

測試報告

號碼(No.) : CE/2016/31596

日期(Date) : 2016/03/11

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Test Report

界升工業股份有限公司

JACO INTERNATIONAL CORPORATION

台中市烏日區學田路342號

NO. 342, SHYUE-TEN RD., WU-JIN DISTRICT, TAICHUNG 41456, 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) :

送樣廠商(Sample Submitted By) : 界升工業股份有限公司 (JACO INTERNATIONAL CORPORATION)
樣品名稱(Sample Description) : CHROME PLATE HEX KEY (鍍鉻扳手)
收件日期(Sample Receiving Date) : 2016/03/04
測試期間(Testing Period) : 2016/03/04 TO 2016/03/11

測試需求(Test Requested) : 依據客戶要求, 參考 RoHS 指令 2011/65/EU Annex II 測試鎘、鉛、汞、六價鉻。 (As specified by client, with reference to RoHS Directive 2011/65/EU Annex II to determine Cadmium, Lead, Mercury, Cr(VI) contents in the submitted sample.)

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

結論(Conclusion) : 根據客戶所選擇的部位測試, 其鎘、鉛、汞、六價鉻的測試結果符合 RoHS 指令 2011/65/EU Annex II 之限值要求 (Based on the performed tests on selected part of submitted sample(s), the test results of Cadmium, Lead, Mercury, Cr(VI) comply with the limits as set by RoHS Directive 2011/65/EU Annex II.)


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 : 銀色金屬鍍層 (PLATING LAYER OF SILVER COLORED METAL)

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	酸洗脫鍍層, 參考IEC 62321-5: 2013方法, 以感應耦合電漿原子發射光譜儀檢測. / IEC 62321-5: 2013 application of modified digestion by surface etching and performed by ICP-AES.	2	n. d.	100
鉛 / Lead (Pb)	mg/kg	酸洗脫鍍層, 參考IEC 62321-5: 2013方法, 以感應耦合電漿原子發射光譜儀檢測. / IEC 62321-5: 2013 application of modified digestion by surface etching and performed by ICP-AES.	2	n. d.	1000
汞 / Mercury (Hg)	mg/kg	酸洗脫鍍層, 參考IEC 62321-4: 2013方法, 以感應耦合電漿原子發射光譜儀檢測. / IEC 62321-4: 2013 application of modified digestion by surface etching and performed by ICP-AES.	2	n. d.	1000
六價鉻 / Hexavalent Chromium Cr(VI)(#2)	µg/cm ²	參考IEC 62321-7-1:2015, 以UV-VIS檢測. / With reference to IEC 62321-7-1:2015 and performed by UV-VIS.	0.10	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. (#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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昇昇工業股份有限公司

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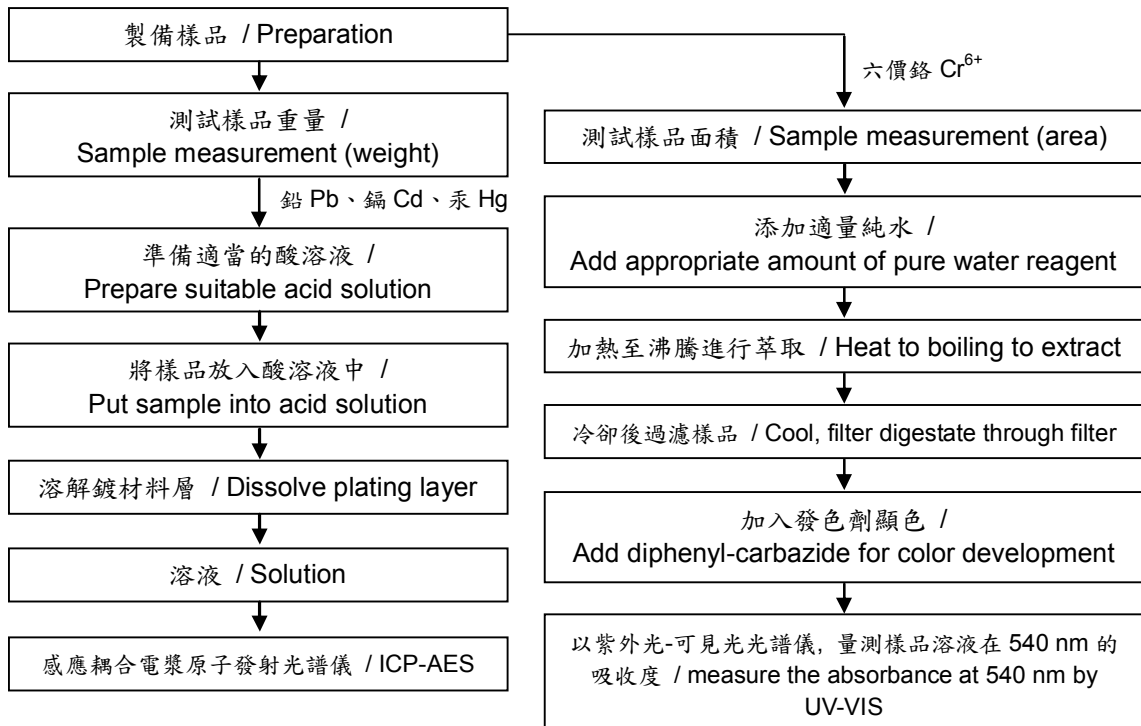
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根據以下的流程圖之條件，樣品之外部鍍層已完全溶解。(六價鉻測試方法除外) / The plating layer of samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ test method excluded)

- 測試人員：楊登偉 / Technician : Climbgreat Yang
- 測試負責人：張啟興 / Supervisor: Troy Chang

鍍層重金屬測試流程圖 / Flow Chart of Stripping method for metal analysis



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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) **