



ICP Test Report Certification Packet

Company name: Littelfuse, Inc.
Product Series: Clip
Product #: 0445001N/ 04450023N/ 10207101009 series
Issue Date: April 28, 2011

It is hereby certified by Littelfuse, Inc. that there is neither RoHS (EU Directive 2002/95/EC)-restricted substance nor such use, for materials to be used for unit parts, for packing/packaging materials, and for additives and the like in the manufacturing processes. In addition, it is hereby reported to you that the parts and sub-materials, the materials to be used for unit parts, the packing/packaging materials, and the additives and the like in the manufacturing processes, are all composed of the following components.

Issued by:

<Global EHS Specialist>

(1) Parts, sub-materials and unit parts

This document covers the 0445001N/ 04450023N/ 10207101009 series RoHS-Compliant series products manufactured by Littelfuse, Inc.

< Raw Materials Used

Please see Table 1

(2) The ICP data on all measurable substances

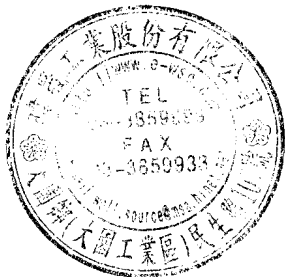
Please see appropriate pages as identified in Table 1

Remarks :



Table 1: List of Raw Materials covered by this report

Total Parts	Raw Material Part Number	Raw Material Description	Page(s)
1	C2680	Brass	3-6
2	NA	Tin/ Nickel Plating	7-10



測試報告 Test Report

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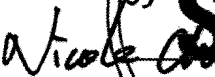
第一伸銅科技股份有限公司
FIRST COPPER TECHNOLOGY CO., LTD.
高雄市前金區中正四路170號
NO. 170, CHUNG CHENG 4TH ROAD, KAOHSIUNG, TAIWAN, R. O. C.



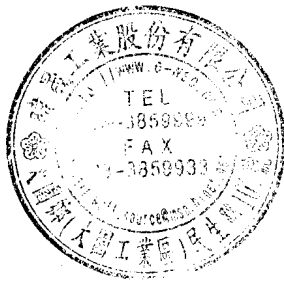
以下測試樣品係由客戶送樣，且由客戶聲稱並經客戶確認如下 (The following samples was/were submitted and identified by/on behalf of the client as):

樣品名稱(Sample Description) : 黃銅 (BRASS)
樣品型號(Style/Item No.) : C2680
收件日期(Sample Receiving Date) : 2010/12/23
測試期間(Testing Period) : 2010/12/23 TO 2010/12/29

=====
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) : 參考 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-AES.
(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-AES.
(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).


Nicole Chien, Supervisor
Signed for and on behalf of
SGS TAIWAN LTD.
Chemical Laboratory - Taipei

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頁數(Page): 2 of 4

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FIRST COPPER TECHNOLOGY CO., LTD.

高雄市前金區中正四路170號

NO. 170, CHUNG CHENG 4TH ROAD, KAOHSIUNG, TAIWAN, R. O. C.



測試結果(Test Results) 單位(Unit): mg/kg

測試項目 (Test Items)	測試方法 Method (Refer to)	結果 (Result)	方法偵測 極限值 (MDL)
		No.1	
鎘 / Cadmium (Cd)	(1)	n.d.	2
鉛 / Lead (Pb)	(2)	22	2
汞 / Mercury (Hg)	(3)	n.d.	2
六價鉻 / Hexavalent Chromium Cr(VI) by Spot test / boiling water extraction	(4)	Negative	See Note 4

測試部位描述 (TEST PART DESCRIPTION):

No.1 : 黃銅色金屬片 (BRASS METAL SHEET)

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. 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 \geq 0.02 mg/kg with 50 cm² (sample surface area)

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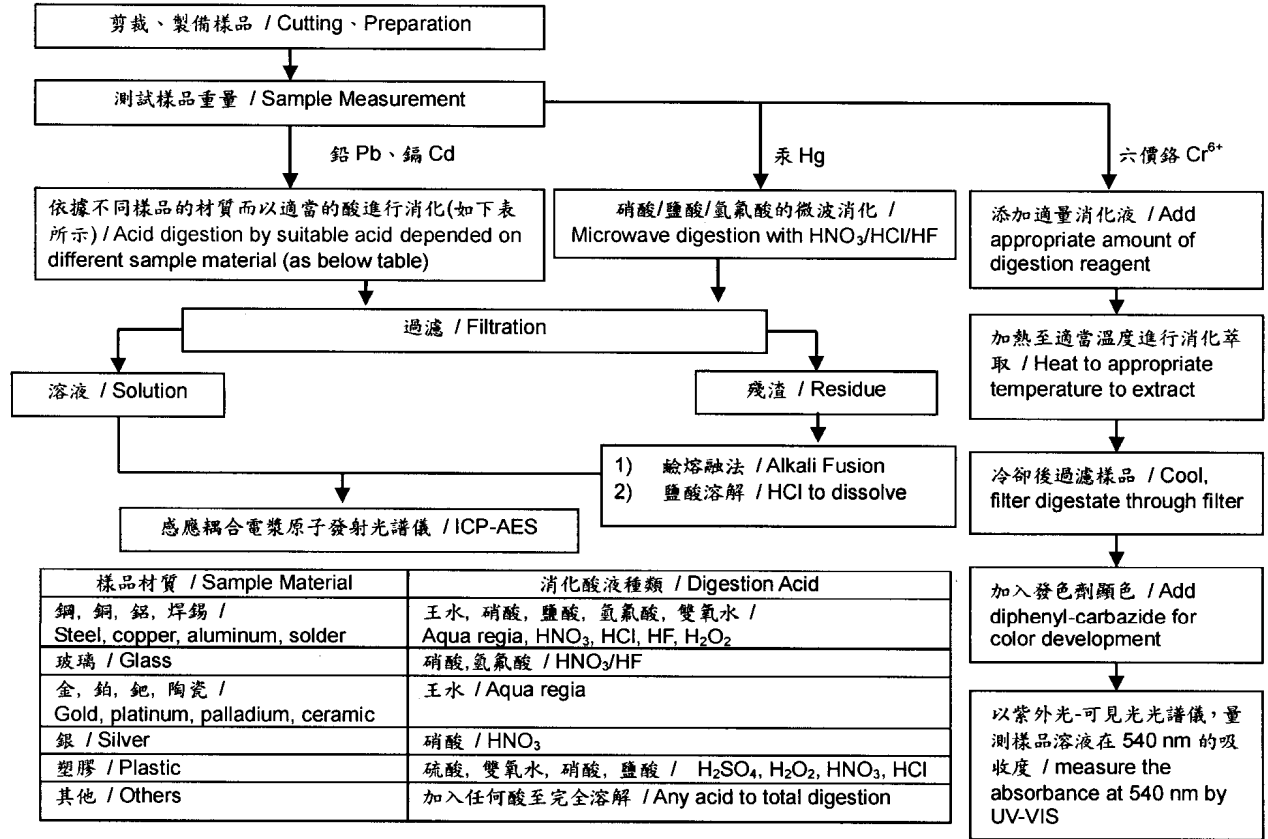
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- 1) 根據以下的流程圖之條件, 樣品已完全溶解。(六價鉻測試方法除外) / These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ test method excluded)
- 2) 測試人員: 楊登偉 / Name of the person who made measurement: Climbgreat Yang
- 3) 測試負責人: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



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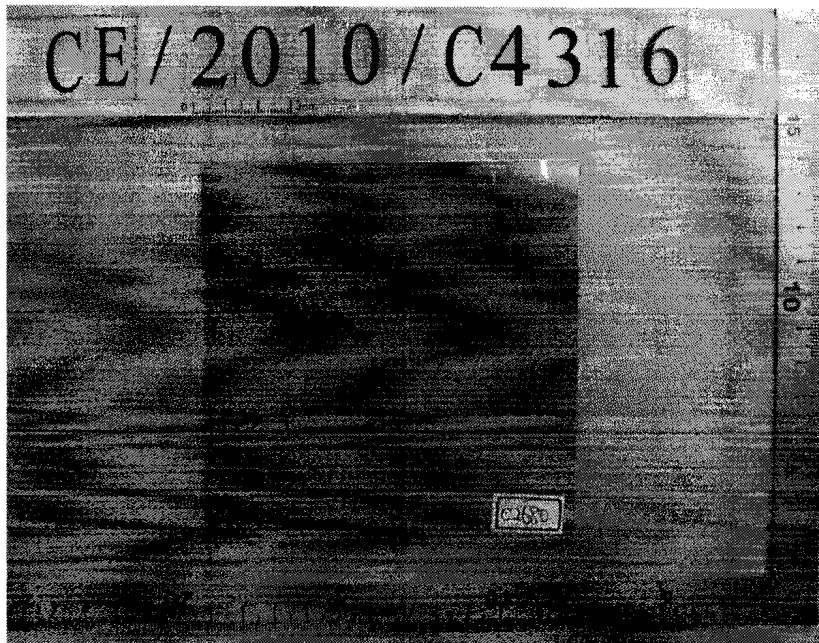
頁數(Page): 4 of 4

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**** 報告結尾(End of Report) ****

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Test Report

No. CANEC1000663703

Date: 08 Mar 2010

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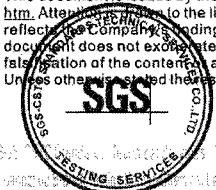
The following sample(s) was/were submitted and identified on behalf of the clients as :
Cu+Ni+Sn Electroplating Membrane

SGS Job No. : 12394134 - SZ
SGS Internal Reference No. : 4.3
Date of Sample Received : 03 Mar 2010
Testing Period : 03 Mar 2010 - 08 Mar 2010
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).

Signed for and on behalf of
SGS-CSTC Ltd.

Manson Yang
Sr. Engineer

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中国·广州·经济技术开发区科学城科珠路198号 邮编:510663 t (86-20)82155555 f (86-20)82075113 e sgs.china@sgs.com

Member of the SGS Group (SGS SA)



Test Report

No. CANEC1000663703

Date: 08 Mar 2010

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Test Results:

ID for specimen 1 : CAN10-006637.002
Description for specimen 1 : Copper-colored metal sheet w/ silvery backing (plating)

Elementary Analysis

Table with 5 columns: Test Item(s), Unit, Test Method (Reference), Result, MDL. Rows include Cadmium (Cd), Lead (Pb), Mercury (Hg), and Hexavalent Chromium (CrVI) by boiling water extraction.

Note:

- 1. mg/kg = ppm
2. N.D. = Not Detected (< MDL)
3. MDL = Method Detection Limit
4. ◇ = Spot-Test:
Negative = Absence of CrVI coating, Positive = Presence of CrVI coating;
(The tested sample should be further verified by boiling-water-extraction method if the spot test result is negative or cannot be confirmed.)
Boiling-water-extraction:
Negative = Absence of CrVI coating
Positive = Presence of CrVI coating; the detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm² sample surface area.
Storage conditions and production date of the tested sample are unavailable and thus results of Cr(VI) represent status of the sample at the time of testing.
5. "-" = Not regulated



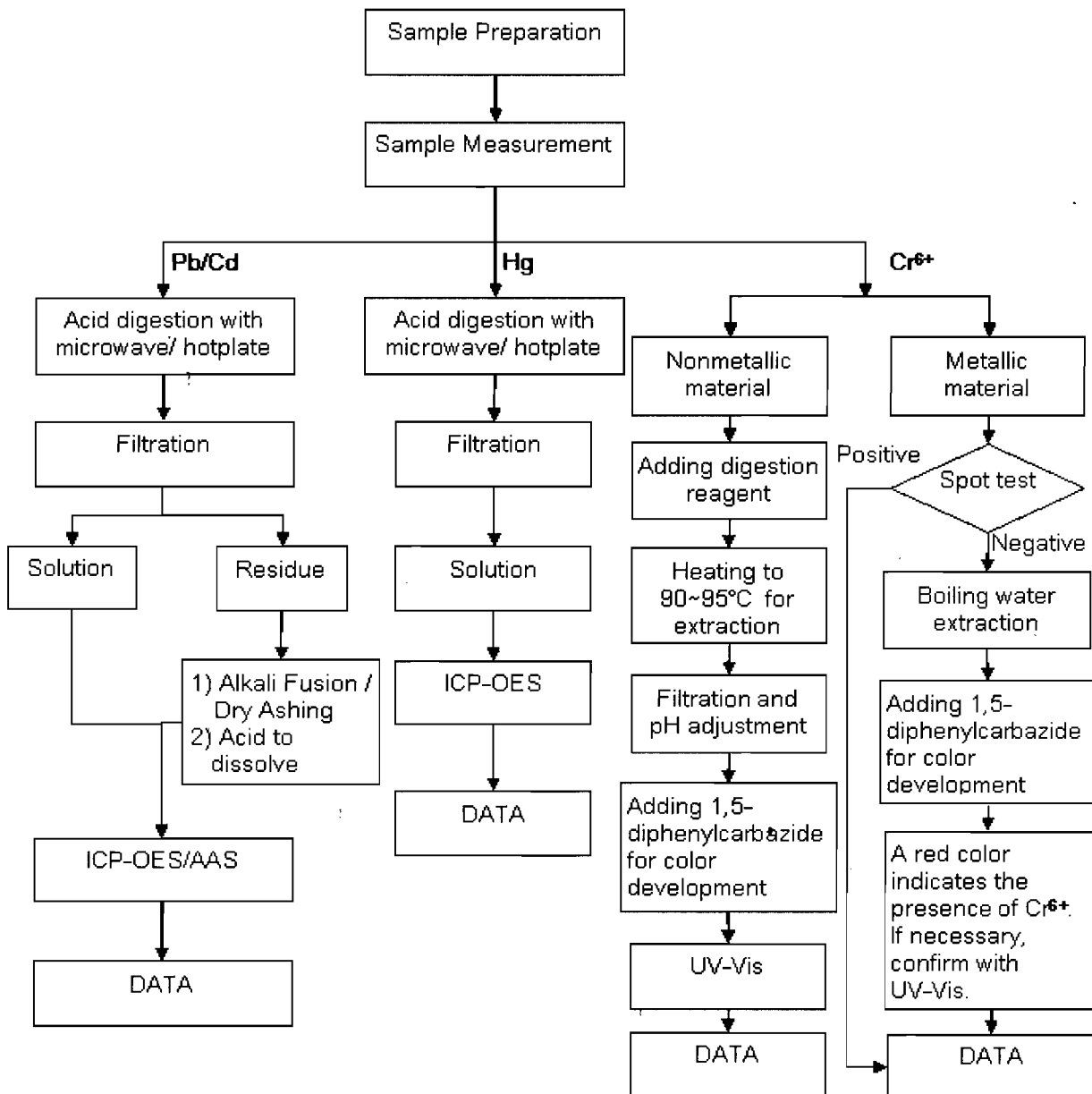
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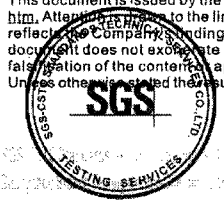
ATTACHMENTS

Testing Flow Chart

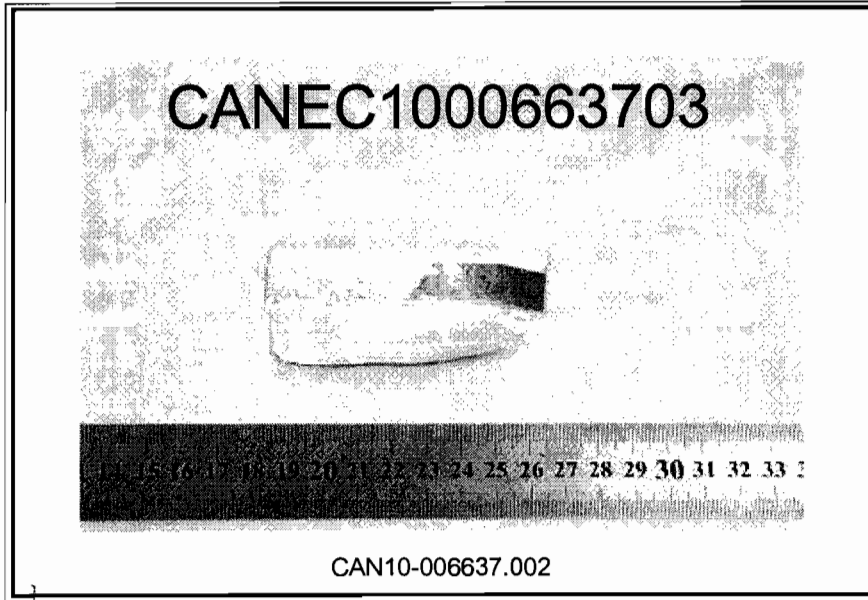
- 1) Name of the person who made measurement: Bella Wang
- 2) Name of the person in charge of measurement: Adams Yu
- 3) These samples were dissolved totally by pre-conditioning method according to below flow chart (Cr⁶⁺ test method excluded).



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Sample photo:



SGS authenticate the photo on original report only

*** End of Report ***



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