

SPECIFICATION FOR APPROVAL

融程電訊股份有限公司

CUSTOMER:

WLAN EMBEDDED ANTENNA

PART NAME:

PART NO.:

397000100009 REVISION:

BRITO P/NO.:

WF0EM33-10150

AD NO.:

AD-B-1015

	M	ANUFACTUR	RER	CUSTOMER			
		SIGNATUR	SIGNATURE				
APPROVED:	核準審核		承 辦	核準審核		承辦	
BA:	NISA	NISA NICOLE					
DATE:		2012/04/05					



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承認書目錄

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WLAN EMBEDDED ANTENNA

Specification

1.	FREQUENCY RANGE	2.4~2.5 GHz/4.9~5.8GHz
2.	V.S.W.R	≦2.0
3.	IMPEDANCE	50Ω
4.	WIRE	OD1.13 CABLE BLACK
5.	PCB	FR4
6.	GAIN	2.2 dBi (Peak)
7.	CONNECTOR	IPEX
8.	ANTENNA PATTERN	Omni-directional
9.	ANTENNA TYPE	PIFA

DRAW	
DATE	

REVISION HISTORY REV. CONTENTS DATE ECN NO.

FREQUENCY RANGE: 2.4~2.5 GHz

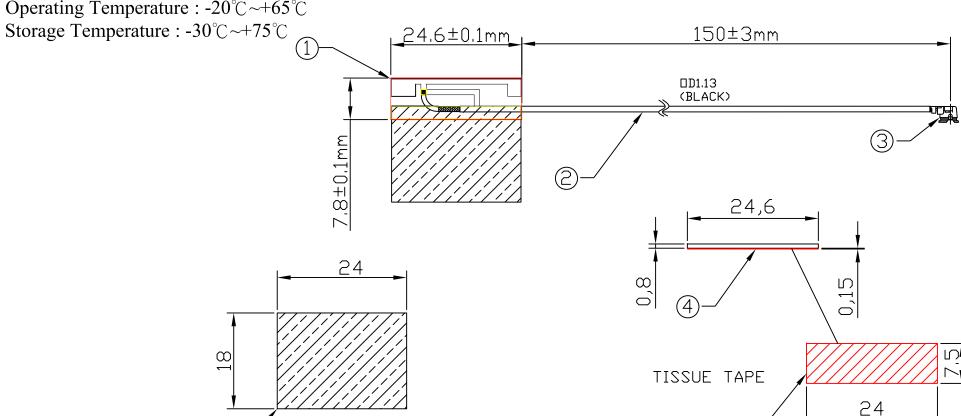
4.9~5.8 GHz

COPPER FOIL

 $V.S.W.R : \le 2.0$

IMPEDANCE: 50Ω

Operating Temperature : -20°C~+65°C



6										
0				DIMENSI	IN TOLERANCE	APPROVED:	TITLE:	MODE NO:		
5	COPPER FOIL	SIZE:24*18*0.15T mm	1PCS	DIVICION	- THELITING	BRUCE	WLAN EMBEDDED			
4	TISSUE TAPE	3M 9888T	1PCS	X. ± 0.25	X.* ± 3.0*	BRUCE	ANTENNA	PART NO: \	√F0EM33-I0	0150
3	CONNECTOR	MHF PLUG FOR Ø1.13mm	1PCS	.X ± 0.15	.X* ± 2.0*	CHECKED:	NDTICE:	DWG. ND:	WFE-B-1015	5
2	CABLE	Ø1.13mm CABLE Black	1PCS	.XX ± 0.10	.XX* ± 1.0*] JOHN	MATERIAL:	UNIT: mm	♦ 🖯	Rev. C
1	PCB	FR-4	1PCS	.XXX ± 0.05	DATE:	DRAWN:	Rrifa.	스탠칙나는	関ムコ	SHEET
NO.	PART NAME	DESCRIPTION	Q'TY	.XXX*± 0.5*	SCALE: N□NE] JOHN	ML10_ECHACTODA	自陽科技有	版公司	SIZE A4



Test Report

號碼(No.): CE/2011/53213 日期(Date): 2011/05/23 頁數(Page): 1 of 45

南亞塑膠工業股份有限公司(台灣) / NAN YA PLASTICS CORPORATION (TAIWAN) (南亞電子材料 (昆山) 有限公司 / NAN YA ELECTRONIC MATERIALS (KUNSHAN) CORP., LTD.) (南亞電子材料 (惠州) 有限公司 / NAN YA ELECTRONIC MATERIALS (HUIZHOU) CORP., LTD.) 台灣台北市敦化北路201號 / 201, TUNG HWA NORTH ROAD, TAIPEI, TAIWAN (江蘇省昆山昆山市長江南路201號 / 201, CHANG JIANG ROAD (S) KUNSHAN ECONOMIC & TECHNICAL DEVELOPMENT ZONE, JIANG SU)

(廣東省惠州市博羅縣石灣鎮永石大道 / YONGSHI BOULEVARD, SHIWAN TOWN, BOLUO COUNTY, HUIZHOU CITY, GUANG DONG)

以下測試樣品係由客户送樣, 且由客户聲稱並經客户確認如下 (The following samples was/were submitted and identified by/on behalf of the client as):

樣品名稱(Sample Description) : LAMINATE (UL E98983)

樣品型號(Style/Item No.) : UV BLOCK FR-4-86 / NP-140TL

買主/訂單號碼(Buyer/Order No.) : 1425251 收件日期(Sample Receiving Date) : 2011/05/17

測試期間(Testing Period) : 2011/05/17 TO 2011/05/23

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

結論(Conclusion) : 根據客户所提供的樣品,其鎬、鉛、汞、六價鉻、多溴聯苯及多溴聯苯醚的測試結果符合

RoHS(2002/95/EC)及其修定指令之要求 (Based upon the performed tests by submitted samples, the test results of Cadmium, Lead, Mercury, Hexavalent Chromium Cr(VI), PBBs and PBDEs comply with the limits of RoHS Directive 2002/95/EC and its

subsequent amendments).

Chenyu Kung Aperation Manager Signed for and on behalf of Alexander SGS TAIWAN LTD. Chemical Laboratory – Taipei

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測試結果(Test Results)

測試部位(PART NAME)No.1 : 銅色 / 棕色板子及其上紅色印刷 (COPPER / BROWN SHEET WITH RED PRINTED)

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result) No.1	法規 限値 (Limit)
鎬 / Cadmium (Cd)	mg/kg	参考IEC 62321: 2008方法,以感應耦合電漿 原子發射光譜儀檢測. / With reference to IEC 62321: 2008 and performed by ICP- AES.	2	n.d.	100
鉛 / Lead (Pb)	mg/kg	參考IEC 62321: 2008方法,以感應耦合電漿原子發射光譜儀檢測. / With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.	1000
汞 / Mercury (Hg)	mg/kg	参考IEC 62321: 2008方法,以感應耦合電漿 原子發射光譜儀檢測. / With reference to IEC 62321: 2008 and performed by ICP- AES.	2	n.d.	1000
六價貉 / Hexavalent Chromium Cr(VI) by alkaline extraction	mg/kg	参考IEC 62321: 2008方法,以UV-VIS檢測./ With reference to IEC 62321: 2008 and performed by UV-VIS.	2	n.d.	1000
鈹 / Beryllium (Be)	mg/kg	参考US EPA 3050B方法,以感應耦合電漿原子發射光譜儀檢測鈹含量. / With reference to US EPA Method 3050B for Beryllium Content. Analysis was performed by ICP- AES.	2	n.d.	-

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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result) No.1	法規 限値 (Limit)
二氯化鈷 / Cobalt dichloride (CAS No.: 7646-79-9)	mg/kg	参考SGS内部方法RSTS-EE-SVHC-004, 以感應 耦合電漿原子發射光譜儀檢測. / SGS In- House method-RSTS-EE-SVHC-004. Analyzed by ICP-AES.	5	n.d.	1
多氣聯苯 / Polychlorinated Biphenyls (PCBs) (CAS No.: 1336- 36-3)	mg/kg	參考US EPA 3540C方法,以氣相層析/質譜儀 檢測. / With reference to US EPA 3540C method. Analysis was performed by GC/MS.	0.5	n.d.	-
多氣奈 / Polychlorinated Naphthalene (PCNs)	mg/kg	参考US EPA 3540C方法,以氣相層析/質譜儀 檢測. / With reference to US EPA 3540C method. Analysis was performed by GC/MS.	5	n.d.	-
多氯三聯苯 / Polychlorinated Terphenyls (PCTs)	mg/kg	参考US EPA 3540C方法,以氣相層析/質譜儀檢測. / With reference to US EPA 3540C method. Analysis was performed by GC/MS.	0.5	n.d.	-
短鏈氯化石蠟 / Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins) (CAS No.: 85535-84-8)	%	参考US EPA 3540C方法,以氣相層析/質譜儀 檢測. / With reference to US EPA 3540C method. Analysis was performed by GC/MS.	0.01	n.d.	-
甲醛 / Formaldehyde (CAS No.: 50-00-0)	mg/kg	参考ISO 17226-1(2008)方法,以高效液相層析儀/二極體陣列偵測器檢測./With reference to ISO 17226-1(2008). Analysis was performed by HPLC/DAD.	3	n.d.	-
聚氯乙烯 / PVC	**	以紅外光譜分析及焰色法檢測. / Analysis was performed by FTIR and FLAME Test.	-	Negative	-

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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result) No.1	法規 限値 (Limit)
全氟辛烷磺酸 / Perfluorooctane sulfonates (PFOS-Acid, Metal Salt, Amide)	mg/kg	参考US EPA 3540C: 1996方法,以液相層析/質譜儀檢測全氟辛烷磺酸含量./ With reference to US EPA 3540C: 1996 method for PFOS Content. Analysis was performed by LC/MS.	10	n.d.	-
全氟辛酸(銨)/ PFOA (CAS No.: 335-67-1)	mg/kg	参考US EPA 3540C: 1996方法,以液相層析/質譜儀檢測全氟辛酸(銨)含量. / With reference to US EPA 3540C: 1996 method for PFOA Content. Analysis was performed by LC/MS.	10	n.d.	-
2- (3', 5'-二叔丁基-2'-羟基苯基) 苯並三氮唑 / 2- (3,5-di-tert- buty1-2-hydroxypheny1)-2H- benzotriazole (CAS No.: 3846-71- 7)	mg/kg	参考US EPA 3540C方法,以氣相層析/質譜儀 檢測之. / With reference to US EPA 3540C method. Analysis was performed by GC/MS.	5	n.d.	-
溴甲烷 / Bromomethane (CAS No.: 74-83-9)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
富馬酸二甲酯 / Dimethyl Fumarate (CAS No.: 624-49-7)	mg/kg	参考US EPA 3550C方法,以氣相層析/質譜儀 檢測. / With reference to US EPA 3550C method. Analysis was performed by GC/MS.	0.1	n.d.	-
雙酚 A / Bisphenol A (CAS No.: 80-05-7)	mg/kg	参考RSTS-HL-229-1方法,以液相層析/質譜儀 檢測. / With reference to RSTS-HL-229-1 method. Analysis was performed by LC/MS.	1	n.d.	-

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Test Report

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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result) No.1	法規 限値 (Limit)
六溴環十二烷 / Hexabromocyclododecane (HBCDD) (CAS No.: 25637-99-4)	mg/kg	參考US EPA 3540C方法,以氣相層析/質譜儀 檢測. / With reference to US EPA 3540C method. Analysis was performed by GC/MS.	5	n.d.	-
可塑劑定量分析 / Phthalates					
鄰苯二甲酸甲苯基丁酯 / BBP (Benzyl butyl phthalate) (CAS No.: 85-68-7)			0.003	n.d.	-
鄰苯二甲酸二 (2-乙基己基)酯 / DEHP (Di- (2-ethylhexyl) phthalate) (CAS No.: 117-81-7)			0.003	n.d.	-
鄰苯二甲酸二異癸酯 / DIDP (Di- isodecyl phthalate) (CAS No.: 26761-40-0)			0.01	n.d.	-
鄰苯二甲酸二異壬酯 / DINP (Di- isononyl phthalate) (CAS No.: 28553-12-0)	%	參考EN 14372, 以氣相層析儀/質譜儀檢測之. / With reference to EN 14372. Analysis was performed by GC/MS.	0.01	n.d.	-
鄰苯二甲酸二正辛酯 / DNOP (Di-n-octyl phthalate) (CAS No.: 117-84-0)			0.003	n.d.	-
鄰苯二甲酸二丁酯 / DBP (Dibutyl phthalate) (CAS No.: 84-74-2)			0.003	n.d.	-
鄰苯二甲酸二己酯 / DNHP (Di-n-hexyl phthalate) (CAS No.: 84-75-3)			0.003	n.d.	-

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Test Report

HUIZHOU CITY, GUANG DONG)

九溴聯苯醚 / Nonabromodiphenyl ether

十溴聯苯醚 / Decabromodiphenyl ether

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測試項目 單位 測試方法 極限値 限値 (Result) (Test Items) (Unit) (Method) (MDL) (Limit) No.1 多溴聯苯總和 / Sum of PBBs n.d. 1000 一溴聯苯 / Monobromobiphenyl 5 n.d. 二溴聯苯 / Dibromobiphenyl 5 n.d. n.d. 三溴聯苯 / Tribromobiphenyl 5 四溴聯苯 / Tetrabromobiphenyl 5 n.d. 五溴聯苯 / Pentabromobiphenyl 5 n.d. 六溴聯苯 / Hexabromobiphenyl 5 n.d. 七溴聯苯 / Heptabromobiphenyl 5 n.d. 八溴聯苯 / Octabromobiphenyl 5 n.d. 九溴聯苯 / Nonabromobiphenyl n.d. 5 參考IEC 62321: 2008方法, 以氣相層析儀/質 十溴聯苯 / Decabromobiphenyl 5 n.d. mg/kg 譜儀檢測. / With reference to IEC 62321: 多溴聯苯醚總和 / Sum of PBDEs _ n.d. 1000 2008 and performed by GC/MS. -溴聯苯醚 / Monobromodiphenyl ether 5 n.d. 二溴聯苯醚 / Dibromodiphenyl ether n.d. 5 ___ 三溴聯苯醚 / Tribromodiphenyl ether 5 n.d. 四溴聯苯醚 / Tetrabromodiphenyl ether 5 n.d. 五溴聯苯醚 / Pentabromodiphenyl ether 5 n.d. 六溴聯苯醚 / Hexabromodiphenyl ether 5 n.d. 七溴聯苯醚 / Heptabromodiphenyl ether 5 n.d. 八溴聯苯醚 / Octabromodiphenyl ether 5 n.d.

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n.d.

n.d.

5

5

結果

法規

方法偵測



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(廣東省惠州市博羅縣石灣鎮永石大道 / YONGSHI BOULEVARD, SHIWAN TOWN, BOLUO COUNTY, HUIZHOU CITY, GUANG DONG)

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result) No.1	法規 限値 (Limit)
石棉 / Asbestos					
陽起石 / Actinolite (CAS No.: 77536-66-4)			1	Negative	-
棕石棉 / Amosite (CAS No.: 12172-73-5)			1	Negative	-
斜方角閃石 / Anthophyllite (CAS No.: 77536-67-5)	24	参考NIOSH 9000 / X光繞射定性分析法 (XRD) / With reference to NIOSH 9000 method. Analysis was performed by XRD.	1	Negative	-
白石棉 / Chrysotile (CAS No.: 12001-29-5)	%		1	Negative	-
青石棉 / Crocidolite (CAS No.: 12001-28-4)			1	Negative	-
透閃石 / Tremolite (CAS No.: 77536-68-6)			1	Negative	-
鹵素 / Halogen					
鹵素(氟)/ Halogen-Fluorine (F) (CAS No.: 14762-94-8)			50	626	-
鹵素(氯)/ Halogen-Chlorine (C1) (CAS No.: 22537-15-1)	,,	参考BS EN 14582:2007, 以離子層析儀分析.	50	518	-
鹵素(溴)/ Halogen-Bromine (Br) (CAS No.: 10097-32-2)	mg/kg	/ With reference to BS EN 14582:2007. Analysis was performed by IC.	50	65400	-
鹵素(碘)/ Halogen-Iodine (I) (CAS No.: 14362-44-8)			50	n.d.	-

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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result) No.1	法規 限値 (Limit)
有機錫 / Organic-tin compounds					
三丁基錫 / Tributyl Tin (TBT) (CAS No.: 688-73-3)	mg/kg	參考DIN 38407-13方法,以氣相層析儀/火焰 光度偵測器檢測. / With reference to DIN 38407-13. Analysis was performed by GC/FPD.	0.03	n.d.	-
三苯基錫 / Triphenyl Tin (TphT) (CAS No.: 668-34-8)	mg/kg	参考DIN 38407-13方法,以氣相層析儀/火焰 光度偵測器檢測. / With reference to DIN 38407-13. Analysis was performed by GC/FPD.	0.03	n.d.	-
二丁基錫 / Dibutyl Tin (DBT) (CAS No.: 1002-53-5)	mg/kg	參考DIN 38407-13方法,以氣相層析儀/火焰 光度偵測器檢測. / With reference to DIN 38407-13. Analysis was performed by GC/FPD.	0.03	n.d.	-
二辛基錫 / Dioctyl Tin (DOT) (CAS No.: 94410-05-6)	mg/kg	參考DIN 38407-13方法,以氣相層析儀/火焰 光度偵測器檢測. / With reference to DIN 38407-13. Analysis was performed by GC/FPD.	0.03	n.d.	-
偶氮 (AZO)					
1): 4-氨基二苯 / 4-AMINODIPHENYL (CAS No.: 92-67-1)	mg/kg	參考LFGB 82.02-2方法,以氣相層析/質譜儀 檢測. / With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.	-
2): 聯苯胺 / BENZIDINE (CAS No.: 92-87-5)	mg/kg	參考LFGB 82.02-2方法,以氣相層析/質譜儀 檢測. / With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.	-

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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result) No.1	法規 限値 (Limit)
3): 4-氯鄰甲苯胺 / 4-CHLORO-O-TOLUIDINE (CAS No.: 95-69-2)	mg/kg	參考LFGB 82.02-2方法,以氣相層析/質譜儀 檢測. / With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.	-
4): 2-萘 胺 / 2-NAPHTHYLAMINE (CAS No.: 91-59-8)	mg/kg	参考LFGB 82.02-2方法,以氣相層析/質譜儀 檢測. / With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.	-
5): 鄰氨基二甲基偶氮 / O- AMINOAZOTOLUENE (CAS No.: 97-56- 3)	mg/kg	参考LFGB 82.02-2方法,以氣相層析/質譜儀 檢測. / With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.	-
6): 對硝基鄰甲苯胺 / 2-AMINO-4- NITROTOLUENE (CAS No.: 99-55-8)	mg/kg	参考LFGB 82.02-2方法,以氣相層析/質譜儀 檢測. / With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.	-
7): 對氯苯胺 / P-CHLOROANILINE (CAS No.: 106-47-8)	mg/kg	參考LFGB 82.02-2方法,以氣相層析/質譜儀 檢測. / With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.	-
8): 4-甲氧基-間苯二胺 / 2,4- DIAMINOANISOLE (CAS No.: 615-05- 4)	mg/kg	參考LFGB 82.02-2方法,以氣相層析/質譜儀 檢測. / With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.	-
9): 4,4'-二氨基二苯甲烷 / 4,4'- DIAMINODIPHENYLMETHANE (CAS No.: 101-77-9)	mg/kg	参考LFGB 82.02-2方法,以氣相層析/質譜儀 檢測. / With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.	-
10): 3,3'-二氯聯苯胺 / 3,3'- DICHLOROBENZIDINE (CAS No.: 91- 94-1)	mg/kg	參考LFGB 82.02-2方法,以氣相層析/質譜儀 檢測. / With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.	-

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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result) No.1	法規 限値 (Limit)
11): 3,3'-二甲氧基聯苯胺 / 3,3'- DIMETHOXYBENZIDINE (CAS No.: 119- 90-4)	mg/kg	參考LFGB 82.02-2方法,以氣相層析/質譜儀 檢測. / With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.	-
12): 3,3'-二甲基聯苯胺 / 3,3'- DIMETHYLBENZIDINE (CAS No.: 119- 93-7)	mg/kg	参考LFGB 82.02-2方法,以氣相層析/質譜儀 檢測. / With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.	-
13): 3,3'-二甲基-4,4'-二氨基二苯甲烷 / 3,3'-DIMETHYL-4,4'- DIAMINODIPHENYLMETHANE (CAS No.: 838-88-0)	mg/kg	參考LFGB 82.02-2方法,以氣相層析/質譜儀 檢測. / With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.	-
14): 2-甲氧基-5-甲基聯苯 / P- CRESIDINE (2-METHOXY-5- METHYLANILINE) (CAS No.: 120-71- 8)	mg/kg	參考LFGB 82.02-2方法,以氣相層析/質譜儀 檢測. / With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.	-
15): 4,4'-亞甲基雙(氣苯胺)/ 4,4'-METHYLENE-BIS- (2- CHLOROANILINE) (CAS No.: 101-14- 4)	mg/kg	參考LFGB 82.02-2方法,以氣相層析/質譜儀 檢測. / With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.	-
16): 4,4'-氧化雙苯胺 / 4,4'- OXYDIANILINE (CAS No.: 101-80-4)	mg/kg	參考LFGB 82.02-2方法,以氣相層析/質譜儀 檢測. / With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.	-
17): 4,4'-硫代雙苯胺 / 4,4'- THIODIANILINE (CAS No.: 139-65-1)	mg/kg	参考LFGB 82.02-2方法,以氣相層析/質譜儀 檢測. / With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.	

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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result) No.1	法規 限値 (Limit)
18): 鄰甲苯胺 / O-TOLUIDINE (CAS No.: 95-53-4)	mg/kg	參考LFGB 82.02-2方法,以氣相層析/質譜儀 檢測. / With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.	1
19): 2,4-二氨基甲苯 / 2,4- TOLUYLENEDIAMINE (CAS No.: 95-80- 7)	mg/kg	参考LFGB 82.02-2方法,以氣相層析/質譜儀 檢測. / With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.	1
20): 2,4,5-三甲基苯胺 / 2,4,5- TRIMETHYLANILINE (CAS No.: 137- 17-7)	mg/kg	参考LFGB 82.02-2方法,以氣相層析/質譜儀 檢測. / With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.	-
21): 鄰位甲氧基苯胺 / O-ANISIDINE (CAS No.: 90-04-0)	mg/kg	參考LFGB 82.02-2方法,以氣相層析/質譜儀 檢測. / With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.	-
22): 對氨基偶氮苯 / P- AMINOAZOBENZENE (CAS No.: 60-09- 3)	mg/kg	参考LFGB 82.02-2方法,以氣相層析/質譜儀 檢測. / With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.	-
23): 2,4-二甲基苯胺 / 2,4- XYLIDINE (CAS No.: 95-68-1)	mg/kg	参考LFGB 82.02-2方法,以氣相層析/質譜儀 檢測. / With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.	-
24): 2,6-二甲基苯胺 / 2,6- XYLIDINE (CAS No.: 87-62-7)	mg/kg	參考LFGB 82.02-2方法,以氣相層析/質譜儀 檢測. / With reference to LFGB 82.02-2. Analysis was performed by GC/MS.	3	n.d.	-
海龍 (Halons)					
海龍 (Halon)-1211 (CAS No.: 353-59-3)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-

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(廣東省惠州市博羅縣石灣鎮永石大道 / YONGSHI BOULEVARD, SHIWAN TOWN, BOLUO COUNTY, HUIZHOU CITY, GUANG DONG)

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result) No.1	法規 限値 (Limit)
海龍 (Halon)-1301 (CAS No.: 75-63-8)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
海龍 (Halon)-2402 (CAS No.: 124-73-2)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氫氟碳化物 / HFCs (Hydrofluorocarbon)					
氫氟碳化物 (HFC)-23 (CHF3) (CAS No.: 75-46-7)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氫氟碳化物 (HFC)-32 (CH2F2) (CAS No.: 75-10-5)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測./ With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氫氟碳化物 (HFC)-41 (CH3F) (CAS No.: 593-53-3)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氫氟碳化物 (HFC)-43-10mee (C5H2F10)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氫氟碳化物 (HFC)-125 (C2HF5)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-

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(廣東省惠州市博羅縣石灣鎮永石大道 / YONGSHI BOULEVARD, SHIWAN TOWN, BOLUO COUNTY, HUIZHOU CITY, GUANG DONG)

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result) No.1	法規 限値 (Limit)
氫氟碳化物 (HFC)-134 (C2H2F4)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氫氟碳化物 (HFC)-134a (CH2FCF3) (CAS No.: 811-97-2)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氫氟碳化物 (HFC)-143 (CH3F3)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氫氟碳化物 (HFC)-143a (CH3F3)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氫氟碳化物 (HFC)-152a (C2H4F2) (CAS No.: 75-37-6)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氫氟碳化物 (HFC)-227ea (C3HF7) (CAS No.: 431-89-0)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氫氟碳化物 (HFC)-236fa (C3H2F6)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測./ With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氫氟碳化物 (HFC)-236ea (C3H2F6) (CAS No.: 431-63-0)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-

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Test Report

HUIZHOU CITY, GUANG DONG)

No.: 355-25-9)

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南亞塑膠工業股份有限公司 (台灣) / NAN YA PLASTICS CORPORATION (TAIWAN) (南亞電子材料 (昆山) 有限公司 / NAN YA ELECTRONIC MATERIALS (KUNSHAN) CORP., LTD.) (南亞電子材料 (惠州) 有限公司 / NAN YA ELECTRONIC MATERIALS (HUIZHOU) CORP., LTD.) 台灣台北市敦化北路201號 / 201, TUNG HWA NORTH ROAD, TAIPEI, TAIWAN (江蘇省昆山昆山市長江南路201號 / 201, CHANG JIANG ROAD (S) KUNSHAN ECONOMIC & TECHNICAL DEVELOPMENT ZONE, JIANG SU) (廣東省惠州市博羅縣石灣鎮永石大道 / YONGSHI BOULEVARD, SHIWAN TOWN, BOLUO COUNTY,

測試項目 單位 測試方法 極限値 (Result) 限値 (Test Items) (Unit) (Method) (MDL) (Limit) No.1 氫氟碳化物 (HFC)-245ca (C3H3F5) 參考US EPA 5021方法, 以氣相層析/質譜儀檢 mg/kg n.d. 測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS. 參考US EPA 5021方法, 以氣相層析/質譜儀檢 氫氟碳化物 (HFC)-245fa (C3H3F5) mg/kg n.d. 測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS. 參考US EPA 5021方法, 以氣相層析/質譜儀檢 氫氟碳化物 (HFC)-365mfc (C4H5F5) n.d. mg/kg 測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS. 全氟碳化物 / PFCs (Perfluorocarbon) 參考US EPA 5021方法, 以氣相層析/質譜儀檢 四氟甲烷 / F14 (CAS No.: 75-73-0) mg/kg n.d. 測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS. 參考US EPA 5021方法, 以氣相層析/質譜儀檢 六氟乙烷 / Fluorocarbon 116 (CAS mg/kg n.d. No.: 76-16-4) 測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS. 八氟丙烷 / Freon 218 (CAS No.: 參考US EPA 5021方法,以氣相層析/質譜儀檢 mg/kg n.d. 76-19-7) 測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS. 參考US EPA 5021方法, 以氣相層析/質譜儀檢 十氟丁烷 / Decafluorobutane (CAS n.d. mg/kg

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测. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.

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方法偵測

結果

法規



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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result) No.1	法規 限値 (Limit)
八氟環丁烷 / Freon C318 (CAS No.: 115-25-3)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
全氟-1-丁烯 / Perfluor-1-butene (CAS No.: 357-26-6)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
全氟異丁烯 / perfluorisobutene (CAS No.: 382-21-8)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
1,4-二氫八氟丁烷 / 1,4- dihydrooctafluorobutane (CAS No.: 377-36-6)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
2-全氟甲基丁烷 / nonafluor-2- (trifluoromethyl)butane (CAS No.: 594-91-2)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
全氟戊烷 / perfluoro-n-pentane (CAS No.: 678-26-2)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測./ With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
2-全氟甲基戊烷 / 2- perfluoromethylpentane (CAS No.: 355-04-4)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
全氟己烷 / perfluorohexane (CAS No.: 355-42-0)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測./ With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-

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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result) No.1	法規 限値 (Limit)
氟氯碳化物 / CFCs (Chlorofluorocarbons)					
Group I					
氟氯碳化物 (Chlorofluorocarbon)- 11 (CAS No.: 75-69-4)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	=
氟氯碳化物 (Chlorofluorocarbon)- 12 (CAS No.: 75-71-8)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測./ With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氟氯碳化物 (Chlorofluorocarbon)- 113 (CAS No.: 76-13-1)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氟氯碳化物 (Chlorofluorocarbon)- 114 (CAS No.: 76-14-2)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測./ With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氟氯碳化物 (Chlorofluorocarbon)- 115 (CAS No.: 76-15-3)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
Group III					
氟氯碳化物 (Chlorofluorocarbon)- 13 (CAS No.: 75-72-9)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氟氯碳化物 (Chlorofluorocarbon)- 111 (CAS No.: 354-56-3)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-

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(廣東省惠州市博羅縣石灣鎮永石大道 / YONGSHI BOULEVARD, SHIWAN TOWN, BOLUO COUNTY, HUIZHOU CITY, GUANG DONG)

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result) No.1	法規 限値 (Limit)
氟氯碳化物 (Chlorofluorocarbon)- 112 (CAS No.: 76-12-0)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氟氯碳化物 (Chlorofluorocarbon)- 211 (CAS No.: 422-78-6)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氟氯碳化物 (Chlorofluorocarbon)- 212 (CAS No.: 3182-26-1)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氟氯碳化物 (Chlorofluorocarbon)- 213 (CAS No.: 2354-06-5)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氟氯碳化物 (Chlorofluorocarbon)- 214 (CAS No.: 29255-31-0)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氟氯碳化物 (Chlorofluorocarbon)- 215 (CAS No.: 4259-43-2)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氟氯碳化物 (Chlorofluorocarbon)- 216 (CAS No.: 661-97-2)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氟氯碳化物 (Chlorofluorocarbon)- 217 (CAS No.: 422-86-6)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-

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(廣東省惠州市博羅縣石灣鎮永石大道 / YONGSHI BOULEVARD, SHIWAN TOWN, BOLUO COUNTY, HUIZHOU CITY, GUANG DONG)

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result) No.1	法規 限値 (Limit)
氟氯氫碳化物 / HCFCs (Hydrochlorofluorocarbons)					
氟氯氫碳化物 (HCFC)-21 (CAS No.: 75-43-4)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氟氯氫碳化物 (HCFC)-22 (CAS No.: 75-45-6)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氟氯氫碳化物 (HCFC)-31 (CAS No.: 593-70-4)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氟氯氫碳化物 (HCFC)-121 (CAS No.: 354-14-3)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氟氯氫碳化物 (HCFC)-122 (CAS No.: 354-21-2)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氟氯氫碳化物 (HCFC)-123 (CAS No.: 306-83-2)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氟氯氫碳化物 (HCFC)-124 (CAS No.: 2837-89-0)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-

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(廣東省惠州市博羅縣石灣鎮永石大道 / YONGSHI BOULEVARD, SHIWAN TOWN, BOLUO COUNTY, HUIZHOU CITY, GUANG DONG)

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result) No.1	法規 限値 (Limit)
氟氯氫碳化物 (HCFC)-131 (CAS No.: 359-28-4)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氟氯氫碳化物 (HCFC)-132b (CAS No.: 1649-08-7)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	1
氟氯氫碳化物 (HCFC)-133a (CAS No.: 75-88-7)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氟氯氫碳化物 (HCFC)-141b (CAS No.: 1717-00-6)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氟氯氫碳化物 (HCFC)-142b (CAS No.: 75-68-3)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氟氯氫碳化物 (HCFC)-221 (CAS No.: 422-26-4)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測./ With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氟氯氫碳化物 (HCFC)-222 (CAS No.: 422-49-1)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氟氯氫碳化物 (HCFC)-223 (CAS No.: 422-52-6)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-

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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result) No.1	法規 限値 (Limit)
氟氯氫碳化物 (HCFC)-224 (CAS No.: 422-54-8)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氟氯氫碳化物 (HCFC)-225ca (CAS No.: 422-56-0)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氟氯氫碳化物 (HCFC)-225cb (CAS No.: 507-55-1)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氟氯氫碳化物 (HCFC)-226 (CAS No.: 431-87-8)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氟氯氫碳化物 (HCFC)-231 (CAS No.: 421-94-3)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氟氯氫碳化物 (HCFC)-232 (CAS No.: 460-89-9)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測./ With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氟氯氫碳化物 (HCFC)-233 (CAS No.: 7125-84-0)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測./ With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氟氯氫碳化物 (HCFC)-234 (CAS No.: 425-94-5)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-

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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result) No.1	法規 限値 (Limit)
氟氯氫碳化物 (HCFC)-235 (CAS No.: 460-92-4)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氟氯氫碳化物 (HCFC)-241 (CAS No.: 666-27-3)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氟氯氫碳化物 (HCFC)-242 (CAS No.: 460-63-9)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氟氯氫碳化物 (HCFC)-243 (CAS No.: 460-69-5)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氟氯氫碳化物 (HCFC)-244	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氟氯氫碳化物 (HCFC)-251 (CAS No.: 421-41-0)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測./ With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氟氯氫碳化物 (HCFC)-252 (CAS No.: 819-00-1)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氟氯氫碳化物 (HCFC)-253 (CAS No.: 460-35-5)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-

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南亞塑膠工業股份有限公司 (台灣) / NAN YA PLASTICS CORPORATION (TAIWAN) (南亞電子材料 (昆山) 有限公司 / NAN YA ELECTRONIC MATERIALS (KUNSHAN) CORP., LTD.) (南亞電子材料 (惠州) 有限公司 / NAN YA ELECTRONIC MATERIALS (HUIZHOU) CORP., LTD.) 台灣台北市敦化北路201號 / 201, TUNG HWA NORTH ROAD, TAIPEI, TAIWAN (江蘇省昆山昆山市長江南路201號 / 201, CHANG JIANG ROAD (S) KUNSHAN ECONOMIC & TECHNICAL DEVELOPMENT ZONE, JIANG SU)

(廣東省惠州市博羅縣石灣鎮永石大道 / YONGSHI BOULEVARD, SHIWAN TOWN, BOLUO COUNTY, HUIZHOU CITY, GUANG DONG)

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result) No.1	法規 限値 (Limit)
氟氯氫碳化物 (HCFC)-261 (CAS No.: 420-97-3)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氟氯氫碳化物 (HCFC)-262 (CAS No.: 421-02-03)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氟氯氫碳化物 (HCFC)-271 (CAS No.: 430-55-7)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
不完全鹵化氟溴化物 / HBFCs (Hydrobromofluorocarbons)					
不完全鹵化氟溴化物 (HBFC)-21B2 (CHFBr2) (CAS No.: 1868-53-7)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
不完全鹵化氟溴化物 (HBFC)-22B1 (CHF2Br) (CAS No.: 1511-62-2)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
不完全鹵化氟溴化物 (HBFC)-31B1 (CH2FBr) (CAS No.: 373-52-4)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
不完全鹵化氟溴化物 (HBFC)-121B4 (C2HFBr4)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-

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(廣東省惠州市博羅縣石灣鎮永石大道 / YONGSHI BOULEVARD, SHIWAN TOWN, BOLUO COUNTY, HUIZHOU CITY, GUANG DONG)

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result) No.1	法規 限値 (Limit)
不完全鹵化氟溴化物 (HBFC)-122B3 (C2HF2Br3)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
不完全鹵化氟溴化物 (HBFC)-123B2 (C2HF3Br2)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	1
不完全鹵化氟溴化物 (HBFC)-124B1 (C2HF4Br)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
不完全鹵化氟溴化物 (HBFC)-131B3 (C2H2FBr3)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
不完全鹵化氟溴化物 (HBFC)-132B2 (C2H2F2Br2)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
不完全鹵化氟溴化物 (HBFC)-133B1 (C2H2F3Br)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
不完全鹵化氟溴化物 (HBFC)-141B2 (C2H3FBr2)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測./ With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
不完全鹵化氟溴化物 (HBFC)-142B1 (C2H3F2Br)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-

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(廣東省惠州市博羅縣石灣鎮永石大道 / YONGSHI BOULEVARD, SHIWAN TOWN, BOLUO COUNTY, HUIZHOU CITY, GUANG DONG)

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result) No.1	法規 限値 (Limit)
不完全鹵化氟溴化物 (HBFC)-151B1 (C2H4FBr)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
不完全鹵化氟溴化物 (HBFC)-221B6 (C3HFBr6)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
不完全鹵化氟溴化物 (HBFC)-222B5 (C3HF2Br5)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
不完全鹵化氟溴化物 (HBFC)-223B4 (C3HF3Br4)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
不完全鹵化氟溴化物 (HBFC)-224B3 (C3HF4Br3)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
不完全鹵化氟溴化物 (HBFC)-225B2 (C3HF5Br2)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
不完全鹵化氟溴化物 (HBFC)-226B1 (C3HF6Br)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測./ With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
不完全鹵化氟溴化物 (HBFC)-231B5 (C3H2FBr5)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-

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(廣東省惠州市博羅縣石灣鎮永石大道 / YONGSHI BOULEVARD, SHIWAN TOWN, BOLUO COUNTY, HUIZHOU CITY, GUANG DONG)

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result) No.1	法規 限値 (Limit)
不完全鹵化氣溴化物 (HBFC)-232B4 (C3H2F2Br4)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
不完全鹵化氟溴化物 (HBFC)-233B3 (C3H2F3Br3)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
不完全鹵化氟溴化物 (HBFC)-234B2 (C3H2F4Br2)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
不完全鹵化氟溴化物 (HBFC)-235B1 (C3H2F5Br)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
不完全鹵化氟溴化物 (HBFC)-241B4 (C3H3FBr4)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
不完全鹵化氟溴化物 (HBFC)-242B3 (C3H3F2Br3)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
不完全鹵化氟溴化物 (HBFC)-243B2 (C3H3F3Br2)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測./ With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
不完全鹵化氟溴化物 (HBFC)-244B1 (C3H3F4Br)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-

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台灣台北市敦化北路201號 / 201, TUNG HWA NORTH ROAD, TAIPEI, TAIWAN
(江蘇省昆山昆山市長江南路201號 / 201, CHANG JIANG ROAD (S) KUNSHAN ECONOMIC & TECHNICAL DEVELOPMENT ZONE, JIANG SU)
(廣東省惠州市博羅縣石灣鎮永石大道 / YONGSHI BOULEVARD, SHIWAN TOWN, BOLUO COUNTY,

HUIZHOU CITY, GUANG DONG)

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result) No.1	法規 限値 (Limit)
不完全鹵化氟溴化物 (HBFC)-251B3 (C3H4FBr3)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
不完全鹵化氟溴化物 (HBFC)-252B2 (C3H4F2Br2)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
不完全鹵化氟溴化物 (HBFC)-253B1 (C3H4F3Br)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
不完全鹵化氟溴化物 (HBFC)-261B2 (C3H5FBr2)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測./ With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
不完全鹵化氟溴化物 (HBFC)-262B1 (C3H5F2Br)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測./ With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
不完全鹵化氟溴化物 (HBFC)-271B1 (C3H6FBr)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氯化碳氫化物 / CHCs (Chlorinate hydrocarbon)					
1,1,1,2-四氯乙烷 / 1,1,1,2- Tetrachloroethane (CAS No.: 630- 20-6)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	_

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南亞塑膠工業股份有限公司 (台灣) / NAN YA PLASTICS CORPORATION (TAIWAN) (南亞電子材料 (昆山) 有限公司 / NAN YA ELECTRONIC MATERIALS (KUNSHAN) CORP., LTD.) (南亞電子材料 (惠州) 有限公司 / NAN YA ELECTRONIC MATERIALS (HUIZHOU) CORP., LTD.) 台灣台北市敦化北路201號 / 201, TUNG HWA NORTH ROAD, TAIPEI, TAIWAN (江蘇省昆山昆山市長江南路201號 / 201, CHANG JIANG ROAD (S) KUNSHAN ECONOMIC & TECHNICAL DEVELOPMENT ZONE, JIANG SU)

(廣東省惠州市博羅縣石灣鎮永石大道 / YONGSHI BOULEVARD, SHIWAN TOWN, BOLUO COUNTY, HUIZHOU CITY, GUANG DONG)

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result) No.1	法規 限値 (Limit)
1,1,1-三氯乙烷 / 1,1,1- Trichloroethane (CAS No.: 71-55- 6)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
1,1,2,2-四氯乙烷 / 1,1,2,2- Tetrachloroethane (CAS No.: 79- 34-5)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
1,1,2-三氯乙烷 / 1,1,2- Trichloroethane (CAS No.: 79-00- 5)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
1,1-二氯乙烷 / 1,1-Dichloroethane (CAS No.: 75-34-3)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
1,1-二氯乙烯 / 1,1-Dichloroethene (CAS No.: 75-35-4)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
1,1-二氯丙烯 / 1,1- Dichloropropene (CAS No.: 563-58- 6)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
1,2,3-三氯丙烷 / 1,2,3- Trichloropropane (CAS No.: 96-18- 4)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
1,2-二氯乙烷 / 1,2-Dichloroethane (CAS No.: 107-06-2)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-

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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result) No.1	法規 限値 (Limit)
1,2-二氯丙烷 / 1,2- Dichloropropane (CAS No.: 78-87- 5)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
1,3-二氯丙烷 / 1,3- Dichloropropane (CAS No.: 142-28- 9)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	1
2,2-二氯丙烷 / 2,2- Dichloropropane (CAS No.: 594-20- 7)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
四氯甲烷 (四氯化碳) / Carbon tetrachloride (CAS No.: 56-23-5)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氯乙烷 / Chloroethane (CAS No.: 75-00-3)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氯仿 / Chloroform (CAS No.: 67-66-3)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
氯甲烷 / Chloromethane (CAS No.: 74-87-3)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測./ With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
順-1,2-二氯乙烯 / cis-1,2- Dichloroethene (CAS No.: 156-59- 2)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-

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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result) No.1	法規 限値 (Limit)
順-1,3-二氯丙烯 / cis-1,3- Dichloropropene (CAS No.: 10061- 01-5)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
六氯丁二烯 / Hexachlorobutadiene (CAS No.: 87-68-3)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
二氯甲烷 / Dichloromethane (CAS No.: 75-09-2)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
四氯乙烯 / Tetrachloroethene (CAS No.: 127-18-4)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
反-1,2-二氯乙烯 / trans-1,2- Dichloroethene (CAS No.: 156-60- 5)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
反-1,3-二氯丙烯 / trans-1,3- Dichloropropene (CAS No.: 10061- 02-6)	mg/kg	參考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-
三氯乙烯 / Trichloroethylene (CAS No.: 79-01-6)	mg/kg	参考US EPA 5021方法,以氣相層析/質譜儀檢測. / With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.	-

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備註(Note):

- 1. mg/kg = ppm ; 0.1wt% = 1000ppm
- 2. n.d. = Not Detected (未檢出)
- 3. MDL = Method Detection Limit (方法偵測極限值)
- 4. "-" = Not Regulated (無規格值)
- 5. **= Qualitative analysis (No Unit) 定性分析(無單位)
- 6. Negative = Undetectable 陰性(未偵測到); Positive = Detectable 陽性(已偵測到)
- 7. 石棉(Asbestos): Negative = 陰性 (< 1.0 %), Positive = 陽性 (> 1.0 %)

PFOS参考資訊(Reference Information): 指令 2006/122/EC (Directive 2006/122/EC)

- (1) 該物質不可置於市場上或使用於特殊物質或配置成分重量濃度等於或大於0.005%.

 (May not be placed on the market or used as a substance or constituent of preparations in a concentration equal to or higher than 0.005% by mass.)
- (2) 該物質不可置於市場上的半成品或商品或其物件;假若零件上明顯地具有PFOS並參照結構上及微細構造上計算PFOS重量濃度等於或大於0.1%,而紡織品或其他覆蓋物質,如果PFOS在覆蓋物質中含量等於或大於1µg/m².

(May not be placed on the market in semi-finished products or articles, or parts thereof, if the concentration of PFOS is equal to or higher than 0.1% by mass calculated with reference to the mass of structurally or microstructurally distinct parts that contain PFOS or, for textiles or other coated materials, if the amount of PFOS is equal to or higher than $1\mu g/m^2$ of the coated material.)

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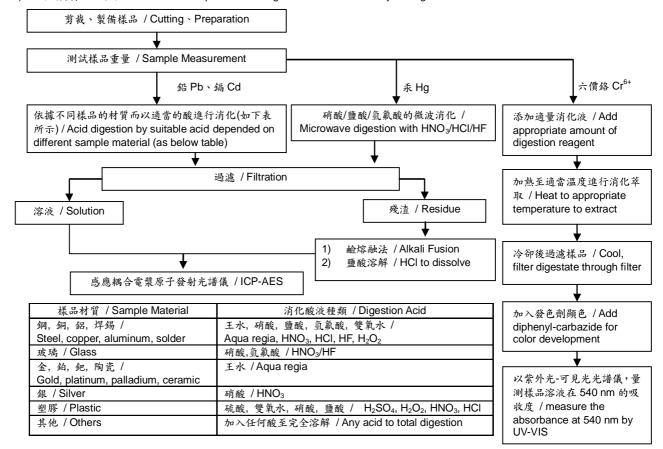
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- 1) 根據以下的流程圖之條件,樣品已完全溶解。(六價鉻測試方法除外) / These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ test method excluded)
- 2) 測試人員:楊登偉 / Name of the person who made measurement: Climbgreat Yang
- 3) 測試負責人:張啓興 / Name of the person in charge of measurement: Troy Chang



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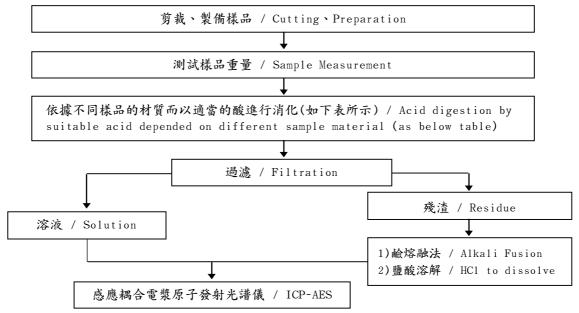
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- 1) 根據以下的流程圖之條件,樣品已完全溶解。 / These samples were dissolved totally by pre-conditioning method according to below flow chart.
- 2) 測試人員:楊登偉 / Name of the person who made measurement: Climbgreat Yang
- 3) 測試負責人:張啓興 / Name of the person in charge of measurement: Troy Chang

元素以 ICP-AES 分析的消化流程圖

(Flow Chart of digestion for the elements analysis performed by ICP-AES)



鋼,銅,鋁,焊錫 / Steel, copper, aluminum, solder	王水,硝酸,鹽酸,氫氟酸,雙氧水 /
	Aqua regia, HNO3, HC1, HF, H2O2
玻璃 / Glass	硝酸,氫氟酸 / HNO₃/HF
金,鉑,鈀,陶瓷 / Gold, platinum, palladium, ceramic	王水 / Aqua regia
銀 / Silver	硝酸 / HNO3
塑膠 / Plastic	硫酸,雙氧水,硝酸,鹽酸 / H2SO4, H2O2, HNO3, HC1
其他 / Others	加入任何酸至完全溶解 / Any acid to total digestion

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測試報告 Test Report

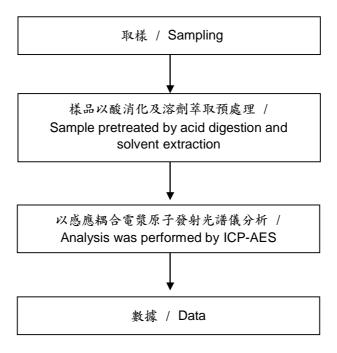
HUIZHOU CITY, GUANG DONG)

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- 1) 測試人員:楊登偉 / Name of the person who made measurement: Climbgreat Yang
- 2) 測試負責人: 龔振裕 / Name of the person in charge of measurement: Chenyu Kung

二氯化鈷分析流程圖 / Analytical flow chart of Cobalt dichloride



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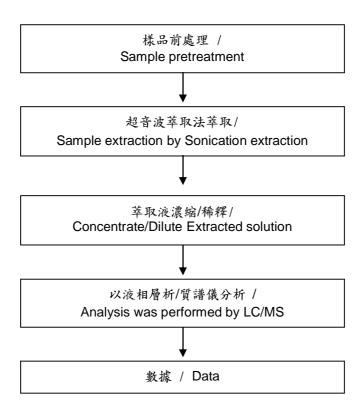
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雙酚A分析流程圖 / Bisphenol A analytical flow chart

- 測試人員: 古遠丰 / Name of the person who made measurement: Scott Ku
- 測試負責人:張啓興 / Name of the person in charge of measurement: Troy Chang



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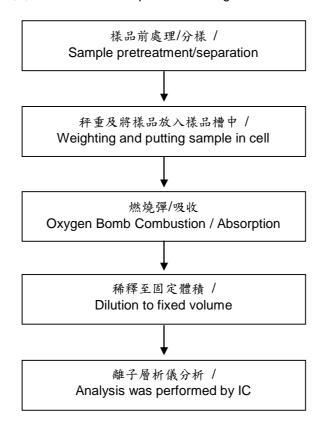
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鹵素分析流程圖 / Analytical flow chart of halogen content

- 1) 測試人員: 陳恩臻 / Name of the person who made measurement: Rita Chen
- 2) 測試負責人:張啓興 / Name of the person in charge of measurement: Troy Chang



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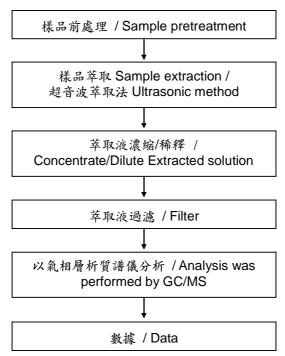
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超音波萃取(GC/MS)分析流程圖 /

Analytical flow chart of Ultrasonic extraction (GC/MS) procedure

- 測試人員:翁賜彬 / Name of the person who made measurement: Roman Wong
- 測試負責人:張啓興 / Name of the person in charge of measurement: Troy Chang

【測試項目(Test Items): 六溴環十二烷(HBCDD)、烷基酚(AP)、富馬酸二甲酯(Dimethyl Fumarate)、多苯環芳香族化合物(PAHs)、乙二醇醚及其酯類(Ethylene glycol ether)】



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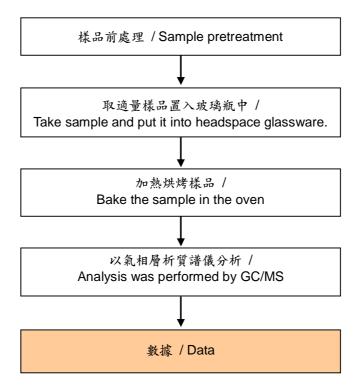
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揮發性有機化合物分析流程圖 /

Analytical flow chart of volatile organic compounds (VOCs)

- 1) 参考方法: US EPA 5021 / Reference method: US EPA 5021
- 2) 測試人員:嚴蔥敏 / Name of the person who made measurement: Dalki Yen
- 3) 測試負責人:陳新智 / Name of the person in charge of measurement: Shinjyh Chen



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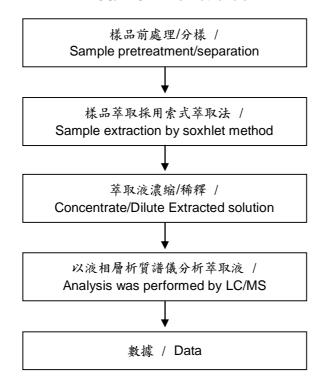
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索式萃取(LC/MS)分析流程圖 /

Analytical flow chart of Soxhlet extraction (LC/MS) procedure

- 1) 測試人員: 翁賜彬 / Name of the person who made measurement: Roman Wong
- 2) 測試負責人: 陳新智 / Name of the person in charge of measurement: Shinjyh Chen
- 測試項目(Test Items): 全氟辛烷磺酸/全氟辛酸(銨)、苯並三唑類化合物 / PFOS/PFOA、Benzotriazole



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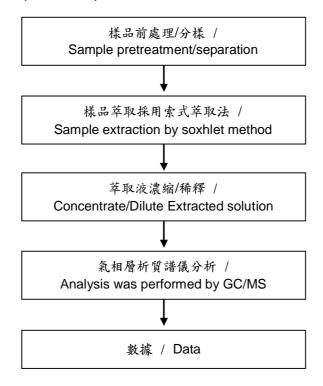
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索式萃取(GC/MS)分析流程圖 /

Analytical flow chart of Soxhlet extraction (GC/MS) procedure

- 1) 測試人員: 翁賜彬 / Name of the person who made measurement: Roman Wong
- 2) 測試負責人: 陳新智 / Name of the person in charge of measurement: Shinjyh Chen
 - 測試項目(Test Items): 可塑劑、苯並三唑類化合物、六溴環十二烷、壬酚、單甲基二 溴二苯基甲烷、有機磷化合物 / Phthalate、Benzotriazole、HBCDD、NP、DBBT、 Organic phosphorus compounds



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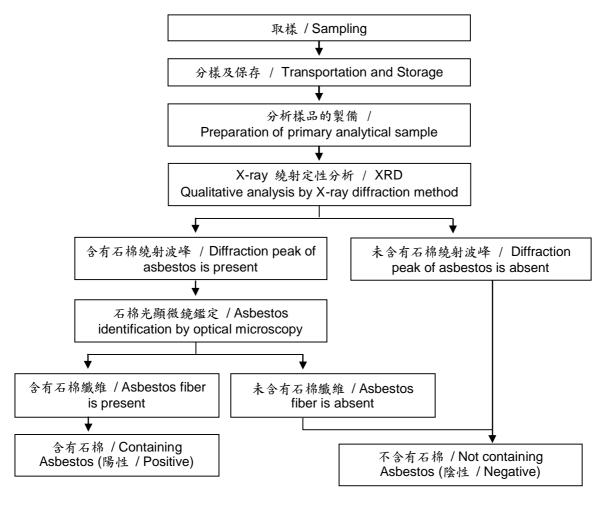
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石棉物質判定分析流程圖 / Analysis flow chart for determination of Asbestos

- 1) 測試人員:高鍵忠 / Name of the person who made measurement: Victor Kao
- 2) 測試負責人: 魏明芬 / Name of the person in charge of measurement: Wendy Wei



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Test Report

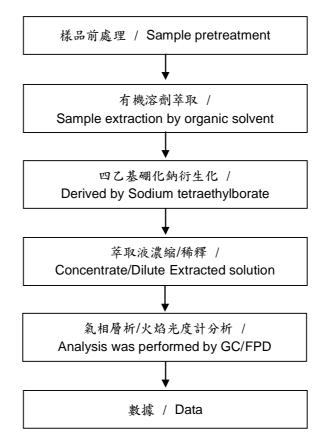
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有機錫分析流程圖 / Analytical flow chart of Organic-Tin content

- 1) 測試人員:陳君涵 / Name of the person who made measurement: Ginny Chen
- 2) 測試負責人:張啓興 / Name of the person in charge of measurement: Troy Chang



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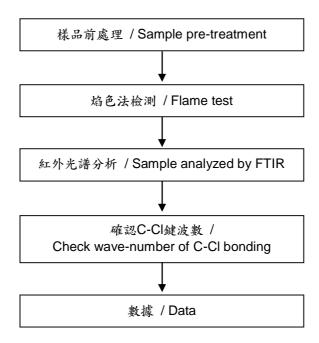
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聚氯乙烯物質判定分析流程圖 /

Analysis flow chart for determination of PVC in material

- 1) 測試人員:陳君涵 / Name of the person who made measurement: Ginny Chen
- 2) 測試負責人:張啓興 / Name of the person in charge of measurement: Troy Chang



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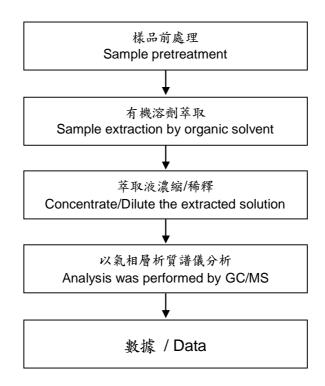
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HUIZHOU CITY, GUANG DONG)

含氯阻燃劑分析流程 / Chlorinated Flame retardant analytical flow chart

- 1) 測試人員: 曾勃鈞 / Name of the person who made measurement: Barry Tseng
- 2) 測試負責人:張啓興 / Name of the person in charge of measurement: Troy Chang
- 参考方法(Reference method): US EPA 8270D, US EPA 3540
- 測試項目(Test Items): PCBs, PCNs, PCTs, Mirex, CP, MCCP / 多氯聯苯, 多氯奈, 多氯三聯苯, 滅蟻靈, 氯化石蠟, 中鏈氯化石蠟



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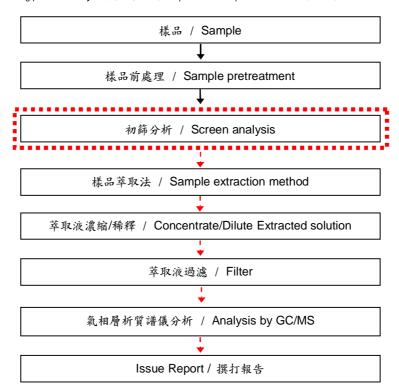
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分析流程圖 / Analytical flow chart

1)測試人員: 翁賜彬 / Name of the person who made measurement: Roman Wong 2)測試負責人: 張啓興 / Name of the person in charge of measurement: Troy Chang

■測試項目(Test Items): 多溴聯苯/多溴聯苯醚, 四溴雙酚-A-雙 / PBB/PBDE, TBBP-A-bis

初次測試程序 / First testing process —— 選擇性篩檢程序 / Optional screen process ------ 確認程序 / Confirmation process ----



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測試報告 Test Report

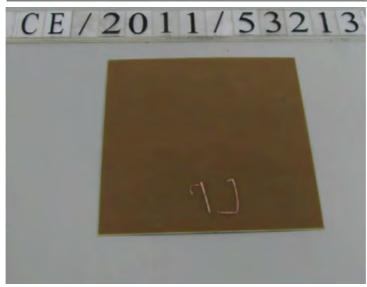
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** 報告結尾 (End of Report) **

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Test Report No.: CE/2011/82256 Date: 2011/08/18

UTEK CHEMICAL INC.

NO. 15, JEN I ROAD, HSINCHU INDUSTRIAL PARK, HSINCHU, TAIWAN, R. O. C.



Page: 1 of 10

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

Sample Description : SOLDER RESIST INK Style/Item No. : UPC-9000/ H-300

Sample Receiving Date : 2011/08/11

Testing Period : 2011/08/11 TO 2011/08/18

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

: Based on the performed tests on submitted samples, the test results of Cadmium, Lead, Conclusion Mercury, Hexavalent Chromium Cr(VI), PBBs and PBDEs comply with the limits as set

by RoHS Directive 2011/65/EU Annex II; recasting 2002/95/EC.



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UTEK CHEMICAL INC.

NO. 15, JEN I ROAD, HSINCHU INDUSTRIAL PARK, HSINCHU, TAIWAN, R. O. C.

Test Result(s)

PART NAME No.1 : GREEN PASTE

Test Item (s):	Unit	Method	MDL	Result No.1	Limit
Cadmium (Cd)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.	100
Lead (Pb)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.	1000
Mercury (Hg)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.	1000
Hexavalent Chromium Cr(VI)	mg/kg	With reference to IEC 62321: 2008 and performed by UV-VIS.	2	n.d.	1000
PVC	**	Analysis was performed by FTIR and FLAME Test.	-	Negative	-
Hexabromocyclododecane (HBCDD) (CAS No.: 25637-99-4)	mg/kg	With reference to US EPA 3540C method. Analysis was performed by GC/MS.	5	n.d.	-
Perfluorooctane sulfonates (PFOS-Acid, Metal Salt, Amide)	mg/kg	With reference to US EPA 3540C: 1996 method for PFOS Content. Analysis was performed by LC/MS.	10	n.d.	-
PFOA (CAS No.: 335-67-1)	mg/kg	With reference to US EPA 3540C: 1996 method for PFOA Content. Analysis was performed by LC/MS.	10	n.d.	-
Phthalates					
BBP (Benzyl butyl phthalate) (CAS No.: 85-68-7)			0.003	n.d.	-
DEHP (Di- (2-ethylhexyl) phthalate) (CAS No.: 117-81-7)			0.003	n.d.	-
DIDP (Di-isodecyl phthalate) (CAS No.: 26761-40-0)			0.01	n.d.	-
DINP (Di-isononyl phthalate) (CAS No.: 28553-12-0)	%	With reference to EN 14372. Analysis was performed by GC/MS.	0.01	n.d.	-
DNOP (Di-n-octyl phthalate) (CAS No.: 117-84-0)			0.003	n.d.	-
DBP (Dibutyl phthalate) (CAS No.: 84-74-2)			0.003	n.d.	-
DIBP (Di-isobutyl phthalate) (CAS No.: 84-69-5)			0.003	n.d.	-

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UTEK CHEMICAL INC.

NO. 15, JEN I ROAD, HSINCHU INDUSTRIAL PARK, HSINCHU, TAIWAN, R. O. C.



Took Itom (a):	Unit	Method	MDL	Result	Limit
Test Item (s):	Unit	Wethod	INIDL	No.1	Limit
Sum of PBBs			-	n.d.	1000
Monobromobiphenyl			5	n.d.	-
Dibromobiphenyl			5	n.d.	-
Tribromobiphenyl			5	n.d.	-
Tetrabromobiphenyl			5	n.d.	-
Pentabromobiphenyl			5	n.d.	-
Hexabromobiphenyl			5	n.d.	-
Heptabromobiphenyl			5	n.d.	-
Octabromobiphenyl			5	n.d.	-
Nonabromobiphenyl			5	n.d.	-
Decabromobiphenyl		With reference to IEC 62321: 2008 and	5	n.d.	-
Sum of PBDEs	mg/kg	performed by GC/MS.	-	n.d.	1000
Monobromodiphenyl ether			5	n.d.	-
Dibromodiphenyl ether			5	n.d.	-
Tribromodiphenyl ether			5	n.d.	-
Tetrabromodiphenyl ether			5	n.d.	-
Pentabromodiphenyl ether			5	n.d.	-
Hexabromodiphenyl ether			5	n.d.	-
Heptabromodiphenyl ether			5	n.d.	-
Octabromodiphenyl ether			5	n.d.	-
Nonabromodiphenyl ether			5	n.d.	-
Decabromodiphenyl ether			5	n.d.	-

Note:

- 1. mg/kg = ppm; 0.1wt% = 1000ppm
- 2. n.d. = Not Detected
- 3. MDL = Method Detection Limit
- 4. " " = Not Regulated
- 5. ** = Qualitative analysis (No Unit)
- 6. Negative = Undetectable / Positive = Detectable

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UTEK CHEMICAL INC. NO. 15, JEN I ROAD, HSINCHU INDUSTRIAL PARK, HSINCHU, TAIWAN, R. O. C.

PFOS Reference Information: Directive 2006/122/EC

- (1) May not be placed on the market or used as a substance or constituent of preparations in a concentration equal to or higher than 0.005 % by mass.
- (2) May not be placed on the market in semi-finished products or articles, or parts thereof, if the concentration of PFOS is equal to or higher than 0.1 % by mass calculated with reference to the mass of structurally or microstructurally distinct parts that contain PFOS or, for textiles or other coated materials, if the amount of PFOS is equal to or higher than 1µg/m² of the coated material.

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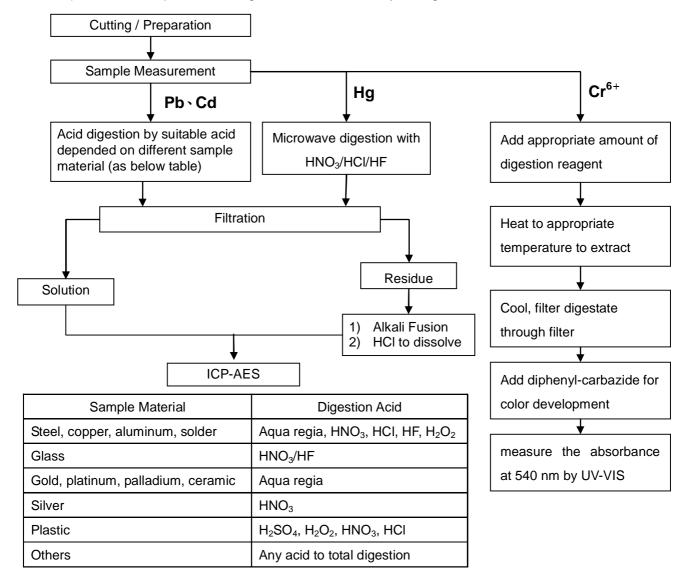


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UTEK CHEMICAL INC.

NO. 15, JEN I ROAD, HSINCHU INDUSTRIAL PARK, HSINCHU, TAIWAN, R. O. C.

- These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ test method excluded)
- 2) Name of the person who made measurement: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang



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No.: CE/2011/82256 Date: 2011/08/18 Page: 6 of 10

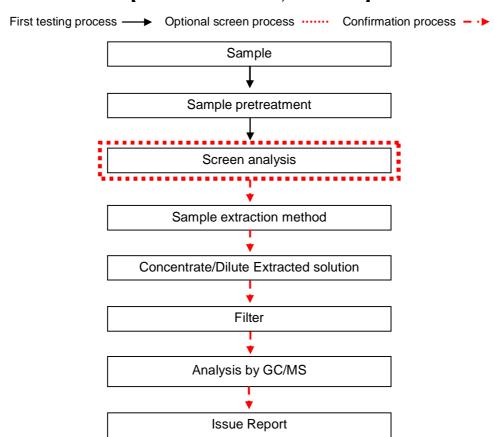
UTEK CHEMICAL INC. NO. 15, JEN I ROAD, HSINCHU INDUSTRIAL PARK, HSINCHU, TAIWAN, R. O. C.



Analytical flow chart

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang

[Test Items: PBB/PBDE, TBBP-A-bis]



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No.: CE/2011/82256 Date: 2011/08/18 Page: 7 of 10

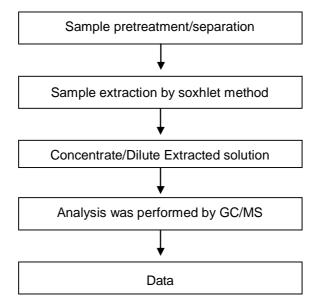
UTEK CHEMICAL INC. NO. 15, JEN I ROAD, HSINCHU INDUSTRIAL PARK, HSINCHU, TAIWAN, R. O. C.



Analytical flow chart of Soxhlet extraction (GC/MS) procedure

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang

[Test Items: Phthalate \(\) Benzotriazole \(\) HBCDD \(\) NP \(\) DBBT \(\)
Organic phosphorus compounds \(\)



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No.: CE/2011/82256 Date: 2011/08/18 Page: 8 of 10

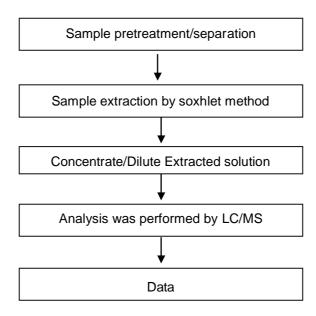
UTEK CHEMICAL INC.
NO. 15, JEN I ROAD, HSINCHU INDUSTRIAL PARK, HSINCHU, TAIWAN, R. O. C.



Analytical flow chart of Soxhlet extraction (LC/MS) procedure

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang

[Test Items: PFOS/PFOA · Benzotriazole]



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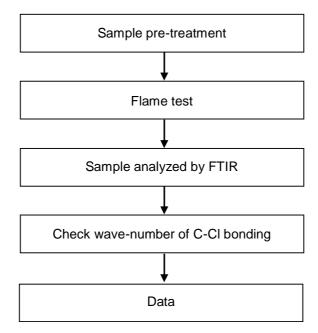
No.: CE/2011/82256 Date: 2011/08/18 Page: 9 of 10

UTEK CHEMICAL INC. NO. 15, JEN I ROAD, HSINCHU INDUSTRIAL PARK, HSINCHU, TAIWAN, R. O. C.



Analysis flow chart for determination of PVC in material

- Name of the person who made measurement: Ginny Chen
- Name of the person in charge of measurement: Troy Chang



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No.: CE/2011/82256 Date: 2011/08/18 Page: 10 of 10

UTEK CHEMICAL INC. NO. 15, JEN I ROAD, HSINCHU INDUSTRIAL PARK, HSINCHU, TAIWAN, R. O. C.





** End of Report **

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吴江市顺鸿铜业有限公司

Snun riong Copper Co., Lta. wujiang

产品质量证明书

CERTIFICATE OF QUALITY

入库时间: 2011.03.16

顾	客/Cust	smer		士	丰电子科技(昆山)有限公司				合同号	:/Contr	act No.				
	牌号			状	态			规格	(mm)		批	号	数量/Amount		重量/Weigh
G	rade Nm	ber			itio			s	ize		Batch	No.	箱/捆 Case/Bond	<u>个数</u> Quantily	(kg)
	TU1				of supply M			0.04	5*40				—	15	92. 3
				•									产	品标准/Pro	duct Standand
	σ _b	σ _{0.2}	!	δ	10	:	硬度	20 ℃	导电率	含氧量	晶粒度	熔		参照GB/	T2059-2000
N.	/mm ²	N/mm	2	(9	%)		HV	%	IACS	Oxygen Content	Graze	炉 号	说明 货到后请立即拆包(箱)验收并存放在室内		
	10	181				5	2—60	-	100	9ppm		1	干燥处。验收后如有异议,请在收到货后三天P 函告本公司,并注明本证入库日期、产品、 牌		议,请在收到货后三天内
	10	101				<i>3</i> .	2 00	•	100) ppin		1			此号、交货日期、
	•		化	学成么	分/Ch	emic	al Comp	osition	(%)				重量、生产	编号等,以	便查对。
	Cu+Ag	Fe	Bi	Sb	As	Sn	Ni	Zn	Р	Pb	0	S		Desc	ription
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测试报告

No. SHAEC1202985101

日期: 2012年03月27日

第1页.共5页

吴江市顺鸿铜业有限公司 吴江市七都镇吴越北路

以下测试之样品是由申请者所提供及确认:铜带

SGS工作编号:

SP12-008423 - SH

型号:

T2

样品接收日期:

2012年03月23日

测试周期:

2012年03月23日 - 2012年03月27日

测试要求:

根据客户要求测试

测试方法:

请参见下一页

测试结果:

请参见下一页

结论:

基于所送样品进行的测试, 测试结果与欧盟RoHS指令2002/95/EC以及后续修正指

令的要求相符。

通标标准技术服务有限公司 授权签名

Sandy Has

Hao Jinyu, Sandy郝金玉 实验室经理

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测试报告

No. SHAEC1202985101

日期: 2012年03月27日

第2页,共5页

测试结果:

样品部件外观描述:

样品编号

SGS样品ID

描述

1

SHA12-029851.001 铜色金属

备注:

(1) 1 mg/kg = 1 ppm = 0.0001%

(2) MDL = 检测极限值

(3) ND = 未检出 (< MDL)

(4) "-" = 未规定

RoHS指令2002/95/EC

测试方法:

参照IEC 62321:2008:

- (1) 用ICP-OES测定镉的含量.
- (2) 用ICP-OES测定铅的含量.
- (3) 用ICP-OES测定汞的含量.
- (4) 用点测试法/紫外-可见分光光度计比色法测定六价铬的含量.
- (5) 用GC-MS测定PBBs(多溴联苯)和PBDEs(多溴二苯醚)的含量.

测试项目	限值	单位	MDL	001
镉 (Cd)	100	mg/kg	2	ND
铅(Pb)	1,000	mg/kg	2	ND
汞 (Hg)	1,000	mg/kg	2	ND
六价铬(CrVI)	-		0	Negative
多溴联苯之和(PBBs)	1,000	mg/kg	-	ND
一溴联苯		mg/kg	5	ND
二溴联苯	1.0	mg/kg	5	ND
三溴联苯	1,41	mg/kg	5	ND
四溴联苯	-	mg/kg	5	ND
五溴联苯		mg/kg	5	ND
六溴联苯	-	mg/kg	5	ND
七溴联苯	-	mg/kg	5	ND
八溴联苯	(÷	mg/kg	5	ND
九溴联苯	-	mg/kg	5	ND
十溴联苯		mg/kg	5	ND
多溴二苯醚之和(PBDEs)	1,000	mg/kg	-	ND
一溴二苯醚	-	mg/kg	5	ND

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测试报告	No. SHAEC12029851	01	日期: 20	12年03月27日	第3页,共5页
测试项目	限值	单位	MDL	001	
二溴二苯醚		mg/kg	5	ND	
三溴二苯醚		mg/kg	5	ND	
四溴二苯醚	9	mg/kg	5	ND	
五溴二苯醚		mg/kg	5	ND	
六溴二苯醚		mg/kg	5	ND	
七溴二苯醚		mg/kg	5	ND	
八溴二苯醚	2.1	mg/kg	5	ND	
九溴二苯醚		mg/kg	5	ND	
十溴二苯醚	-	mg/kg	5	ND	

备注:

(1)最大允许极限值引用自2002/95/EC RoHS指令和后继修正指令2005/618/EC.

(2) 点测试法:

Negative= 镀层中未检测到六价铬, Positive = 镀层中检测到六价铬;

(当点测试结果为Negative或无法确定时,将采用沸水萃取法作进一步的结果验证.)

∘ 沸水萃取法:

Negative = 镀层中未检测到六价铬

Positive = 镀层中检测到六价铬; 表明50 cm²表面积的被测试样品的沸水萃取液中六价铬的浓度等于或大 于0.02 mg/kg.

针对金属表面的防魔涂层:由于未获知样品的存储条件和生产日期,样品的六价铬测试结果仅代表测试时样 品的状态.

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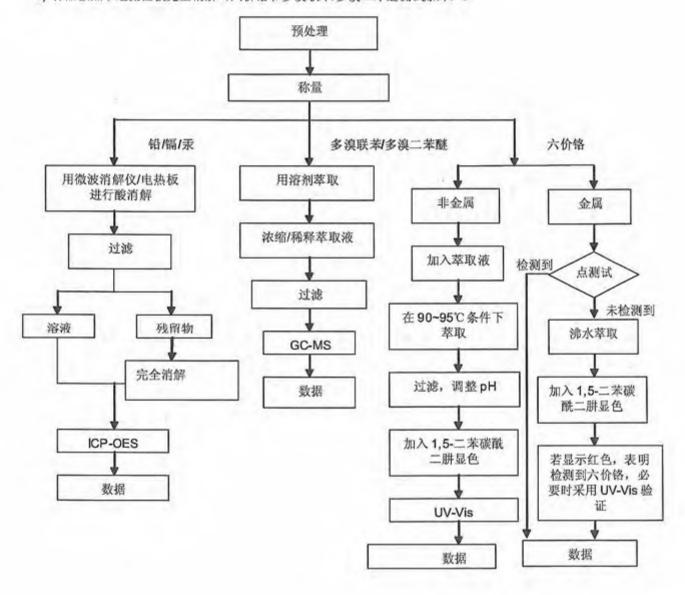
测试报告

No. SHAEC1202985101

日期: 2012年03月27日 第4页,共5页

附件

- 1) 分析人员: 韩玮/方何裔/左克春/林以琳
- 2) 项目负责人: 王卫/沈建萍
- 3) 样品按照下述流程被完全消解(六价铬和多溴联苯/多溴二苯醚测试除外)。



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测试报告

No. SHAEC1202985101

日期: 2012年03月27日 第5页,共5页

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HENG YU TECHNOLOGY CO., LTD.

TEL: 886-3-3789881 FAX: 886-3-3789190 導電無基材膠帶物性規格表 CONDUCTIVE NON BASE TAPE

品 名 Article Name 產品編號 Code	導電無基材膠符 Conductive No Base Tape DY-958	_L-14-		Co	電膠 nductive adhesive 型紙 Liner
面	層 Surface	Material	底	紙 Line	ſ
項目	單 位	規格 值	項目	單 位	規格値
Items	Unit	Spec Value	Items	Unit	Spec Value
材料物質 Article Matter		壓克力自黏膠	材料物質 Article Matter		離型紙
厚 度 Thickness	mm	0.050 ±0.005	厚 度 Thickness	Mm	0.15 ±0.02
基 重 Basic Weight	g /m²		基 重 Basic Weight	g /m²	130±20
抗張力 Tensile Strength	Kg / 25mm		抗張力 Tensile Strength	kg / 25mm	>20
伸 長 率 Elongation	%		伸 長 率 Elongation	%	0
表面阻抗 Surface Resist	Ω/□		顏 色 Color		白色
對導電布 (貼)電阻値 Conductive Ω	Ω以下	0.05	平滑度 Smoothness		佳
顔 色 Color		灰白	印刷性 Printable		不適
Physical Propertie	產 es & Chemical P		性與化物	性	
膠 系 Adhesive Base		乳化型壓克力	耐候性 Weathering Resistance	e	良
膠 厚 Coating Thickness	mm	0.050 ± 0.005	保持力 Holding Power	inch / hr	>72
初期黏著力 Initial Adhesion	14# /cm	≦ 5 cm	適用溫度 Temperature Range	°C	-20 -100
黏 著 力 Adhesion	Kg / 25mm	≧12	庫 存 條 件 Storage Condition	°C / R.H	25 / 75
膠面傳導阻抗 Coating Conductive Resistance	ASTMD-257	< 0.05	庫存有效期限 Storage Validity	month	12
			總厚度 Whole Thickness	mm	0.17 - 0.18



检测报告 报告编号: E08082017804D-2 日期: 2011.08.12 第1页, 共11页

(SVHC)

样品型号:

委托单位: 恒裕科技股份有限公司

DY-958

抽址: 桃园具 33844 桃园具芦竹乡龙寿街一段 263 号

委托单位提供样品信息如下: 样品名称: 导电胶

样品接收日期: 2011.08.08

样品检测日期: 2011.08.08 至 2011.08.12

基于欧州化学品管理署于 2008 年 10 月 28 日公布的供审议的高关注物质 15 项清单(蒽、4,4'-检测要求:

> 二氨基二苯基甲烷、邻苯二甲酸二丁酯、二氯化钴、五氧化二砷、三氧化二砷、重铬酸钠、二 甲苯麝香、邻苯二甲酸二(2-乙基己基)酯(DEHP)、六溴环十二烷(HBCDD)、短链氯化石蜡、氧 化双三丁基锡、砷酸氢铅、邻苯二甲酸丁基苄酯、三乙基砷酸酯)及 2010 年 01 月 13 日正式公 布的将另外 14 个高关注物质(蒽油、蒽油、蒽糊、轻油、蒽油、蒽糊、蒽馏分、蒽油、含蒽量 少、蔥油,蔥糊、煤焦油沥青,高温、硅酸铝耐火陶瓷纤维、氧化锆硅酸铝耐火陶瓷纤维、2.4-二硝基甲苯、邻苯二甲酸二异丁酯(DIBP)、铬酸铅、钼铬红(C.I.颜料红 104)、铅铬黄(C.I.颜料 黄 34)、磷酸三(2-氯乙基)酯(TCEP))、2010年3月30日公布的丙烯酰胺及2010年6月18 日,提议的8种化学物质(三氯乙烯、硼酸、无水四硼酸钠、铬酸钠、铬酸钾、重铬酸钾、重 铬酸铵、水合四硼酸钠)、2010年12月03日公布的第四批8种化学物质(硫酸钴、硝酸钴、 碳酸钴、醋酸钴、2-甲氧基乙醇、2-乙氧基乙醇、三氧化铬、三氧化二铬及其低聚物产生的酸) 列入候选清单的决定(根据欧盟第 1907/2006 号 REACH 法规),以及 2011 年 2 月 21 日公布 的第五批 7 种化学物质,(乙二醇乙醚乙酸酯、铬酸锶、1,2 苯二酸-二(C7-11 支链-直链)烷 基(醇)酯、联胺,也称肼、1-甲基-2-吡咯烷酮、1.2.3-三氯丙烷、邻苯二甲酸二异庚酯)列

入候选清单的决定根据客户要求进行筛选测试。

检测结果: 请参见下页

摘要: 根据分析结果,所检样品中53项SVHC浓度小于0.1%。

批准人:

本检测单位保

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日期: 2011.08.12

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(SVHC)

检测依据:

177 1V3 1V 1VI	•		
序号	物质名称	测试方法及仪器	物质分类
1	蒽	参考 US EPA 3540C:1996& US EPA 8270D:2007, GC-MS	持久性,生物积累性 和毒性物质
2	邻苯二甲酸丁苄酯	参考 EPA 8061A, GC-MS	第2类生殖系统毒性物质
3	邻苯二甲酸二丁酯	参考 EPA 8061A, GC-MS	第2类生殖系统毒性物质
4	邻苯二甲酸二 (2-乙基已基)酯	参考 EPA 8061A, GC-MS	第2类生殖系统毒性物质
5	六溴环十二烷及其非对映异构体	参考 US EPA 3540C:1996, GC-MS	持久性,生物积累性和毒 性物质
6	4,4'-二氨基二苯基甲烷	参考 EN 14362-1&2:2003 GC-MS	第2类致癌性物质
7	短链型 C10~C13 氯化石蜡	参考 US EPA 3540C:1996, GC-MS	持久性,生物积累性和毒 性物质;高持久性和高度 生物积累性物质
8	二甲苯麝香	参考 US EPA 3540C:1996, GC-MS	高持久性和高度生物积 累性物质
9	三乙砷酸酯	参考 US EPA 3052:1996, ICP-OES	第1类致癌性物质
10	氧化双三丁基锡	参考 DIN EN ISO 17353: 2005 GC-MS	持久性,生物积累性和毒 性物质
11	二氯化钴 ⁽¹⁾	参考 US EPA 3052:1996/ BS EN14582:2007, ICP-OES/IC	致癌、致突变、有生殖 毒性物质
12	五氧化二砷(1)	参考 US EPA 3052:1996, ICP-OES	第 1 类致癌性物质
13	三氧化二砷(1)	参考 US EPA 3052:1996, ICP-OES	第1类致癌性物质
14	重铬酸钠 ⁽¹⁾	参考 US EPA 3052:1996/US EPA 3060A:1996, EPA 9056A: 2007ICP-OES/UV-Vis	第2类致癌性物质; 第2类致畸性物质; 第2类生殖系统毒性物质
15	砷酸氢铅 ⁽¹⁾	参考 US EPA 3052:1996, ICP-OES	第 1 类致癌性物质; 第 1 类生殖系统毒性物质

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(SVHC)

检测依据:

<u> </u>			
序号	物质名称	测试方法及仪器	物质分类
16	2,4-二硝基甲苯	内部方法, GC-MS	第2类致癌性物质
17	蔥油 ⁽³⁾	内部方法, GC-MS	持久性,生物积累性和毒 性物质
18	蔥油,蔥糊,轻油 ⁽³⁾	内部方法, GC-MS	持久性,生物积累性和毒 性物质
19	蔥油,蔥糊,蔥馏分 ⁽³⁾	内部方法, GC-MS	持久性,生物积累性和毒 性物质
20	蔥油,含蔥量少 ⁽³⁾	内部方法, GC-MS	持久性,生物积累性和毒 性物质
21	蔥油,蔥糊 ⁽³⁾	内部方法, GC-MS	持久性,生物积累性和毒 性物质
22	邻苯二甲酸二异丁酯	参考 EPA 8061A, GC-MS	第2类生殖系统毒性物质
23	硅酸铝,耐火陶瓷纤维(4)	内部方法, ICP-OES/SEM-EDS	第2类致癌性物质
24	锆硅酸铝,耐火陶瓷纤维 ⁽⁴⁾	内部方法, ICP-OES/SEM-EDS	第2类致癌性物质
25	铬酸铅 ⁽⁴⁾	参考 US EPA 3052:1996/US EPA 3060A:1996, ICP-OES/UV-Vis	第2类致癌性物质;第1 类生殖系统毒性物质
26	钼铬红(C.I.颜料红 104) ⁽⁴⁾	参考 US EPA 3052:1996/US EPA 3060A:1996, ICP-OES/UV-Vis	第2类致癌性物质;第1 类生殖系统毒性物质
27	铅铬黄(C.I.颜料黄 34) ⁽⁴⁾	参考 US EPA 3052:1996/US EPA 3060A:1996, ICP-OES/UV-Vis	第2类致癌性物质;第1 类生殖系统毒性物质
28	三(2-氯乙基)磷酸酯	内部方法, GC-MS	第2类生殖系统毒性物质
29	煤沥青,高温 ⁽³⁾	内部方法, GC-MS	持久性,生物积累性和毒性 物质;第2类致癌性物质
30	丙烯酰胺	内部方法, HPLC	第2类致癌性物质;第2类致畸物质

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检测依据:

序号	物质名称	测试方法及仪器	物质分类
31	三氯乙烯	内部方法, GC-MS	2 类致癌物质
32	硼酸	内部方法, ICP-OES	2 类致生殖毒性物质
33	无水四硼酸钠	内部方法, ICP-OES	2 类致生殖毒性物质
34	水合四硼酸钠	内部方法, ICP-OES	2 类致生殖毒性物质
35	铬酸钠	内部方法, UV	2 类致畸、致癌、致生殖 毒性物质
36	铬酸钾	内部方法, UV	2 类致畸、致癌物质
37	重铬酸钾	内部方法, UV	2 类致畸、致癌、致生殖 毒性物质
38	重铬酸铵	内部方法, UV	2 类致畸、致癌、致生殖 毒性物质
39	硫酸钴 ⁽¹⁾	内部方法, ICP-OES	2类致畸、3类致癌、2 类致生殖毒性物质
40	硝酸钴 ⁽¹⁾	内部方法, ICP-OES	2 类致畸、3 类致癌、2 类致生殖毒
41	碳酸钴 ⁽¹⁾	内部方法, ICP-OES	致畸、致癌、致生殖毒性 物质
42	醋酸钴(1)	内部方法, ICP-OES	致畸、致癌、致生殖毒性 物质

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(SVHC)

检测依据:

一直でいまれた	•			
序号	华	物质名称 测试方法及仪器		物质分类
43	2-月	甲氧基乙醇	内部方法, GC	致畸、致癌、致生殖毒性物质 CMR
44	2-7	乙氧基乙醇	内部方法, GC	致畸、致癌、致生殖毒性物质 CMR
45	Ξ	E氧化铬 ⁽¹⁾	内部方法, UV	致畸、致癌、致生殖毒性物质 CMR1,2
	三氧化二	铬酸	内部方法, UV	致畸、致癌、致生殖毒性物质 CMR
46	铬及其低 聚物产生	及其低 勿产生 二铬酸 内部方	内部方法, UV	致畸、致癌、致生殖毒性物质 CMR
	的酸 ⁽¹⁾	铬酸及二铬酸的 低聚物	内部方法, UV	致畸、致癌、致生殖毒性物质 CMR2
47	乙二酉	乙二醇乙醚乙酸酯 内部方法, GC		致癌、致突变、有生殖毒性物 质
48	年	各酸锶 ⁽¹⁾	参考 EPA 3052:1996, EPA 6010C:2007 ICP-OES	致癌、致突变、有生殖毒性物 质
49		二(C7-11 支链-直 完基(醇)酯	参考 EPA 8061A, GC-MS	致癌、致突变、有生殖毒性物 质
50	联胎	安,也称肼	内部方法, UV	致癌、致突变、有生殖毒性物 质
51	1-甲基-2-吡咯烷酮		参考 EPA 8270D:2007, GC-MS	致癌、致突变、有生殖毒性物 质
52	1,2,3-三氯丙烷		参考 EPA 5021:1996, GC	致癌、致突变、有生殖毒性物 质
53	邻苯二	甲酸二异庚酯	参考 EPA 8061A, GC-MS	致癌、致突变、有生殖毒性物 质

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(SVHC)

检测结果 (单位:%)

序号	检测项目	CAS 号	EC 号	检出限	检测结果
1	閚	120-12-7	204-371-1	0.0005	未检出
2	邻苯二甲酸丁苄酯	85-68-7	201-622-7	0.005	未检出
3	邻苯二甲酸二丁酯	84-74-2	201-557-4	0.005	未检出
4	邻苯二甲酸二 (2-乙基已基)酯	117-81-7	204-211-0	0.005	未检出
5	六溴环十二烷 及其非对映异构体	25637-99-4 and 3194-55-6 (134237-51-7, 134237-50-6, 134237-52-8)	247-148-4/ 221-695-9	0.005	未检出
6	4,4'-二氨基二苯基甲烷	101-77-9	202-974-4	0.005	未检出
7	短链型 C10~C13 氯化石蜡	85535-84-8	287-476-5	0.01	未检出
8	二甲苯麝香	81-15-2	201-329-4	0.005	未检出
9	三乙砷酸酯	15606-95-8	427-700-2	0.005	未检出
10	氧化双三丁基锡	56-35-9	200-268-0	0.01	未检出
11	二氯化钴(1)	7646-79-9	231-589-4	0.01	未检出
12	五氧化二砷(1)	1303-28-2	215-116-9	0.01	未检出
13	三氧化二砷(1)	1327-53-3	215-481-4	0.01	未检出
14	重铬酸钠 ⁽¹⁾	7789-12-0, 10588-01-9	234-190-3	0.01	未检出
15	砷酸氢铅 ⁽¹⁾	7784-40-9	232-064-2	0.01	未检出

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(SVHC)

检测结果 (单位:%)

序号	检测项目	CAS 号	EC 号	检出限	检测结果
16	2,4-二硝基甲苯	121-14-2	204-450-0	0.01	未检出
17	蔥油(3)	90640-80-5	292-602-7	,	4
18	蔥油,蔥糊,轻油 ⁽³⁾	91995-17-4	295-278-5		
19	蔥油,蔥糊,蔥馏分 ⁽³⁾	91995-15-2	295-275-9	0.050	未检出
20	蔥油,含蔥量少 ⁽³⁾	90640-82-7	292-604-8	~	
21	蔥油, 蔥糊 ⁽³⁾	90640-81-6	292-603-2	A	
22	邻苯二甲酸二异丁酯	84-69-5	201-553-2	0.005	未检出
23	硅酸铝,耐火陶瓷纤维(4)		Index No. 650-017-00-8 ⁽²⁾	0.01	未检出
24	锆硅酸铝,耐火陶瓷纤维 ⁽⁴⁾		Index No. 650-017-00-8 ⁽²⁾	0.01	未检出
25	铬酸铅 ⁽⁴⁾	7758-97-6	231-846-0	0.005	未检出
26	钼铬红(C.I.颜料红 104) ⁽⁴⁾	12656-85-8	235-759-9	0.005	未检出
27	铅铬黄(C.I.颜料黄 34) ⁽⁴⁾	1344-37-2	215-693-7	0.005	未检出
28	三(2-氯乙基)磷酸酯	115-96-8	204-118-5	0.005	未检出
29	煤沥青,高温 ⁽³⁾	65996-93-2	266-028-2	0.050	未检出
30	丙烯酰胺	79-06-1	201-173-7	0.005	未检出

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报告编号: E08082017804D-2

日期: 2011.08.12

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(SVHC)

检测结果 (单位:%)

序号	检测项目	CAS 号	EC 号	检出限	检测结果
31	三氯乙烯	79-01-6	201-167-4	0.01	未检出
32	硼酸	10043-35-3/ 11113-50-1	233-139-2/ 234-343-4	0.01	未检出
33	无水四硼酸钠	1330-43-4 12179-04-3 1303-96-4	215-540-4	0.01	未检出
34	水合四硼酸钠	12267-73-1	235-541-3	0.01	未检出
35	铬酸钠	7775-11-3	231-889-5	0.01	未检出
36	铬酸钾	7789-00-6	232-140-5	0.01	未检出
37	重铬酸钾	7778-50-9	231-906-6	0.01	未检出
38	重铬酸铵	7789-9-5	232-143-1	0.01	未检出
39	硫酸钴(1)	10124-43-3	233-334-2	0.01	未检出
40	硝酸钴 ⁽¹⁾	10141-05-6	233-402-1	0.01	未检出
41	碳酸钴 ⁽¹⁾	513-79-1	208-169-4	0.01	未检出
42	醋酸钴(1)	71-48-7	200-755-8	0.01	未检出

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日期: 2011.08.12

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(SVHC)

检测结果 (单位:%)

序号	检测项目	CAS 号	EC 号	检出限	检测结果
43	2-甲氧基乙醇	109-86-4	203-713-7	0.01	未检出
44	2-乙氧基乙醇	110-80-5	203-804-1	0.01	未检出
45	三氧化铬 ⁽¹⁾	1333-82-0	215-607-8	0.01	未检出
	三氧化二 铬酸		>	0.01	未检出
46	铬及其低 聚物产生 二铬酸	7738-94-5 13530-68-2		0.01	未检出
	的酸 ⁽¹⁾ 铬酸及二铬酸的 低聚物			0.01	未检出
47	乙二醇乙醚乙酸酯	111-15-9	203-839-2	0.01	未检出
48	铬酸锶 ⁽¹⁾	7789-6-2	232-142-6	0.01	未检出
49	1,2 苯二酸-二 (C7-11 支链-] 链)烷基 (醇)酯	68515-42-4	271-084-6	0.01	未检出
50	联胺,也称肼	7803-57-8 302-01-2	206-114-9	0.01	未检出
51	1-甲基-2-吡咯烷酮	872-50-4	212-828-1	0.01	未检出
52	1,2,3-三氯丙烷	96-18-4	202-486-1	0.01	未检出
53	邻苯二甲酸二异庚酯	71888-89-6	276-158-1	0.01	未检出

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(SVHC)

注释:

N.D.=未检出 (小于检出限) 0.1% = 1000 mg/kg = 1000 ppm

mg/kg = ppm

- (1):二氯化钴浓度值是由钴(Co)和氯(Cl)测试结果换算而来。五氧化二砷、三氧化二砷、重铬酸钠、砷酸氢铅、硫酸钴、硝酸钴、碳酸钴、醋酸钴、三氧化铬、三氧化二铬及其低聚物产生的酸、铬酸锶的浓度值是由物质中的重金属测试结果换算而来。
- (2):在化学物质及其混合物的分类,标记与包装法规,即 CLP 法规(法规(EC)No 1272/2008)的附录 VI 中,索引号 650-017-00-8 适用于所有的耐火陶瓷纤维材料。
- (3):由于这些物质是 UVCB 物质(未知成分或可变成分的,复杂反应物或生物材料的物质),由各种不同的成分组成,所以这些物质的测试结果是由选定的具有代表性的物质的主要组成成分的测试结果换算而来的。
- (4):由于此物质含有多种物质,测试结果是基于此物质中最具有代表性的主要组成化合物的含量,其主要造成化合物的测试结果是基于特定的重金属元素的浓度换算而来。

备注:

1:本报告所涉及的关于 53 种高关注物质的化学分析是基于根据欧洲化学品管理署 (ECHA) 2008 年 10 月 28 日、2010 年 01 月 13 日、2010 年 3 月 30 日、2010 年 6 月 18 日、2010 年 12 月 03 日和 2011 年 2 月 21 日公布的高关注物质列入候选清单的决定,利用现有的分析技术所完成的。具体参考:

http://echa.europa.eu/chem data/authorisation process/candidate list table en.asp,

http://echa.europa.eu/doc/press/pr 10 01 candidate list 20100113.pdf,

http://echa.europa.eu/doc/press/pr 10 05 acrylamide 20100330.pdf,

http://echa.europa.eu/consultations/authorisation/svhc/svhc cons en.asp

- 2:根据欧盟第 1907/2006(EC)号法规,如果满足以下两件条件,如果物质符合第 57 条中的标准并根据第 59 条第一款被确定,物品的任何制造商或进口商应根据第 7 条第 4 款向欧盟化学品管理署进行通报: (a)物质在物品中的总含量超过 1 吨/年/生产商或进口商; (b)物质在物品中的总含量以质量分数计超过 0.1% 的浓度。
- 3:欧盟第 1907/2006(EC)号法规第 33 条规定,含有满足第 57 条中的标准并根据第 59 条第一款被确定且质量分数大于 0.1%的物质的物品的所有供应商应向物品接受者提供其可获取的充足信息,以使物品使用安全,这些信息至少包括物质的名称。

照片:



仅对报告照片中的样品负责

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报告编号: E08082017804D-2

日期: 2011.08.12

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(SVHC)

检测流程图

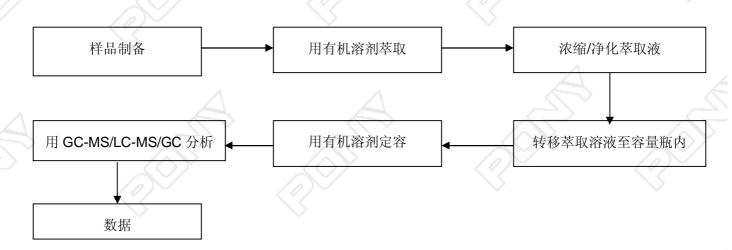
测试人员:应浩然 审核人员:曹佳

实验室负责人:曹维鹏

筛选二氯化钴/五氧化二砷/三氧化二砷/重铬酸钠/砷酸氢铅/三乙基砷酸酯/硅酸铝,耐火陶瓷纤维/锆硅酸铝, 耐火陶瓷纤维/铬酸铅/钼铬红(C.I.颜料红 104)/铬酸黄(C.I.颜料黄 34)/硼酸/无水四硼酸钠/七水合四硼酸钠/ 铬酸钠/铬酸钾/重铬酸铵/重铬酸钾/硫酸钴/硝酸钴/碳酸钴/醋酸钴/三氧化铬/三氧化二铬及其低聚物产生的酸/ 铬酸锶/联胺,也称肼



2. 测定蒽/4,4'-二氨基二苯基甲烷/二甲苯麝香/六溴环十二烷/短链氯化石蜡/氧化双三丁基锡/邻苯二甲酸 二丁酯/邻苯二甲酸二(2-乙基己基)酯/邻苯二甲酸丁苄酯/2,4-二硝基甲苯/蒽油/蒽油,蒽糊,轻油/蒽油, 蒽 糊, 蔥馏分/蔥油, 含蔥量少/蔥油, 蔥糊/邻苯二甲酸二异丁酯/丙烯酰胺/三(2-氯乙基)磷酸酯/煤沥青, 高温/ 三氯乙烯/2-甲氧基乙醇/2-乙氧基乙醇/乙二醇乙醚乙酸酯/1,2 苯二酸-二(C7-11 支链-直链)烷基(醇) 酯/1-甲基-2-吡咯烷酮/1,2,3-三氯丙烷/邻苯二甲酸二异庚酯含量



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SPECIFICATION FOR APPROVAL

DOCUMENT: A3132TS001

COAXIAL CABLE

STYLE: 105° C 30V

SIZE: 32AWG×1C

BRAID : TS

RECOGNIZED: UL 1979



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

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CHUNG-LI IND. PARK

TAIWAN, R.O.C.

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

WONDERFUL HI-TECH CO., LTD. SPECIFICATION

CTVI E	105°C 30V	DOCU	DOCUMENT NO:		
STYLE	UL 1979	A3132	TS001		
SIZE	32AWG		ESTABLISHED DATE: 2007/11/07		
STANDARI	D:				
	Size	AWG	32		
Conductor	Material		Silver Cover Copper		
Conductor	Conductors No.		7		
	Conductors Size	mm	0.080		
	O.D.	mm	0.24		
	Average Thickness	mm	0.22		
Insulation	Diameter	mm	0.68 ± 0.02		
	Material		FEP		
	Color		Clear		
David	Material		Tinned Copper		
Braid	Construction	mm	16 / 4 / 0.050		
	Coverage	%	90		
	Average Thickness	mm	0.13		
Jacket	Diameter	mm	1.13 ± 0.05		
	Material		FEP		
	Color		According to custom		
Marking	Non				
Drawing					
ΔΚ001/210Χ29	7/1 0		PAGE · 1		

AK001/210X297/1.0 PAGE: 1

EDITION: 1.3

MAKER: 7. C. XUO CONFIRM: C. Y. Chen APPROVAL: W.J. Wang

WONDERFUL HI-TECH CO., LTD. SPECIFICATION

Electrical a	Electrical & Physical Properties						
Item	-		32AWG				
Rating Ter	np Volta	ge	105°C 30)V			
Conductor Resistance			545 OHM	1/KM/20°	C MAX.		
Insulation	Resistanc	ce	1000 ME	GA OHM	I-KM MII	N.	
Dielectric	Strength		AC 500 V	V/Minute			
Spark Test			2.5 KV				
	Unaged Tensile Strength		2500 PSI	MIN.(1.	76 Kg/1	m m²)	
Insulation	Unageu	Elongation	200% MI	N.			
Agad		Tensile Strength	UNAGED MIN. 75%(168HRS×232°C)				
Aged Elongation		Elongation	UNAGED MIN. 75%(168HRS×232°C)				
	Unaged	Tensile Strength	2500 PSI MIN.(1.76 Kg / m m²)				
Jacket	Ullageu	Elongation	200% MIN.				
	Aged	Tensile Strength	UNAGED MIN.75%(168HRS×232°C)				
	Aguu	Elongation	UNAGED MIN.75%(168HRS×232°C)				
Nom. Impe	edance		50 ± 3 Ohms				
Nom. Capa	acitance		96 ± 3 pF/m				
Nom. Vel. of Prop.		69%					
VSWR Test (0 – 6 GHZ)		Max 1.3					
Flame Test		VW-1 OK					
Attenuation	n	2.0GHZ	2.4GHZ	2.5GHZ	5.0GHZ	6.0 GHZ	
(dB/1m)		2.80	3.10	3.15	4.85	5.20	

AK001/210X297/1.0 PAGE: 2

EDITION: 1.3

MAKER: 7. C. XUO CONFIRM: C. Y. Chen APPROVAL: W.J. Wang



號碼(No.): CE/2011/50467 日期(Date): 2011/05/10 頁數(Page): 1 of 4

仁親銅導體股份有限公司

REN CHIN ELECTRIC CONDUCTOR CO., LTD.

苗栗縣竹南鎮新南里7鄰三角店29之1號

NO. 29-1, SAN JYUE DIAN, SHSING NAN LI, CHU NAN, MIAOLI, TAIWAN R. O. C.

以下測試樣品係由客户送樣,且由客户聲稱並經客户確認如下 (The following samples was/were submitted and identified by/on behalf of the client as):

樣品名稱(Sample Description)

鍍銀銅線 (SILVER-PLATED COPPER WIRE)

收件日期(Sample Receiving Date)

2011/05/04

測試期間(Testing Period)

2011/05/04 TO 2011/05/10

測試需求(Test Requested)

: 參照 RoHS 2002/95/EC 及其修定指令要求. (In accordance with the RoHS Directive 2002/95/EC, and its amendment directives).

測試方法(Test Method)

- : 参考IEC 62321: 2008方法檢測. (With reference to IEC 62321: 2008. Procedures for the Determination of Levels of Regulated Substances in Electrotechnical Products).
- (1) 以感應耦合電漿原子發射光譜儀檢測鎬含量. / Determination of Cadmium by ICP-
- (2) 以感應耦合電漿原子發射光譜儀檢測鉛含量. / Determination of Lead by ICP-
- (3) 以感應耦合電漿原子發射光譜儀檢測汞含量. / Determination of Mercury by ICP-AES.
- (4) 以Spot test / boiling water extraction方法檢測六價鉻含量. / Determination of Hexavalent Chromium by Spot test / boiling water extraction Method.

測試結果(Test Results)

: 請見下一頁 (Please refer to next pages).

Signed for and on SGS TAIWAN LTD

Chemical Laboratory - Taipei

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號碼(No.): CE/2011/50467 日期(Date): 2011/05/10 頁數(Page): 2 of 4

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REN CHIN ELECTRIC CONDUCTOR CO., LTD.

苗栗縣竹南鎮新南里7鄰三角店29之1號

NO. 29-1, SAN JYUE DIAN, SHSING NAN LI, CHU NAN, MIAOLI, TAIWAN R. O. C.

測試結果(Test Results) 單位(Unit): mg/kg

測試項目	測試方法 Method	結果 (Result)	方法偵測 極限値
(Test Items)	(Refer to)	No.1	他DL)
鎬 / Cadmium (Cd)	(1)	n.d.	2
鉛 / Lead (Pb)	(2)	n.d.	2
汞 / Mercury (Hg)	(3)	n.d.	2
六價鉻 / Hexavalent Chromium Cr(VI) by	(4)	Negative	See Note 4
Spot test / boiling water extraction			

測試部位描述 (TEST PART DESCRIPTION):

No.1: 銀色金屬線 (含鍍層) (SILVER COLORED METAL WIRE (INCLUDING THE PLATING LAYER))

備註(Note):

- 1. mg/kg = ppm ; 0.1wt% = 1000ppm
- 2. n.d. = Not Detected (未檢出)
- 3. MDL = Method Detection Limit (方法偵測極限値)
- 4. Spot-test:

Negative = Absence of Cr(VI) coating / surface layer(鍍層中偵測不到六價鉻),

Positive = Presence of Cr(VI) coating / surface layer(鍍層中偵測到六價鉻);

The tested sample should be further verified by boiling-water-extraction method if the spot test result cannot be confirmed. (當該測項無法確認時,測試樣品可藉由boiling-water-extraction測試方法進一 步確認)

Boiling-water-extraction:

Negative = Absence of Cr(VI) coating / surface layer(鍍層中偵測不到六價鉻),

Positive = Presence of Cr(VI) coating / surface layer(鍍層中偵測到六價鉻);

The detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm² sample surface area. / 該溶液濃度≧0.02 mg/kg with 50 cm² (sample surface area)

5. 樣品的測試是基於申請人要求混合測試,報告中的混合測試結果不代表其中個别單一材質的含量.

(The samples was/were analyzed on behalf of the applicant as mixing sample in one testing. The above results was/were only given as the informality value).

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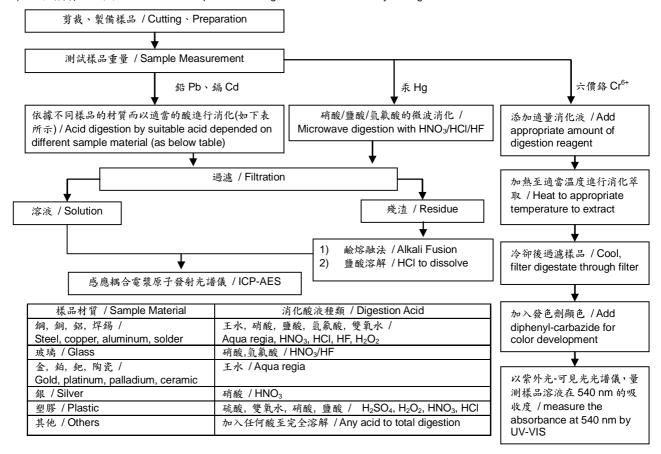
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- 根據以下的流程圖之條件,樣品已完全溶解。(六價鉻測試方法除外) / These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr^{6+} test method excluded)
- 測試人員:楊登偉 / Name of the person who made measurement: Climbgreat Yang
- 測試負責人:張啓興 / Name of the person in charge of measurement: Troy Chang



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報告結尾(End of Report) **

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以下測試樣品係由客户送樣,且由客户聲稱並經客户確認如下 (The following samples was/were submitted and identified by/on behalf of the client as):

樣品名稱(Sample Description)

鍍錫銅線 (TIN PLATED COPPER WIRE)

收件日期(Sample Receiving Date)

2011/05/04

測試期間(Testing Period)

2011/05/04 TO 2011/05/10

測試需求(Test Requested)

: 參照 RoHS 2002/95/EC 及其修定指令要求. (In accordance with the RoHS Directive 2002/95/EC, and its amendment directives).

測試方法(Test Method)

- : 参考IEC 62321: 2008方法檢測. (With reference to IEC 62321: 2008. Procedures for the Determination of Levels of Regulated Substances in Electrotechnical Products).
- (1) 以感應耦合電漿原子發射光譜儀檢測鎘含量. / Determination of Cadmium by ICP-
- (2) 以感應耦合電漿原子發射光譜儀檢測鉛含量. / Determination of Lead by ICP-
- (3) 以感應耦合電漿原子發射光譜儀檢測汞含量. / Determination of Mercury by ICP-AES.
- (4) 以Spot test / boiling water extraction方法檢測六價鉻含量. / Determination of Hexavalent Chromium by Spot test / boiling water extraction Method.

: 請見下一頁 (Please refer to next pages).

測試結果(Test Results)



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NO. 29-1, SAN JYUE DIAN, SHSING NAN LI, CHU NAN, MIAOLI, TAIWAN, R. O. C.

測試結果(Test Results) 單位(Unit): mg/kg

測試項目	測試方法 Method	結果 (Result)	方法偵測 極限値
(Test Items)	(Refer to)	No.1	7室『K-7直 (MDL)
鎬 / Cadmium (Cd)	(1)	n.d.	2
鉛 / Lead (Pb)	(2)	n.d.	2
汞 / Mercury (Hg)	(3)	n.d.	2
六價鉻 / Hexavalent Chromium Cr(VI) by	(4)	Negative	See Note 4
Spot test / boiling water extraction			

測試部位描述 (TEST PART DESCRIPTION):

No.1: 銀色金屬線 (含鍍層) (SILVER COLORED METAL WIRE (INCLUDING THE PLATING LAYER))

備註(Note):

- 1. mg/kg = ppm ; 0.1wt% = 1000ppm
- 2. n.d. = Not Detected (未檢出)
- 3. MDL = Method Detection Limit (方法偵測極限値)
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Negative = Absence of Cr(VI) coating / surface layer(鍍層中偵測不到六價鉻),

Positive = Presence of Cr(VI) coating / surface layer(鍍層中偵測到六價鉻);

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Positive = Presence of Cr(VI) coating / surface layer(鍍層中偵測到六價鉻);

The detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm² sample surface area. / 該溶液濃度≧0.02 mg/kg with 50 cm² (sample surface area)

5. 樣品的測試是基於申請人要求混合測試,報告中的混合測試結果不代表其中個别單一材質的含量.

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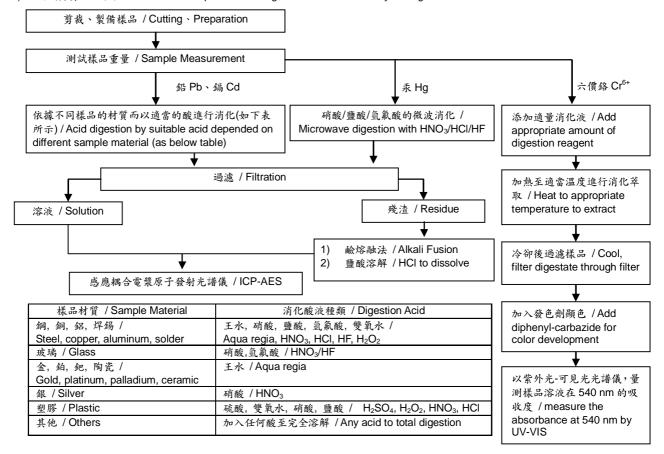
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- 根據以下的流程圖之條件,樣品已完全溶解。(六價鉻測試方法除外) / These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr^{6+} test method excluded)
- 測試人員:楊登偉 / Name of the person who made measurement: Climbgreat Yang
- 測試負責人:張啓興 / Name of the person in charge of measurement: Troy Chang



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報告結尾(End of Report) **

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Test Report No. SHAEC1202397206 Date: 07 Mar 2012 Page 1 of 5

DU PONT CHINA HOLDING CO.,LTD

CHEGONGMIAO, INDUSTRIAL AREA, DISTRICT NO.5, SHENZHEN, GUANGDONG, 518040, P.R.C

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

ETHYLENE PROPYLENE)

SGS Job No.: SP12-004927 - SH

Supplier: DU PONT

Date of Sample Received : 01 Mar 2012

Testing Period : 01 Mar 2012 - 07 Mar 2012

Test Requested: Selected test(s) as requested by client.

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

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

Conclusion: Based on the performed tests on submitted samples, the results of Lead,

Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBB), Polybrominated diphenyl ethers (PBDE) comply with the limits as set by RoHS

Directive 2011/65/EU Annex II; recasting 2002/95/EC.

Signed for and on behalf of SGS-CSTC Ltd.

Fan Jingjie, JJ Approved Signatory

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No. SHAEC1202397206

Date: 07 Mar 2012

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Test Results:

Test Part Description:

Specimen No. SGS Sample ID Description

1 SHA12-023972.003 Transparent solid grain

Remarks:

(1) 1 mg/kg = 1 ppm = 0.0001%

(2) MDL = Method Detection Limit

(3) ND = Not Detected (< MDL)

(4) "-" = Not Regulated

RoHS Directive 2011/65/EU

Test Method: With reference to IEC 62321:2008

(1) Determination of Cadmium by ICP-OES.

(2) Determination of Lead by ICP-OES.

(3) Determination of Mercury by ICP-OES.

(4) Determination of Hexavalent Chromium by Colorimetric Method using UV-Vis.

(5) Determination of PBBs / PBDEs content by GC-MS.

Test Item(s)	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>003</u>
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1,000	mg/kg	2	ND
Mercury (Hg)	1,000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))	1,000	mg/kg	2	ND
Sum of PBBs	1,000	mg/kg	-	ND
Monobromobiphenyl	-	mg/kg	5	ND
Dibromobiphenyl	-	mg/kg	5	ND
Tribromobiphenyl	-	mg/kg	5	ND
Tetrabromobiphenyl	-	mg/kg	5	ND
Pentabromobiphenyl	-	mg/kg	5	ND
Hexabromobiphenyl	-	mg/kg	5	ND
Heptabromobiphenyl	-	mg/kg	5	ND
Octabromobiphenyl	-	mg/kg	5	ND
Nonabromobiphenyl	-	mg/kg	5	ND
Decabromobiphenyl	-	mg/kg	5	ND
Sum of PBDEs	1,000	mg/kg	-	ND
Monobromodiphenyl ether	-	mg/kg	5	ND

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Test Report	No. SHAEC120239720	06	Date: 07	Mar 2012	Page 3 of 5
Test Item(s)	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>003</u>	
Dibromodiphenyl ether	-	mg/kg	5	ND	
Tribromodiphenyl ether	-	mg/kg	5	ND	
Tetrabromodiphenyl ether	-	mg/kg	5	ND	
Pentabromodiphenyl ether	-	mg/kg	5	ND	
Hexabromodiphenyl ether	-	mg/kg	5	ND	
Heptabromodiphenyl ether	-	mg/kg	5	ND	
Octabromodiphenyl ether	-	mg/kg	5	ND	
Nonabromodiphenyl ether	-	mg/kg	5	ND	
Decabromodiphenyl ether	-	mg/kg	5	ND	

Notes:

(1) The maximum permissible limit is quoted from directive 2011/65/EU, Annex II

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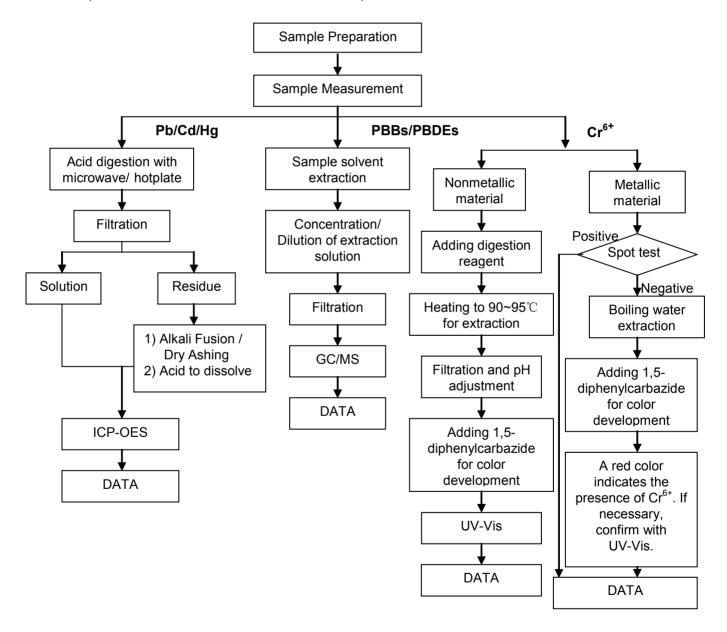
Date: 07 Mar 2012

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ATTACHMENTS

RoHS Testing Flow Chart

- 1) Name of the person who made testing: Jan Shi/Yoyo Wang/Allen Xiao/Gary Xu
- 2) Name of the person in charge of testing: Jeff Zhang/George Xu/ Elim Lin
- 3) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr6+ and PBBs/PBDEs test method excluded)



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No. SHAEC1202397206

Date: 07 Mar 2012

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Sample photo:



SGS authenticate the photo on original report only

*** End of Report ***



測試報告

Test Report

號碼(No.): CE/2011/80553 日期(Date): 2011/08/09 頁數(Page): 1 of 9

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以下測試樣品係由客户送樣,且由客户聲稱並經客户確認如下 (The following samples was/were submitted and identified by/on behalf of the client as):

樣品名稱(Sample Description)

樣品型號(Style/Item No.)

收件日期(Sample Receiving Date)

測試期間(Testing Period)

FLUOROPOLYMER COLOR CONCENTRATE

FCM-H 1172 BLACK

2011/08/02

2011/08/02 TO 2011/08/09

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



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測試結果(Test Results)

測試部位(PARTNAME)No.1 黑色塑膠粒 (BLACK PLASTIC PELLETS)

		測試方法 (Method)	方法偵測 極限値 (MDL)		
鎬 / Cadmium (Cd)	mg/kg	参考IEC 62321: 2008方法, 以感應耦合 電漿原子發射光譜儀檢測. / With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.	
鉛 / Lead (Pb)	mg/kg	參考IEC 62321: 2008方法,以感應耦合 電漿原子發射光譜儀檢測./With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.	
汞 / Mercury (Hg)	mg/kg	參考IEC 62321: 2008方法,以感應耦合 電漿原子發射光譜儀檢測. / With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.	
六價絡 / Hexavalent Chromium Cr(VI)	mg/kg	参考IEC 62321: 2008方法,以UV-VIS檢測./ With reference to IEC 62321: 2008 and performed by UV-VIS.	2	n.d.	
全氟辛烷磺酸 / Perfluorooctane sulfonates (PFOS-Acid, Metal Salt, Amide)	mg/kg	参考US EPA 3540C: 1996方法,以液相 層析質譜儀檢測全氟辛烷磺酸含量./ With reference to US EPA 3540C: 1996 method for PFOS Content. Analysis was performed by LC/MS.	10	n.d.	
全氟辛酸(銨) / PFOA (CAS No.: 335-67- 1)	mg/kg	参考US EPA 3540C: 1996方法,以液相 層析質譜儀檢測全氟辛酸(銨)含量./ With reference to US EPA 3540C: 1996 method for PFOA Content. Analysis was performed by LC/MS.	10	n.d.	

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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result) No.1
多溴聯苯總和 / Sum of PBBs			-	n.d.
一溴聯苯 / Monobromobiphenyl			5	n.d.
二溴聯苯 / Dibromobiphenyl			5	n.d.
三溴聯苯 / Tribromobiphenyl			5	n.d.
四溴聯苯 / Tetrabromobiphenyl			5	n.d.
五溴聯苯 / Pentabromobiphenyl			5	n.d.
六溴聯苯 / Hexabromobiphenyl			5	n.d.
七溴聯苯 / Heptabromobiphenyl			5	n.d.
八溴聯苯 / Octabromobiphenyl			5	n.d.
九溴聯苯 / Nonabromobiphenyl		參考IEC 62321: 2008方法, 以氣相層析	5	n.d.
十溴聯苯 / Decabromobiphenyl	/1	儀/質譜儀檢測. / With reference to	5	n.d.
多溴聯苯醚總和 / Sum of PBDEs	mg/kg	IEC 62321: 2008 and performed by	-	n.d.
一溴聯苯醚 / Monobromodiphenyl ether		GC/MS.	5	n.d.
二溴聯苯醚 / Dibromodiphenyl ether			5	n.d.
三溴聯苯醚 / Tribromodiphenyl ether			5	n.d.
四溴聯苯醚 / Tetrabromodiphenyl ether			5	n.d.
五溴聯苯醚 / Pentabromodiphenyl ether			5	n.d.
六溴聯苯醚 / Hexabromodiphenyl ether			5	n.d.
七溴聯苯醚 / Heptabromodiphenyl ether			5	n.d.
八溴聯苯醚 / Octabromodiphenyl ether			5	n.d.
九溴聯苯醚 / Nonabromodiphenyl ether			5	n.d.
十溴聯苯醚 / Decabromodiphenyl ether			5	n.d.
鹵素 / Halogen				
鹵素 (氟) / Halogen-Fluorine (F) (CAS No.: 14762-94-8)			50	432000
鹵素 (氣) / Halogen-Chlorine (C1) (CAS No.: 22537-15-1)		參考BS EN 14582:2007, 以離子層析儀 分析. / With reference to BS EN	50	n.d.
鹵素(溴)/ Halogen-Bromine (Br) (CAS No.: 10097-32-2)	mg/kg	14582:2007. Analysis was performed by IC.	50	n.d.
鹵素(碘)/ Halogen-Iodine (I) (CAS No.: 14362-44-8)			50	n.d.

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備註(Note):

- 1. mg/kg = ppm ; 0.1wt% = 1000ppm
- 2. n.d. = Not Detected (未檢出)
- 3. MDL = Method Detection Limit (方法偵測極限値)
- 4. "-" = Not Regulated (無規格值)
- 5. 此份報告取代簽署人爲Chenyu Kung之CE/2011/80553報告.

(This report supersedes the previous document bearing the test report number CE/2011/80553 which signed by Chenyu Kung.)

PFOS参考資訊(Reference Information): 指令 2006/122/EC (Directive 2006/122/EC)

- (1) 該物質不可置於市場上或使用於特殊物質或配置成分重量濃度等於或大於0.005%.
 - (May not be placed on the market or used as a substance or constituent of preparations in a concentration equal to or higher than 0.005% by mass.)
- (2) 該物質不可置於市場上的半成品或商品或其物件;假若零件上明顯地具有PFOS並參照結構上及微細構造上計 算PFOS重量濃度等於或大於0.1%,而紡織品或其他覆蓋物質,如果PFOS在覆蓋物質中含量等於或大於1μg/m².

(May not be placed on the market in semi-finished products or articles, or parts thereof, if the concentration of PFOS is equal to or higher than 0.1% by mass calculated with reference to the mass of structurally or microstructurally distinct parts that contain PFOS or, for textiles or other coated materials, if the amount of PFOS is equal to or higher than $1\mu g/m^2$ of the coated material.)

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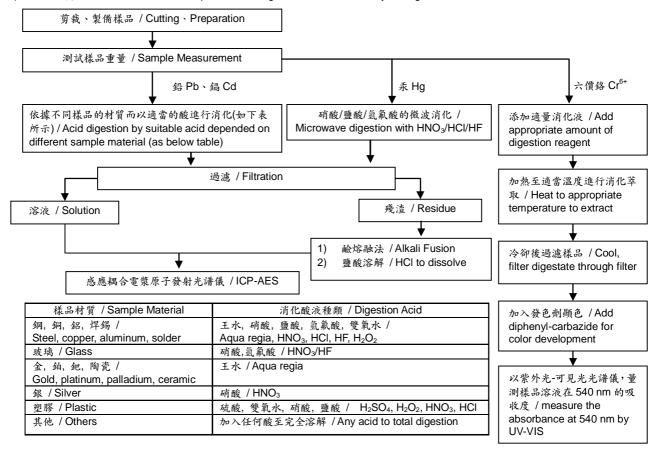
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- 根據以下的流程圖之條件,樣品已完全溶解。(六價鉻測試方法除外) / These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ test method excluded)
- 2) 測試人員:楊登偉 / Name of the person who made measurement: Climbgreat Yang
- 3) 測試負責人: 張啓興 / Name of the person in charge of measurement: Troy Chang



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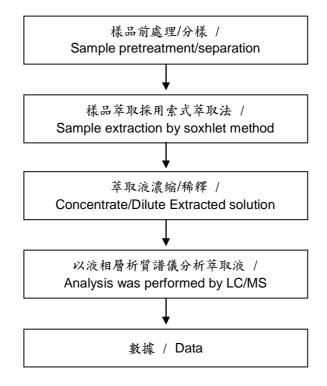


索式萃取分析流程圖 / Analytical flow chart of Soxhlet extraction (LC/MS) procedure

測試人員:翁賜彬 / Name of the person who made measurement: Roman Wong 測試負責人:張啓興 / Name of the person in charge of measurement: Troy Chang

【測試項目: 全氟辛烷磺酸/全氟辛酸(銨)、苯並三唑類化合物 /

Test Items: PFOS/PFOA · Benzotriazole]



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分析流程圖 / Analytical flow chart

- 測試人員: 翁賜彬 / Name of the person who made measurement: Roman Wong
- 測試負責人:張啓興 / Name of the person in charge of measurement: Troy Chang

【測試項目(Test Items): 多溴聯苯/多溴聯苯醚、四溴雙酚-A-雙 / PBB/PBDE, TBBP-A-bis】

樣品 / Sample 樣品前處理 / Sample pretreatment 初篩分析 / Screen analysis 樣品萃取法 / Sample extraction method 萃取液濃縮/稀釋 / Concentrate/Dilute Extracted solution 萃取液過濾 / Filter 氣相層析質譜儀分析 / Analysis by GC/MS Issue Report / 撰打報告

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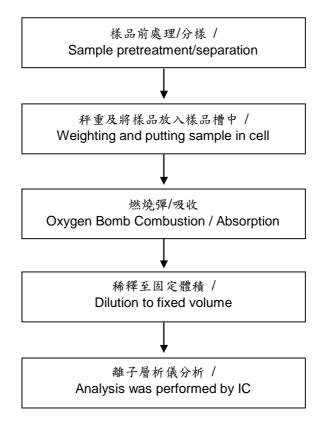
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鹵素分析流程圖 / Analytical flow chart of halogen content

- 1) 測試人員: 陳恩臻 / Name of the person who made measurement: Rita Chen
- 2) 測試負責人:張啓興 / Name of the person in charge of measurement: Troy Chang



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CE/2011/80553



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SGS REPORT

SUBJECT: Survey for Environmental-Related Substances

Cwcej o gpv

Survey Form on Environmental Impact Substances Contained in Parts and Materials UI U'VGUV'TGRQTV'hqt'O J H'Rnxi 'eqppgevqt''

Vj ku'ku''cr r rkgf 'hqt''vj g'hqmqy kpi 'r tqf wevı<''Rrgcug''tghgt''vq''vj g''cwcej gf '' UI U'TGRQTV0'

"

Eqo r qpgpv'pco g''	UI U'Tgrqtv'Pq0'	KRGZ 'Rctv'P wo dgt"
HOUSING (BLACK)	EGa4234a3572: "	" 4240, /224T/25"
EQPVCEV"	IECa4233a: 5: 26".	4249: /334T/35" 4249: /334T/54"
I TQWPF 'EQP VCEV''	EGa4234a45487",	"

"

Eqo r qpgpv'pco g"	UI U'Tgrqtv'Pq0'	KRGZ 'Rctv'P wo dgt"
HOUSING (WHITE)	EGa4234a3572; "	" 4240, /224T/2, "
EQPVCEV"	IEGa4233a · 5 · 26"	4249: /334T/2: " 4249: /334T/3: "
I TQWPF'EQPVCEV"	EGa4234a45487", "	42573/334T/59"

••

Tgo ctm; "Vj g'Ul U'Vguv'Tgr qtv'ecp"dg''cr r rkgf '\q''c''eqo r qpgpv0'



No.: CE/2012/13508 Date: 2012/01/18 Page: 1 of 12

DAI-ICHI SEIKO CO., LTD. 6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 JAPAN



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

Sample Description : MHF PLUG HOUSING

Style/Item No. : 1844-011-01 Sample Receiving Date : 2012/01/13

Testing Period : 2012/01/13 TO 2012/01/18

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



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DAI-ICHI SEIKO CO., LTD. 6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 JAPAN



Test Result(s)

PART NAME No.1 : BLACK PLASTIC

Test Item(s)	Unit	Method	MDL	Result
rest item(s)	Offic	Wethod	IVIDL	No.1
Cadmium (Cd)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
Lead (Pb)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
Mercury (Hg)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
Hexavalent Chromium Cr(VI)	mg/kg	With reference to IEC 62321: 2008 and performed by UV-VIS.	2	n.d.
Antimony (Sb)	mg/kg	With reference to US EPA Method 3050B for Antimony Content. Analysis was performed by ICP-AES.	2	n.d.
Antimony trioxide (Sb ₂ O ₃) (#) (CAS No.: 1309-64-4)	mg/kg	With reference to US EPA Method 3050B for Antimony Content. Analysis was performed by ICP-AES.	-	n.d.
Phosphorus (P)	mg/kg	With reference to US EPA Method 3052 for Phosphorus Content. Analysis was performed by ICP-AES.	2	26400
Perfluorooctane sulfonates (PFOS-Acid, Metal Salt, Amide)	mg/kg	With reference to US EPA 3540C: 1996 method for PFOS Content. Analysis was performed by LC/MS.	10	n.d.
PFOA (CAS No.: 335-67-1)	mg/kg	With reference to US EPA 3540C: 1996 method for PFOA Content. Analysis was performed by LC/MS.	10	n.d.
Tetrabromobisphenol A (TBBP-A) (CAS No.: 79-94-7)	mg/kg	With reference to DIN 53313. Analysis was performed by GC/MS.	10	n.d.
Hexabromocyclododecane (HBCDD) (CAS No.: 25637-99-4)	mg/kg	With reference to US EPA 3540C method. Analysis was performed by GC/MS.	5	n.d.

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DAI-ICHI SEIKO CO., LTD. 6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 JAPAN



Toot Itom(s)	Unit	Method	MDL	Result	
Test Item(s)	Offic	Metriod	MIDL	No.1	
Sum of PBBs	-		-	n.d.	
Monobromobiphenyl			5	n.d.	
Dibromobiphenyl			5	n.d.	
Tribromobiphenyl			5	n.d.	
Tetrabromobiphenyl			5	n.d.	
Pentabromobiphenyl			5	n.d.	
Hexabromobiphenyl			5	n.d.	
Heptabromobiphenyl			5	n.d.	
Octabromobiphenyl	mg/kg		5	n.d.	
Nonabromobiphenyl			5	n.d.	
Decabromobiphenyl		With reference to IEC 62321: 2008 and	5	n.d.	
Sum of PBDEs		performed by GC/MS.	-	n.d.	
Monobromodiphenyl ether			5	n.d.	
Dibromodiphenyl ether			5	n.d.	
Tribromodiphenyl ether			5	n.d.	
Tetrabromodiphenyl ether			5	n.d.	
Pentabromodiphenyl ether			5	n.d.	
Hexabromodiphenyl ether			5	n.d.	
Heptabromodiphenyl ether			5	n.d.	
Octabromodiphenyl ether			5	n.d.	
Nonabromodiphenyl ether			5	n.d.	
Decabromodiphenyl ether			5	n.d.	
Halogen					
Halogen-Fluorine (F) (CAS No.:	mg/kg	With reference to BS EN 14582:2007.	50	1080	
14762-94-8)		Analysis was performed by IC.			
Halogen-Chlorine (CI) (CAS No.:	mg/kg	With reference to BS EN 14582:2007.	50	n.d.	
22537-15-1)		Analysis was performed by IC.			
Halogen-Bromine (Br) (CAS No.:	mg/kg	With reference to BS EN 14582:2007.	50	n.d.	
10097-32-2)		Analysis was performed by IC.			
Halogen-Iodine (I) (CAS No.:	mg/kg	With reference to BS EN 14582:2007.	50	n.d.	
14362-44-8)		Analysis was performed by IC.			

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DAI-ICHI SEIKO CO., LTD. 6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 JAPAN



Note:

- 1. mg/kg = ppm; 0.1wt% = 1000ppm
- 2. n.d. = Not Detected
- 3. MDL = Method Detection Limit
- 4. " " = Not Regulated
- 5. (#): The substance was calculated by the test result of Antimony. The MDL was evaluated for Antimony.

 $AX = A \times F$

AX	Α	F
Antimony trioxide (Sb ₂ O ₃)	Antimony	1.1971

PFOS Reference Information: Directive 2006/122/EC

- (1) May not be placed on the market or used as a substance or constituent of preparations in a concentration equal to or higher than 0.005 % by mass.
- (2) May not be placed on the market in semi-finished products or articles, or parts thereof, if the concentration of PFOS is equal to or higher than 0.1 % by mass calculated with reference to the mass of structurally or microstructurally distinct parts that contain PFOS or, for textiles or other coated materials, if the amount of PFOS is equal to or higher than 1µg/m² of the coated material.

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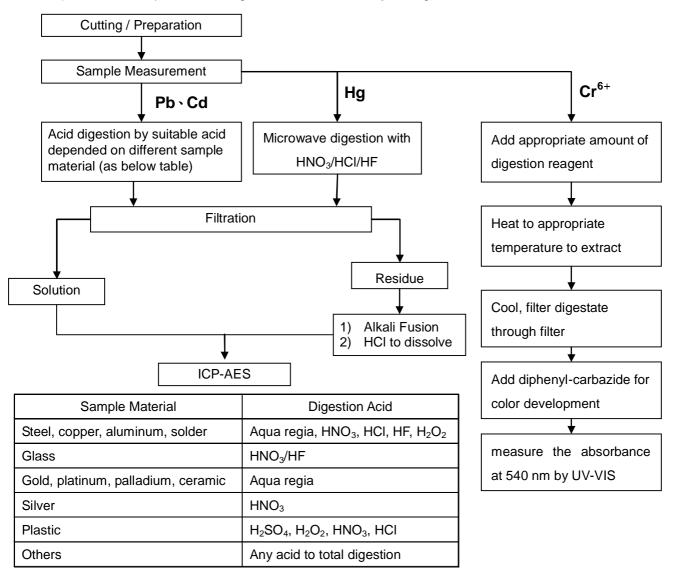


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DAI-ICHI SEIKO CO., LTD. 6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 JAPAN



- 1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ test method excluded)
- 2) Name of the person who made measurement: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang



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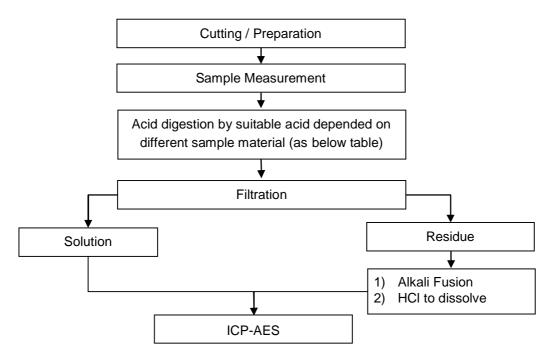
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DAI-ICHI SEIKO CO., LTD. 6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 JAPAN



- 1) These samples were dissolved totally by pre-conditioning method according to below flow chart.
- 2) Name of the person who made measurement: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang

Flow Chart of digestion for the elements analysis performed by ICP-AES



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



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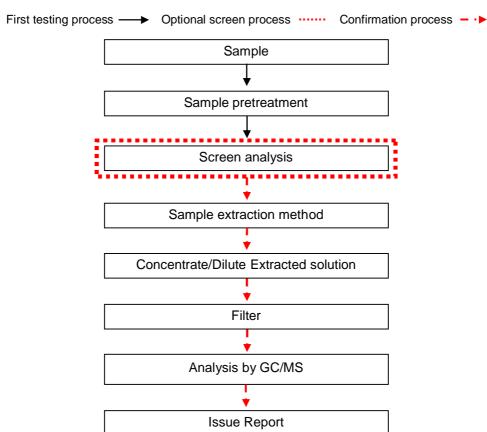
DAI-ICHI SEIKO CO., LTD. 6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 JAPAN



Analytical flow chart

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang

[Test Items: PBB/PBDE, TBBP-A-bis]





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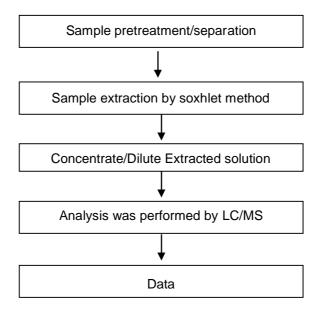
DAI-ICHI SEIKO CO., LTD. 6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 JAPAN



Analytical flow chart of Soxhlet extraction (LC/MS) procedure

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang

[Test Items: PFOS/PFOA > Benzotriazole]





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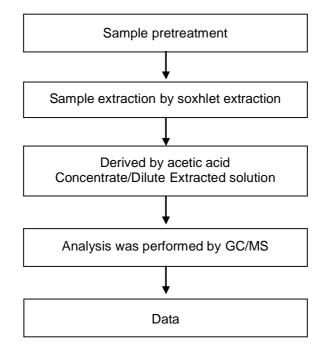
DAI-ICHI SEIKO CO., LTD. 6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 JAPAN



Analytical flow chart

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang

[Test Items: TBBP-A · Bisphenol A]





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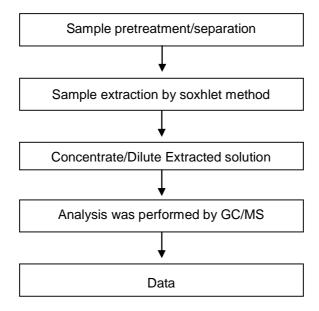
DAI-ICHI SEIKO CO., LTD. 6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 JAPAN



Analytical flow chart of Soxhlet extraction (GC/MS) procedure

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang

Test Items: Phthalate . Benzotriazole . HBCDD . NP . DBBT . Organic phosphorus compounds]





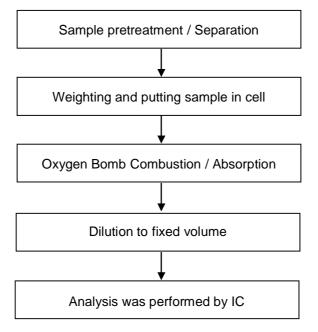
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DAI-ICHI SEIKO CO., LTD. 6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 JAPAN



Analytical flow chart of halogen content

- 1) Name of the person who made measurement: Rita Chen
- Name of the person in charge of measurement: Troy Chang



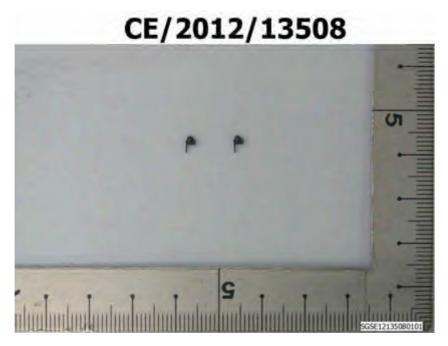


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DAI-ICHI SEIKO CO., LTD. 6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 JAPAN



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



** End of Report **



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DAI-ICHI SEIKO CO., LTD. 6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 JAPAN



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

Sample Description : MHF PLUG HOUSING

Style/Item No. : 1844-012-01 Sample Receiving Date : 2012/01/13

Testing Period : 2012/01/13 TO 2012/01/18

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





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DAI-ICHI SEIKO CO., LTD. 6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 JAPAN



Test Result(s)

PART NAME No.1 : WHITE PLASTIC

Test Item(s)	Unit	Method	MDL	Result
rest item(s)	Offic	Wethod	IVIDL	No.1
Cadmium (Cd)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
Lead (Pb)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
Mercury (Hg)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
Hexavalent Chromium Cr(VI)	mg/kg	With reference to IEC 62321: 2008 and performed by UV-VIS.	2	n.d.
Antimony (Sb)	mg/kg	With reference to US EPA Method 3050B for Antimony Content. Analysis was performed by ICP-AES.	2	n.d.
Antimony trioxide (Sb ₂ O ₃) (#) (CAS No.: 1309-64-4)	mg/kg	With reference to US EPA Method 3050B for Antimony Content. Analysis was performed by ICP-AES.	-	n.d.
Phosphorus (P)	mg/kg	With reference to US EPA Method 3052 for Phosphorus Content. Analysis was performed by ICP-AES.	2	28100
Perfluorooctane sulfonates (PFOS-Acid, Metal Salt, Amide)	mg/kg	With reference to US EPA 3540C: 1996 method for PFOS Content. Analysis was performed by LC/MS.	10	n.d.
PFOA (CAS No.: 335-67-1)	mg/kg	With reference to US EPA 3540C: 1996 method for PFOA Content. Analysis was performed by LC/MS.	10	n.d.
Tetrabromobisphenol A (TBBP-A) (CAS No.: 79-94-7)	mg/kg	With reference to DIN 53313. Analysis was performed by GC/MS.	10	n.d.
Hexabromocyclododecane (HBCDD) (CAS No.: 25637-99-4)	mg/kg	With reference to US EPA 3540C method. Analysis was performed by GC/MS.	5	n.d.



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DAI-ICHI SEIKO CO., LTD. 6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 JAPAN



Test Item(s)	Unit	Method	MDL	Result
, ,	Oilit	Metriod	WIDE	No.1
Sum of PBBs	_		-	n.d.
Monobromobiphenyl			5	n.d.
Dibromobiphenyl			5	n.d.
Tribromobiphenyl			5	n.d.
Tetrabromobiphenyl			5	n.d.
Pentabromobiphenyl			5	n.d.
Hexabromobiphenyl			5	n.d.
Heptabromobiphenyl			5	n.d.
Octabromobiphenyl			5	n.d.
Nonabromobiphenyl			5	n.d.
Decabromobiphenyl		With reference to IEC 62321: 2008 and	5	n.d.
Sum of PBDEs	mg/kg	performed by GC/MS.	-	n.d.
Monobromodiphenyl ether			5	n.d.
Dibromodiphenyl ether			5	n.d.
Tribromodiphenyl ether			5	n.d.
Tetrabromodiphenyl ether			5	n.d.
Pentabromodiphenyl ether			5	n.d.
Hexabromodiphenyl ether			5	n.d.
Heptabromodiphenyl ether			5	n.d.
Octabromodiphenyl ether			5	n.d.
Nonabromodiphenyl ether				n.d.
Decabromodiphenyl ether			5	n.d.
Halogen				
Halogen-Fluorine (F) (CAS No.:	mg/kg	With reference to BS EN 14582:2007.	50	1090
14762-94-8)		Analysis was performed by IC.		
Halogen-Chlorine (CI) (CAS No.: 22537-15-1)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
Halogen-Bromine (Br) (CAS No.: 10097-32-2)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
Halogen-Iodine (I) (CAS No.: 14362-44-8)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.



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DAI-ICHI SEIKO CO., LTD. 6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 JAPAN



Note:

- 1. mg/kg = ppm; 0.1wt% = 1000ppm
- 2. n.d. = Not Detected
- 3. MDL = Method Detection Limit
- 4. " " = Not Regulated
- 5. (#): The substance was calculated by the test result of Antimony. The MDL was evaluated for Antimony.

 $AX = A \times F$

AX	Α	F
Antimony trioxide (Sb ₂ O ₃)	Antimony	1.1971

PFOS Reference Information: Directive 2006/122/EC

- (1) May not be placed on the market or used as a substance or constituent of preparations in a concentration equal to or higher than 0.005 % by mass.
- (2) May not be placed on the market in semi-finished products or articles, or parts thereof, if the concentration of PFOS is equal to or higher than 0.1 % by mass calculated with reference to the mass of structurally or microstructurally distinct parts that contain PFOS or, for textiles or other coated materials, if the amount of PFOS is equal to or higher than 1µg/m² of the coated material.

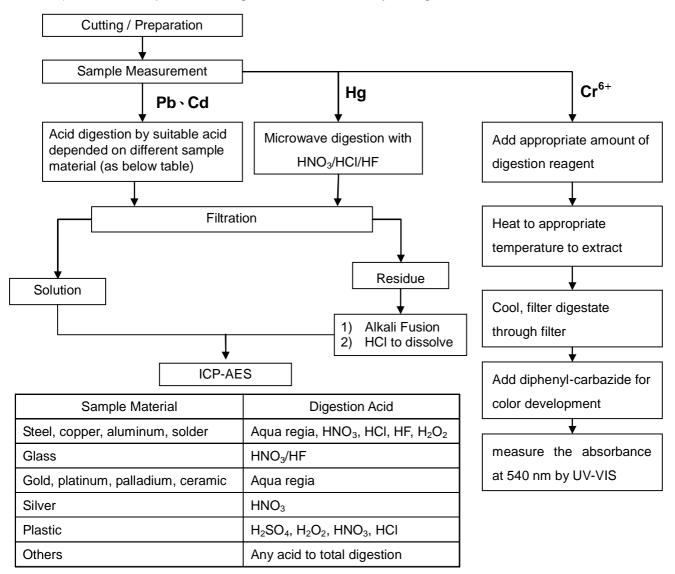


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DAI-ICHI SEIKO CO., LTD. 6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 JAPAN



- 1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ test method excluded)
- 2) Name of the person who made measurement: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang





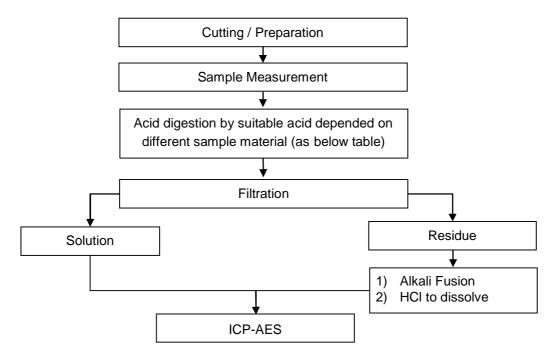
No.: CE/2012/13509 Date: 2012/01/18 Page: 6 of 12

DAI-ICHI SEIKO CO., LTD. 6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 JAPAN



- 1) These samples were dissolved totally by pre-conditioning method according to below flow chart.
- 2) Name of the person who made measurement: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang

Flow Chart of digestion for the elements analysis performed by ICP-AES



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



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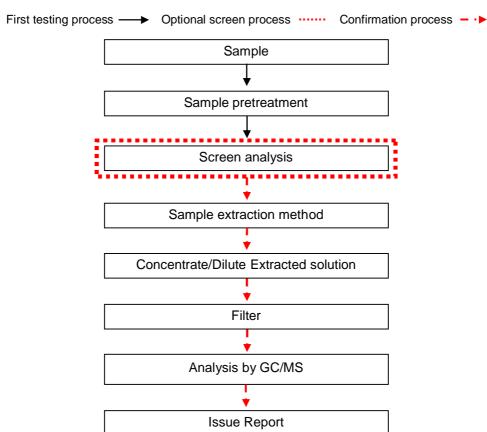
DAI-ICHI SEIKO CO., LTD. 6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 JAPAN



Analytical flow chart

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang

[Test Items: PBB/PBDE, TBBP-A-bis]





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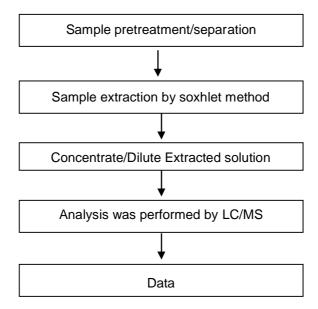
DAI-ICHI SEIKO CO., LTD. 6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 JAPAN



Analytical flow chart of Soxhlet extraction (LC/MS) procedure

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang

[Test Items: PFOS/PFOA > Benzotriazole]





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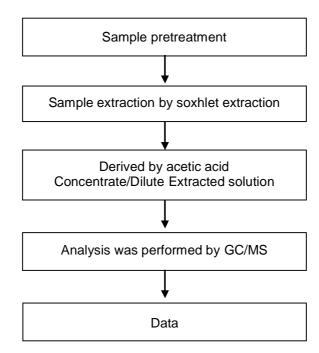
DAI-ICHI SEIKO CO., LTD. 6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 JAPAN



Analytical flow chart

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang

[Test Items: TBBP-A · Bisphenol A]





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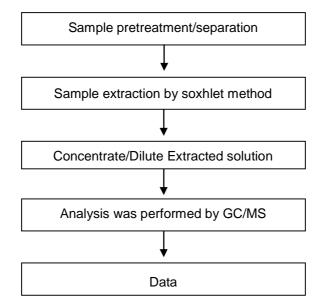
DAI-ICHI SEIKO CO., LTD. 6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 JAPAN



Analytical flow chart of Soxhlet extraction (GC/MS) procedure

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang

Test Items: Phthalate . Benzotriazole . HBCDD . NP . DBBT . Organic phosphorus compounds]





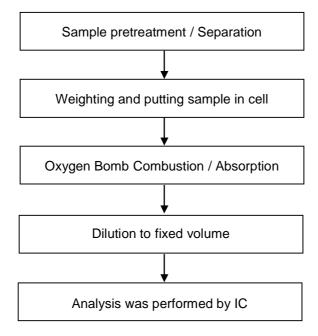
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DAI-ICHI SEIKO CO., LTD. 6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 JAPAN



Analytical flow chart of halogen content

- 1) Name of the person who made measurement: Rita Chen
- Name of the person in charge of measurement: Troy Chang



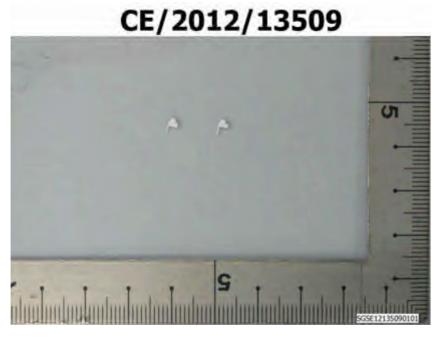


No.: CE/2012/13509 Date: 2012/01/18 Page: 12 of 12

DAI-ICHI SEIKO CO., LTD. 6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 JAPAN



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



** End of Report **



No.: CE/2011/83804 Date: 2011/08/25 Page: 1 of 7

I-PEX JP CO., LTD. TAIWAN BRANCH 6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 JAPAN



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

Sample Description : MHF III PLUG GROUND CONTACT

Style/Item No. : 2172-001 Sample Receiving Date : 2011/08/19

Testing Period : 2011/08/19 TO 2011/08/25

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



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明,此報告結果僅對測試的樣品負責。本報告未經本公司書面許可,不可部份複製。

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No. : CE/2011/83804 Date : 2011/08/25 Page : 2 of 7

I-PEX JP CO., LTD. TAIWAN BRANCH 6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 JAPAN



Test Result(s)

PART NAME No.1 : PLATING LAYER OF GOLDEN COLORED METAL PART NAME No.2 : BASE MATERIAL OF GOLDEN COLORED METAL

Toot Itom (c):	Unit Method		MDL	Result	
Test Item (s):	Onit	Metriod	MDL	No.1	No.2
Cadmium (Cd)	mg/kg	IEC 62321: 2008 application of modified digestion by surface etching and performed by ICP-AES.	2	n.d.	
	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2		n.d.
Lead (Pb)	mg/kg	IEC 62321: 2008 application of modified digestion by surface etching and performed by ICP-AES.	2	n.d.	
	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2		17
Mercury (Hg)	mg/kg	IEC 62321: 2008 application of modified digestion by surface etching and performed by ICP-AES.	2	n.d.	
	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2		n.d.
Hexavalent Chromium Cr(VI) by Boiling water extraction	**	With reference to IEC 62321: 2008 and performed by Boiling water extraction Method.#	#	Negative	Negative
Perfluorooctane sulfonates (PFOS-Acid, Metal Salt, Amide)	μg/m²	With reference to US EPA 3540C: 1996 method for PFOS Content. Analysis was performed by LC/MS.	1	n.d.	

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No.: CE/2011/83804 Date: 2011/08/25 Page: 3 of 7

I-PEX JP CO., LTD. TAIWAN BRANCH 6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 JAPAN



Note:

- 1. mg/kg = ppm; 0.1wt% = 1000ppm
- 2. n.d. = Not Detected
- 3. MDL = Method Detection Limit
- 4. "---" = Not Conducted
- 5. ** = Qualitative analysis (No Unit)
- 6. # = a. Positive means the presence of CrVI on the tested areas
 - b. Negative means the absence of CrVI on the tested areas

The detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm² tested areas.

PFOS Reference Information: Directive 2006/122/EC

- (1) May not be placed on the market or used as a substance or constituent of preparations in a concentration equal to or higher than 0.005 % by mass.
- (2) May not be placed on the market in semi-finished products or articles, or parts thereof, if the concentration of PFOS is equal to or higher than 0.1 % by mass calculated with reference to the mass of structurally or microstructurally distinct parts that contain PFOS or, for textiles or other coated materials, if the amount of PFOS is equal to or higher than 1µg/m² of the coated material.

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No.: CE/2011/83804 Date: 2011/08/25 Page: 4 of 7

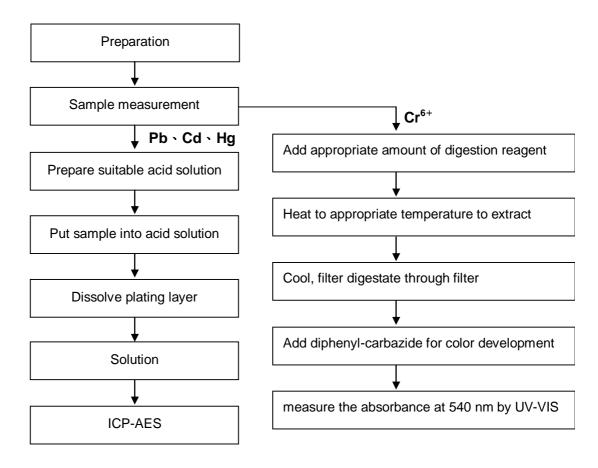
I-PEX JP CO., LTD. TAIWAN BRANCH 6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 JAPAN



NO.1

- 1) The plating layer of samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ test method excluded)
- 2) Name of the person who made measurement: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang

Flow Chart of Stripping method for metal analysis



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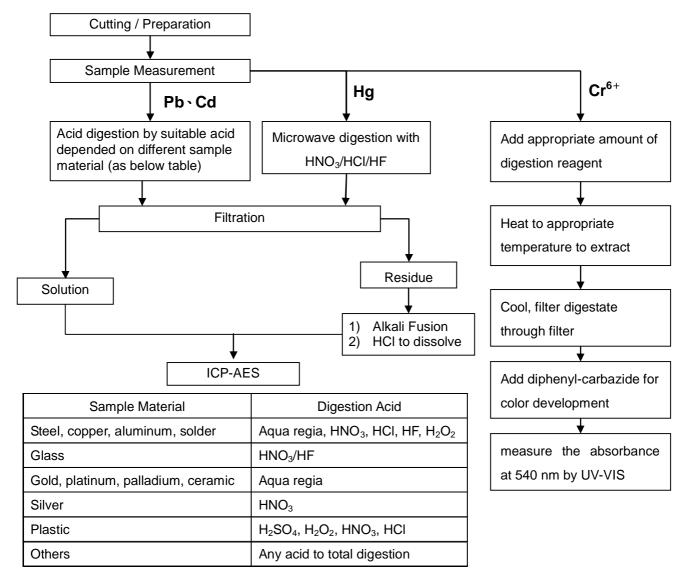
No.: CE/2011/83804 Date: 2011/08/25 Page: 5 of 7

I-PEX JP CO., LTD. TAIWAN BRANCH 6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 JAPAN



NO.2

- 1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ test method excluded)
- 2) Name of the person who made measurement: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang



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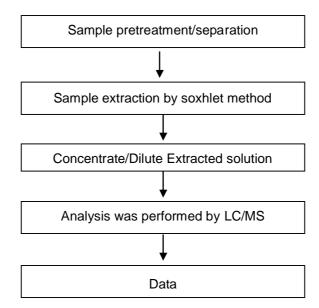
No.: CE/2011/83804 Date: 2011/08/25 Page: 6 of 7

I-PEX JP CO., LTD. TAIWAN BRANCH 6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 JAPAN



Analytical flow chart of Soxhlet extraction (LC/MS) procedure

- 1) Name of the person who made measurement: Roman Wong
- 2) Name of the person in charge of measurement: Shinjyh Chen
 - Test Items: PFOS/PFOA · Benzotriazole



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No.: CE/2011/83804 Date: 2011/08/25 Page: 7 of 7

I-PEX JP CO., LTD. TAIWAN BRANCH 6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 JAPAN







** End of Report **

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Test Report No.: CE/2012/23265 Date: 2012/02/21 Page: 1 of 7

DAI-ICHI SEIKO CO., LTD. 6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 JAPAN



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

Sample Description MHF II PLUG GROUND CONTACT

Style/Item No. : 1927-2** Sample Receiving Date 2012/02/15

Testing Period 2012/02/15 TO 2012/02/21

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





No.: CE/2012/23265 Date: 2012/02/21 Page: 2 of 7

DAI-ICHI SEIKO CO., LTD. 6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 JAPAN



Test Result(s)

PART NAME No.1 PLATING LAYER OF GOLDEN COLORED METAL PART NAME No.2 BASE MATERIAL OF GOLDEN COLORED METAL

Took Itom (a):	Unit Method		MDL	Res	Result	
Test Item (s):	Unit	Method	MDL	No.1	No.2	
Cadmium (Cd)	mg/kg	IEC 62321: 2008 application of modified digestion by surface etching and performed by ICP-AES.	2	n.d.		
	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2		n.d.	
Lead (Pb)	mg/kg	IEC 62321: 2008 application of modified digestion by surface etching and performed by ICP-AES.	2	n.d.		
	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2		17	
Mercury (Hg)	mg/kg	IEC 62321: 2008 application of modified digestion by surface etching and performed by ICP-AES.	2	n.d.		
	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2		n.d.	
Hexavalent Chromium Cr(VI) by Boiling water extraction	**	With reference to IEC 62321: 2008 and performed by Boiling water extraction Method.#	#	Negative	Negative	
Perfluorooctane sulfonates (PFOS-Acid, Metal Salt, Amide)	μg/m²	With reference to US EPA 3540C: 1996 method for PFOS Content. Analysis was performed by LC/MS.	1	n.d.		



No.: CE/2012/23265 Date: 2012/02/21 Page: 3 of 7

DAI-ICHI SEIKO CO., LTD. 6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 JAPAN



Note:

- 1. mg/kg = ppm; 0.1wt% = 1000ppm
- 2. n.d. = Not Detected
- 3. MDL = Method Detection Limit
- 4. "---" = Not Conducted
- 5. ** = Qualitative analysis (No Unit)
- 6. # = a. Positive means the presence of CrVI on the tested areas
 - b. Negative means the absence of CrVI on the tested areas

The detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm2 tested areas.

PFOS Reference Information: POPs - (EU) 757/2010

Outlawing PFOS as substances or preparations in concentrations above 0.001% (10ppm), in semi-finished products or articles or parts at a level above 0.1%(1000ppm), in textiles or other coated materials above $1\mu g/m^2$.



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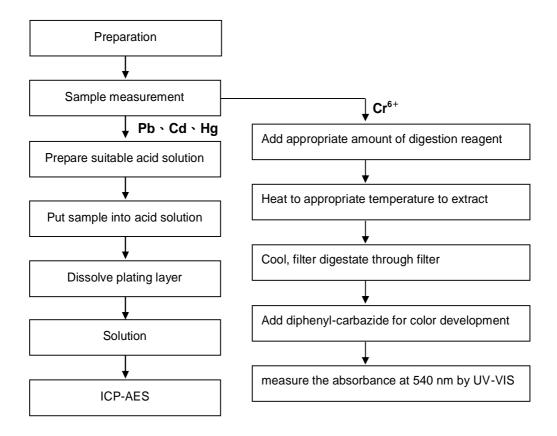
DAI-ICHI SEIKO CO., LTD. 6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 JAPAN



NO.1

- 1) The plating layer of samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ test method excluded)
- 2) Name of the person who made measurement: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang

Flow Chart of Stripping method for metal analysis





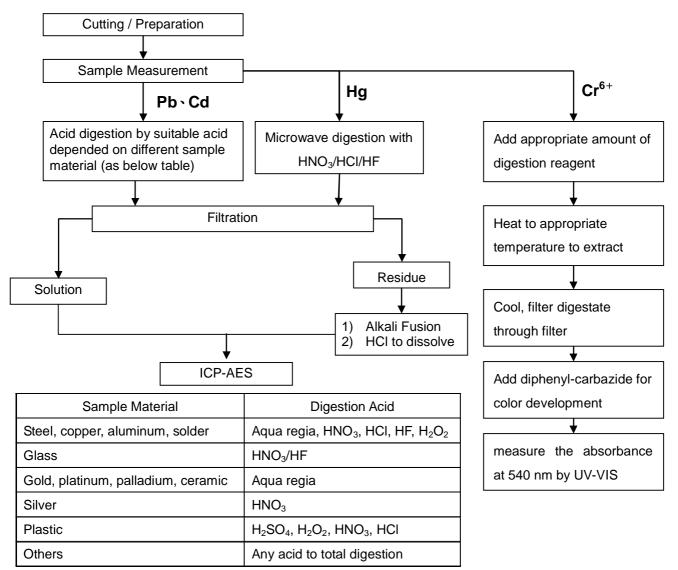
No. : CE/2012/23265 Date : 2012/02/21 Page: 5 of 7

DAI-ICHI SEIKO CO., LTD. 6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 JAPAN



NO.2

- 1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ test method excluded)
- 2) Name of the person who made measurement: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang





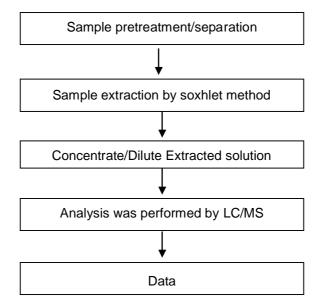
No. : CE/2012/23265 Date : 2012/02/21 Page: 6 of 7

DAI-ICHI SEIKO CO., LTD. 6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 JAPAN



Analytical flow chart of Soxhlet extraction (LC/MS) procedure

- 1) Name of the person who made measurement: Roman Wong
- 2) Name of the person in charge of measurement: Shinjyh Chen
 - Test Items: PFOS/PFOA · Benzotriazole





Page: 7 of 7 No.: CE/2012/23265 Date: 2012/02/21

DAI-ICHI SEIKO CO., LTD. 6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 JAPAN



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

CE/2012/23265 NO.1



CE/2012/23265 NO.2



** End of Report **



Double Coated Tissue Tapes 9888T

Technical Data

revised on Sept. 10th, 2002

Product Description:

Product 9888T double-coated tissue tape features a tissue carrier for dimensional stability and improved handling with ease of die cutting and laminating. Double-coated acrylic adhesive is suitable for various surface, and possess good performance.

Construction:

Produc Numbe	Color/	Carrier	Liner Color, Type, Print	Liner Caliper
9888T	Translucent, 0.0059" (0.150mm)	Tissue, white translucent in color	White, PE ² polycoated paper, 3M logo print in red color	0.0059" (0.150mm)

Note 1: Pressure Sensitive Acrylic Adhesive provides excellent initial tack and adhesion to a wide variety surface including many low surface energy plastics.

Note 2: PE (Polyethylene)

Feature

- 1. 3M 9888T feature a medium-soft acrylic pressure sensitive adhesive system. The key characteristics of this adhesive include a combination of high initial adhesion and good shear and holding power to a wide variety of materials, including many plastics.
- 2. 3M 9888T feature controlled adhesive flow into open cell foam and controlled caliper for bond to application surface.
- 3. For foam laminating, it provides excellent foam stability to reduce stretching and allows to more precise alignment during application.
- 4. High-density and high-strength paper liner is excellent for converting process.
- 5. 3M 9888T is UL recognized (File MH28421). Please see the UL listing for details.

Typical Physical Properties and Performance Characteristics

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

Product Number	9888T
Adhesion to stainless steel ASTM D3330 –180 degree, 2 mil Al foil at 22°C, 50%RH	g/25.4mm
15 minute RT	2940
72 Hour RT	3180
Adhesion to ABS	
ASTM D3330 –180 degree, 2 mil Al foil at 22°C, 50%RH	
15 minute RT	2210
72 Hour RT	2440
Adhesion to PC	
ASTM D3330 –180 degree, 2 mil Al foil at 22°C, 50%RH	
15 minute RT	2560
72 Hour RT	2670
Adhesion to PP	
ASTM D3330 –180 degree, 2 mil Al foil at 22°C, 50%RH	
20 minute RT	1900
72 Hour RT	2190

Shear strength ASTM D3654 modified 0.5 inch ² sample size at 22°C	
1000 grams	10000 mins
Relative High temperature Operating Ranges	
Long Term (days, weeks)	80°C
Short Term (minutes, hours)	120°C

Shelf Life

12 months from date of receipt by customer when stored in original carton at $22\ ^{\circ}\text{C}$ and 50% relative humidity

Application Techniques:

Bond strength is dependent upon the amount of adhesive-to-surface contact developed. Firm application pressure helps develop better adhesive contact and improves bond strength.

To obtain optimum adhesion, the bonding surfaces must be clean, dry and well unified. Some typical surface cleaning solvents are isopropyl alcohol or heptane. Note: Carefully read and follow the manufacturer's precautions and directions for use when working with solvents.

Ideal tape application temperature range is 70° F to 100° F (21° C to 38° C). Initial tape application to surfaces at temperatures below 50° F (10° C) is not recommended because the adhesive becomes too firm to adhere readily. However, once properly applied, low temperature holding is generally satisfactory.

Application Ideas

- 9888T tapes are specially formulated for many indoor/outdoor high performance purpose mounting and joining applications, including bonding to Polyethylene, Polypropylene and many other Plastics, where moderate temperature and shear performance are required.
- Application ideas for these tapes include
 - Lens attachment for mobile phone
 - Sign, Nameplates and Plaques
 - Bonding for System assembly of Appliance, Display and Notebooks
 - Interior accessories for car
 - Foam, Gasket, and insulting film attachment
 - General purpose attachment

Important Notice

3M MAKES NO WARRANTES, EXPRESS OR IMPLED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of application. Please remember that many factors can affect the use and performance of a 3M product in a particular application. The materials to be bonded with the product, the surface preparation of those materials, the product selected for use, the conditions in which the product is used, and the time and environmental conditions in which the product is expected to perform are among the many factors that can affect the use and performance of a 3M product. Given the variety of factors that can affect the use and performance of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for the user's method of application.

Limitation of Remedies and **Liability**

If the 3M product is proved to be defective, THE EXCLUSIVE REMEDY, AT 3M'S OPTION, SHALL BE TO REFUND THE PURCHASE PRICE OF OR TO REPAIR OR REPLACE THE DEFECTIVE 3M PRODUCT. 3M shall not otherwise be liable for loss or damages, whether direct, indirect, special, incidental, or consequential, regardless of the legal theory asserted, including negligence, warranty, or strict liability.

3M 9888T was manufactured under a 3M's quality system registered to ISO 9002 standards; and environmental protection system registered to ISO 14000 standards.



測試報告

Test Report

號碼(No.) : CE/2011/43223 日期(Date) : 2011/04/21 頁數(Page) : 1 of 12

台灣明尼蘇達礦業製造股份有限公司

3M TAIWAN LTD.

桃園縣楊梅鎮中山南路800巷66號

66, 800 LANE, CHUNG-SHAN S. RD., YANG-MEI, TAOYUAN, TAIWAN, R. O. C.

以下測試樣品係由客户送樣,且由客户聲稱並經客户確認如下 (The following samples was/were submitted and identified by/on behalf of the client as):

樣品名稱(Sample Description) : 3M DOUBLE COATED TAPE

樣品型號(Style/Item No.) : 9815, 1815, 9888T, 9810T, 9516, 9183

收件日期(Sample Receiving Date) : 2011/04/15

測試期間(Testing Period) : 2011/04/15 TO 2011/04/21

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



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號碼(No.): CE/2011/43223 日期(Date): 2011/04/21 頁數(Page): 2 of 12

台灣明尼蘇達礦業製造股份有限公司

3M TAIWAN LTD.

桃園縣楊梅鎮中山南路800巷66號

66, 800 LANE, CHUNG-SHAN S. RD., YANG-MEI, TAOYUAN, TAIWAN, R. O. C.

測試結果(Test Results)

測試部位(PART NAME)No.1

透明色雙面膠 (不含離型紙) (TRANSPARENT DOUBLE SIDED ADHESIVE (EXCLUDING THE RELEASE PAPER))

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result) No.1
鎬 / Cadmium (Cd)	mg/kg	參考IEC 62321: 2008 - Clause 8方法,以 感應耦合電漿原子發射光譜儀檢測. / With reference to IEC 62321: 2008 - Clause 8 and performed by ICP-AES.	2	n.d.
鉛 / Lead (Pb)	mg/kg	參考IEC 62321: 2008 - Clause 8方法,以 感應耦合電漿原子發射光譜儀檢測. / With reference to IEC 62321: 2008 - Clause 8 and performed by ICP-AES.	2	n.d.
汞 / Mercury (Hg)	mg/kg	参考IEC 62321: 2008 - Clause 7方法,以 感應耦合電漿原子發射光譜儀檢測. / With reference to IEC 62321: 2008 - Clause 7 and performed by ICP-AES.	2	n.d.
六價鉻 / Hexavalent Chromium Cr(VI) by alkaline extraction	mg/kg	參考IEC 62321: 2008 - Annex C方法,以 UV-VIS檢測. / With reference to IEC 62321: 2008 - Annex C and performed by UV-VIS.	2	n.d.
全氟辛烷磺酸 / Perfluorooctane sulfonates (PFOS) PFOS — Acid PFOS — Metal Salt PFOS — Amide	mg/kg	参考US EPA 3540C: 1996方法,以液相層析/質譜儀檢測全氟辛烷磺酸含量. / With reference to US EPA 3540C: 1996 method for PFOS Content. Analysis was performed by LC/MS.	10	n.d.

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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result) No.1
全氟辛酸 (銨) / PFOA (CAS No.: 335-67-1)	mg/kg	參考US EPA 3540C: 1996方法,以液相層析/質譜儀檢測全氟辛酸(銨)含量. / With reference to US EPA 3540C: 1996 method for PFOA Content. Analysis was performed by LC/MS.	10	n.d.
六溴環十二烷 / Hexabromocyclododecane (HBCDD) (CAS No.: 25637-99-4)	mg/kg	参考US EPA 3540C方法,以氣相層析/質譜 儀檢測. / With reference to US EPA 3540C method. Analysis was performed by GC/MS.	5	n.d.
四溴雙酚-A / Tetrabromobisphenol A (TBBP-A) (CAS No.: 79-94-7)	mg/kg	參考US EPA 3540C & 8270D方法,以氣相層析/質譜儀檢測. / With reference to US EPA 3540C & 8270D method. Analysis was performed by GC/MS.	10	n.d.
多溴聯苯總和 / Sum of PBBs		参考IEC 62321: 2008 - Annex A方法,以 氣相層析儀/質譜儀檢測. / With reference to IEC 62321: 2008 - Annex A and performed by GC/MS.	-	n.d.
一溴聯苯 / Monobromobiphenyl			5	n.d.
二溴聯苯 / Dibromobiphenyl			5	n.d.
三溴聯苯 / Tribromobiphenyl			5	n.d.
四溴聯苯 / Tetrabromobiphenyl			5	n.d.
五溴聯苯 / Pentabromobiphenyl	mg/kg		5	n.d.
六溴聯苯 / Hexabromobiphenyl	-		5	n.d.
七溴聯苯 / Heptabromobiphenyl			5	n.d.
八溴聯苯 / Octabromobiphenyl			5	n.d.
九溴聯苯 / Nonabromobiphenyl			5	n.d.
十溴聯苯 / Decabromobiphenyl			5	n.d.

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測試報告

Test Report

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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result) No.1
多溴聯苯醚總和 / Sum of PBDEs		参考IEC 62321: 2008 - Annex A方法,以 氣相層析儀/質譜儀檢測. / With reference to IEC 62321: 2008 - Annex A and performed by GC/MS.	-	n.d.
一溴聯苯醚 / Monobromodiphenyl ether			5	n.d.
二溴聯苯醚 / Dibromodiphenyl ether			5	n.d.
三溴聯苯醚 / Tribromodiphenyl ether			5	n.d.
四溴聯苯醚 / Tetrabromodiphenyl ether			5	n.d.
五溴聯苯醚 / Pentabromodiphenyl ether	mg/kg		5	n.d.
六溴聯苯醚 / Hexabromodiphenyl ether			5	n.d.
七溴聯苯醚 / Heptabromodiphenyl ether			5	n.d.
八溴聯苯醚 / Octabromodiphenyl ether			5	n.d.
九溴聯苯醚 / Nonabromodiphenyl ether			5	n.d.
十溴聯苯醚 / Decabromodiphenyl ether			5	n.d.
鹵素 / Halogen				
鹵素(氟)/ Halogen-Fluorine (F) (CAS No.: 14762-94-8)	mg/kg	参考BS EN 14582:2007, 以離子層析儀分析. / With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
鹵素(氯)/ Halogen-Chlorine (C1) (CAS No.: 22537-15-1)			50	n.d.
鹵素(溴)/ Halogen-Bromine (Br) (CAS No.: 10097-32-2)			50	n.d.
鹵素(碘)/ Halogen-Iodine (I) (CAS No.: 14362-44-8)			50	n.d.

備註(Note):

- 1. mg/kg = ppm ; 0.1wt% = 1000ppm
- 2. n.d. = Not Detected (未檢出)
- 3. MDL = Method Detection Limit (方法偵測極限值)
- 4. "-" = Not Regulated (無規格值)

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PFOS参考資訊(Reference Information): 指令 2006/122/EC (Directive 2006/122/EC)

- (1) 該物質不可置於市場上或使用於特殊物質或配置成分重量濃度等於或大於0.005%.

 (May not be placed on the market or used as a substance or constituent of preparations in a concentration equal to or higher than 0.005% by mass.)
- (2) 該物質不可置於市場上的半成品或商品或其物件;假若零件上明顯地具有PFOS並參照結構上及微細構造上計算PFOS重量濃度等於或大於0.1%,而紡織品或其他覆蓋物質,如果PFOS在覆蓋物質中含量等於或大於1µg/m².

(May not be placed on the market in semi-finished products or articles, or parts thereof, if the concentration of PFOS is equal to or higher than 0.1% by mass calculated with reference to the mass of structurally or microstructurally distinct parts that contain PFOS or, for textiles or other coated materials, if the amount of PFOS is equal to or higher than $1\mu g/m^2$ of the coated material.)

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測試報告

Test Report

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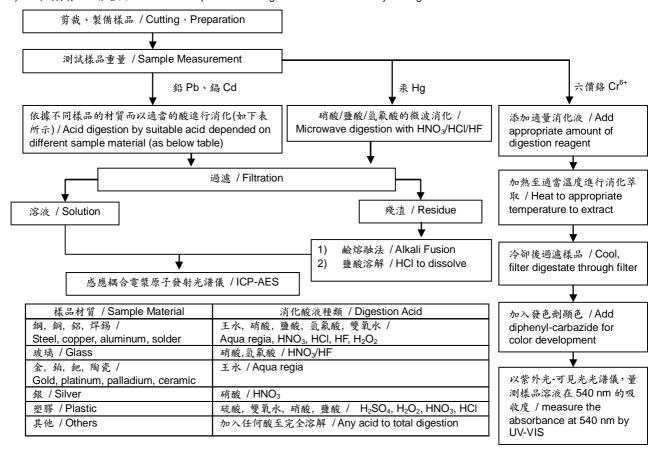
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- 1) 根據以下的流程圖之條件,樣品已完全溶解。(六價鉻測試方法除外) / These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ test method excluded)
- 2) 测試人員:楊登偉 / Name of the person who made measurement: Climbgreat Yang
- 3) 測試負責人:張啓興 / Name of the person in charge of measurement: Troy Chang



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分析流程圖 / Analytical flow chart

1) 測試人員: 翁賜彬 / Name of the person who made measurement: Roman Wong

2) 測試負責人:張啓興 / Name of the person in charge of measurement: Troy Chang

■測試項目(Test Items): 多溴聯苯/多溴聯苯醚, 四溴雙酚-A-雙 / PBB/PBDE, TBBP-A-bis

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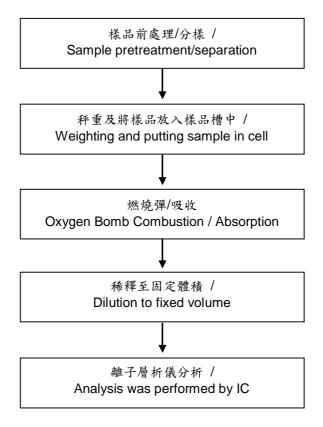
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鹵素分析流程圖 / Analytical flow chart of halogen content

- 1) 測試人員:陳恩臻 / Name of the person who made measurement: Rita Chen
- 2) 測試負責人:張啓興 / Name of the person in charge of measurement: Troy Chang



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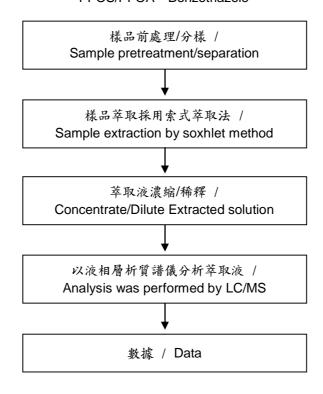
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索式萃取(LC/MS)分析流程圖 /

Analytical flow chart of Soxhlet extraction (LC/MS) procedure

- 1) 測試人員: 翁賜彬 / Name of the person who made measurement: Roman Wong
- 2) 測試負責人: 陳新智 / Name of the person in charge of measurement: Shinjyh Chen
- 測試項目(Test Items): 全氟辛烷磺酸/全氟辛酸(銨)、苯並三唑類化合物 / PFOS/PFOA、Benzotriazole



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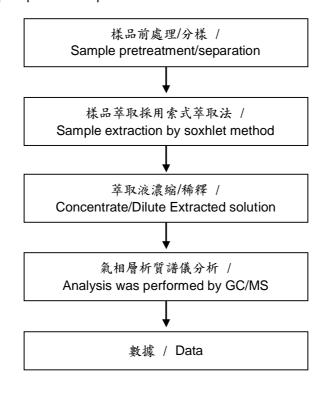
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索式萃取(GC/MS)分析流程圖 /

Analytical flow chart of Soxhlet extraction (GC/MS) procedure

- 1) 測試人員: 翁賜彬 / Name of the person who made measurement: Roman Wong
- 2) 測試負責人: 陳新智 / Name of the person in charge of measurement: Shinjyh Chen
 - 測試項目(Test Items): 可塑劑、苯並三唑類化合物、六溴環十二烷、壬酚、單甲基二 溴二苯基甲烷、有機磷化合物 / Phthalate、Benzotriazole、HBCDD、NP、DBBT、 Organic phosphorus compounds



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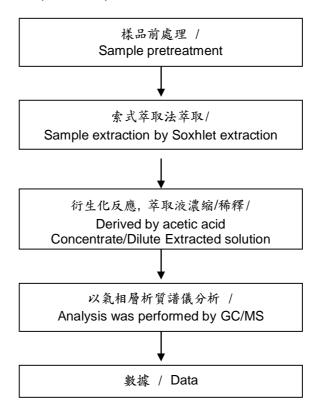
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分析流程圖 / Analytical flow chart

- 1) 測試人員: 翁賜彬 / Name of the person who made measurement: Roman Wong
- 2) 測試負責人: 陳新智 / Name of the person in charge of measurement: Shinjyh Chen
 - 測試項目(Test Items):四溴雙酚-A、雙酚 A/TBBP-A、Bisphenol A



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台灣明尼蘇達礦業製造股份有限公司

3M TAIWAN LTD.

桃園縣楊梅鎮中山南路800巷66號

66, 800 LANE, CHUNG-SHAN S. RD., YANG-MEI, TAOYUAN, TAIWAN, R. O. C.



** 報告結尾 (End of Report) **

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HIGH SPEED TECHNOLOGY 1F, NO. 82, JUNG JENG RD., TU CHENG, NEW TAIPEI CITY TAIWAN R. O. C.

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

Sample Description : LEAD FREE SOLDER BAR (B3051) LEAD FREE SOLDER WIRE (W3051),

LEAD FREE SOLDER BAR (B0305) LEAD FREE SOLDER WIRE (W0305), LEAD FREE SOLDER BAR, LEAD FREE SOLDER WIRE LEAD FREE

SOLDER BAR, PURE SOLDER BAR, PURE SOLDER WIRE SOLDER ALLOY

Style/Item No. : Sn/Ag3/Cu0.5, Sn/Ag0.3/Cu0.5, SN 97% AG 3%, SN 99.7% AG 0.3%, Sn96.5%

Ag3.5%, Sn100% Sn99.3/Cu0.7

Sample Receiving Date : 2011/10/05

Testing Period : 2011/10/05 TO 2011/10/13

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



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HIGH SPEED TECHNOLOGY 1F, NO. 82, JUNG JENG RD., TU CHENG, NEW TAIPEI CITY TAIWAN R. O. C.



Test Result(s)

PART NAME No.1 : MIXED ALL SILVER COLORED METAL BAR AND SILVER COLORED METAL WIRE

Test Item (s):	Unit	Method	MDL	Result
				No.1
Cadmium (Cd)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
Lead (Pb)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	190
Mercury (Hg)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
Hexavalent Chromium Cr(VI)	**	With reference to IEC 62321: 2008 and performed by Boiling water extraction Method.	#	Negative
Perfluorooctane sulfonates (PFOS-Acid, Metal Salt, Amide)	mg/kg	With reference to US EPA 3540C: 1996 method for PFOS Content. Analysis was performed by LC/MS.	10	n.d.
PFOA (CAS No.: 335-67-1)	mg/kg	With reference to US EPA 3540C: 1996 method for PFOA Content. Analysis was performed by LC/MS.	10	n.d.
Halogen				
Halogen-Fluorine (F) (CAS No.: 14762-94-8)		With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
Halogen-Chlorine (CI) (CAS No.: 22537-15-1)			50	n.d.
Halogen-Bromine (Br) (CAS No.: 10097-32-2)	mg/kg		50	116
Halogen-lodine (I) (CAS No.: 14362-44-8)			50	n.d.

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HIGH SPEED TECHNOLOGY
1F, NO. 82, JUNG JENG RD., TU CHENG, NEW TAIPEI CITY TAIWAN R. O. C.



Test Item (s):	l lm!4	Mathad	MDL	Result
	Unit	Method		No.1
Sum of PBBs			-	n.d.
Monobromobiphenyl			5	n.d.
Dibromobiphenyl			5	n.d.
Tribromobiphenyl			5	n.d.
Tetrabromobiphenyl			5	n.d.
Pentabromobiphenyl			5	n.d.
Hexabromobiphenyl			5	n.d.
Heptabromobiphenyl		With reference to IEC 62321: 2008 and performed by GC/MS.	5	n.d.
Octabromobiphenyl			5	n.d.
Nonabromobiphenyl			5	n.d.
Decabromobiphenyl	700 CV / 1 c CV		5	n.d.
Sum of PBDEs	mg/kg		-	n.d.
Monobromodiphenyl ether			5	n.d.
Dibromodiphenyl ether			5	n.d.
Tribromodiphenyl ether			5	n.d.
Tetrabromodiphenyl ether			5	n.d.
Pentabromodiphenyl ether			5	n.d.
Hexabromodiphenyl ether			5	n.d.
Heptabromodiphenyl ether			5	n.d.
Octabromodiphenyl ether			5	n.d.
Nonabromodiphenyl ether			5	n.d.
Decabromodiphenyl ether			5	n.d.

Note:

- 1. mg/kg = ppm; 0.1wt% = 1000ppm
- 2. n.d. = Not Detected
- 3. MDL = Method Detection Limit
- 4. " " = Not Regulated
- 5. ** = Qualitative analysis (No Unit)
- 6. # = a. Positive means the presence of CrVI on the tested areas
 - b. Negative means the absence of CrVI on the tested areas

The detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm² tested areas.

7. The sample(s) was/were analyzed on behalf of the applicant as mixing sample in one testing. The above result(s) was/were only given as the informality value.

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HIGH SPEED TECHNOLOGY 1F, NO. 82, JUNG JENG RD., TU CHENG, NEW TAIPEI CITY TAIWAN R. O. C.



PFOS Reference Information: Directive 2006/122/EC

- (1) May not be placed on the market or used as a substance or constituent of preparations in a concentration equal to or higher than 0.005 % by mass.
- (2) May not be placed on the market in semi-finished products or articles, or parts thereof, if the concentration of PFOS is equal to or higher than 0.1 % by mass calculated with reference to the mass of structurally or microstructurally distinct parts that contain PFOS or, for textiles or other coated materials, if the amount of PFOS is equal to or higher than 1µg/m² of the coated material.

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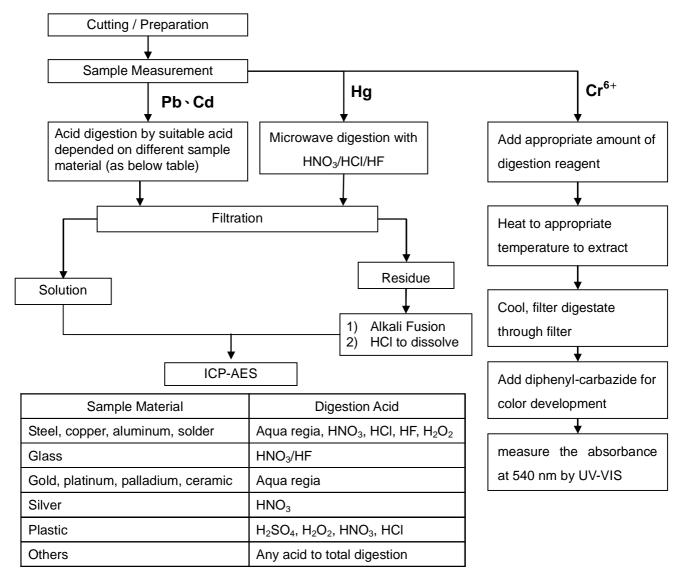


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HIGH SPEED TECHNOLOGY

1F, NO. 82, JUNG JENG RD., TU CHENG, NEW TAIPEI CITY TAIWAN R. O. C.

- 1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr^{6+} test method excluded)
- 2) Name of the person who made measurement: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang



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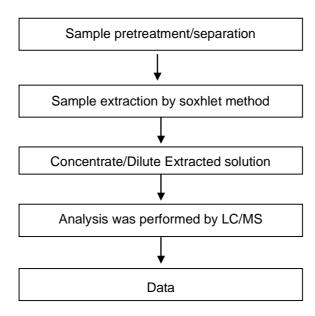
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Analytical flow chart of Soxhlet extraction (LC/MS) procedure

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang

[Test Items: PFOS/PFOA · Benzotriazole]



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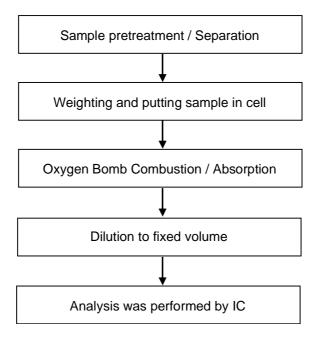
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HIGH SPEED TECHNOLOGY 1F, NO. 82, JUNG JENG RD., TU CHENG, NEW TAIPEI CITY TAIWAN R. O. C.



Analytical flow chart of halogen content

- 1) Name of the person who made measurement: Rita Chen
- 2) Name of the person in charge of measurement: Troy Chang



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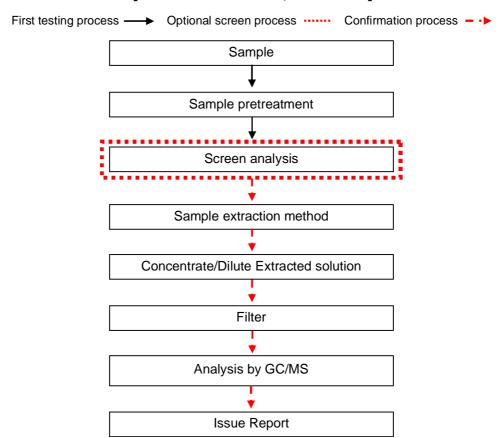
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Analytical flow chart

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang

[Test Items: PBB/PBDE, TBBP-A-bis]



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HIGH SPEED TECHNOLOGY 1F, NO. 82, JUNG JENG RD., TU CHENG, NEW TAIPEI CITY TAIWAN R. O. C.



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



** End of Report **

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