

## 測試報告

# Test Report

號碼(No.): ETR23100398

日期(Date): 09-Jan-2023

頁數(Page): 1 of 8

巨昌金屬股份有限公司 (GEU CHONE METAL CO., LTD.)

新北市三重區中興北街176號 (NO. 176, ZHONGXING N. ST., SANCHONG DIST., NEW TAIPEI CITY 241-022, TAIWAN)

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

送樣廠商(Sample Submitted By) : 巨昌金屬股份有限公司 (GEU CHONE METAL CO., LTD.)

樣品名稱(Sample Name) : ALLOY STEEL (合金鋼)

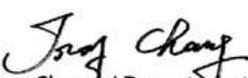
樣品型號(Style/Item No.) : SUJ2/GCr15/100Cr6

收件日(Sample Receiving Date) : 03-Jan-2023

測試期間(Testing Period) : 03-Jan-2023 to 09-Jan-2023

測試需求(Test Requested) : 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).)

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

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



PIN CODE: A8D74822

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### 測試部位敘述 (Test Part Description)

No.1 : 銀色金屬 (SILVER COLORED METAL)

### 測試結果 (Test Results)

| 測試項目<br>(Test Items)  | 測試方法<br>(Method)   | 單位<br>(Unit)       | MDL | 結果<br>(Result) |
|---|--|--------------------|-----|----------------|
|   |  |                    |     | No.1           |
| 鎘 (Cd) (Cadmium (Cd)) (CAS No.: 7440-43-9)                  | 參考IEC 62321-5: 2013 · 以感應耦合電漿發射光譜儀分析。(With reference to IEC 62321-5: 2013, analysis was performed by ICP-OES.)                         | mg/kg              | 2   | n.d.           |
| 鉛 (Pb) (Lead (Pb)) (CAS No.: 7439-92-1)                     | 參考IEC 62321-5: 2013 · 以感應耦合電漿發射光譜儀分析。(With reference to IEC 62321-5: 2013, analysis was performed by ICP-OES.)                         | mg/kg              | 2   | n.d.           |
| 汞 (Hg) (Mercury (Hg)) (CAS No.: 7439-97-6)                  | 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 (Hexavalent Chromium) Cr(VI) (CAS No.: 18540-29-9) (#2) | 參考IEC 62321-7-1: 2015 · 以紫外光-可見光分光光度計分析。(With reference to IEC 62321-7-1: 2015, analysis was performed by UV-VIS.)                     | µg/cm <sup>2</sup> | 0.1 | 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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新北市三重區中興北街176號 (NO. 176, ZHONGXING N. ST., SANCHONG DIST., NEW TAIPEI CITY 241-022, TAIWAN)

| 測試項目<br>(Test Items)  | 測試方法<br>(Method)   | 單位<br>(Unit) | MDL | 結果<br>(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 phthalate (BBP)) (CAS No.: 85-68-7)               | 參考IEC 62321-8: 2017 · 以氣相層析儀/質譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.) | mg/kg        | 50  | n.d.           |
| 鄰苯二甲酸二丁酯 (DBP) (Diethyl phthalate (DBP)) (CAS No.: 84-74-2)                     | 參考IEC 62321-8: 2017 · 以氣相層析儀/質譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.) | mg/kg        | 50  | n.d.           |
| 鄰苯二甲酸二(2-乙基己基)酯 (DEHP) (Di-(2-ethylhexyl) phthalate (DEHP)) (CAS No.: 117-81-7) | 參考IEC 62321-8: 2017 · 以氣相層析儀/質譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.) | mg/kg        | 50  | n.d.           |
| 鄰苯二甲酸二異丁酯 (DIBP) (Diisobutyl phthalate (DIBP)) (CAS No.: 84-69-5)               | 參考IEC 62321-8: 2017 · 以氣相層析儀/質譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.) | mg/kg        | 50  | n.d.           |

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### 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. (#2) =
  - a. 當六價鉻結果大於 $0.13 \mu\text{g}/\text{cm}^2$ ，表示樣品表層含有六價鉻。(The sample is positive for Cr(VI) if the Cr(VI) concentration is greater than  $0.13 \mu\text{g}/\text{cm}^2$ . The sample coating is considered to contain Cr(VI).)
  - b. 當六價鉻結果為n.d. (濃度小於 $0.10 \mu\text{g}/\text{cm}^2$ )，表示表層不含六價鉻。(The sample is negative for Cr(VI) if Cr(VI) is n.d. (concentration less than  $0.10 \mu\text{g}/\text{cm}^2$ ). The coating is considered a non-Cr(VI) based coating)
  - c. 當六價鉻結果介於  $0.10$  及  $0.13 \mu\text{g}/\text{cm}^2$  時，無法確定塗層是否含有六價鉻。(The result between  $0.10 \mu\text{g}/\text{cm}^2$  and  $0.13 \mu\text{g}/\text{cm}^2$  is considered to be inconclusive - unavoidable coating variations may influence the determination.)

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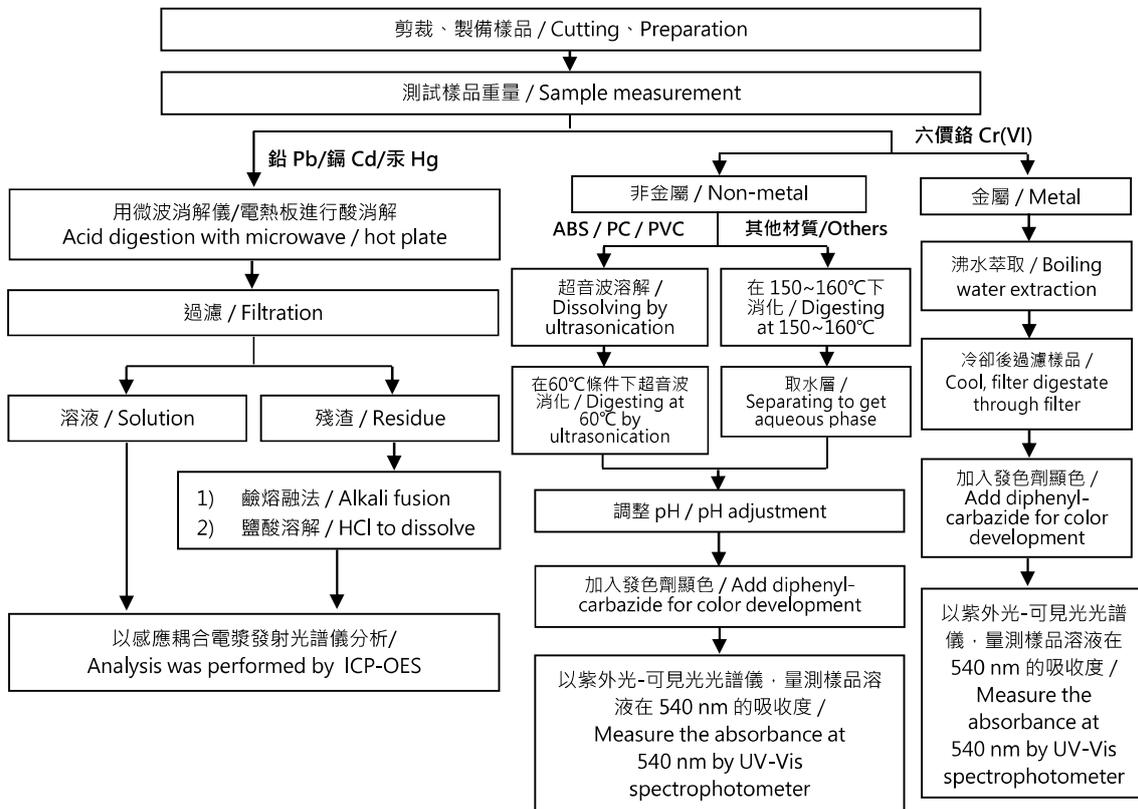
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### 重金屬流程圖 / Analytical flow chart of heavy metal

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<sup>6+</sup> test method excluded)

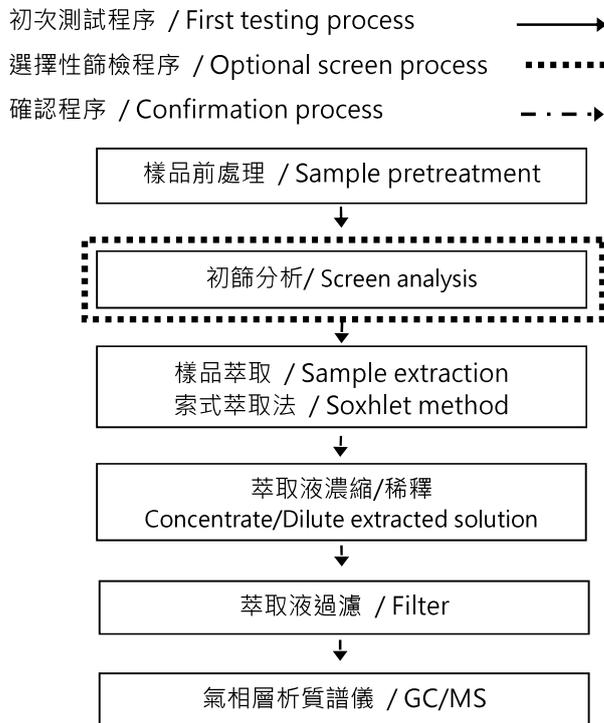


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### 多溴聯苯/多溴聯苯醚分析流程圖 / Analytical flow chart - PBBs/PBDEs



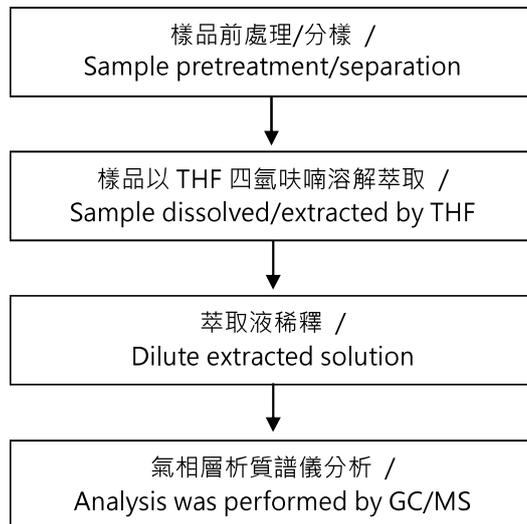
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### 可塑劑分析流程圖 / Analytical flow chart - Phthalate

【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.)

### ETR23100398



\*\* 報告結尾 (End of Report) \*\*

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