

**Test Report** 

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有達工業股份有限公司 (UTA AUTO INDUSTRIAL CO., LTD.) 台中市大里區工業12路1號 (大里工業區) (NO. 1, GONGYE 12TH RD., DALI DIST., TAICHUNG CITY 412, 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 the applicant as):

送樣廠商(Sample Submitted By) : 有達工業股份有限公司 (UTA AUTO INDUSTRIAL CO., LTD.) 樣品名稱(Sample Name) : CLOSED END CONNECTOR / WIRE NUT (閉端子 / 旋轉端子) 樣品型號(Style/Item No.) : CE-X (A/B/L/S) SERIES (HW-CX,HWCX,HW-CXS,HWCX

V0,HCXXXXSDB1,HC8SDB1,HW-CXL,HW-C3SL) E-X SERIES (E-X)

收件日(Sample Receiving Date) : 21-Dec-2023

測試期間(Testing Period) : 21-Dec-2023 to 27-Dec-2023

測試需求(Test Requested) : 依據客戶指定,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, to test Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP contents

in the submitted sample(s).)

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

Troy Chang / Department Malager
Signed for and on behalf of Alwah
SGS TAIWAN LTD.
Chemical Laboratory - Taipei



PIN CODE: 94C7D948



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#### 測試部位敘述 (Test Part Description)

No.1 : 整體混測 (MIXED ALL PARTS)

#### 測試結果 (Test Results)

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1
鎘 (Cd) (Cadmium (Cd))	參考IEC 62321-5: 2013·以感應耦合電 漿發射光譜儀分析。(With reference to	mg/kg	2	n.d.
鉛 (Pb) (Lead (Pb))	IEC 62321-5: 2013, analysis was performed by ICP-OES.)	mg/kg	2	n.d.
汞 (Hg) (Mercury (Hg))	參考IEC 62321-4: 2013+ AMD1: 2017 · 以感應耦合電漿發射光譜儀分析。(With reference to IEC 62321-4: 2013+ AMD1: 2017, analysis was performed by ICP-OES.)	mg/kg	2	n.d.
六價鉻 Cr(VI) (Hexavalent Chromium Cr(VI))	參考IEC 62321-7-2: 2017·以紫外光-可見光分光光度計分析。(With reference to IEC 62321-7-2: 2017, analysis was performed by UV-VIS.)	mg/kg	8	n.d.
一溴聯苯 (Monobromobiphenyl)	· 參考IEC 62321-6: 2015·以氣相層析儀/ · 質譜儀分析。(With reference to IEC · 62321-6: 2015, analysis was performed · by GC/MS.)	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.
多溴聯苯總和 (Sum of PBBs)		mg/kg	-	n.d.



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測試項目	測試方法	單位	MDL	結果
(Test Items)	(Method)	(Unit)		(Result)
				No.1
一溴聯苯醚 (Monobromodiphenyl ether)	· 參考IEC 62321-6: 2015·以氣相層析儀/ · 質譜儀分析。(With reference to IEC · 62321-6: 2015, analysis was performed · by GC/MS.)	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.
多溴聯苯醚總和 (Sum of PBDEs)		mg/kg	-	n.d.
鄰苯二甲酸丁苯甲酯 (BBP) (Butyl benzyl		mg/kg	50	n.d.
phthalate (BBP))				
鄰苯二甲酸二丁酯 (DBP) (Dibutyl	參考IEC 62321-8: 2017,以氣相層析儀/	mg/kg	50	n.d.
phthalate (DBP))	質譜儀分析。(With reference to IEC			
鄰苯二甲酸二異丁酯 (DIBP) (Diisobutyl	62321-8: 2017, analysis was performed	mg/kg	50	n.d.
phthalate (DIBP))	by GC/MS.)			
鄰苯二甲酸二(2-乙基己基)酯 (DEHP) (Di-		mg/kg	50	n.d.
(2-ethylhexyl) phthalate (DEHP))				

#### 備註(Note):

- 1. mg/kg = ppm; 0.1wt% = 0.1% = 1000ppm
- 2. MDL = Method Detection Limit (方法偵測極限值)
- 3. n.d. = Not Detected (未檢出); 小於MDL / Less than MDL
- 4. "-" = Not Regulated (無規格值)
- 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別單一材質的含量。 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.



## **Test Report**

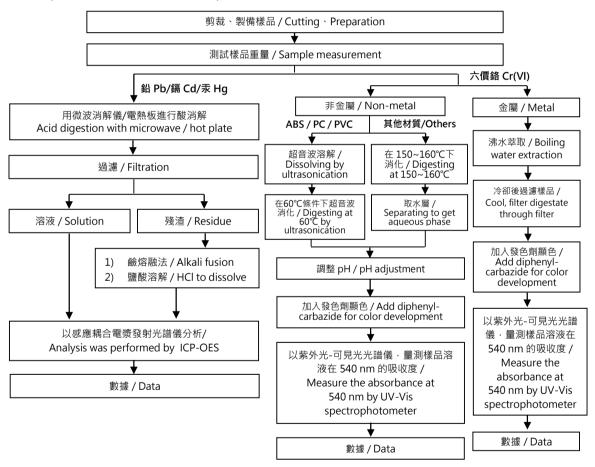
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#### 重金屬流程圖 / Analytical flow chart of heavy metal

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. ( $Cr^{6+}$  test method excluded)



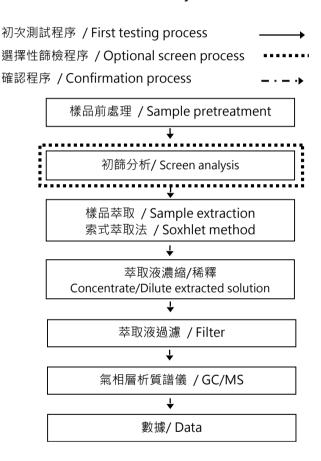


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#### 多溴聯苯/多溴聯苯醚分析流程圖 / Analytical flow chart - PBBs/PBDEs





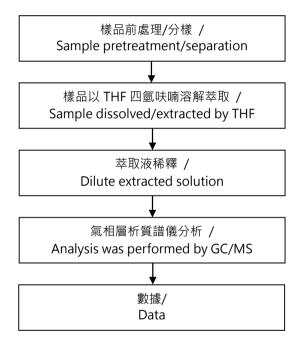
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可塑劑分析流程圖 / Analytical flow chart - Phthalate

【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) \*\*