

測試報告

Test Report

號碼(No.): CR/2013/70005 日期(Date): 2013/07/09 頁數(Page): 1 of 14

宏祥電子股份有限公司

AVANT ELECTRONICS CORPORATION

新北市新店區中正路501-14號2樓

2F, NO. 501-14, ZHONGZHENG RD., XINDIAN DISTRICT, NEW TAIPEI CITY 231, TAIWAN.



以下測試樣品係由申請廠商所提供及確認 (The following sample(s) was/were submitted and identified by/on behalf of the applicant as):

送樣廠商(Sample Submitted By) : 宏祥電子股份有限公司 (AVANT ELECTRONICS CORPORATION)
樣品名稱(Sample Description) : LCD SERIES PB-FREE PRODUCTS / 液晶系列純錫電鍍產品
樣品型號(Style/Item No.) : SBN1661G_M18, SBN1661G_M02, SBN0080G_S18, SBN0080G_S02, SBN0064G, SBN6400G, SAP1024B, SDN8080G, SCN0080G_A, SCN6400G, SDN0080G, SDN8000G, SEN6A39, SEN6A40, SAP3305
收件日期(Sample Receiving Date) : 2013/07/01
測試期間(Testing Period) : 2013/07/01 TO 2013/07/08

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測試方法(Test Method) : 參照SGS內部方法RSTS-EE-SVHC-007. 由感應耦合電漿原子發射光譜儀、紫外光可見光譜儀、氣相層析/質譜儀、液相層析質譜儀、氣相層析儀/火焰光度偵測器、液相層析/質譜儀/二極體陣列偵測器進行分析。(SGS In-House method-RSTS-EE-SVHC-007. Analyzed by ICP-AES, UV-VIS, GC/MS, LC/MS, GC/FPD, LC/MS/DAD.)

測試結果(Test Results) : 請見下一頁 (Please refer to next pages).


Edison Chang / Sr. Supervisor
Signed for and on behalf of
SGS TAIWAN LTD.
Chemical Laboratory – Taipei

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測試樣品(Test Sample):

測試部位(PART NAME) No.1 : 整體混測 (MIXED ALL PARTS)

測試結果 (Test Results) (單位Unit: %)

物質名稱 (Substance Name)	結果 (Result)	報告 極限值 (RL)	分類 (Classification)
	No.1		
蒽 / Anthracene (CAS No.: 120-12-7)	n.d.	0.05	PBT
4,4' - 二氨基二苯甲烷 / 4,4' - Diaminodiphenylmethane (CAS No.: 101-77-9)	n.d.	0.05	CC 1B
鄰苯二甲酸二丁酯 / DBP (Dibutyl phthalate) (CAS No.: 84-74-2)	n.d.	0.05	TRC 1B
鄰苯二甲酸甲苄基丁酯 / BBP (Benzyl butyl phthalate) (CAS No.: 85-68-7)	n.d.	0.05	TRC 1B
鄰苯二甲酸二(2-乙基己基)酯 / Bis(2-ethyl(hexyl) phthalate) (DEHP) (CAS No.: 117-81-7)	n.d.	0.05	TRC 1B
二甲苯麝香 / 5-tert-butyl-2,4,6-trinitro- m-xylene (Musk Xylene) (CAS No.: 81-15-2)	n.d.	0.05	vPvB
六溴環十二烷及所有主要被辨別出的異構物 / Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified (α - HBCDD, β - HBCDD, γ - HBCDD) (CAS No.: 25637-99-4 and 3194-55-6 (134237-51-7, 134237-50-6, 134237-52-8))	n.d.	0.05	PBT
短鏈氯化石蠟 / Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins) (CAS No.: 85535-84-8)	n.d.	0.05	PBT
三丁基錫氧化物 / Bis(tributyltin)oxide*** (CAS No.: 56-35-9)	n.d.	-	PBT
二氯化鈷 / Cobalt dichloride (CAS No.: 7646-79-9)	n.d.	0.005	CC 1B; TRC 1B
五氧化二砷 / Diarsenic pentaoxide*** (CAS No.: 1303-28-2)	n.d.	-	CC 1A
三氧化二砷 / Diarsenic trioxide*** (CAS No.: 1327-53-3)	n.d.	-	CC 1A
三乙基砷酸酯 / Triethyl arsenate*** (CAS No.: 15606-95-8)	n.d.	-	CC 1A
砷酸氫鉛 / Lead hydrogen arsenate*** (CAS No.: 7784-40-9) (※1)	n.d.	-	CC 1A; TRC 1A
鉻酸鈉 / Sodium chromate*** (CAS No.: 7775-11-3)	n.d.	-	CC 1B; MC 1B; TRC 1B
重鉻酸銨 / Ammonium dichromate*** (CAS No.: 7789-09-5)	n.d.	-	CC 1B; MC 1B; TRC 1B
重鉻酸鉀 / Potassium dichromate*** (CAS No.: 7778-50-9)	n.d.	-	CC 1B; MC 1B; TRC 1B

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物質名稱 (Substance Name)	結果 (Result)	報告 極限值 (RL)(%)	分類 (Classification)
	No.1		
鉻酸鉀 / Potassium chromate*** (CAS No.: 7789-00-6)	n.d.	-	CC 1B; MC 1B
重鉻酸鈉 / Sodium dichromate*** (CAS No.: 10588-01-9, 7789-12-0(*))	n.d.	-	CC 1B; MC 1B; TRC 1B
三氧化鉻 / Chromium trioxide *** (CAS No.: 1333-82-0)	n.d.	-	CC 1B; MC 1B
從三氧化鉻與其它寡聚體生成的酸類: 鉻酸 / Acids generated from chromium trioxide and their oligomers: Chromic acid*** (CAS No.: 7738-94-5)	n.d.	-	CC 1B
從三氧化鉻與其它寡聚體生成的酸類: 重鉻酸 / Acids generated from chromium trioxide and their oligomers: Dichromic acid*** (CAS No.: 13530-68-2)	n.d.	-	CC 1B
從三氧化鉻與其它寡聚體生成的酸類: 鉻酸與重鉻酸的寡聚體 / Acids generated from chromium trioxide and their oligomers: Oligomers of chromic acid and dichromic acid (*1)	n.d.	-	CC 1B
鉻酸鋇 / Strontium chromate*** (CAS No.: 7789-06-2)	n.d.	-	CC 1B
蔥油 / Anthracene oil (CAS No.: 90640-80-5) (**)	n.d.	0.05	PBT; vPvB; CC 1B
蔥油, 蔥糊, 輕油 / Anthracene oil, anthracene paste, distn. Lights (CAS No.: 91995-17-4) (**)	n.d.	0.05	PBT; vPvB; CC 1B; MC 1B
蔥油, 蔥糊, 蔥餾分 / Anthracene oil, anthracene paste, anthracene fraction (CAS No.: 91995-15-2) (**)	n.d.	0.05	PBT; vPvB; CC 1B; MC 1B
蔥油, 含蔥量少 / Anthracene oil, anthracene-low (CAS No.: 90640-82-7) (**)	n.d.	0.05	PBT; vPvB; CC 1B; MC 1B
蔥油, 蔥糊 / Anthracene oil, anthracene paste (CAS No.: 90640-81-6) (**)	n.d.	0.05	PBT; vPvB; CC 1B; MC 1B
煤瀝青, 高溫 / Pitch, coal tar, high-temp. (CAS No.: 65996-93-2) (**)	n.d.	0.05	PBT; vPvB; CC 1B
鄰苯二甲酸二異丁酯 / DIBP (Di-isobutyl phthalate) (CAS No.: 84-69-5)	n.d.	0.05	TRC 1B
2,4-二硝基甲苯 / 2,4-Dinitrotoluene (CAS No.: 121-14-2)	n.d.	0.05	CC 1B
磷酸三(2-氯乙基)酯 / Tris(2-chloroethyl) phosphate (TCEP) (CAS No.: 115-96-8)	n.d.	0.05	TRC 1B
鉻酸鉛 / Lead chromate (CAS No.: 7758-97-6)	n.d.	0.01	CC 1B; TRC 1A

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物質名稱 (Substance Name)	結果 (Result)	報告 極限值 (RL)(%)	分類 (Classification)
	No.1		
鉞鉻紅; 顏色索引: 顏料紅104 / Lead chromate molybdate sulphate red (C.I. Pigment Red 104) (CAS No.: 12656-85-8)	n.d.	0.01	CC 1B; TRC 1A
鉻酸鉛; 顏色索引: 顏料黃34 / Lead sulfochromate yellow (C.I. Pigment Yellow 34) (CAS No.: 1344-37-2)	n.d.	0.01	CC 1B; TRC 1A
丙烯醯胺 / Acrylamide (CAS No.: 79-06-1)	n.d.	0.05	CC 1B; MC 1B
硼酸 / Boric acid*** (CAS No.: 10043-35-3; 11113-50-1)	n.d.	-	TRC 1B
無水四硼酸二鈉 / Disodium tetraborate, anhydrous*** (CAS No.: 1303-96-4, 1330-43-4, 12179-04-3)	n.d.	-	TRC 1B
水合硼酸鈉 / Tetraboron disodium heptaoxide, hydrate (CAS No.: 12267-73-1) (*2)	n.d.	-	TRC 1B
三氯乙烯 / Trichloroethylene (CAS No.: 79-01-6)	n.d.	0.05	CC 1B
硫酸鈷(二價) / Cobalt(II) sulphate*** (CAS No.: 10124-43-3)	n.d.	-	CC 1B; TRC 1B
硝酸鈷(二價) / Cobalt(II) dinitrate*** (CAS No.: 10141-05-6)	n.d.	-	CC 1B; TRC 1B
碳酸鈷(二價) / Cobalt(II) carbonate*** (CAS No.: 513-79-1)	n.d.	-	CC 1B; TRC 1B
醋酸鈷(二價) / Cobalt(II) diacetate*** (CAS No.: 71-48-7)	n.d.	-	CC 1B; TRC 1B
乙二醇甲醚 / 2-Methoxyethanol (CAS No.: 109-86-4)	n.d.	0.05	TRC 1B
乙二醇乙醚 / 2-Ethoxyethanol (CAS No.: 110-80-5)	n.d.	0.05	TRC 1B
乙二醇乙醚乙酸酯 / 2-ethoxyethyl acetate (CAS No.: 111-15-9)	n.d.	0.05	TRC 1B
鄰苯二甲酸二(C7-11支鏈與直鏈)烷基酯 / 1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP) (CAS No.: 68515-42-4)	n.d.	0.05	TRC 1B
聯氨 / Hydrazine (CAS No.: 7803-57-8; 302-01-2)	n.d.	0.05	CC 1B
N-甲基吡咯烷酮 / 1-methyl-2-pyrrolidone (CAS No.: 872-50-4)	n.d.	0.05	TRC 1B
1,2,3-三氯丙烷 / 1,2,3-trichloropropane (CAS No.: 96-18-4)	n.d.	0.05	CC 1B; TRC 1B
鄰苯二甲酸二(C6-8支鏈與直鏈)烷基酯, 富C7 / 1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP) (CAS No.: 71888-89-6)	n.d.	0.05	TRC 1B
砷酸 / Arsenic acid*** (CAS No.: 7778-39-4)	n.d.	-	CC 1A
砷酸鈣 / Calcium arsenate*** (CAS No.: 7778-44-1)	n.d.	-	CC 1A
砷酸鉛 / Trilead diarsenate*** (CAS No.: 3687-31-8) (※1)	n.d.	-	CC 1A; TRC 1A
疊氮化鉛 / Lead diazide, Lead azide*** (CAS No.: 13424-46-9)	n.d.	-	TRC 1A
中性斯蒂酚酸鉛 / Lead styphnate*** (CAS No.: 15245-44-0)	n.d.	-	TRC 1A

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	No.1		
苦味酸鉛 / Lead dipicrate*** (CAS No.: 6477-64-1)	n.d.	-	TRC 1A
鉻酸鉻 / Dichromium tris (chromate)*** (CAS No.: 24613-89-6)	n.d.	-	CC 1B
氫氧化鉻酸鉍鉀 / Potassium hydroxyoctaoxidizincatedi-chromate*** (CAS No.: 11103-86-9)	n.d.	-	CC 1A
八氫氧化五鉻酸鉍 / Pentazinc chromate octahydroxide*** (CAS No.: 49663-84-5)	n.d.	-	CC 1A
甲醛與苯胺的寡聚體 / Formaldehyde, oligomeric reaction products with aniline (technical MDA) (CAS No.: 25214-70-4)	n.d.	0.05	CC 1B
鄰苯二甲酸二甲氧基乙酯 / Bis(2-methoxyethyl) phthalate (CAS No.: 117-82-8)	n.d.	0.05	TRC 1B
鄰甲氧基苯胺 / 2-Methoxyaniline; o-Anisidine (CAS No.: 90-04-0)	n.d.	0.05	CC 1B
對特辛基苯酚 / 辛基酚 / 4-(1,1,3,3-tetramethylbutyl) phenol, (4-tert-Octylphenol) (CAS No.: 140-66-9)	n.d.	0.05	EQC
1,2-二氯乙烷 / 1,2-Dichloroethane (CAS No.: 107-06-2)	n.d.	0.05	CC 1B
雙(2-甲氧基乙基)醚 / Bis(2-methoxyethyl) ether (CAS No.: 111-96-6)	n.d.	0.05	TRC 1B
N,N-二甲基乙醯胺 / N,N-dimethylacetamide (DMAC) (CAS No.: 127-19-5)	n.d.	0.05	TRC 1B
4,4'-亞甲雙(2-氯苯胺) / 2,2'-dichloro- 4,4'-methylenedianiline (MOCA) (CAS No.: 101-14-4)	n.d.	0.05	CC 1B
酚酞 / Phenolphthalein (CAS No.: 77-09-8)	n.d.	0.05	CC 1B
矽酸鋁, 耐火陶瓷纖維 (主要成分濃度於可變範圍內) / Aluminosilicate, Refractory Ceramic Fibres [oxides of aluminium and silicon are the main components present (in the fibres) within variable concentration ranges]	n.d.	0.05	CC 1B
鋯矽酸鋁, 耐火陶瓷纖維 (主要成分濃度於可變範圍內) / Zirconia Aluminosilicate, Refractory Ceramic Fibres [oxides of aluminium, silicon and zirconium are the main components present (in the fibres) within variable concentration ranges]	n.d.	0.05	CC 1B
三甘醇二甲醚 / 1,2-bis (2-methoxyethoxy) ethane (TEGDME; triglyme) (CAS No.: 112-49-2)	n.d.	0.05	TRC 1B

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	No.1		
乙二醇二甲醚 / 1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME) (CAS No.: 110-71-4)	n.d.	0.05	TRC 1B
甲酰胺 / Formamide (CAS No.: 75-12-7)	n.d.	0.05	TRC 1B
甲基磺酸鉛 / Lead(II) bis(methanesulfonate)*** (CAS No.: 17570-76-2)	n.d.	-	TRC 1B
異氰尿酸三縮水甘油酯 / TGIC (1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6 (1H,3H,5H)-trione) (CAS No.: 2451-62-9)	n.d.	0.05	MC 1B
異氰尿酸β-三縮水甘油酯 / β-TGIC (1,3,5-tris [(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6- (1H,3H,5H)-trione) (CAS No.: 59653-74-6) (※3)	n.d.	0.05	MC 1B
4,4'-二(N,N-二甲氨基)二苯甲酮 (米氏酮) / 4,4'-bis(dimethylamino) benzophenone (Michler's ketone) (CAS No.: 90-94-8)	n.d.	0.05	CC 1B
4,4'-(對二甲氨基)二苯基甲烷 (米氏鹼) / N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base) (CAS No.: 101-61-1)	n.d.	0.05	CC 1B
鹼性紫 3 [內含≥ 0.1% 的米氏酮或米氏鹼] / [4-{4,4'-bis(dimethylamino) benzhydrylidene] cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Violet 3) (CAS No.: 548-62-9) [with ≥ 0.1% of Michler's ketone or Michler's base]	n.d.	0.05	CC 1B
鹼性藍 26 [內含≥ 0.1% 的米氏酮或米氏鹼] / [4-{[4-anilino-1-naphthyl] [4-(dimethylamino) phenyl] methylene] cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26) (CAS No.: 2580-56-5) [with ≥ 0.1% of Michler's ketone or Michler's base]	n.d.	0.05	CC 1B
溶劑藍 4 [內含≥ 0.1% 的米氏酮或米氏鹼] / α,α-Bis[4-(dimethylamino) phenyl]-4 (phenylamino) naphthalene-1-methanol (C.I. Solvent Blue 4) (CAS No.: 6786-83-0) [with ≥ 0.1% of Michler's ketone or Michler's base]	n.d.	0.05	CC 1B
三氧化二硼 / Diboron trioxide*** (CAS No.: 1303-86-2)	n.d.	-	TRC 1B

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物質名稱 (Substance Name)	結果 (Result)	報告 極限值 (RL)(%)	分類 (Classification)
	No.1		
α, α-二[(二甲氨基)苯基]-4-甲氨基苯甲醇 [內含≥ 0.1% 的米氏酮或米氏鹼] / 4,4'-bis (dimethylamino)-4''-(methylamino) trityl alcohol (CAS No.: 561-41-1) [with ≥ 0.1% of Michler's ketone or Michler's base]	n.d.	0.05	CC 1B
十溴聯苯醚 / Bis(pentabromophenyl) ether (DecaBDE) (CAS No.: 1163-19-5)	n.d.	0.05	PBT
全氟十三酸 / Pentacosaflluorotridecanoic acid (CAS No.: 72629-94-8)	n.d.	0.05	PBT
全氟十二酸 / Tricosaflluorododecanoic acid (CAS No.: 307-55-1)	n.d.	0.05	PBT
全氟十一酸 / Henicosaflluoroundecanoic acid (CAS No.: 2058-94-8)	n.d.	0.05	PBT
全氟十四酸 / Heptacosaflluorotetradecanoic acid (CAS No.: 376-06-7)	n.d.	0.05	PBT
4-(1,1,3,3-四甲基丁基)苯酚, 乙氧基- 以及所有的被定義的物質, 未知成分或可變成分的物質, 聚合物和同系物 / 4-(1,1,3,3-tetramethylbutyl) phenol, ethoxylated- covering well-defined substances and UVCB substances, polymers and homologues	n.d.	0.05	EQC
分支或線性的壬基酚, 包括含有9個碳烷基鏈的所有獨立的同分異構體和所有含有線性或分支9個碳烷基鏈的UVCB物質 / 4-Nonylphenol, branched and linear - substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof	n.d.	0.05	EQC
偶氮[二]甲醯胺 / Diazene-1,2-dicarboxamide (C,C'-azodi(formamide)) (CAS No.: 123-77-3)	n.d.	0.05	EQC
六氫苯二甲酸酐 / Cyclohexane-1,2-dicarboxylic anhydride (HHPA), cis-cyclohexane-1,2- dicarboxylic anhydride, trans-cyclohexane-1,2- dicarboxylic anhydride (Hexahydrophthalic anhydride - HHPA) (CAS No.: 85-42-7, 13149-00-3, 14166-21-3)	n.d.	0.05	EQC
甲基六氫苯酐 / Hexahydromethylphthalic anhydride (CAS No.: 25550-51-0)	n.d.	0.05	EQC
4-甲基六氫苯酐 / Hexahydro-4-methylphthalic anhydride (CAS No.: 19438-60-9)			
1-甲基六氫苯酐 / Hexahydro-1-methylphthalic anhydride (CAS No.: 48122-14-1)			
3-甲基六氫苯酐 / Hexahydro-3-methylphthalic anhydride (CAS No.: 57110-29-9)			

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宏祥電子股份有限公司

AVANT ELECTRONICS CORPORATION

新北市新店區中正路501-14號2樓

2F, NO. 501-14, ZHONGZHENG RD., XINDIAN DISTRICT, NEW TAIPEI CITY 231, TAIWAN.



物質名稱 (Substance Name)	結果 (Result)	報告 極限值 (RL)(%)	分類 (Classification)
	No.1		
甲氧基乙酸 / Methoxy acetic acid (CAS No.: 625-45-6)	n.d.	0.05	TRC 1B
支鏈和直鏈1,2-苯二羧二戊酯 / 1,2-Benzenedicarboxylic acid, dipentylester, branched and linear (CAS No.: 84777-06-0)	n.d.	0.05	TRC 1B
鄰苯二甲酸二異戊酯 / Diisopentylphthalate (CAS No.: 605-50-5)	n.d.	0.05	TRC 1B
鄰苯二甲酸正戊基異戊基酯 / N-pentyl-isopentylphthalate (CAS No.: 776297-69-9)	n.d.	0.05	TRC 1B
乙二醇二乙醚 / 1,2-Diethoxyethane (CAS No.: 629-14-1)	n.d.	0.05	TRC 1B
N,N-二甲基甲醯胺 / N,N-dimethylformamide; dimethyl formamide (CAS No.: 68-12-2)	n.d.	0.05	TRC 1B
二氯二丁基錫 / Dibutyltin dichloride (DBTC) (CAS No.: 683-18-1)	n.d.	0.05	TRC 1B
城式醋酸鉛 / Acetic acid, lead salt, basic*** (CAS No.: 51404-69-4)	n.d.	-	TRC 1A
城式碳酸鉛 / Trilead bis(carbonate) dihydroxide (basic lead carbonate)*** (CAS No.: 1319-46-6)	n.d.	-	TRC 1A
城式硫酸鉛 / Lead oxide sulfate*** (CAS No.: 12036-76-9)	n.d.	-	TRC 1A
[1,2-苯二羧酸根合]二氧化三鉛 / [Phthalato(2-)] dioxotrilead*** (CAS No.: 69011-06-9)	n.d.	-	TRC 1A
雙(十八酸基)二氧代三鉛 / Dioxobis(stearato) trilead*** (CAS No.: 12578-12-0)	n.d.	-	TRC 1A
C16-18-脂肪酸鉛鹽 / Fatty acids, C16-18, lead salts*** (CAS No.: 91031-62-8)	n.d.	-	TRC 1A
氨基氰鉛鹽 / Lead cyanamidate*** (CAS No.: 20837-86-9)	n.d.	-	TRC 1A
硝酸鉛 / Lead dinitrate*** (CAS No.: 10099-74-8)	n.d.	-	TRC 1A
氧化鉛 / Lead oxide (lead monoxide)*** (CAS No.: 1317-36-8)	n.d.	-	TRC 1A
四氧化鉛 / Lead tetroxide (orange lead)*** (CAS No.: 1314-41-6)	n.d.	-	TRC 1A
氧化鉛與硫酸鉛的複合物 / Pentalead tetraoxide sulphate*** (CAS No.: 12065-90-6)	n.d.	-	TRC 1A
矽酸鉛 / Silicic acid, lead salt*** (CAS No.: 11120-22-2)	n.d.	-	TRC 1A
亞硫酸鉛(II) / Sulfurous acid, lead salt, dibasic*** (CAS No.: 62229-08-7)	n.d.	-	TRC 1A

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宏祥電子股份有限公司



AVANT ELECTRONICS CORPORATION

新北市新店區中正路501-14號2樓

2F, NO. 501-14, ZHONGZHENG RD., XINDIAN DISTRICT, NEW TAIPEI CITY 231, TAIWAN.

物質名稱 (Substance Name)	結果 (Result)	報告 極限值 (RL)(%)	分類 (Classification)
	No.1		
四乙基鉛 / Tetraethyllead*** (CAS No.: 78-00-2)	n.d.	-	TRC 1A
三鹼式硫酸鉛/ C.I. 顏料白 / Tetralead trioxide sulphate*** (CAS No.: 12202-17-4)	n.d.	-	TRC 1A
四氟硼酸鉛 (II) / Lead bis(tetrafluoroborate)*** (CAS No.: 13814-96-5)	n.d.	-	TRC 1A
鈦酸鉛 / Lead titanium trioxide*** (CAS No.: 12060-00-3)	n.d.	-	TRC 1A
鈦酸鉛鋯 / Lead Titanium Zirconium Oxide*** (CAS No.: 12626-81-2)	n.d.	-	TRC 1A
C.I.顏料黃41 / Pyrochlore, antimony lead yellow*** (CAS No.: 8012-00-8)	n.d.	-	TRC 1A
磷酸氧化鉛 / Trilead dioxide phosphonate*** (CAS No.: 12141-20-7)	n.d.	-	TRC 1A
含鉛的矽酸鋇 / Silicic acid, barium salt, lead-doped (※4) (CAS No.: 68784-75-8)	n.d.	0.05	TRC 1A
呋喃 / Furan (CAS No.: 110-00-9)	n.d.	0.05	CC 1B
環氧丙烷 / Propylene oxide; 1,2-epoxypropane; methyloxirane (CAS No.: 75-56-9)	n.d.	0.05	CC 1B; MC 1B
硫酸二乙酯 / Diethyl sulphate (CAS No.: 64-67-5)	n.d.	0.05	CC 1B; MC 1B
硫酸二甲酯 / Dimethyl sulphate (CAS No.: 77-78-1)	n.d.	0.05	CC 1B
3-乙基-2-甲基-2-(3-甲基丁基)-1,3-惡唑烷 / 3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine (CAS No.: 143860-04-2)	n.d.	0.05	TRC 1B
2-(1-甲基丙基)-4,6-二硝基苯酚 / Dinoseb (CAS No.: 88-85-7)	n.d.	0.05	TRC 1B
4,4'-二氨基-3,3'-二甲基聯苯基甲烷 / 4,4'-methylenedi-o-toluidine (CAS No.: 838-88-0)	n.d.	0.05	CC 1B
4,4'-二氨基二苯醚 / 4,4'-oxydianiline and its salts (CAS No.: 101-80-4)	n.d.	0.05	CC 1B; MC 1B
4-氨基偶氮基苯胺 / 4-Aminoazobenzene; 4-Phenylazoaniline (CAS No.: 60-09-3)	n.d.	0.05	CC 1B
2,4-二氨基甲苯 / 4-methyl-m-phenylenediamine (2,4-toluenediamine) (CAS No.: 95-80-7)	n.d.	0.05	CC 1B
3-甲基-6-甲氧基苯胺 / 6-methoxy-m-toluidine (p-cresidine) (CAS No.: 120-71-8)	n.d.	0.05	CC 1B
4-胺基聯苯 / Biphenyl-4-ylamine (CAS No.: 92-67-1)	n.d.	0.05	CC 1A

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宏祥電子股份有限公司

AVANT ELECTRONICS CORPORATION

新北市新店區中正路501-14號2樓

2F, NO. 501-14, ZHONGZHENG RD., XINDIAN DISTRICT, NEW TAIPEI CITY 231, TAIWAN.



物質名稱 (Substance Name)	結果 (Result)	報告 極限值 (RL)(%)	分類 (Classification)
	No.1		
鄰氨基偶氮甲苯 / o-aminoazotoluene (CAS No.: 97-56-3)	n.d.	0.05	CC 1B
鄰甲苯胺 / o-Toluidine; 2-Aminotoluene (CAS No.: 95-53-4)	n.d.	0.05	CC 1B
N-甲基乙醯胺 / N-methylacetamide (CAS No.: 79-16-3)	n.d.	0.05	TRC 1B
正丙基溴 / 1-bromopropane (CAS No.: 106-94-5)	n.d.	0.05	TRC 1B
全氟辛酸 / Pentadecafluorooctanoic acid (PFOA) (CAS No.: 335-67-1)	n.d.	0.05	TRC 1B & PBT
全氟辛酸銨 / Ammoniumpentadecafluorooctanoate (APFO)** (CAS No.: 3825-26-1)	n.d.	-	TRC 1B & PBT
鎘 / Cadmium (Cd) (CAS No.: 7440-43-9)	n.d.	0.005	CC 1B & EQC
氧化鎘 / Cadmium oxide*** (CAS No.: 1306-19-0)	n.d.	-	CC 1B & EQC
鄰苯二甲酸二戊酯 / DPP (Di-pentyl phthalate) (CAS No.: 131-18-0)	n.d.	0.05	TRC 1B
分支或線性的乙氧基壬基酚，包括含有9個碳烷基鏈的所有獨立的同分異構體和所有含有線性或分支9個碳烷基鏈的UVCB物質 / 4-Nonylphenol, branched and linear, ethoxylated [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB- and well-defined substances, polymers and homologues, which include any of the individual isomers and/or combinations thereof]	n.d.	0.05	EQC

備註(Note):

1. mg/kg = ppm ; 0.1wt% = 1000ppm
2. n.d.= not detected = below Reporting Limit / 未檢出
3. RL = Reporting Limit / 報告極限值
4. (*): 重鉻酸鈉二水合物(CAS No.: 7789-12-0)含量 = 重鉻酸鈉含量 × 1.1374
(conc. of Sodium dichromate dihydrate = conc. of sodium dichromate × 1.1374)
5. (*1): 鉻酸與重鉻酸的寡聚體: 因為其寡聚體是由未知數的鉻酸或與重鉻酸所組成，而導致沒有固定分子量，因此以單體鉻酸或重鉻酸較為重要並應被考慮。 / Oligomers of chromic acid and dichromic acid : since the oligomers are made of the unknown amount of chromic acid or dichromic acid that results in no fixed molecular weight, therefore the monomer of chromic acid or dichromic acid is relevant and considered.
6. (*2): 水合硼酸鈉: 依照歐洲化學總署解釋以無水四硼酸二鈉數據作為代表(歐洲化學總署回信編號 Ref no.: INC 00000032519) / Tetraboron disodium heptaoxide, hydrate: Only anhydrous form of disodium tetraborate is relevant and considered according to ECHA explanation (Ref no.: INC 00000032519).

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AVANT ELECTRONICS CORPORATION
新北市新店區中正路501-14號2樓



2F, NO. 501-14, ZHONGZHENG RD., XINDIAN DISTRICT, NEW TAIPEI CITY 231, TAIWAN.

7. (**): 上述混合物的濃度是經由所獲得的成分比例介於被選擇標靶物及混合物所推估出來。 / The concentrations of above-mentioned mixtures are evaluated per the gained composition rate between the selected marks and the mixtures.
8. ***: 該物質是由三丁基錫、全氟辛酸或各別元素 (例如: 砷、鉛、六價鉻、硼、鈷、鋇、鎘)之測試結果計算得知。 / The substance was calculated by the test results of Tributyl Tin, PFOA or element (Ex. Arsenic, Lead, Cr(VI), Boron, Cobalt, Barium, Cadmium respectively).

測試結果如下(The test result is given as):

物質名稱 (Substance Name)	結果 (Result)	報告 極限值 (RL)(%)
	No.1	
三丁基錫 / Tributyl Tin (TBT)	n.d.	0.05
砷 / Arsenic (As) (※2)	n.d.	0.005
鉛 / Lead (Pb)	n.d.	0.005
六價鉻 / Hexavalent Chromium Cr(VI)	n.d.	0.005
硼 / Boron (B) (※2)	n.d.	0.005
鈷 / Cobalt (Co)	n.d.	0.005

9. (※1): 此砷鉛化合物之濃度是取砷及鉛兩者各別換算出砷鉛化合物濃度，並取其最小值做為最後出報告之依據。
(Regarding the compound containing arsenic and lead, lead and arsenic are tested and respectively used for the calculation of the independent concentration of the compound containing arsenic and lead. The minimum value of the two independently calculated concentrations is used as the final concentration for the report.)
10. "-" = Not Regulated (無規格值)
11. F 參數換算表/F Parameter Conversion Table: Please refer to http://twap.sgs.com/V3attachment/News/N_20130415_1.pdf
12. 分類/Classification: Please refer to http://twap.sgs.com/V3attachment/News/N_20130415_2.pdf
13. (※2): 被萃取出之溶出硼/砷是以感應耦合電漿原子發射光譜儀檢測得之。 / The extracted soluble Boron / Arsenic are detected by ICP-AES.
14. (※3): 由於TGIC本身含有β-TGIC, 依照ECHA 技術文件 β-TGIC與 TGIC 約為 1:10 比例, 因此β-TGIC將以1/10 的 TGIC計算濃度。 / TGIC is a mixture and also contains β-TGIC. According to the ECHA's technical dossier the ratio of β-TGIC to TGIC is around 1 to 10. Therefore β-TGIC is issued based on the above-mentioned ratio.
15. (※4): 只有在矽與鉛定性結果為陽性時, 再以鋇之濃度換算之。 / Only if both qualitative results of lead and silicon are positive, the test result of the compound will be calculated based on the concentration of barium.

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宏祥電子股份有限公司

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新北市新店區中正路501-14號2樓

2F, NO. 501-14, ZHONGZHENG RD., XINDIAN DISTRICT, NEW TAIPEI CITY 231, TAIWAN.



16. 樣品的測試是基於申請人要求混合數個成品進行測試，但報告中混合測試的結果不代表其中單一成品的含量。 / The mixed test with a couple of articles was implemented according to the applicant's request. Even though the test result "n.d." (Not Detected) for the submitted articles is obtained, but the obtained test result doesn't stand for the test result of the respective articles. Therefore the conclusion can't be made for a mixed test.
17. 此份報告取代2013/07/08所核發的CR/2013/70005報告。(This report supersedes the previous document bearing the test report number CR/2013/70005 which was issued on 2013/07/08.)

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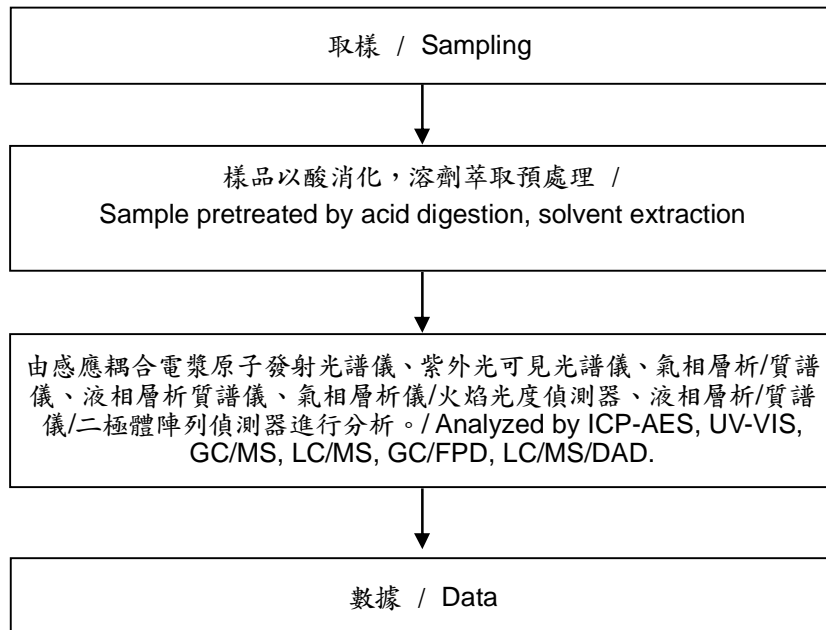
宏祥電子股份有限公司
AVANT ELECTRONICS CORPORATION
新北市新店區中正路501-14號2樓

2F, NO. 501-14, ZHONGZHENG RD., XINDIAN DISTRICT, NEW TAIPEI CITY 231, TAIWAN.



分析流程圖 / Analytical flow chart

- 測試人員：翁賜彬/周穗華/楊登偉 / Name of the person who made measurement: Roman Wong / Stacy Chou / Climbgreat Yang
- 測試負責人：張啓興 / Name of the person in charge of measurement: Troy Chang



測試報告

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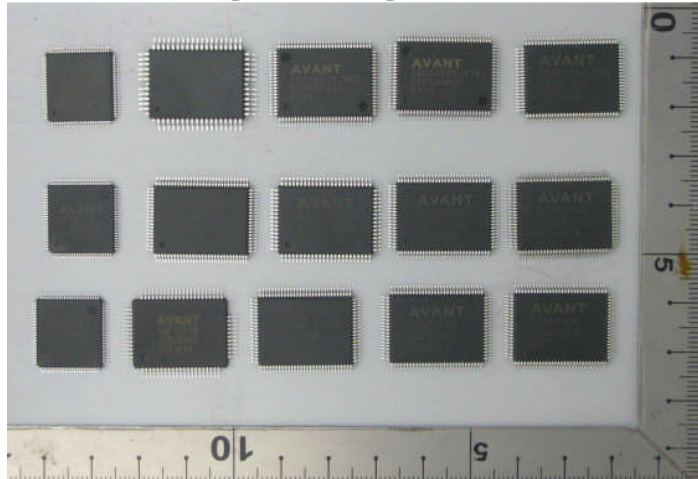
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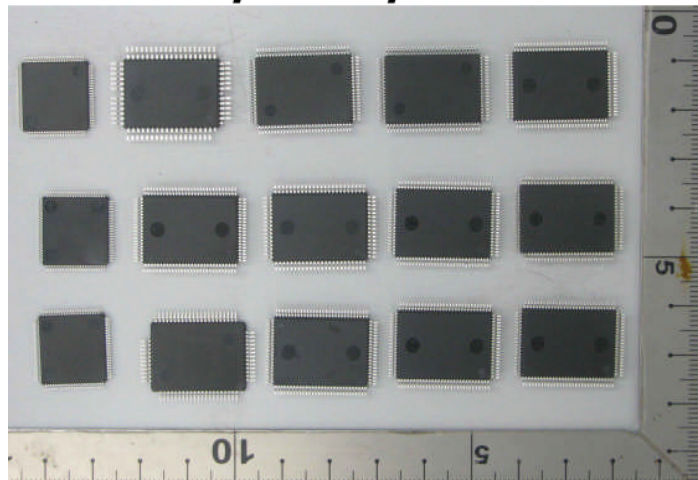
* 照片中如有箭頭標示，則表示為實際檢測之樣品/部位。*

(The tested sample / part is marked by an arrow if it's shown on the photo.)

CR/2013/70005



CR/2013/70005



** 報告結尾(End of Report) **

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