

測試報告

Test Report

號碼(No.) : CE/2018/36307

日期(Date) : 2018/03/30

頁數(Page): 1 of 11

凱士士企業股份有限公司

KAI SUH SUH ENTERPRISE CO., LTD.

台北市延平北路一段38號

38, YEN PING N. RD., SEC. 1, TAIPEI, TAIWAN, R. O. C.



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

樣品名稱(Sample Description) : WIRING DUCT (GREY)/絕緣配線槽(灰色)
同材質/產品名稱/型號(Sample Material/Sample Description/Style/Item No.) : 請參考第6-7頁 (PLEASE REFER TO PAG 6-7)
樣品材質(Sample Material) : PVC(GREY) 94V-0
收件日期(Sample Receiving Date) : 2018/03/23
測試期間(Testing Period) : 2018/03/23 TO 2018/03/30

測試需求(Test Requested) :

- (1) 依據客戶指定，參考RoHS 2011/65/EU Annex II及其修訂指令(EU) 2015/863測試鎘、鉛、汞、六價鉻、多溴聯苯、多溴聯苯醚，DBP, BBP, DEHP, DIBP. (As specified by client, with reference to RoHS 2011/65/EU Annex II and amending Directive (EU) 2015/863 to determine Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP contents in the submitted sample(s).)
- (2) 其他測試項目請見下一頁 . (Please refer to next pages for the other item(s).)

測試結果(Test Results) : 請參閱下一頁 (Please refer to following pages).

結論(Conclusion) : (1) 根據客戶所提供的樣品，其鎘、鉛、汞、六價鉻、多溴聯苯、多溴聯苯醚，DBP, BBP, DEHP, DIBP 的測試結果符合RoHS指令暨(EU) 2015/863之限值要求. (Based on the performed tests on submitted sample(s), the test results of Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP comply with the limits as set by RoHS and amending Directive (EU) 2015/863.)


Troy Chang, Manager - Tech
Signed for and on behalf of
SGS TAIWAN LTD.
Chemical Laboratory - Taipei



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測試結果(Test Results)

測試部位(PART NAME)No. 1 : 灰色塑膠 (GRAY PLASTIC)

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限值 (MDL)	結果 (Result)	限值 (Limit)
				No. 1	
鎘 / Cadmium (Cd)	mg/kg	參考IEC 62321-5 (2013), 以感應耦合電漿原子發射光譜儀檢測. / With reference to IEC 62321-5 (2013) and performed by ICP-AES.	2	n. d.	100
鉛 / Lead (Pb)	mg/kg	參考IEC 62321-5 (2013), 以感應耦合電漿原子發射光譜儀檢測. / With reference to IEC 62321-5 (2013) and performed by ICP-AES.	2	n. d.	1000
汞 / Mercury (Hg)	mg/kg	參考IEC 62321-4 (2013), 以感應耦合電漿原子發射光譜儀檢測. / With reference to IEC 62321-4 (2013) and performed by ICP-AES.	2	n. d.	1000
六價鉻 / Hexavalent Chromium Cr(VI) (◆)	mg/kg	參考IEC 62321-7-2 (2017), 以UV-VIS檢測; 參考IEC 62321-5 (2013), 以ICP-AES檢測. / With reference to IEC 62321-7-2 (2017) and performed by UV-VIS. ; With reference to IEC 62321-5 (2013) and performed by ICP-AES.	8	n. d.	1000

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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限值 (MDL)	結果 (Result)	限值 (Limit)
				No. 1	
多溴聯苯總和 / Sum of PBBs	mg/kg	參考IEC 62321-6 (2015), 以氣相層析 / 質譜儀檢測. / With reference to IEC 62321-6 (2015) and performed by GC/MS.	-	n. d.	1000
一溴聯苯 / Monobromobiphenyl	mg/kg		5	n. d.	-
二溴聯苯 / Dibromobiphenyl	mg/kg		5	n. d.	-
三溴聯苯 / Tribromobiphenyl	mg/kg		5	n. d.	-
四溴聯苯 / Tetrabromobiphenyl	mg/kg		5	n. d.	-
五溴聯苯 / Pentabromobiphenyl	mg/kg		5	n. d.	-
六溴聯苯 / Hexabromobiphenyl	mg/kg		5	n. d.	-
七溴聯苯 / Heptabromobiphenyl	mg/kg		5	n. d.	-
八溴聯苯 / Octabromobiphenyl	mg/kg		5	n. d.	-
九溴聯苯 / Nonabromobiphenyl	mg/kg		5	n. d.	-
十溴聯苯 / Decabromobiphenyl	mg/kg		5	n. d.	-
多溴聯苯醚總和 / Sum of PBDEs	mg/kg		-	n. d.	1000
一溴聯苯醚 / Monobromodiphenyl ether	mg/kg		5	n. d.	-
二溴聯苯醚 / Dibromodiphenyl ether	mg/kg		5	n. d.	-
三溴聯苯醚 / Tribromodiphenyl ether	mg/kg		5	n. d.	-
四溴聯苯醚 / Tetrabromodiphenyl ether	mg/kg		5	n. d.	-
五溴聯苯醚 / Pentabromodiphenyl ether	mg/kg		5	n. d.	-
六溴聯苯醚 / Hexabromodiphenyl ether	mg/kg		5	n. d.	-
七溴聯苯醚 / Heptabromodiphenyl ether	mg/kg		5	n. d.	-
八溴聯苯醚 / Octabromodiphenyl ether	mg/kg		5	n. d.	-
九溴聯苯醚 / Nonabromodiphenyl ether	mg/kg	5	n. d.	-	
十溴聯苯醚 / Decabromodiphenyl ether	mg/kg	5	n. d.	-	

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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限值 (MDL)	結果 (Result)	限值 (Limit)
				No. 1	
鄰苯二甲酸丁苯甲酯 / BBP (Butyl Benzyl phthalate) (CAS No. : 85-68-7)	mg/kg	參考IEC 62321-8 (2017), 以氣相層析儀/質譜儀檢測. / With reference to IEC 62321-8 (2017). Analysis was performed by GC/MS.	50	n. d.	1000
鄰苯二甲酸二丁酯 / DBP (Dibutyl phthalate) (CAS No. : 84-74-2)	mg/kg		50	n. d.	1000
鄰苯二甲酸二異丁酯 / DIBP (Di-isobutyl phthalate) (CAS No. : 84-69-5)	mg/kg		50	n. d.	1000
鄰苯二甲酸二(2-乙基己基)酯 / DEHP (Di-(2-ethylhexyl) phthalate) (CAS No. : 117-81-7)	mg/kg		50	n. d.	1000
鄰苯二甲酸二異癸酯 / DIDP (Di-isodecyl phthalate) (CAS No. : 26761-40-0; 68515-49-1)	mg/kg		50	n. d.	-
鄰苯二甲酸二異壬酯 / DINP (Di-isononyl phthalate) (CAS No. : 28553-12-0; 68515-48-0)	mg/kg		50	n. d.	-
鄰苯二甲酸二正辛酯 / DNOP (Di-n-octyl phthalate) (CAS No. : 117-84-0)	mg/kg		50	n. d.	-
鄰苯二甲酸二正己酯 / DNHP (Di-n-hexyl phthalate) (CAS No. : 84-75-3)	mg/kg		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 (方法偵測極限值)
4. "-" = Not Regulated (無規格值)
5. (◆) :

若鉻含量小於六價鉻之方法偵測極限值，則六價鉻為n. d.，不須再測試六價鉻。

The result of Cr(VI) is "n.d." as the result of Chromium (Cr) is less than the MDL of Cr(VI), and confirmation test of Cr(VI) is not required.

若鉻含量未小於六價鉻之方法偵測極限值，需進行六價鉻測試。

If the Chromium (Cr) content is not less than the MDL of Cr(VI), confirmation test of Cr(VI) is required.

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產品名稱/型號 (Used For Products (Style /Item No.)) :

電線固定夾 CABLE CLAMP /CL, CLB, RCL

蓋式配線槽 COVERING DUCT /CD, WCD, ECD

室內裝潢配線槽 DECORATION WIRING DUCT /TF

排線固定夾 FLAT CABLE CLAMP /FC, FCB, SFC

迷你型配線槽 MINI TRUNKING /UD, WUD

一體式絕緣配線槽 ONE PIECE WIRING DUCT /OS, TF, RTF, WTF

橢圓形配線管 OVAL INSULATING CONDUIT /OV, WOV, EOY

圓形配線管 ROUND INSULATING CONDUIT /OD, WOD

圓形地板配線槽 ROUND TYPE WIRING DUCT /RD, RDA, WRD

圓形地板配線槽身 ROUND TYPE WIRING DUCT BASE /RDY

圓形地板配線槽蓋 ROUND TYPE WIRING DUCTWITHOUT ADHESIVE /RDN

日式電話配線槽 TELEPHONE WIRING DUCT SELF-ADHESIVE /JD, JDB, WJD

電話配線槽 TELEPHONE WIRING DUCT /TC, TCN, WTC

明線配線槽 U TYPE WIRING DUCT /TD, TDB, WTD

絕緣配線槽 WIRING DUCT CLOSE SLOT /VDC, VDCB, WVDC, WVDCB, LDC, LDCB, WLDC

絕緣配線槽 WIRING DUCT SLOTTED /MD, MDV, KD, KDV, HD, HDV, VD, VDV, KVD, KVDV,

HVD, HVDV, AD, ADV, BD, BDV, GD, GDV, PD, MPD, MID

WMD, WMDV, WKD, WKDV, WHD, WHDV, WVD, WVDV, WKVD, WKVDV, WHVD, WHVDV, WAD, WADV, WBD,

WBDV, WGD, WGDV, WPD, WMPD, WMID

EMD, EMDV, EKD, EKDV, EHD, EHDV, EVD, EVDV, EKVD, EKVDV, EHVD, EHVDV, EAD, EADV, EBD,

EBDV, EGD, EGDV, EPD, EMPD, EMID

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絕緣配線槽槽身 WIRING DUCT BASE /MDB, MDVB, KDB, KDVB, HDB, HDVB, VDB, VDVB, KVDB, KVDVB, HVDB, HVDVB, ADB, ADVB, BDB, BDVB, GDB, GDVB, PDB, WDB, WDVB, UDB, MPDB, MIDB
WMDb, WMDVB, WKDB, WKDVB, WHDB, WHDVB, WVDB, WVDVB, WKVDB, WKVDVB, WHVDB, WHVDVB, WADB, WADVB, WBDB, WBDVB, WGDB, WGDVB, WPDB, WWDB, WWDVB, WUDB, WMPDB, WMIDB
EMDB, EMDVB, EKDB, EKDVB, EHDB, EHDVB, EVDB, EVDVB, EKVDB, EKVDVB, EHVDB, EHVDB, EADB, EADVB, EBDB, EBDVB, EGDB, EGDVB, EPDB, EWDB, EWDVB, EUDB, EMPDB, EMIDB
絕緣配線槽槽蓋 WIRING DUCT COVER /DC, WDC, EDC, UDC, NDC, BDC, TCC, TFC
絕緣配線槽密封式 WIRING DUCT SOLID /SD, WSD, SDB, WSDB, SDVB

絕緣配線槽 WIRING DUCT /SDH, WSDH

絕緣配線槽接頭 WIRING DUCT CONNECTOR /SDHV, SDHI, SDHA, SDHO, SDHF, SDHL, SDHX, SDHT, SDE

絕緣配線槽連接片 WIRING DUCT COUPLER /DCP

分隔型配線槽 WIRING DUCT /WD, WWD, WDV, EX

含膠型防滑配線槽 WIRING DUCT WITH NON-SLIPCOVER /MQ, KQ, HQ, VQ, KVQ, HVQ, VQC, LQC, GQ, MPQ, PQ, MIQ, AQ, HQ, SQ, WMQ, WKQ, WHQ, WVQ, WKVQ, WHVQ, WVQC, WLQC, WGQ, WMPQ, WPQ, WMIQ, WAQ, WHQ, WSQ

CM型配線標誌 CM TYPE CABLE MARKER /CM

OC型配線標誌 OC TYPE CABLE MARKER /OC

RJ45 插座防塵塞頭 DUST COVER FOR RJ45 PLUG /RJ45-DC

鋁蓋圓形地板配線槽 ROUND TYPE WIRING DUCT WITH ALUMINUM COVER /ARD, WARD

一體式絕緣配線槽 ONE PIECE SURFACE RACEWAY /OP

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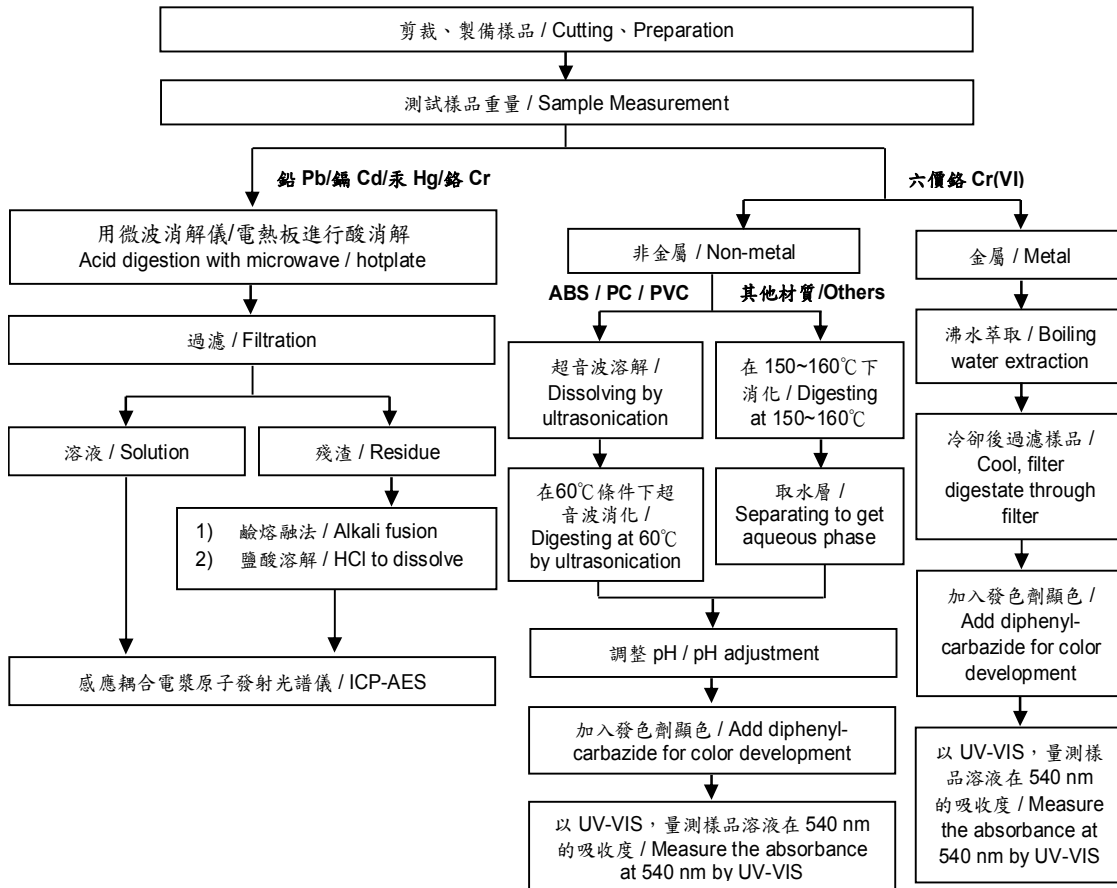


重金屬流程圖 / Analytical flow chart of Heavy Metal

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)

- 測試人員：王志瑋 / Technician : JR Wang
- 測試負責人：張啟興 / Supervisor: Troy Chang



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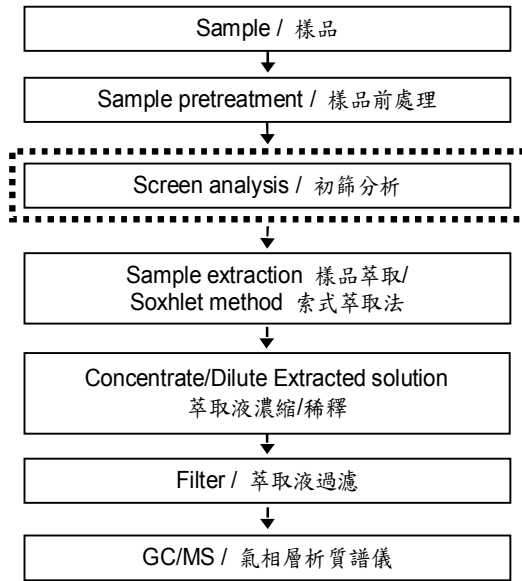
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多溴聯苯/多溴聯苯醚分析流程圖 / Analytical flow chart - PBB/PBDE

- 測試人員：涂雅苓 / Technician: Yaling Tu
- 測試負責人：張啟興 / Supervisor: Troy Chang

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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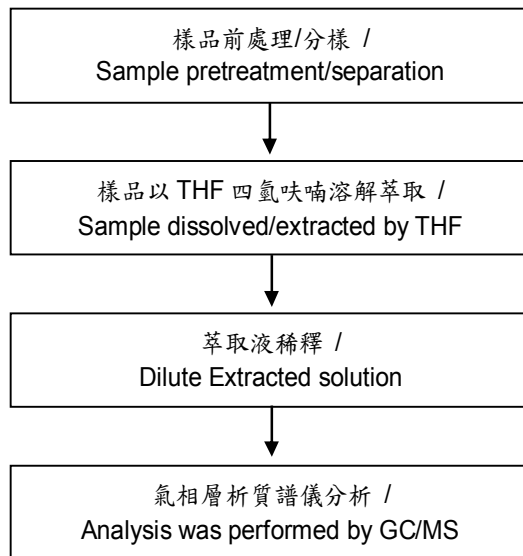
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可塑劑分析流程圖 / Analytical flow chart - Phthalate

- 測試人員：徐毓明 / Technician: Andy Hsu
- 測試負責人：張啟興 / Supervisor : Troy Chang

【測試方法/Test method: IEC 62321-8】



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* 照片中如有箭頭標示，則表示為實際檢測之樣品/部位。 *
(The tested sample / part is marked by an arrow if it's shown on the photo.)

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** 報告結尾 (End of Report) **