acetate	醋酸鉛(二價)	PbAc	301-04-2	0	0
A09033	Lead (II) acetate, trihydrate	三水醋酸鉛(二價)	-	-	6080-56-4	0
A09034	Lead (IV) acetate	醋酸鉛(四價)	Pb(Ac) ₄	546-67-8	0	0
A09035	Lead selenide	亞碲酸鉛	-	-	12069-00-0	0
A09036	Lead oleate	油酸鉛	-	-	1120-46-3	0
A09037	Lead(II)metaborate	偏硼酸鉛(二價)	-	-	10214-39-8	0
A09038	Lead metasilicate	矽酸鉛	-	-	11120-22-2 / 22569-	0
A09039	Lead antimonate	亞錒酸鉛	-	-	12266-38-5 / 13150-	0
A09040	Lead arsenate (1:1)	砷酸鉛	-	-	7784-40-9	0
A09041	Lead (II)arsenate	亞砷酸鉛(二價)	-	-	10031-13-7	0
A09042	Lead chromate,chrome yellow	鉻酸鉛, 鉻黃	-	-	1344-37-2	0
A09043	Lead molybdate	鉬酸鉛	-	-	10190-55-3	0
A09044	Calcium plumbate	鉛酸鈣	-	-	12013-69-3	0
A09045	Tetramethyllead	四甲基鉛	-	-	75-74-1	0
A09046	Trimethyllead	四乙鉛	-	-	78-00-2	0
A0900001	Other lead compound	-	-	-	-	0
A0900002	Other lead compound	-	-	-	-	0
A10	A10-Mercury and its compounds	汞及其化合物				0
A10001	Mercury	汞	Hg	1.000	7439-97-6	0
A10002	Mercuric (II) chloride	二氯化汞(二價)	HgCl ₂	0.739	7487-94-7	0
A10003	Mercuric(II) oxide	氧化汞	HgO	0.926	21908-53-2	0
A10004	Mercuric alloys,amalgam	汞合金; 汞齊	-	-	15829-53-5	0
A10005	Mercuric (I) chloride	二氯化汞(一價)	Hg ₂ Cl ₂	-	10045-94-0	0
A10006	Mercuric(I) sulfate	硫酸汞(一價)	Hg ₂ SO ₄	-	-	0
A10007	Mercuric(II) nitrate	硝酸汞(二價)	Hg(NO ₃) ₂	-	10045-94-0	0
A10008	Mercuric sulfide	硫化汞	HgS	-	1344-48-5	0
A10009	Mercuric(I) oxide	氧化二汞	Hg ₂ O	-	15829-53-5	0
A10010	Mercury (II) acetate	醋酸汞(二價)	HgAc	-	1600-27-7	0
A10011	Methylmercury salts	甲基汞鹽	-	-	22967-92-6	0
A10012	Ethylmercury salts	乙烷基汞鹽	-	-	-	0
A10013	Propylmercury salts	丙基汞鹽	-	-	-	0
A10014	Phenylmercury salts	苯基汞鹽	-	-	-	0
A10015	Methoxyethylmercury salts	甲氧基乙烷基汞鹽	-	-	-	0
A10016	Dialkylmercury	二烷基汞	-	-	-	0
A10017	Dibenzylmercury	二苄基汞	-	-	-	0
A1000001	Other mercury compound	-	-	-	587-85-9	0
A1000002	Other mercury compound	-	-	-	-	0
A17	A17-Bis(tri-n-butyltin) oxide	三丁基氧化錫(TBTO)				0
A17001	Bis(tri-n-butyltin) oxide	三丁基氧化錫	O(Sn(C ₄ H ₉) ₃) ₂	-	56-35-9	0
A17006	Tributyl tin oxide bis(tributyl tin)oxide	雙三丁基錫氧化物	-	-	56-35-9	0
A1700001	others	-	-	-	-	0
A1700002	others	-	-	-	-	0
A18	A18-TBT類&TPT類	三丁基錫類&三苯基錫類				0
A18001	Triphenyl tin N,N'-Dimethyldithiocar-	三苯基錫N,N'-二甲基二硫代氨基甲	(C ₆ H ₅) ₃ Sn(CH ₃) ₂ NCS	-	1803-12-9	0
A18002	Triphenyl tin fluoride	氟化三苯基錫	(C ₆ H ₅) ₃ SnF	-	379-52-2	0
A18003	Triphenyl tin acetate	醋酸三苯基錫	(C ₆ H ₅) ₃ SnOCOCH ₃	-	900-95-8	0
A18004	Triphenyl tin chloride	氯化三苯基錫	(C ₆ H ₅) ₃ SnCl	-	639-58-7	0
A18005	Triphenyltin hydroxide	三苯基錫氫氧化錫	(C ₆ H ₅) ₃ SnOH	-	76-87-9	0
A18006	Triphenyltin fatty acid salts (C=9-11)	三苯基錫脂肪酸鹽(脂肪酸的碳原子	-	-	47672-31-1	0
A18007	Triphenyltin chloroacetate	氯化三丁基錫	(C ₆ H ₅) ₃ SnOCOCH ₂ Cl	-	7094-94-2	0
A18008	Tributyltin methacrylate	丙基酸甲酯三丁基錫	(C ₄ H ₉) ₃ SnC ₄ H ₇ O ₂	-	2155-70-6	0
A18009	Bis(tributyltin) fumarate	三丁基錫富馬酸鹽	C ₂ H ₂ (COO) ₂ (C ₄ H ₉) ₂	-	6454-35-9	0
A18010	Tributyltin fluoride	氟化三苯基錫	(C ₆ H ₅) ₃ SnF	-	1983-10-4	0
A18011	Bis(tributyltin) 2,3-dibromosuccinate	2, 3-二溴琥珀酸三丁基錫	((C ₄ H ₉) ₃ Sn) ₂ C ₂ H ₂ (Br) ₂	-	31732-71-5	0
A18012	Tributyltin acetate	醋酸三丁基錫	(C ₄ H ₉) ₃ SnOCOCH ₃	-	56-36-0	0

產品含有害物質_非刻意添加宣告書
"Unintentionally Added" Declaration for RoHS

此宣告確認產品中含有害物質乃基於以下一項或多項原因

1. 天然雜質
2. 製程上不可避免
3. 符合RoHS排除條款

This purpose to declare for RoHS(Restriction of Hazardous Substances) that satisfies any of the following conditions:

- 1) One contained in a natural material, which cannot technically be removed in a refining process totally (i.e. natural impurities)
- 2) One generated in a synthesis process, the total removal of which is technically impossible. Additionally, there are substances called "impurities," the name of which is used to distinguish them from main materials.
- 3) Comply to 2002/95/EC "Applications of lead, mercury, cadmium and hexavalent chromium, which are exempted from the requirements of Article 4(1)"

註:如添加目的為改變物質特性,稱為含有或故意添加


If they are used for the purpose of changing the characteristics of a material, they are treated as "Contained" or "Intentionally Added"

宣告之產品(Parts List of Declaration)

料號: C407-510316-A
 名稱: RF Antenna Cable Assembly
 有毒物質所在部位: 鉚釘
 有毒物質含量: Pb=24987.5PPM
 ※符合ROHS排除條款→銅合金類 Pb < 40000PPM

請簡單描述含有害物質的原因(Please to describe the cause of contained Hazardous Substances)

物料材質即內含

公司名稱(Company)	填寫人(Prepared by)
譚裕實業股份有限公司 	柯美雪

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