Company name: Littelfuse, Inc.

Product Series: Thin Film SlimLine

Product #: 494xxx Series

Issue Date: December 3, 2013

It is hereby certified by Littelfuse, Inc. that there is neither RoHS (EU Directive 2002/95/EC, 2011/65/EU)-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 Engineer]

(1) Parts, sub-materials and unit parts
This document covers the Thin Film SlimLine 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

<table>
<thead>
<tr>
<th>Total Parts</th>
<th>Raw Material Part Number</th>
<th>Raw Material Description</th>
<th>Page(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>039613/039611</td>
<td>FR-4</td>
<td>3-14</td>
</tr>
<tr>
<td>2</td>
<td>010104</td>
<td>Nickel Anode</td>
<td>15-20</td>
</tr>
<tr>
<td>3</td>
<td>010113</td>
<td>Tin Anode</td>
<td>21-26</td>
</tr>
<tr>
<td>4</td>
<td>010114</td>
<td>Copper Anode</td>
<td>27-32</td>
</tr>
<tr>
<td>5</td>
<td>090317</td>
<td>Soldermask-White</td>
<td>33-50</td>
</tr>
<tr>
<td>6</td>
<td>090363</td>
<td>Soldermask Green</td>
<td>51-68</td>
</tr>
</tbody>
</table>
Test Report

Applicant: Littelfuse Philippines Inc.
LIMA Technology Center, Lipa City,
Malvar, Batangas

Number : TWNC00319519
Date : Jun 27, 2013

Sample Description:
One (1) group of submitted samples said to be:
Part Description : FR-4 PGB_TFF non-HF copper clad laminate
Part Number : 039611, 039612, 039613, 039608, 039609, 039610, 039618
Date Sample Received : Jun 21, 2013
Date Test Started : Jun 24, 2013

Test Conducted:
As requested by the applicant, for details please refer to attached pages.

Authorized by:
On Behalf of Intertek Testing Services
Taiwan Limited

K. Y. Liang
Director
### Test Result Summary:

<table>
<thead>
<tr>
<th>Test Item</th>
<th>Unit</th>
<th>Test Method</th>
<th>Result</th>
<th>RL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Heavy Metal</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cadmium (Cd) content ppm</td>
<td>With reference to IEC 62321: 2008, by microwave digestion and determined by ICP-OES.</td>
<td>ND</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Lead (Pb) content ppm</td>
<td>With reference to IEC 62321: 2008, by microwave digestion and determined by ICP-OES.</td>
<td>ND</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Mercury (Hg) content ppm</td>
<td>With reference to IEC 62321: 2008, by microwave digestion and determined by ICP-OES.</td>
<td>ND</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Antimony (Sb) Content ppm</td>
<td>With reference to USEPA 3052, by microwave digestion and determined by ICP-OES.</td>
<td>ND</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Chromium VI (Cr(^{6+})) content ppm</td>
<td>With reference to IEC 62321: 2008, by alkaline digestion and determined by UV-Vis Spectrophotometer.</td>
<td>ND</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>Polybrominated Biphenyls (PBBs)</strong></td>
<td></td>
<td>With reference to IEC 62321: 2008, by solvent extraction and determined by GC-MS and further HPLC-DAD confirmation when necessary.</td>
<td>ND</td>
<td>5</td>
</tr>
<tr>
<td>Monobrominated Biphenyls (MonoBB) ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Dibrominated Biphenyls (DiBB) ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Tribrominated Biphenyls (TriBB) ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Tetrabrominated Biphenyls (TetraBB) ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Pentabrominated Biphenyls (PentaBB) ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Hexabrominated Biphenyls (HexaBB) ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Heptabrominated Biphenyls (HeptaBB) ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Octabrominated Biphenyls (OctaBB) ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Nonabrominated Biphenyls (NonaBB) ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Decabrominated Biphenyl (DecaBB) ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Test Item</td>
<td>Unit</td>
<td>Test Method</td>
<td>Result</td>
<td>RL</td>
</tr>
<tr>
<td>----------------------------------------------------</td>
<td>------</td>
<td>-----------------------------------------------------------------------------</td>
<td>----------------</td>
<td>-----</td>
</tr>
<tr>
<td><strong>Polybrominated Diphenyl Ethers (PBDEs)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monobrominated Diphenyl Ethers (MonoBDE)</td>
<td>ppm</td>
<td>With reference to IEC 62321: 2008, by solvent extraction and determined by GC-MS and further HPLC-DAD confirmation when necessary.</td>
<td>ND</td>
<td>5</td>
</tr>
<tr>
<td>Dibrominated Diphenyl Ethers (DiBDE)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
</tr>
<tr>
<td>Tribrominated Diphenyl Ethers (TriBDE)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
</tr>
<tr>
<td>Tetrabrominated Diphenyl Ethers (TetraBDE)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
</tr>
<tr>
<td>Pentabrominated Diphenyl Ethers (PentaBDE)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
</tr>
<tr>
<td>Hexabrominated Diphenyl Ethers (HexaBDE)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
</tr>
<tr>
<td>Heptabrominated Diphenyl Ethers (HeptaBDE)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
</tr>
<tr>
<td>Octabrominated Diphenyl Ethers (OctaBDE)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
</tr>
<tr>
<td>Nonabrominated Diphenyl Ethers (NonaBDE)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
</tr>
<tr>
<td>Decabrominated Diphenyl Ether (DecaBDE)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
</tr>
<tr>
<td><strong>Halogen Content</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluorine (F)</td>
<td>ppm</td>
<td>With reference to EN 14582:2007 by calorimetric bomb with oxygen and determined by Ion Chromatograph.</td>
<td>317</td>
<td>50</td>
</tr>
<tr>
<td>Chlorine (Cl)</td>
<td>ppm</td>
<td></td>
<td>285</td>
<td>50</td>
</tr>
<tr>
<td>Bromine (Br)</td>
<td>ppm</td>
<td></td>
<td>24974</td>
<td>50</td>
</tr>
<tr>
<td>Iodine (I)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>50</td>
</tr>
<tr>
<td><strong>Phthalates</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Di(2-ethylhexyl) Phthalate (DEHP)</td>
<td>ppm</td>
<td>With reference to EN 14372: 2004, by solvent extraction and determined by GC-MS.</td>
<td>ND</td>
<td>10</td>
</tr>
<tr>
<td>Dibutyl Phthalate (DBP)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>10</td>
</tr>
<tr>
<td>Benzyl Butyl Phthalate (BBP)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>10</td>
</tr>
<tr>
<td>Diisobutyl Phthalate (DIBP)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>10</td>
</tr>
<tr>
<td><strong>Others</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hexabromocyclododecane (HBCDD)</td>
<td>ppm</td>
<td>With reference to USEPA 3540C, by solvent extraction and determined by GC-MS.</td>
<td>ND</td>
<td>10</td>
</tr>
</tbody>
</table>
Remarks:  ppm = parts per million based on weight of tested sample = mg/kg  
ND = Not detected  
RL = Reporting Limit, Quantitation limit of analyte in sample  

Responsibility of Chemist:  Kevin Liu/ Irene Chiou/ Vico Lin  

Date Sample Received:  Jun 21, 2013  
Test Period:  Jun 24, 2013 To Jun 26, 2013  

<table>
<thead>
<tr>
<th>Restricted Substances</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cadmium (Cd) content</td>
<td>0.01% (100ppm)</td>
</tr>
<tr>
<td>Lead (Pb) content</td>
<td>0.1% (1000ppm)</td>
</tr>
<tr>
<td>Mercury (Hg) content</td>
<td>0.1% (1000ppm)</td>
</tr>
<tr>
<td>Chromium VI (Cr^{6+}) content</td>
<td>0.1% (1000ppm)</td>
</tr>
<tr>
<td>Polybrominated Biphenyls (PBBs)</td>
<td>0.1% (1000ppm)</td>
</tr>
<tr>
<td>Polybrominated Diphenyl Ethers (PBDEs)</td>
<td>0.1% (1000ppm)</td>
</tr>
</tbody>
</table>

The above limits were quoted from Annex II of 2011/65/EU for homogeneous material.
Test Report

Test Conducted
Measurement Flowchart:

Test for Cd/Pb/Hg/Chromium (VI)/PBBs/PBDEs Contents

Sample preparation

For non-metal part
Take sample and immerse into Aqua Regia, start to strip plating layer
Stop the stripping procedure upon color change completely
Take the Aqua solution as plating component and stripped body as substrate component

For metal part

PBBs/PBDEs
Weigh sample and add organic solvent
By Soxhlet extraction or Solvent extraction
Concentrate the extract and make up with organic solvent
Analyzed by GC-MS

Cr$_{6+}$
Weigh sample and add alkaline solution
Definite temp. extraction
Cool and filter the extract
Analyzed by ICP-OES

Cd/Pb/Hg
For different material, digest the sample with appropriate acid*1
Confirm the tested samples are totally dissolved
Make up with deionized water
Analyzed by ICP-OES

Substrate

Plating

Cr$_{6+}$
By spot test
Negative *2
Get 50cm$^2$ sample
By boiling water extraction
Make up with deionized water and add diphenyl-carbazide solution
Analyzed by UV-VIS

Remarks:
*1: List of Appropriate Acid:

<table>
<thead>
<tr>
<th>Material</th>
<th>Acid Added for Digestion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polymers</td>
<td>HNO$_3$,HCl,HF,H$_2$O$_2$,H$_3$BO$_3$</td>
</tr>
<tr>
<td>Metals</td>
<td>HNO$_3$,HCl,HF</td>
</tr>
<tr>
<td>Electronics</td>
<td>HNO$_3$,HCl,H$_2$O$_2$,HBF$_4$</td>
</tr>
</tbody>
</table>

*2: If the result of spot test is positive, Chromium VI would be determined as detected.
Measurement Flowchart:

Test for Heavy Metal (Sb) Contents
Reference Method: USEPA 3052

```
Sampling

Weigh sample and digest in microwave
digestion oven with suitable acid

Confirm the tested samples are totally
dissolved

Transfer the digested solution and make up
with deionized water

Analyzed by ICP-OES
```
Test Conducted

Measurement Flowchart:
Test for Halogen Contents
Reference Method: EN 14582

Sampling

Add absorbent in a combustion flask & place weighed sample in equipment

Fill oxygen into calorimetric bomb

Ignite then leave the bomb at room temperature

Transfer the absorbent into a volumetric flask

Make up with deionized water

Analyzed by ion chromatography
Measurement Flowchart:
Test for Phthalates Contents
Reference Method: EN 14372: 2004

Sampling

Weigh sample and add organic solvent

By solvent extraction

Concentrate the extract and make up with organic solvent

Analyzed by GC-MS
Measurement Flowchart:
Test for Hexabromocyclododecane (HBCDD) Content
Reference Method: USEPA 3540C

Sampling

Weigh sample and add organic solvent

By soxhlet extraction

Concentrate the extract and make up with organic solvent

Analyzed by GC-MS
This report is made solely on the basis of your instructions and/or information and materials supplied by you. It is not intended to be a recommendation for any particular course of action. Intertek does not accept a duty of care or any other responsibility to any person other than the Client in respect of this report and only accepts liability to the Client insofar as is expressly contained in the terms and conditions governing Intertek’s provision of services to you. Intertek makes no warranties or representations either express or implied with respect to this report save as provided for in those terms and conditions. We have aimed to conduct the review on a diligent and careful basis and we do not accept any liability to you for any loss arising out of or in connection with this report, in contract, tort, by statute or otherwise, except in the event of our gross negligence or wilful misconduct.
1. Intertek Testing Services Taiwan Ltd. (hereinafter “the Company”) agrees to provide its services in accordance with and subject to the terms and conditions herein contained (hereinafter “the Conditions”). The Conditions may only be modified by a variation expressed in writing and signed on behalf of the Company by a director and no other action on the part of the Company or its employees or agents shall be construed as an acceptance of any other terms and conditions.

2. The Company acts for the person or body from whom the request to provide its services has originated (hereinafter “the Principal”). No other party is entitled to give instructions to the Company unless agreed by the Company.

3. All rights (including but not limited to copyright) in any test reports, surveys, certificates of inspection or other material produced by the Company in the course of providing its services shall remain vested in the Company. The Principal shall not reproduce or make copies, publish or disclose the contents of any such material or extracts thereof to any third party without the Company’s prior written consent, which may be refused at its discretion. The Principal further undertakes that its servants and agents shall keep confidential and shall not publish or otherwise use any information that may be acquired relating to the Company’s activities.

4. The Company undertakes to exercise due care and skill in the performance of its services and accepts responsibility only where such skill and care is not excused.

4.1 The liability of the Company in respect of any claims for loss, damage or expense of whatsoever nature and however arising in respect of any breach of contract and/or any failure to exercise due care and skill by the Company shall in no circumstances exceed a total aggregate amount equal to ten (10) times the amount of the fee or commission payable in respect of the specific service required under the particular contract with the Company which gave rise to such claims provided however that the Company shall have no liability in respect of any claims for indirect or consequential loss including loss of profit and/or loss of future business and/or loss of production and/or cancellation of contracts entered into by the Principal.

4.2 The Company shall not in any event be liable for any loss or damage caused by delay in performance or non-performance of any of its services where the same is occasioned by any cause whatsoever that is beyond the Company’s control including but not limited to war, civil disturbance, requisitioning, governmental or parliamentary restriction, prohibitions or enactment of any kind, import or export regulations, strike or trade dispute (whether involving its own employees or those of any other person), difficulties in obtaining workmen or materials, breakdown of machinery, fire or accident. Should any such event occur the Company may cancel or suspend any contract for the provision of services without incurring any liability whatsoever.

4.3 The Principal will not be liable to the Principal for any loss or damage whatsoever sustained by the Principal as a result of any failure by the Company to comply with any time estimate given by the Company relating to the provision of its services. [See clause 9.1] [See clause 9.2]

4.4 The Principal acknowledges that samples may be damaged or destroyed in the course of testing carried out by the Company or any of the Company’s agents or subcontractors as part of the necessary testing process and the Company shall not in any event be liable for any loss or damage arising from the damage or destruction of the samples subject to testing.

4.5 In the event that the Principal requests for the return of the samples, the Company shall not be responsible for any re-packaging of the samples prior to such return and the Company shall in no circumstances be liable for any loss or damage caused to any of the samples during or as a result of their shipment to the Principal for the purpose of this Clause 4.6.

5.1 Subject to the Principal’s instructions as accepted by the Company, the test reports, surveys, certificates of inspection or other material produced by the Company shall contain statements of opinion made with due care within the limitation of the instructions received by the Company. The Company is under no obligation to refer to or report upon any facts or circumstances which are outside the specific instructions received.

5.2 For pre-shipment inspection or survey of goods, the Company's inspector shall perform the inspection or survey when goods are 100% completed, packed and marked (unless otherwise agreed between the Company and the Principal). Goods for inspection or survey shall be unpacked in the presence of the Company's inspector and inspection or survey shall, subject to Condition 5.3, take place at the place specified by the Principal.

5.3 If the Company's inspector finds that the location is not suitable for carrying out a proper inspection or survey of goods or where necessary equipment for inspection or survey is not available the inspector may, if practical in the circumstances, draw samples of goods from the location and carry out the inspection or survey at the premises of the Company. The Principal shall be responsible for all costs and expenses incurred in relation thereto.

5.4 Reports, surveys or certificates issued following testing or analysis of samples contain the Company's specific opinion on those samples only but do not express any opinion upon the bulk from which the samples were drawn. If an opinion on the bulk is requested special arrangements in writing must be made in advance with the Company for the inspection and sampling of the bulk. No circumstances shall the Company's responsibility extend beyond inspection, testing and reporting upon the samples actually drawn from the bulk and inspected, tested and surveyed by the Company and any reference to be drawn from the results of such inspection or survey or testing shall be entirely in this connection and at the sole and exclusive responsibility of the Principal.

6. The Company shall be entitled at its discretion to delegate the performance of the whole or any part of the services contracted for with the Principal to any agent or subcontractor.

7. Every officer, employee, agent or subcontractor of the Company shall have the benefit of the limitations of liability and the indemnities contained in the General Conditions. So far as relates to such limitations and indemnities, any contract entered into by the Company is entered into not only on its own behalf but also as agent and trustee for any such person as aforesaid.

8. If the requirements of the Principal necessitate the analysis of samples by the Principal only by any third party the Company will pass on the results of the analysis but without responsibility for its accuracy. Where the Company is only able to witness an analysis by the Principal or by any third party the Company will provide confirmation, if such be the case, that a correct sample has been analysed but will not otherwise be responsible for the accuracy of such analysis.

9. The Principal will:

9.1 ensure that instructions to the Company are given in due time and are accompanied by sufficient information to enable the required services to be performed effectively.

9.2 accept that documents reaching arrangements or agreements made between the Principal and any third party, or third party documents such as copies of contracts of sale, letters of credit, bills of lading, etc. are received by the Company considered to be for information only, without extending or restricting the services to be provided or obligations accepted by the Company.

9.3 procure all necessary access for the Company's representatives to enable the required services to be performed effectively.

9.4 supply, if required, any special equipment and personnel necessary for the performance of the required services.

9.5 ensure that all necessary measures are taken for safety and security of working conditions, site and installations during the performance of the required services.
9.6 take all necessary steps to eliminate or remedy any obstruction to or interruptions in the performance of the required services and replace all inspected goods immediately after any inspection or survey of them;

9.7 inform the Company in advance of any known hazards or dangers, actual or potential, associated with any request for the provision of services by the Company including but not limited to the presence or risk of radiation, toxic or noxious or explosive elements or materials, environmental pollution or poisons;

10. The Principal shall guarantee, hold harmless and indemnify the Company and its officers, employees, agents or subcontractors against

10.1 all claims made by any third party for any loss, damage or expense of whatsoever nature and howsoever arising relating to the performance, purported performance or non-performance of any of the services to the extent that the aggregate of any such claims relating to any one service exceeds the limit mentioned in Condition 4.2;

10.2 any loss or damage suffered by the Company as a result of the provision of services by the Company to the Principal otherwise than resulting from the Company’s own error, negligence or wilful default.

11.1.1 The Principal will punctually pay the Company immediately upon presentation of the relevant invoice or within such other period as may have been agreed in writing by the Company all charges rendered by the Company falling which interest will become due at the rate of 1.5 per cent per month from the date of invoice until payment. The Principal further agrees and undertakes to reimburse the Company all disbursements reasonably incurred in connection with the provision of services.

11.2 The Principal shall not be entitled to retain or defer payment of any sums due to the Company on account of any dispute, cross claim or set off which it may allege against the Company.

11.3 In the event of any suspension of payment arrangement with creditors, bankruptcy, insolvency, receivership or cessation of business or failure of the Principal to pay part or all of any sums owing to the Company, the Company shall be entitled to suspend all further performance of its services and withhold the issue of any test report, survey, certificate of inspection or other material requested forthwith and without liability until payment of all sums owing to the Company together with interest thereon is made.

12. Without prejudice to any rights the Company may have at law or under the Conditions, the Company has the following rights in the event of non-payment of sums owing to the Company as set out below:

12.1 The Company has a general and particular lien over all samples delivered to be tested for all claims and sums owing by the Principal to the Company under any contract whatsoever and in any other way whatsoever.

12.2 During the currency of any such lien the Company is entitled to be paid reasonable storage charges for samples retained in the Company’s custody.

12.3 Without prejudice to the Company’s lien and other rights under Conditions 12.1 to 12.2 above, if test, inspection or survey of the goods takes place on the premises of the Company, the Company may give notice to the Principal that the goods (or any part thereof) are ready for collection and the Principal shall collect the same within three (3) calendar days (Saturdays, Sundays and Public Holidays excepted). Upon the expiry of this period, if the goods are not collected by the Principal, at the sole discretion of the Company the goods may be deemed abandoned and/or destroyed.

12.4 Without prejudice to Conditions 12.3 above, the Company shall have the discretion to store the goods (or any of them) at their own premises or elsewhere at the Principal’s expense if the Principal has deposited the goods at the Company’s premises for the performance of these services and has subsequently failed to collect the said goods.

12.5 The Company may reclaim from the Principal all reasonable costs incurred by the Company (whether by way of storage, insurance or otherwise) in respect of the goods and it is expressly declared that it shall be reasonable but not mandatory for the Company to effect comprehensive insurance in respect of the goods.

12.6 Without prejudice to the Company’s lien and other rights under Conditions 12.1 to 12.5 above, the risk and property in the goods shall remain at all times in the Principal.

13. In the event of the Principal being prevented by reason of any cause whatsoever outside the Company’s control from performing or completing any service for which an order has been given or an agreement made, the Principal will pay to the Company:

13.1 the amount of all abortive expenditure actually made or incurred, and

13.2 a proportion of the agreed fee or commission equal to the proportion (if any) of the service actually earned, and

13.3 the Company shall be relieved of all responsibility whatsoever for the partial or total non-performance of the required service.

14. The Company shall be discharged from all liability to the Principal for all claims for loss, damage or expense unless suit is brought within twelve (12) months after the date of the performance by the Company of the service which gives rise to the claim or in the event of any alleged non-performance within twelve (12) months of the date when such service should have been completed.

15. In the event that any unforeseen additional time or costs are incurred in the course of carrying out any of its services the Company shall be entitled to render additional charges which shall reasonably reflect such additional time and costs incurred.

16. All contracts for provision of services by the Company and the Conditions shall be construed in accordance with and governed by the laws of the ROC and for the purpose of any arbitration or litigation proceedings such contracts shall be deemed to have been made and performed in Taiwan. If any provision contained in the Conditions is and/or becomes invalid, illegal or unenforceable in any respect under the laws of the ROC, the validity, legality and enforceability of the remaining provisions hereof shall not in any way be affected or impaired thereby.

17. Any dispute or claim arising out of or relating to the provision of, or any agreement to provide, services by the Company shall be referred to and determined by arbitration subject to the Company’s sole and overriding discretion to commence litigation proceedings in the courts Taiwan of the courts of any other country as the Company may choose. The parties may agree to the appointment of an arbitrator failing which either party may, after having made a written request to concur in the appointment of an arbitrator, request the ROC Arbitration Association to appoint an arbitrator. The place of arbitration shall be in Taiwan. There shall only be one arbitrator.

Intertek Testing Services Taiwan Ltd.
8F., No. 423, Ruiguang Rd., Neihu District, Taipei 11492, Taiwan, R.O.C.

Intertek 全國公證檢驗股份有限公司
11492 台北市內湖區瑞光路 423 號 8 樓

Tel: (+886-2) 6602-2888 - Fax: (+886-2) 6602-2410
Test Report

Number : TWNC00340094

Date : Nov 07, 2013

Applicant: Littelfuse Philippines Inc.
LIMA Technology Center, Lipa City,
Malvar, Batangas

Authorized by:
On Behalf of Intertek Testing Services
Taiwan Limited

K. Y. Liang
Director

Sample Description:
One (1) group of submitted samples said to be:
Part Description : Nickel Anode
Part Number : 010104
Date Sample Received : Oct 30, 2013
Date Test Started : Oct 31, 2013

Test Conducted:
As requested by the applicant, for details please refer to attached pages.
<table>
<thead>
<tr>
<th>Test Item</th>
<th>Unit</th>
<th>Test Method</th>
<th>Result</th>
<th>RL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Silvery metal</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cadmium (Cd) content</td>
<td>ppm</td>
<td>With reference to IEC 62321-5: 2013, by microwave or acid digestion and determined by ICP-OES.</td>
<td>ND</td>
<td>2</td>
</tr>
<tr>
<td>Lead (Pb) content</td>
<td>ppm</td>
<td>With reference to IEC 62321-5: 2013, by microwave or acid digestion and determined by ICP-OES.</td>
<td>ND</td>
<td>2</td>
</tr>
<tr>
<td>Mercury (Hg) content</td>
<td>ppm</td>
<td>With reference to IEC 62321-4: 2013, by microwave or acid digestion and determined by ICP-OES.</td>
<td>ND</td>
<td>2</td>
</tr>
<tr>
<td>Chromium VI (Cr(^{6+})) content</td>
<td>mg/kg with 50 cm(^2)</td>
<td>With reference to IEC 62321: 2008, by boiling water extraction and determined by UV-Vis Spectrophotometer.</td>
<td>Negative(#)</td>
<td>0.02</td>
</tr>
</tbody>
</table>

Remarks: ppm = parts per million based on weight of tested sample = mg/kg  
ND = Not detected  
RL = Reporting Limit, Quantitation limit of analyte in sample  
mg/kg with 50cm\(^2\) = milligram per kilogram with 50 square centimeter  
Negative = A negative test result indicated positive observation was not found at the time of test  
# = Due to the insufficient sample area, reduced total sample surface of 10 cm\(^2\) was used and the dilution factor was adjusted accordingly.

Responsibility of Chemist: Kevin Liu/ Irene Chiou

Date Sample Received : Oct 30, 2013  

RoHS Limit

<table>
<thead>
<tr>
<th>Restricted Substances</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cadmium (Cd) content</td>
<td>0.01% (100ppm)</td>
</tr>
<tr>
<td>Lead (Pb) content</td>
<td>0.1% (1000ppm)</td>
</tr>
<tr>
<td>Mercury (Hg) content</td>
<td>0.1% (1000ppm)</td>
</tr>
<tr>
<td>Chromium VI (Cr(^{6+})) content</td>
<td>0.1% (1000ppm)</td>
</tr>
</tbody>
</table>

The above limits were quoted from Annex II of 2011/65/EU for homogeneous material.
Test Report

Number: TWNC00340094

Test Conducted
Measurement Flowchart:

Test for Cd/Pb/Hg/Chromium (VI)

Measurement Flowchart:

Sampling

Cd/Pb/Hg

For different material, digest the sample with appropriate acid*1

Confirm the tested samples are totally dissolved

Make up with deionized water

Analyzed by ICP-OES

Cd\textsuperscript{6+}

Metal

Polymers / Electronics

By spot test

Weigh sample and add alkaline solution

Definite temp. extraction

Cool and filter the extract

Make up with deionized water and add diphenyl-carbazide solution

Analyzed by UV-VIS

Remarks:

*1: List of Appropriate Acid:

<table>
<thead>
<tr>
<th>Material</th>
<th>Acid Added for Digestion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polymers</td>
<td>HNO\textsubscript{3}, HCl, HF, H\textsubscript{2}O\textsubscript{2}, H\textsubscript{3}BO\textsubscript{3}</td>
</tr>
<tr>
<td>Metals</td>
<td>HNO\textsubscript{3}, HCl, HF</td>
</tr>
<tr>
<td>Electronics</td>
<td>HNO\textsubscript{3}, HCl, H\textsubscript{2}O\textsubscript{2}, HBF\textsubscript{4}</td>
</tr>
</tbody>
</table>

*2: If the result of spot test is positive, Chromium VI would be determined as detected.
This report is made solely on the basis of your instructions and/or information and materials supplied by you. It is not intended to be a recommendation for any particular course of action. Intertek does not accept a duty of care or any other responsibility to any person other than the Client in respect of this report and only accepts liability to the Client insofar as is expressly contained in the terms and conditions governing Intertek’s provision of services to you. Intertek makes no warranties or representations either express or implied with respect to this report save as provided for in those terms and conditions. We have aimed to conduct the Review on a diligent and careful basis and we do not accept any liability to you for any loss arising out of or in connection with this report, in contract, tort, by statute or otherwise, except in the event of our gross negligence or wilful misconduct.
TERMS AND CONDITIONS OF BUSINESS

1. Intertek Testing Services Taiwan Ltd. (hereinafter "the Company") agrees to provide its services in accordance with, and subject to the terms and conditions herein contained (hereinafter "the Conditions"). The Conditions may only be modified by a variation expressed in writing and signed on behalf of the Company by a director and no other person on the part of the Company or its employees or agents shall be construed as an acceptance of any other terms and conditions.

2. The Company acts for the person or body from whom the request to provide its services has originated (hereinafter "the Principal"). No other person is entitled to give instructions to the Company unless agreed by the Company.

3. All rights (including but not limited to copyright) in any test reports, surveys, certificates of inspection or other material produced by the Company in the course of providing its services shall remain vested in the Company. The Principal shall not reproduce or make copies, publish or disseminate the contents of any such material or extracts thereof to any third party without the Company's prior written consent, which may be refused at its discretion. The Principal further undertakes that its servants and agents shall keep confidential and shall not publish or otherwise use any information that may be acquired relating to the Company's activities.

4. The Company undertakes to exercise due care and skill in the performance of its services and accepts responsibility only where such care and skill is not exercised.

4.1 The liability of the Company in respect of any claims for loss, damage or expense whatsoever nature and howsoever arising in respect of any breach of contract and/or any failure to exercise due care and skill by the Company shall in no circumstances exceed a total aggregate sum equal to ten (10) times the amount of the fee or commission payable in respect of the specific services required under the particular contract with the Company which gives rise to such claims provided however that the Company shall have no liability in respect of any claims for indirect or consequential loss including loss of profit and/or loss of future business and/or loss of production and/or cancellation of contracts entered into by the Principal.

4.2 The Company shall not in any event be liable for any loss or damage caused by delay in performance or non-performance of any of its services where the same is occasioned by any cause whatever that is beyond the Company's control including but not limited to war, civil disturbance, requisitioning, governmental or parliamentary restrictions, prohibitions or enactment of any kind, import or export regulations, strike or trade dispute (whether involving its own employees or those of any other person), difficulties in obtaining workmen or materials, breakdown of machinery, fire or accident. Should any such event occur the Company may cancel or suspend any contract for the provision of services without incurring any liability whatsoever.

4.3 The Company will not be liable to the Principal for any loss or damage whatsoever sustained by the Principal as a result of any failure by the Company to comply with any time estimate given by the Company relating to the provision of its services. [See clause 9.1] [See clause 9.3]

4.4 The Principal acknowledges that samples may be damaged or destroyed in the course of testing carried out by the Company or by any of the Company's agent or subcontractor as part of the necessary testing process and the Company shall not in any event be liable for any loss or damage arising from the damage or destruction of the samples subject to testing.

4.5 In the event that the Principal requests for the return of the samples, the Company shall not be responsible for any re-packaging of the samples prior to such return and the Company shall in no circumstances be liable for any loss or damage caused to any of the samples during or as a result of their shipment to the Principal for the purpose of this Clause 4.6

5.1 Subject to the Principal's instructions as accepted by the Company, the test reports, surveys, certificates of inspection or other material produced by the Company shall contain statements of opinion made with due care within the limitation of the instructions received by the Company. The Company is under no obligation to refer to or report upon any facts or circumstances which are outside the specific instructions received.

5.2 For pre-shipping inspection or survey of goods, the Company's inspector shall perform the inspection or survey when goods are 100% completed, packed and marked (unless otherwise agreed between the Company and the Principal). Goods for inspection or survey shall be unpacked in the presence of the Company's inspector and inspection or survey shall, subject to Condition 5.3, take place at the place specified by the Principal.

5.3 If the Company's inspector finds that the location is not suitable for carrying out a proper inspection or survey of goods or where necessary equipment for inspection or survey is not available the inspector may, if practical in the circumstances, draw samples of goods from the location and carry out the inspection or survey at a premises of the Company. The Principal shall be responsible for all costs and expenses incurred in relation thereto.

5.4 Reports, surveys or certificates issued following testing or analysis of samples contain the Company's specific opinion on those samples only but do not express any opinion upon the bulk from which the samples were drawn. If an opinion on the bulk is required special arrangements in writing must be made in advance by the Company for the inspection and sampling of the bulk. In no circumstances shall the Company's responsibility extend beyond inspection, testing and reporting upon the samples actually drawn from the bulk and inspected, tested and surveyed by the Company and the Company shall not be liable for the results of such inspection or survey or testing being wholly or partially incorrect or incomplete or for the sole and exclusive responsibility of the Principal.

6. The Company shall be entitled at its discretion to delegate the performance of the whole or any part of the services contracted for with the Principal to any agent or subcontractor.

7. Every officer, employee, agent or subcontractor of the Company shall have the benefit of the limitations of liability and indemnities contained in the General Conditions. So far as relates to such limitations and indemnities, any contract entered into by the Company is entered into not only on its own behalf but also as agent and trustee for every such person as aforesaid.

8. If the requirements of the Principal necessitate the analysis of samples by the Principal only any third party the Company will pass on the results of the analysis but without responsibility for its accuracy. Where the Company is only able to witness an analysis by the Principal or by any third party the Company will provide confirmation, if such be the case, that a correct sample has been analysed but will not otherwise be responsible for the accuracy of such analysis.

9.1 The Principal shall ensure that instructions to the Company are given in due time and are accompanied by sufficient information to enable the required services to be performed effectively.

9.2 The Company may refuse to accept documents relating to the analysis or any other materials unless the Company has been provided with such information as may be required.

9.4 The Principal shall ensure that all necessary measures are taken for safety and security of working conditions, sites and installations during the performance of the required services.
9. The Principal shall guarantee, hold harmless and indemnify the Company and its officers, employees, agents or subcontractors against:
10. all claims made by any third party for any loss, damage or expense of whatsoever nature and however arising relating to the performance, purported performance or non-performance of any of its services to the extent that the aggregate of all such claims relating to any one service exceeds the limit mentioned in Condition 4.2.
11. any loss or damage suffered by the Company as a result of the provision of services by the Company to the Principal otherwise than resulting from the Company's own error, negligence or wilful default.
12. The Principal will punctually pay the Company immediately upon presentation of the relevant invoice or within such other period as may have been agreed in writing by the Company all charges rendered by the Company falling which interest will become due at the rate of 1.5% per cent per month from the date of invoice until payment. The Principal further agrees and undertakes to reimburse the Company all disbursements reasonably incurred in connection with the provision of services.
13. The Principal shall not be entitled to retain or defer payment of any sums due to the Company on account of any dispute, cross claim or set off which it may allege against the Company.
14. In the event of any suspension of payment arrangement with creditors, bankruptcy, insolvency, receivership or cessation of business or failure of the Principal to pay part or all of any sums owing to the Company, the Company shall be entitled to suspend all further performance of its services and withhold the issue of any test report, survey, certificate of inspection or other material requested forthwith and without liability until payment of all sums owing to the Company together with interest thereon is made.

Without prejudice to any rights a Company may have at law or under the Conditions, the Company has the following rights in the event of non-payment of sums owing to the Company as set out below:

12.1 The Company has a general and particular lien over all samples delivered to be tested for all claims and sums owed by the Principal to the Company under any contract whatsoever and in any other way whatever.
12.2 During the currency of any such lien the Company is entitled to be paid reasonable storage charges for samples retained in the Company's custody.
12.3 Without prejudice to the Company's lien and other rights under Conditions 12.1 to 12.2 above, if test, inspection or survey of the samples taken place on the premises of the Company, the Company may give notice to the Principal that the goods (or any part thereof) are ready for collection and the Principal shall collect the same within three (3) calendar days (Saturdays, Sundays and Public Holidays excepted). Upon the expiry of this period, if the goods are not collected by the Principal, at the sole discretion of the Company the goods may be deemed abandoned and/or destroyed.
12.4 Without prejudice to Conditions 12.3 above, the Company shall have the discretion to store the goods (or any of them) at their own premises or elsewhere at the Principal's expense if the Principal has deposited the goods at the Company's premises for the performance of these services and has subsequently failed to collect the said goods.
12.5 The expenses by way of disbursements that the Company may reclaim from the Principal include all reasonable costs incurred by the Company (whether by way of storage, insurance or otherwise) in respect of the goods and it is expressly declared that it shall be reasonable but not mandatory for the Company to effect comprehensive insurance in respect of the goods.
12.6 Without prejudice to the Company's lien and other rights under Conditions 12.1 to 12.5 above, the risk and property in the goods shall remain at all times in the Principal.
13. In the event of the Company being prevented by reason of any cause whatsoever outside the Company's control from performing or completing any service for which an order has been given or an agreement made, the Principal will pay to the Company:
13.1 the amount of all abortive expenditure actually made or incurred, and
13.2 a proportion of the agreed fee or commission equal to the proportion (if any) of the service actually carried out.

And the Company shall be relieved of all responsibility whatsoever for the partial or total non-performance of the required service.
14. The Company shall be discharged from all liability to the Principal for all claims for loss, damage or expense unless suit is brought within twelve (12) months after the date of the performance by the Company of the service which gives rise to the claim or in the event of any alleged non-performance within twelve (12) months of the data when such service should have been completed.
15. In the event that any unforeseen additional time or costs are incurred in the course of carrying out any of its services the Company shall be entitled to render additional charges as shall reasonably reflect such additional time and costs incurred.
16. All contracts for provision of services by the Company and the Conditions shall be construed in accordance with and governed by the laws of the ROC and for the purpose of any arbitral or litigation proceedings such contracts shall be deemed to have been made and performed in Taiwan. If any provision contained in the Conditions is and/or becomes invalid, illegal or unenforceable in any respect under the laws of the ROC, the validity, legality and enforceability of the remaining provisions hereof shall not in any way be affected or impaired thereby.
17. Any dispute or claim arising out of or relating to the provision of, or any agreement to provide, services by the Company shall be referred to and determined by arbitration subject to the Company's sole and overriding discretion to commence litigation proceedings in the courts of Taiwan or the courts of any other country as the Company may choose. The parties may agree to the appointment of an arbitrator failing which either party may, after having made a written request to concur in the appointment of an arbitrator, request the ROC Arbitration Association to appoint an arbitrator. The place of arbitration shall be in Taiwan. There shall only be one arbitrator.
Applicant: Littelfuse Philippines Inc.  
LIMA Technology Center, Lipa City, 
Malvar, Batangas

Sample Description:
One (1) group of submitted samples said to be:
Part Description : Tin Anode
Part Number : 010113
Date Sample Received : Oct 30, 2013
Date Test Started : Oct 31, 2013

Test Conducted:
As requested by the applicant, for details please refer to attached pages.

Authorized by:
On Behalf of Intertek Testing Services 
Taiwan Limited

K. Y. Liang
Director
### Test Result Summary:

<table>
<thead>
<tr>
<th>Test Item</th>
<th>Unit</th>
<th>Test Method</th>
<th>Result</th>
<th>RL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Heavy Metal</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cadmium (Cd) content</td>
<td>ppm</td>
<td>With reference to IEC 62321-5: 2013, by microwave or acid digestion and determined by ICP-OES.</td>
<td>ND</td>
<td>2</td>
</tr>
<tr>
<td>Lead (Pb) content</td>
<td>ppm</td>
<td>With reference to IEC 62321-5: 2013, by microwave or acid digestion and determined by ICP-OES.</td>
<td>108</td>
<td>2</td>
</tr>
<tr>
<td>Mercury (Hg) content</td>
<td>ppm</td>
<td>With reference to IEC 62321-4: 2013, by microwave or acid digestion and determined by ICP-OES.</td>
<td>ND</td>
<td>2</td>
</tr>
<tr>
<td>Chromium VI (Cr⁶⁺) content</td>
<td>mg/kg with 50 cm²</td>
<td>With reference to IEC 62321: 2008, by boiling water extraction and determined by UV-Vis Spectrophotometer.</td>
<td>Negative</td>
<td>0.02</td>
</tr>
</tbody>
</table>

Remarks:
- ppm = Parts per million based on weight of tested sample = mg/kg
- ND = Not detected
- RL = Reporting Limit, quantitation limit of analyte in sample
- mg/kg with 50 cm² = Milligram per kilogram with 50 square centimeter
- Negative = A negative test result indicated positive observation was not found at the time of test.

Responsibility of Chemist: Kevin Liu/ Irene Chiou

Date Sample Received : Oct 30, 2013

### RoHS Limit

<table>
<thead>
<tr>
<th>Restricted Substances</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cadmium (Cd) content</td>
<td>0.01% (100ppm)</td>
</tr>
<tr>
<td>Lead (Pb) content</td>
<td>0.1% (1000ppm)</td>
</tr>
<tr>
<td>Mercury (Hg) content</td>
<td>0.1% (1000ppm)</td>
</tr>
<tr>
<td>Chromium VI (Cr⁶⁺) content</td>
<td>0.1% (1000ppm)</td>
</tr>
</tbody>
</table>

The above limits were quoted from Annex II of 2011/65/EU for homogeneous material.
Test Conducted
Test For Cd/Pb/Hg/Chromium (VI)

Sampling

Cd/Pb/Hg
- For different material, digest the sample with appropriate acid
- Confirm the tested samples are totally dissolved
- Make up with deionized water
- Analyzed by ICP-OES

Cd²⁺
- Metal
- By spot test
- Negative
- Get 50cm² sample
- Boiling water extraction
- Make up with deionized water and add diphenyl-carbazide solution
- Analyzed by UV-VIS

Polymers / Electronics
- Weigh sample and add alkaline solution
- Definite temp. extraction
- Cool and filter the extract
Test Report

End of Report

This report is made solely on the basis of your instructions and/or information and materials supplied by you. It is not intended to be a recommendation for any particular course of action. Intertek does not accept a duty of care or any other responsibility to any person other than the Client in respect of this report and only accepts liability to the Client as is expressly contained in the terms and conditions governing Intertek’s provision of services to you. Intertek makes no warranties or representations either express or implied with respect to this report save as provided for in those terms and conditions. We have aimed to conduct the Review on a diligent and careful basis and we do not accept any liability to you for any loss arising out of or in connection with this report, in contract, tort, by statute or otherwise, except in the event of our gross negligence or wilful misconduct.
TERMS AND CONDITIONS OF BUSINESS

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2. The Company acts for the person or body from whom the request to provide its services has originated (hereinafter the "Principal"). No other party is entitled to give instructions to the Company unless agreed by the Company.

3. All rights (including but not limited to copyright) in any test reports, surveys, certificates of inspection or other material produced by the Company in the course of providing its services shall remain vested in the Company. The Principal shall not reproduce or make copies, publish or disclose the contents of any such material or extracts therefrom to any third party without the Company’s prior written consent, which may be refused at its discretion. The Principal further undertakes that its servants and agents shall keep confidential and shall not publish or otherwise use any information that may be acquired relating to the Company's activities.

4. The Company undertakes to exercise due care and skill in the performance of its services and accepts responsibility only where such skill and care is not exercised.

4.2 The liability of the Company in respect of any claims for loss, damage or expense of whatsoever nature and howsoever arising in respect of any breach of contract and/or any failure to exercise due care and skill by the Company shall in no circumstances exceed a total aggregate sum equal to ten (10) times the amount of the fee or commission payable in respect of the specific service required under the particular contract with the Company which gives rise to such claims provided however that the Company shall have no liability in respect of any claims for indirect or consequential loss including loss of profit and/or loss of future business and/or loss of production and/or cancellation of contracts entered into by the Principal.

4.3 The Company shall not in any event be liable for any loss or damage caused by delay in performance or non-performance of any of its services where the same is occasioned by any cause whatsoever that is beyond the Company’s control including but not limited to war, civil disturbance, requisitioning, governmental or parliamentary restriction, prohibitions or enactments of any kind, import or export regulations, strike or trade dispute (whether involving its own employees or those of any other person), difficulties in obtaining workmen or materials, breakdown of machinery, fire or accident. Should any such event occur the Company may cancel or suspend any contract for the provision of services without incurring any liability whatsoever.

4.4 The Company will not be liable to the Principal for any loss or damage whatsoever sustained by the Principal as a result of any failure by the Company to comply with any time estimate given by the Company relating to the provision of its services. [See clause 9.1] [See clause 9.2]

4.5 The Principal acknowledges that samples may be damaged or destroyed in the course of testing carried out by the Company or any of the Company’s agent or subcontractor as part of the necessary testing process and the Company shall not in any event be liable for any loss or damage arising from the damage or destruction of the samples subject to testing.

4.6 In the event that the Principal requests for the return of the samples, the Company shall not be responsible for any re-packaging of the samples prior to such return and the Company shall in no circumstances be liable for any loss or damage caused to any of the samples during or as a result of their shipment to the Principal for the purpose of this Clause 4.6.

5.1 Subject to the Principal’s instructions as accepted by the Company, the test reports, surveys, certificates of inspection or other material produced by the Company shall contain statements of opinion made with due care within the limitation of the instructions received by the Company. The Company is under no obligation to refer to or report upon any facts or circumstances which are outside the specific instructions received.

5.2 For pre-shipment inspection or survey of goods, the Company’s inspector shall perform the inspection or survey when goods are 100% completed, packed and marked (unless otherwise agreed between the Company and the Principal). Goods for inspection or survey shall be unpacked in the presence of the Company’s inspector and inspection or survey shall be carried out at the place specified by the Principal.

5.3 If the Company’s inspector finds that the location is not suitable for carrying out a proper inspection or survey of goods or where necessary equipment for inspection or survey is not available the inspector may, if practical in the circumstances, draw samples of goods from the location and carry out the inspection or survey at the premises of the Company. The Principal shall be responsible for all costs and expenses incurred in relation thereto.

5.4 Reports, surveys or certificates issued following testing or analysis of samples contain the Company’s specific opinion on those samples only but do not express any opinion upon the bulk from which the samples were drawn. If an opinion on the bulk is required special arrangements in writing must be made in advance for the Company for the inspection and sampling of the bulk. In no circumstances shall the Company’s responsibility extend beyond inspection, testing and reporting upon the samples actually drawn from the bulk, and inspected, tested and surveyed by the Company and any inference to be drawn from the results of such inspection or survey or testing shall be entirely in the discretion and at the sole and exclusive responsibility of the Principal.

6. The Company shall be entitled at its discretion to delegate the performance of the whole or any part of the services contracted for with the Principal to any agent or subcontractor.

7. Every officer, employee, agent or subcontractor of the Company shall have the benefit of those limitations of liability and the indemnities contained in the General Conditions. All claims made by such officers, employees, agents or subcontractors shall be made by the Company and the claim entered into by the Company is entered into not only on its own behalf but also as agent and trustee for every such person as aforesaid.

8. If the requirements of the Principal necessitate the analysis of samples by the Principal or by any third party the Company will pass on the results of the analysis but without responsibility for its accuracy. Where the Company is only able to witness an analysis by the Principal or by any third party the Company will provide confirmation, if such be the case, that a correct sample has been analysed but will not otherwise be responsible for the accuracy of such analysis.

9. The Company will:

9.1 ensure that instructions to the Company are given in due time and are accompanied by sufficient information to enable the required services to be performed effectively.

9.2 accept that documents reflecting arrangements or agreements made between the Principal and any third party, or third party documents such as copies of contracts of sale, letters of credit, bills of lading, etc. are furnished by the Company considered to be for information only, without extending or restricting the services to be provided or obligations accepted by the Company.

9.3 ensure all necessary access for the Company’s representatives to enable the required services to be performed effectively.

9.4 supply, if required, any special equipment and personnel necessary for the performance of the required services.

9.5 ensure that all necessary measures are taken for safety and security of working conditions, sites and installations during the performance of the required services.
9.6 take all necessary steps to eliminate or remedy any obstruction to or interruptions in the performance of the required services and repack all inspected goods immediately after any inspection or survey of them;

9.7 inform the Company in advance of any known hazards or dangers, actual or potential, associated with any request for the provision of services by the Company including but not limited to the presence or risk of radiation, toxic or noxious or explosive elements or materials, environmental pollution or poisons;

10. The Principal shall guarantee, hold harmless and indemnify the Company and its officers, employees, agents or subcontractors against

10.1 all claims made by any third party for any loss, damage or expense of whatsoever nature and howsoever arising relating to the performance, purported performance or non-performance of any of its services to the extent that the aggregate of any such claims relating to any one service exceeds the limit mentioned in Condition 4.2;

10.2 any loss or damage suffered by the Company as a result of the provision of services by the Company to the Principal otherwise than resulting from the Company's own error, negligence or wilful default.

11.1.1 The Principal will punctually pay the Company immediately upon presentation of the relevant invoice or within such other period as may have been agreed in writing by the Company all charges rendered by the Company falling which interest will become due at the rate of 1.5 per cent per month from the date of invoice until payment. The Principal further agrees and undertakes to reimburse the Company all disbursements reasonably incurred in connection with the provision of services.

11.2 The Principal shall not be entitled to retain or defer payment of any sums due to the Company on account of any dispute, cross claim or set off which it may allege against the Company.

11.3 In the event of any suspension of payment arrangement with creditors, bankruptcy, insolvency, receivership or cessation of business or failure of the Principal to pay part or all of any sums owing to the Company, the Company shall be entitled to suspend all further performance of its services and withhold the issue of any test report, survey, certificate of inspection or other material requested forthwith and without liability until payment of all sums owing to the Company together with interest thereon is made.

12. Without prejudice to any rights the Company may have at law or under the Conditions, the Company has the following rights in the event of non-payment of sums owing to the Company as set out below:

12.1 The Company has a general and particular lien over all samples delivered to be tested for all claims and sums owing by the Principal to the Company under any contract whatsoever and in any other way whatsoever.

12.2 During the currency of any such lien the Company is entitled to be paid reasonable storage charges for samples retained in the Company's custody.

12.3 Without prejudice to the Company's lien and other rights under Conditions 12.1 to 12.2 above, if test, inspection or survey of the goods takes place on the premises of the Company, the Company may give notice to the Principal that the goods (or any part thereof) are ready for collection and the Principal shall collect the same within three (3) calendar days (Saturdays, Sundays and Public Holidays excepted). Upon the expiry of this period, if the goods are not collected by the Principal, at the sole discretion of the Company the goods may be deemed abandoned and/or destroyed.

12.4 Without prejudice to Conditions 12.3 above, the Company shall have the discretion to store the goods (or any of them) at their own premises or elsewhere at the Principal's expense if the Principal has deposited the goods at the Company's premises for the performance of the services and has subsequently failed to collect the said goods.

12.5 The expenses by way of disbursements that the Company may reclaim from the Principal include all reasonable costs incurred by the Company (whether by way of storage, insurance or otherwise) in respect of the goods and it is expressly declared that it shall be reasonable but not mandatory for the Company to effect comprehensive insurance in respect of the goods.

12.6 Without prejudice to the Company's lien and other rights under Conditions 12.1 to 12.5 above, the risk and property in the goods shall remain at all times in the Principal.

13. In the event of the Company being prevented by reason of any cause whatsoever outside the Company's control from performing or completing any service for which an order has been given or an agreement made, the Principal will pay to the Company:

13.1 the amount of all abortive expenditure actually made or incurred, and

13.2 a proportion of the agreed fee or commission equal to the proportion (if any) of the service actually earned out, and the Company shall be relieved of all responsibility whatsoever for the partial or total non-performance of the required service.

14. The Company shall be discharged from all liability to the Principal for all claims for loss, damage or expense unless suit is brought within twelve (12) months after the date of the performance by the Company of the service which gives rise to the claim or in the event of any alleged non-performance within twelve (12) months of the date when such service should have been completed.

15. In the event that any unforeseen additional time or costs are incurred in the course of carrying out any of its services the Company shall be entitled to render additional charges as shall reasonably reflect such additional time and costs incurred.

16. All contracts for provision of services by the Company and the Conditions shall be construed in accordance with and governed by the laws of the ROC and for the purpose of any arbitral or litigation proceedings such contracts shall be deemed to have been made and performed in Taiwan. If any provision contained in the Conditions is and/or becomes invalid, illegal or unenforceable in any respect under the laws of the ROC, the validity, legality and enforceability of the remaining provisions hereof shall not in any way be affected or impaired thereby.

17. Any dispute or claim arising out of or relating to the provision of, or any agreement to provide, services by the Company shall be referred to and determined by arbitration subject to the Company's sole and overriding discretion to commence litigation proceedings in the courts of Taiwan or the courts of any other country as the Company may choose. The parties may agree to the appointment of an arbitrator failing which either party may, after having made a written request to concur in the appointment of an arbitrator, request the ROC Arbitration Association to appoint an arbitrator. The place of arbitration shall be in Taiwan. There shall only be one arbitrator.
Test Report

Applicant: Littelfuse Philippines Inc.
LIMA Technology Center, Lipa City,
Malvar, Batangas

Date Sample Received: Oct 30, 2013
Date Test Started: Oct 31, 2013

Sample Description:
One (1) group of submitted samples said to be:
Part Description: Copper Anode
Part Number: 010114

Test Conducted:
As requested by the applicant, for details please refer to attached pages.

Authorized by:
On Behalf of Intertek Testing Services
Taiwan Limited

K. Y. Liang
Director
## Test Result Summary:

<table>
<thead>
<tr>
<th>Test Item</th>
<th>Unit</th>
<th>Test Method</th>
<th>Result</th>
<th>RL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coppery metal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cadmium (Cd) content</td>
<td>ppm</td>
<td>With reference to IEC 62321-5: 2013, by microwave or acid digestion and determined by ICP-OES.</td>
<td>ND</td>
<td>2</td>
</tr>
<tr>
<td>Lead (Pb) content</td>
<td>ppm</td>
<td>With reference to IEC 62321-5: 2013, by microwave or acid digestion and determined by ICP-OES.</td>
<td>ND</td>
<td>2</td>
</tr>
<tr>
<td>Mercury (Hg) content</td>
<td>ppm</td>
<td>With reference to IEC 62321-4: 2013, by microwave or acid digestion and determined by ICP-OES.</td>
<td>ND</td>
<td>2</td>
</tr>
<tr>
<td>Chromium VI (Cr⁶⁺) content</td>
<td>mg/kg with 50 cm²</td>
<td>With reference to IEC 62321: 2008, by boiling water extraction and determined by UV-Vis Spectrophotometer.</td>
<td>Negative(#)</td>
<td>0.02</td>
</tr>
</tbody>
</table>

**Remarks:**
- ppm = parts per million based on weight of tested sample = mg/kg
- ND = Not detected
- RL = Reporting Limit, Quantitation limit of analyte in sample
- mg/kg with 50 cm² = milligram per kilogram with 50 square centimeter
- Negative = A negative test result indicated positive observation was not found at the time of test
- # = Due to the insufficient sample area, reduced total sample surface of 10 cm² was used and the dilution factor was adjusted accordingly.

**Responsibility of Chemist:** Kevin Liu / Irene Chiou

**Date Sample Received:** Oct 30, 2013
**Test Period:** Oct 31, 2013 to Nov 07, 2013

**RoHS Limit**

<table>
<thead>
<tr>
<th>Restricted Substances</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cadmium (Cd) content</td>
<td>0.01% (100ppm)</td>
</tr>
<tr>
<td>Lead (Pb) content</td>
<td>0.1% (1000ppm)</td>
</tr>
<tr>
<td>Mercury (Hg) content</td>
<td>0.1% (1000ppm)</td>
</tr>
<tr>
<td>Chromium VI (Cr⁶⁺) content</td>
<td>0.1% (1000ppm)</td>
</tr>
</tbody>
</table>

The above limits were quoted from Annex II of 2011/65/EU for homogeneous material.
Test for Cd/Pb/Hg/Chromium (VI)

**Measurement Flowchart:**

**Sampling**

- **Cd/Pb/Hg**
  - For different material, digest the sample with appropriate acid*1
  - Confirm the tested samples are totally dissolved
  - Make up with deionized water
  - Analyzed by ICP-OES

- **Cr**
  - Metal
  - By spot test
  - Negative*2
  - Get 50cm² sample
  - Definite temp. extraction
  - Cool and filter the extract
  - Make up with deionized water and add diphenyl-carbazide solution
  - Analyzed by UV-VIS

- **Polymers / Electronics**
  - Weigh sample and add alkaline solution

**Remarks:**

*1: List of Appropriate Acid:

<table>
<thead>
<tr>
<th>Material</th>
<th>Acid Added for Digestion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polymers</td>
<td>HNO₃,HCl,HF,H₂O₂,H₃BO₃</td>
</tr>
<tr>
<td>Metals</td>
<td>HNO₃,HCl,HF</td>
</tr>
<tr>
<td>Electronics</td>
<td>HNO₃,HCl,H₂O₂,HBF₄</td>
</tr>
</tbody>
</table>

*2: If the result of spot test is positive, Chromium VI would be determined as detected.
This report is made solely on the basis of your instructions and/or information and materials supplied by you. It is not intended to be a recommendation for any particular course of action. Intertek does not accept a duty of care or any other responsibility to any person other than the Client in respect of this report and only accepts liability to the Client as is expressly contained in the terms and conditions governing Intertek’s provision of services to you. Intertek makes no warranties or representations either express or implied with respect to this report save as provided for in those terms and conditions. We have aimed to conduct the Review on a diligent and careful basis and we do not accept any liability to you for any loss arising out of or in connection with this report, in contract, tort, by statute or otherwise, except in the event of our gross negligence or wilful misconduct.
TERMS AND CONDITIONS OF BUSINESS

1. Intertek Testing Services Taiwan Ltd. (hereinafter "the Company") agrees to provide its services in accordance with and subject to the terms and conditions herein contained (hereinafter "the Conditions"). The Conditions may only be modified by a variation expressed in writing and signed on behalf of the Company by a director and no other person on the part of the Company or its employees or agents shall be construed as an acceptance of any other terms and conditions.

2. The Company acts for the person or body from whom the request to provide its services has originated (hereinafter "the Principal"). No other party is entitled to give instructions to the Company unless agreed by the Company.

3. All rights (including but not limited to copyright) in any test reports, surveys, certificates of inspection or other material produced by the Company in the course of providing its services shall remain vested in the Company. The Principal shall not reproduce or make copies, publish or disclose the contents of any such material or extracts thereof to any third party without the Company's prior written consent, which may be refused at its discretion. The Principal further undertakes that its servants and agents shall keep confidential and shall not publish or otherwise use any information that may be acquired relating to the Company's activities.

4. The Company undertakes to exercise due care and skill in the performance of its services and accepts responsibility only where such due care and skill is not exercised.

4.1 The liability of the Company in respect of any claims for loss, damage or expense of whatsoever nature and however arising in respect of any breach of contract and/or any failure to exercise due care and skill by the Company shall in no circumstances exceed a total aggregate such equal to ten (10) times the amount of the fee or commission payable in respect of the specific service required under the particular contract with the Company which gives rise to such claims provided however that the Company shall have no liability in respect of any claims for indirect or consequential loss including loss of profit and/or loss of future business and/or loss of production and/or cancellation of contracts entered into by the Principal.

4.2 The Company shall not in any event be liable for any loss or damage caused by delay in performance or non-performance of any of its services where the same is occasioned by any cause whatsoever that is beyond the Company's control including but not limited to war, civil disturbance, requisitioning, governmental or parliamentary restriction, prohibitions or enactment of any kind, import or export regulations, strike or trade dispute (whether involving its own employees or those of any other persons), difficulties in obtaining workmen or materials, breakdown of machinery, fire or accident. Should any such event occur the Company may cancel or suspend any contract for the provision of services without incurring any liability whatsoever.

4.4 The Company will not be liable to the Principal for any loss or damage whatsoever sustained by the Principal as a result of any failure by the Company to comply with any time estimate given by the Company relating to the provision of its services. [See clause 9.1] [See clause 9.2]

4.5 The Principal acknowledges that samples may be damaged or destroyed in the course of testing carried out by the Company or any of the Company's agents or subcontractors as part of the necessary testing process and the Company shall not in any event be liable for any loss or damage arising from the damage or destruction of the samples subject to testing.

4.6 In the event that the Principal requests for the return of the samples, the Company shall not be responsible for any re-packing of the samples prior to such return and the Company shall in no circumstances be liable for any loss or damage caused to any of the samples during or as a result of their shipment to the Principal for the purpose of this Clause 4.6.

5.1 Subject to the Principal's instructions as accepted by the Company, the test reports, surveys, certificates of inspection or other material produced by the Company shall contain statements of opinion made with due care within the limitation of the instructions received by the Company. The Company is under no obligation to refer to or report upon any facts or circumstances which are outside the specific instructions received.

5.2 For pre-shipment inspection or survey of goods, the Company's inspector shall perform the inspection or survey when goods are 100% completed, packed and marked (unless otherwise agreed between the Company and the Principal). Goods for inspection or survey shall be unpacked in the presence of the Company's inspector and inspection or survey shall, subject to Condition 5.3, take place at the place specified by the Principal.

5.3 If the Company's inspector finds that the location is not suitable for carrying out a proper inspection or survey of goods, or where necessary equipment for inspection or survey is not available the inspector may, if practical in the circumstances, draw samples of goods from the location and carry out the inspection or survey at the premises of the Company. The Principal shall be responsible for all costs and expenses incurred in relation thereto.

5.4 Reports, surveys or certificates issued following testing or analysis of samples contain the Company's specific opinion on those samples only but do not express any opinion upon the bulk from which the samples were drawn. If an opinion on the bulk is requested special arrangements in writing must be made in advance with the Company for the inspection and sampling of the bulk. In no circumstances shall the Company's responsibility extend beyond inspection, testing and reporting upon the samples actually drawn from the bulk and inspected, tested and surveyed by the Company and any inference to be drawn from the results of such inspection or survey or testing shall be entirely in the discretion and at the sole and exclusive responsibility of the Principal.

6. The Company shall be entitled at its discretion to delegate the performance of the whole or any part of the services contracted for with the Principal to any agent or subcontractor.

6.1 Every officer, agent, and/or subcontractor of the Company shall have the benefit of the limitations of liability and the indemnities contained in the General Conditions. So far as relates to such limitations and indemnities, any contract entered into by the Company is entered into not only on its own behalf but also as agent and trustee for every such person as aforesaid.

7. If the requirements of the Principal necessitate the analysis of samples by the Principal or by any third party the Company will pass on the results of the analysis but without responsibility for its accuracy. Where the Company is only able to witness an analysis by the Principal or by any third party the Company will provide confirmation, if such be the case, that a correct sample has been analysed but will not otherwise be responsible for the accuracy of such analyses.

8. The Principal will

8.1 ensure that instructions to the Company are given in due time and are accompanied by sufficient information to enable the required services to be performed effectively.

8.2 accept that documents reflecting arrangements or agreements made between the Principal and any third party, or third party documents such as copies of contracts of sale, letters of credit, bills of lading, etc are -if received by the Company considered to be for information only, without extending or restricting the services to be provided or obligations accepted by the Company.

8.3 ensure all necessary access for the Company's representatives to enable the required services to be performed effectively.

8.4 supply, if required, any special equipment and personnel necessary for the performance of the required services.

8.5 ensure that all necessary measures are taken for safety and security of working conditions, sites and installations during the performance of the required services.
9.6 take all necessary steps to eliminate or remedy any obstruction to or interruptions in the performance of the required services and repack all inspected goods immediately after any inspection or survey of them;

9.7 inform the Company in advance of any known hazards or dangers, actual or potential, associated with any request for the provision of services by the Company including but not limited to the presence or risk of radiation, toxic or noxious or explosive elements or materials, environmental pollution or poisons;

10. The Principal shall guarantee, hold harmless and indemnify the Company and its officers, employees, agents or subcontractors against:

10.1 all claims made by any third party for any loss, damage or expense of whatsoever nature and howsoever arising relating to the performance, purported performance or non-performance of any of its services to the extent that the aggregate of any such claims relating to any one service exceeds the limit mentioned in Condition 4.2;

10.2 any loss or damage suffered by the Company as a result of the provision of services by the Company to the Principal otherwise than resulting from the Company’s own error, negligence or willful default.

11. 1.1 The Principal will punctually pay the Company immediately upon presentation of the relevant invoice or within such other period as may have been agreed in writing by the Company all charges rendered by the Company falling within which interest will become due at the rate of 1.5 per cent per month from the date of invoice until payment. The Principal further agrees and undertakes to reimburse the Company all disbursements reasonably incurred in connection with the provision of the services.

11.2 The Principal shall not be entitled to retain or defer payment of any sums due to the Company on account of any dispute, cross claim or set off which it may allege against the Company.

11.3 In the event of any suspension of payment arrangement with creditors, bankruptcy, insolvency, receivership or cessation of business or failure of the Principal to pay part or all of any sums owing to the Company, the Company shall be entitled to suspend all further performance of its services and withhold the issue of any test report, survey, certificate of inspection or other material requested forthwith and without liability until payment of all sums owing to the Company together with interest thereon is made.

12. Without prejudice to any rights the Company may have at law or under the Conditions, the Company has the following rights in the event of non-payment of sums owing to the Company as set out below:

12.1 The Company has a general and particular lien over all samples delivered to be tested for all claims and sums owing by the Principal to the Company under any contract whatsoever and in any other way whatsoever.

12.2 During the currency of any such lien the Company is entitled to be paid reasonable storage charges for samples retained in the Company’s custody.

12.3 Without prejudice to the Company’s lien and other rights under Conditions 12.1 to 12.2 above, if test, inspection or survey of the goods takes place on the premises of the Company, the Company may give notice to the Principal that the goods (or any part thereof) are ready for collection and the Principal shall collect the same within three (3) calendar days (Saturdays, Sundays and Public Holidays excepted). Upon the expiry of this period, if the goods are not collected by the Principal, at the sole discretion of the Company the goods may be deemed abandoned and/or destroyed.

12.4 Without prejudice to Condition 12.3 above, the Company shall have the discretion to store the goods (or any of them) at their premises or elsewhere at the Principal’s expense if the Principal has not collected the goods at the Company’s premises for the performance of these services and has subsequently failed to collect the said goods.

12.5 The expenses by way of disbursements that the Company may reclaim from the Principal include all reasonable costs incurred by the Company (whether by way of storage, insurance or otherwise) in respect of the goods and it is expressly declared that it shall be reasonable but not mandatory for the Company to effect comprehensive insurance in respect of the goods.

12.6 Without prejudice to the Company’s lien and other rights under Conditions 12.1 to 12.5 above, the risk and property in the goods shall remain at all times in the Principal.

13. In the event of the Company being prevented by reason of any cause whatsoever outside the Company’s control from performing or completing any service for which an order has been given or an agreement made the Principal will pay to the Company:

13.1 the amount of all abortive expenditure actually made or incurred, and

13.2 a proportion of the agreed fee or commission equal to the proportion (if any) of the service actually earned, and

14. The Company shall be discharged from all liability to the Principal for all claims for loss, damage or expense unless suit is brought within twelve (12) months after the date of the performance by the Company of the service which gives rise to the claim or in the event of any alleged non-performance within twelve (12) months of the date when such service should have been completed.

15. In the event that any unforeseen additional time or costs are incurred in the course of carrying out any of its services the Company shall be entitled to render additional charges as shall reasonably reflect such additional time and costs incurred.

16. All contracts for provision of services by the Company and the Conditions shall be construed in accordance with and governed by the laws of the ROC and for the purpose of any arbitral or litigation proceedings such contracts shall be deemed to have been made and performed in Taiwan. If any provision contained in the Conditions is and/or becomes invalid, illegal or unenforceable in any respect under the laws of the ROC, the validity, legality and enforceability of the remaining provisions hereof shall not in any way be affected or impaired thereby.

17. Any dispute or claim arising out of or relating to the provision of, or any agreement to provide, services by the Company shall be referred to and determined by arbitration subject to the Company’s sole and overriding discretion to commence litigation proceedings in the courts of Taiwan or the courts of any other country as the Company may choose. The parties may agree to the appointment of an arbitrator falling which either party may, after having made a written request to concur in the appointment of an arbitrator, request the ROC Arbitration Association to appoint an arbitrator. The place of arbitration shall be in Taiwan. There shall only be one arbitrator.
Test Report

Applicant: Littelfuse Philippines Inc.
LIMA Technology Center, Lipa City,
Malvar, Batangas

Number : TWNC00319523
Date : Jun 27, 2013

Sample Description:
One (1) group of submitted samples said to be:
Part Description : Photoimageable soldermask white
Part Number : 090317
Date Sample Received : Jun 21, 2013
Date Test Started : Jun 24, 2013

Test Conducted:
As requested by the applicant, for details please refer to attached pages.

Authorized by:
On Behalf of Intertek Testing Services Taiwan Limited

K. Y. Liang
Director

Intertek Testing Services Taiwan Ltd.
8F., No. 423, Ruiguang Rd., Neihu District, Taipei 11492, Taiwan, R.O.C.
全國公證檢驗股份有限公司
11492 台北市內湖區瑞光路 423 號 8 樓
Tel: (+886-2) 6602-2888 · 2797-8885  Fax: (+886-2) 6602-2410
## Test Report

### Test Conducted

### Test Result Summary:

<table>
<thead>
<tr>
<th>Test Item</th>
<th>Unit</th>
<th>Test Method</th>
<th>Result</th>
<th>RL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Heavy Metal</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cadmium (Cd) content ppm</td>
<td>ppm</td>
<td>With reference to IEC 62321: 2008, by microwave digestion and determined by ICP-OES.</td>
<td>ND</td>
<td>2</td>
</tr>
<tr>
<td>Lead (Pb) content ppm</td>
<td>ppm</td>
<td>With reference to IEC 62321: 2008, by microwave digestion and determined by ICP-OES.</td>
<td>ND</td>
<td>2</td>
</tr>
<tr>
<td>Mercury (Hg) content ppm</td>
<td>ppm</td>
<td>With reference to IEC 62321: 2008, by microwave digestion and determined by ICP-OES.</td>
<td>ND</td>
<td>2</td>
</tr>
<tr>
<td>Antimony (Sb) Content ppm</td>
<td>ppm</td>
<td>With reference to USEPA 3052, by microwave digestion and determined by ICP-OES.</td>
<td>ND</td>
<td>2</td>
</tr>
<tr>
<td>Chromium VI (Cr(^{6+})) content</td>
<td>ppm</td>
<td>With reference to IEC 62321: 2008, by alkaline digestion and determined by UV-Vis Spectrophotometer.</td>
<td>ND</td>
<td>1</td>
</tr>
<tr>
<td><strong>Polybrominated Biphenyls (PBBs)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monobrominated Biphenyls (MonoBB)</td>
<td>ppm</td>
<td>With reference to IEC 62321: 2008, by solvent extraction and determined by GC-MS and further HPLC-DAD confirmation when necessary.</td>
<td>ND</td>
<td>5</td>
</tr>
<tr>
<td>Dibrominated Biphenyls (DiBB)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
</tr>
<tr>
<td>Tribrominated Biphenyls (TriBB)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
</tr>
<tr>
<td>Tetrabrominated Biphenyls (TetraBB)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
</tr>
<tr>
<td>Pentabrominated Biphenyls (PentaBB)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
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<tr>
<td>Hexabrominated Biphenyls (HexaBB)</td>
<td>ppm</td>
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<td>ND</td>
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<tr>
<td>Heptabrominated Biphenyls (HeptaBB)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
</tr>
<tr>
<td>Octabrominated Biphenyls (OctaBB)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
</tr>
<tr>
<td>Nonabrominated Biphenyls (NonaBB)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
</tr>
<tr>
<td>Decabrominated Biphenyl (DecaBB)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
</tr>
</tbody>
</table>
### Polybrominated Diphenyl Ethers (PBDEs)

<table>
<thead>
<tr>
<th>Test Item</th>
<th>Unit</th>
<th>Test Method</th>
<th>Result</th>
<th>RL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monobrominated Diphenyl Ethers (MonoBDE)</td>
<td>ppm</td>
<td>With reference to IEC 62321: 2008, by solvent extraction and determined by GC-MS and further HPLC-DAD confirmation when necessary.</td>
<td>ND</td>
<td>5</td>
</tr>
<tr>
<td>Dibrominated Diphenyl Ethers (DiBDE)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
</tr>
<tr>
<td>Tribrominated Diphenyl Ethers (TriBDE)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
</tr>
<tr>
<td>Tetrabrominated Diphenyl Ethers (TetraBDE)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
</tr>
<tr>
<td>Pentabrominated Diphenyl Ethers (PentaBDE)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
</tr>
<tr>
<td>Hexabrominated Diphenyl Ethers (HexaBDE)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
</tr>
<tr>
<td>Heptabrominated Diphenyl Ethers (HeptaBDE)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
</tr>
<tr>
<td>Octabrominated Diphenyl Ethers (OctaBDE)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
</tr>
<tr>
<td>Nonabrominated Diphenyl Ethers (NonaBDE)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
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<tr>
<td>Decabrominated Diphenyl Ether (DecaBDE)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
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</tbody>
</table>

### Halogen Content

<table>
<thead>
<tr>
<th>Test Item</th>
<th>Unit</th>
<th>Test Method</th>
<th>Result</th>
<th>RL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluorine (F)</td>
<td>ppm</td>
<td>With reference to EN 14582:2007 by calorimetric bomb with oxygen and determined by Ion Chromatograph.</td>
<td>ND</td>
<td>50</td>
</tr>
<tr>
<td>Chlorine (Cl)</td>
<td>ppm</td>
<td></td>
<td>298</td>
<td>50</td>
</tr>
<tr>
<td>Bromine (Br)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>50</td>
</tr>
<tr>
<td>Iodine (I)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>50</td>
</tr>
</tbody>
</table>

### Phthalates

<table>
<thead>
<tr>
<th>Test Item</th>
<th>Unit</th>
<th>Test Method</th>
<th>Result</th>
<th>RL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Di(2-ethylhexyl) Phthalate (DEHP)</td>
<td>ppm</td>
<td>With reference to EN 14372: 2004, by solvent extraction and determined by GC-MS.</td>
<td>ND</td>
<td>10</td>
</tr>
<tr>
<td>Dibutyl Phthalate (DBP)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>10</td>
</tr>
<tr>
<td>Benzyl Butyl Phthalate (BBP)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>10</td>
</tr>
<tr>
<td>Diisobutyl Phthalate (DIBP)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>10</td>
</tr>
</tbody>
</table>
## Test Report

**Test Conducted**

<table>
<thead>
<tr>
<th>Test Item</th>
<th>Unit</th>
<th>Test Method</th>
<th>Result</th>
<th>RL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexabromocyclododecane (HBCDD)</td>
<td>ppm</td>
<td>With reference to USEPA 3540C, by solvent extraction and determined by GC-MS.</td>
<td>ND</td>
<td>10</td>
</tr>
</tbody>
</table>

Remarks:  

- ppm = parts per million based on wet weight of tested sample = mg/kg  
- ND = Not detected  
- RL = Reporting Limit, Quantitation limit of analyte in sample

Responsibility of Chemist: Kevin Liu/ Irene Chiou/ Vico Lin

Date Sample Received: Jun 21, 2013  
Test Period: Jun 24, 2013 To Jun 26, 2013

### RoHS Limit

<table>
<thead>
<tr>
<th>Restricted Substances</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cadmium (Cd) content</td>
<td>0.01% (100ppm)</td>
</tr>
<tr>
<td>Lead (Pb) content</td>
<td>0.1% (1000ppm)</td>
</tr>
<tr>
<td>Mercury (Hg) content</td>
<td>0.1% (1000ppm)</td>
</tr>
<tr>
<td>Chromium VI (Cr6+) content</td>
<td>0.1% (1000ppm)</td>
</tr>
<tr>
<td>Polybrominated Biphenyls (PBBs)</td>
<td>0.1% (1000ppm)</td>
</tr>
<tr>
<td>Polybrominated Diphenyl Ethers (PBDEs)</td>
<td>0.1% (1000ppm)</td>
</tr>
</tbody>
</table>

The above limits were quoted from Annex II of 2011/65/EU for homogeneous material.
Measurement Flowchart:

Test for Cd/Pb/Hg/Chromium (VI)/PBBs/PBDEs Contents

Sample preparation

For non-metal part

Weigh sample and add organic solvent

By Soxhlet extraction or solvent extraction

Concentrate the extract and make up with organic solvent

Analyzed by GC-MS

For metal part

Take sample and immerse into Aqua Regia, start to strip plating layer

Stop the stripping procedure upon color change completely

Take the Aqua solution as plating component and stripped body as substrate component

PBBs/PBDEs

Cd/Pb/Hg

Substrate

Plating

C\text{r}^{6+}

Weigh sample and add alkaline solution

Definite temp. extraction

Cool and filter the extract

Analyzed by ICP-OES

Analyzed by UV-VIS

For different material, digest the sample with appropriate acid\textsuperscript{*1}

Confirm the tested samples are totally dissolved

Make up with deionized water

Negative \textsuperscript{*2}

Get 50cm\textsuperscript{2} sample

By boiling water extraction

Make up with deionized water and add diphenyl-carbazide solution

Remarks:

\textsuperscript{*1}: List of Appropriate Acid:

<table>
<thead>
<tr>
<th>Material</th>
<th>Acid Added for Digestion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polymers</td>
<td>HNO\textsubscript{3}, HCl, HF, H\textsubscript{2}O\textsubscript{2}, H\textsubscript{3}BO\textsubscript{3}</td>
</tr>
<tr>
<td>Metals</td>
<td>HNO\textsubscript{3}, HCl, HF</td>
</tr>
<tr>
<td>Electronics</td>
<td>HNO\textsubscript{3}, HCl, H\textsubscript{2}O\textsubscript{2}, HBF\textsubscript{4}</td>
</tr>
</tbody>
</table>

\textsuperscript{*2}: If the result of spot test is positive, Chromium VI would be determined as detected.
Measurement Flowchart:

Test for Heavy Metal (Sb) Contents
Reference Method: USEPA 3052

Sampling

Weigh sample and digest in microwave digestion oven with suitable acid

Confirm the tested samples are totally dissolved

Transfer the digested solution and make up with deionized water

Analyzed by ICP-OES

Test Conducted
Test Report

Test Conducted

Measurement Flowchart:

Test for Halogen Contents
Reference Method: EN 14582

1. Sampling
2. Add absorbent in a combustion flask & place weighed sample in equipment
3. Fill oxygen into calorimetric bomb
4. Ignite then leave the bomb at room temperature
5. Transfer the absorbent into a volumetric flask
6. Make up with deionized water
7. Analyzed by ion chromatography
Test Conducted

Measurement Flowchart:

Test for Phthalates Contents
Reference Method: EN 14372: 2004

- Sampling
- Weigh sample and add organic solvent
- By solvent extraction
- Concentrate the extract and make up with organic solvent
- Analyzed by GC-MS
Test Report

Number: TWNC00319523

Measurement Flowchart:

Test for Hexabromocyclododecane (HBCDD) Content
Reference Method: USEPA 3540C

1. Sampling
2. Weigh sample and add organic solvent
3. By soxhlet extraction
4. Concentrate the extract and make up with organic solvent
5. Analyzed by GC-MS
This report is made solely on the basis of your instructions and/or information and materials supplied by you. It is not intended to be a recommendation for any particular course of action. Intertek does not accept a duty of care or any other responsibility to any person other than the Client in respect of this report and only accepts liability to the Client insofar as is expressly contained in the terms and conditions governing Intertek’s provision of services to you. Intertek makes no warranties or representations either express or implied with respect to this report save as provided for in those terms and conditions. We have aimed to conduct the Review on a diligent and careful basis and we do not accept any liability to you for any loss arising out of or in connection with this report, in contract, tort, by statute or otherwise, except in the event of our gross negligence or willful misconduct.
TERMS AND CONDITIONS OF BUSINESS

1. Intertek Testing Services Taiwan Ltd. (hereinafter “the Company”) agrees to provide its services in accordance with and subject to the terms and conditions herein contained (hereinafter “the Conditions”). The Conditions may only be modified by a variation expressly in writing and signed on behalf of the Company by a director and no other action on the part of the Company or its employees or agents shall be construed as an acceptance of any other terms and conditions.

2. The Company acts for the person or body from whom the request to provide its services has originated (hereinafter “the Principal”). No other party is entitled to give instructions to the Company unless agreed by the Company.

3. All rights (including but not limited to copyright) in any test reports, surveys, certificates of inspection or other material produced by the Company in the course of providing its services shall remain vested in the Company. The Principal shall not reproduce or make copies, publish or disclose the contents of any such material or extracts thereof to any third party without the Company’s prior written consent, which may be refused at its discretion. The Principal further undertakes that its servants and agents shall keep confidential and shall not publish or otherwise use any information that may be acquired relating to the Company’s activities.

4. The Company undertakes to exercise due care and skill in the performance of its services and accepts responsibility only where such skill and care is not exercised.

4.1 The liability of the Company in respect of any claims for loss, damage or expense of whatsoever nature and however arising in respect of any breach of contract and/or any failure to perform the work required by the Company shall not in circumstances exceed a total aggregate sum equal to ten (10) times the amount of the fee or commission payable in respect of the specific service required under the particular contract with the Company which gives rise to such claims provided however that the Company shall have no liability in respect of any claims for indirect or consequential loss including loss of profit and/or loss of future business and/or loss of production and/or cancellation of contracts entered into by the Principal.

4.2 The Company shall not in any event be liable for any loss or damage caused by delay in performance or non-performance of any of its services where the same is occasioned by any cause whatsoever that is beyond the Company’s control including but not limited to war, civil disturbance, requisitioning, governmental or parliamentary restriction, prohibitions or enactment of any kind, import or export regulations, strike or trade dispute (whether involving its own employees or those of any other person), difficulties in obtaining labour or materials, breakdown of machinery, fire or accident. Should any such event occur the Company may cancel or suspend any contract for the provision of services without incurring any liability whatsoever.

4.3 The Company will not be liable to the Principal for any loss or damage whatsoever sustained by the Principal as a result of any failure by the Company to comply with any time estimates given by the Company relating to the provision of its services. [See clause 9.1] [See clause 9.2]

4.4 The Principal acknowledges that samples may be damaged or destroyed in the course of testing carried out by the Company or by any of the Company’s agents or subcontractors as part of the necessary testing process and the Company shall not in any event be liable for any loss or damage arising from the damage or destruction of the samples subject to testing.

4.5 In the event that the Principal requests for the return of the samples, the Company shall not be responsible for any re-packaging of the samples prior to such return and the Company shall in no circumstances be liable for any loss or damage caused to any of the samples during or as a result of their shipment to the Principal for the purpose of this Clause 4.6.

5.1 Subject to the Principal’s instructions as accepted by the Company, the test reports, surveys, certificates of inspection or other material produced by the Company shall contain statements of opinion made with due care within the limitation of the instructions received by the Company. The Company is under no obligation to refer to or report upon any facts or circumstances which are outside the specific instructions received.

5.2 For pre-shipping inspection or survey of goods, the Company’s inspector shall perform the inspection or survey when goods are 100% completed, packed and marked (unless otherwise agreed between the Company and the Principal). Goods for inspection or survey shall be unpacked in the presence of the Company’s inspector and inspection or survey shall, subject to Condition 5.3, take place at the place specified by the Principal.

5.3 If the Company’s inspector finds that the location is not suitable for carrying out a proper inspection or survey of goods or where necessary equipment for inspection or survey is not available the inspector may, if practical in the circumstances, draw samples of goods from the location and carry out the inspection or survey at the premises of the Company. The Principal shall be responsible for all costs and expenses incurred in relation thereto.

5.4 Reports, surveys or certificates issued following testing or analysis of samples contain the Company’s specific opinion on those samples only but do not express any opinion upon the bulk from which the samples were drawn. If an opinion on the bulk is required special arrangements in writing must be made in advance with the Company for the inspection and sampling of the bulk. In no circumstances shall the Company’s responsibility extend beyond inspection, testing and reporting upon the samples actually drawn from the bulk and inspected, tested and surveyed by the Company and any inference to be drawn from the results of such inspection or survey or testing shall be entirely in the discretion and at the sole and exclusive responsibility of the Principal.

6. The Company shall be entitled at its discretion to delegate the performance of the whole or any part of the services contracted for with the Principal to any agent or subcontractor.

7. Every officer, agent, employee, agent or subcontractor of the Company shall have the benefit of the limitations of liability and indemnities contained in the General Conditions. So far as relates to such limitations and indemnities, any contract entered into by the Company is entered into not only on its own behalf but also as agent and trustee for such person as it may appoint.

8. If the requirements of the Principal necessitate the analysis of samples by the Principal or by any third party the Company will pass on the results of the analysis but without responsibility for its accuracy. Where the Company is only able to witness an analysis by the Principal or by any third party the Company will provide confirmation, if such be the case, that a correct sample has been analysed but will not otherwise be responsible for the accuracy of such analysis.

9.1 ensure that instructions to the Company are given in due time and are accompanied by sufficient information to enable the required services to be performed effectively.

9.2 accept that documents reflecting arrangements or agreements made between the Principal and any third party, or third party documents such as copies of contracts of sale, letters of credit, bills of lading, etc. are - if received by the Company - considered to be for information only, without extending or restricting the services to be provided or obligations accepted by the Company.

9.3 ensure all necessary access for the Company’s representatives to enable the required services to be performed effectively.

9.4 supply, if required, any special equipment and personnel necessary for the performance of the required services.

9.5 ensure that all necessary measures are taken for the safety and security of working conditions, sites and installations during the performance of the required services;
9.6 take all necessary steps to eliminate or remedy any obstruction to or interruptions in the performance of the required services and repack all inspected goods immediately after any inspection or survey of them.

9.7 inform the Company in advance of any known hazards or dangers, actual or potential, associated with any request for the provision of services by the Company including but not limited to the presence or risk of radiation, toxic or noxious or explosive elements or materials, environmental pollution or poisons.

10. The Principal shall guarantee, hold harmless and indemnify the Company and its officers, employees, agents or subcontractors against:

10.1 all claims made by any third party for any loss, damage or expense of whatsoever nature and however arising relating to the performance, purported performance or non-performance of any of services to the extent that the aggregate of any such claims relating to any one service exceeds the limit mentioned in Condition 4.2.

10.2 any loss or damage suffered by the Company as a result of the provision of services by the Company to the Principal otherwise than resulting from the Company’s own error, negligence or wilful default.

11.1 The Principal will punctually pay the Company immediately upon presentation of the relevant invoice or within such other period as may have been agreed in writing by the Company all charges rendered by the Company failing which interest will become due at the rate of 1.5 per cent per month from the date of invoice until payment. The Principal further agrees and undertakes to reimburse the Company all disbursements reasonably incurred in connection with the provision of the services.

11.2 The Principal shall not be entitled to retain or defer payment of any sums due to the Company on account of any dispute, cross claim or set off which it may allege against the Company.

11.3 In the event of any suspension of payment arrangement with creditors, bankruptcy, insolvency, receivership or cessation of business or failure of the Principal to pay part or all of any sums owing to the Company, the Company shall be entitled to suspend all further performance of its services and withhold the issue of any test report, survey, certificate of inspection or other material requested forthwith and without liability until payment of all sums owing to the Company together with interest thereon is made.

12. Without prejudice to any rights in the Company may have at law or under the Conditions, the Company has the following rights in the event of non-payment of sums owing to the Company as set out below:

12.1 The Company has a general and particular lien over all samples delivered to be tested for all claims and sums owing by the Principal to the Company under any contract whatsoever and in any other way whatsoever.

12.2 During the currency of any such lien the Company is entitled to provide reasonable storage charges for samples retained in the Company’s custody.

12.3 Without prejudice to the Company’s lien and other rights under Conditions 12.1 to 12.2 above, if test, inspection or survey of the goods takes place on the premises of the Company, the Company may give notice to the Principal that the goods (or any part thereof) are ready for collection and the Principal shall collect the same within three (3) calendar days (Saturdays, Sundays and Public Holidays excepted). Upon the expiry of this period, if the goods are not collected by the Principal, the sole discretion of the Company the goods may be deemed abandoned and/or destroyed.

12.4 Without prejudice to Conditions 12.3 above, the Company shall have the discretion to store the goods for any of them at their own premises or elsewhere at the Principal’s expense if the Principal has deposited the goods at the Company’s premises for the performance of these services and has subsequently failed to collect the said goods.

12.5 If the Principal fail to comply with the Conditions 12.4 above, they shall be entitled to sell all or any part of the goods and have such right and power in respect of the goods and it is expressly declared that it shall be reasonable but not mandatory for the Company to affect comprehensive insurance in respect of the goods.

12.6 Without prejudice to the Company’s lien and other rights under Conditions 12.1 to 12.5 above, the risk and property in the goods shall remain at all times in the Principal.

13. In the event of the Company being prevented by reason of any cause whatsoever outside the Company’s control from performing or completing any service for which an order has been given or an agreement made, the Principal will pay the Company:

13.1 the amount of all abortive expenditure actually made or incurred, and

13.2 a proportion of the agreed fee or commission equal to the proportion (if any) of the work actually carried out.

14. The Company shall be discharged from all liability to the Principal for all claims for loss, damage or expense unless suit is brought within twelve (12) months after the date of the performance by the Company of the service which gives rise to the claim or in the event of any alleged non-performance within twelve (12) months of the date when such service should have been completed.

15. In the event that any unforeseen additional time or costs are incurred in the course of carrying out any of its services the Company shall be entitled to render additional charges as shall reasonably reflect such additional time and costs incurred.

16. All contracts for provision of services by the Company and the Conditions shall be construed in accordance with and governed by the laws of the ROC and for the purpose of any arbitral or litigation proceedings such contracts shall be deemed to have been made and performed in Taiwan. If any provision contained in the Conditions is void or becomes invalid, illegal or unenforceable in any respect under the laws of the ROC, the validity, legality and enforceability of the remaining provisions hereof shall not in any way be affected or impaired thereby.

17. Any dispute or claim arising out of or relating to the provision of, or any agreement to provide, services by the Company shall be referred to and determined by arbitration subject to the Company’s sole and absolute discretion to commence arbitration proceedings in the courts of Taiwan or the courts of any other country as the Company may choose. The parties may agree to the appointment of an arbitrator failing which either party may, after having made a written request to concur in the appointment of an arbitrator, request the ROC Arbitration Association to appoint an arbitrator. The place of arbitration shall be in Taiwan. There shall only be one arbitrator.
Test Report

Applicant: Littelfuse Philippines Inc.
LIMA Technology Center, Lipa City,
Malvar, Batangas

Number : TWNC00333035
Date : Sep 24, 2013

Sample Description:
One (1) group of submitted samples said to be:
Sample Description : Photomageable soldermask white
Style / Item No. : 090317
Date Sample Received : Sep 18, 2013
Date Test Started : Sep 20, 2013

Test Conducted:
As requested by the applicant, for details please refer to attached pages.

Authorized by:
On Behalf of Intertek Testing Services
Taiwan Limited

K. Y. Liang
Director
## Test Result Summary:

<table>
<thead>
<tr>
<th>Test Item</th>
<th>Unit</th>
<th>Test Method</th>
<th>Result</th>
<th>RL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perfluorooctane Sulfonates (PFOS)</td>
<td>ppm</td>
<td>With reference to CEN/TS 15968:2010, by solvent extraction and determined by LC-MS-MS.</td>
<td>ND</td>
<td>0.05</td>
</tr>
<tr>
<td>Perfluorooctanoic Acid (PFOA)</td>
<td>ppm</td>
<td>With reference to CEN/TS 15968:2010, by solvent extraction and determined by LC-MS-MS.</td>
<td>ND</td>
<td>0.05</td>
</tr>
</tbody>
</table>

Remarks: ppm = parts per million based on wet weight of tested sample = mg/kg  
ND = Not detected  
RL = Reporting Limit, Quantitation limit of analyte in sample

Responsibility of Chemist: Kevin Liu/ Vico Lin

Date Sample Received : Sep 18, 2013  
Test Period : Sep 20, 2013 To Sep 24, 2013
Measurement Flowchart:

Test for Perfluorooctane Sulfonates (PFOS) / Perfluorooctanoic Acid (PFOA) Contents
Reference Method: CEN/TS 15968:2010

Sampling

Get appropriate weigh or surface of sample and add organic solvent

By solvent extraction

Concentrate the extract and make up with organic solvent

Analyzed by LC-MS-MS
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Intertek Testing Services Taiwan Ltd.
8F., No. 423, Ruiguang Rd., Neihu District, Taipei 11492, Taiwan, R.O.C.
全國公證檢驗股份有限公司
11492 台北市內湖區瑞光路 423 號 8 樓
Tel: (+886-2) 6602-2888 - 2797-8885  Fax: (+886-2) 6602-2410
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8. If the requirements of the Principal necessitate the analysis of samples by the Principal only by any third party the Company will pass on the results of the analysis but without responsibility for its accuracy. Where the Company is only able to witness an analysis by the Principal or by any third party the Company will provide confirmation, if such be the case, that a correct sample has been analysed but will not otherwise be responsible for the accuracy of such analysis.

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9.2 ensure all necessary access for the Company's representatives to enable the required services to be performed effectively.

9.3 supply, if required, any special equipment and personnel necessary for the performance of the required services.

9.5 ensure that all necessary measures are taken for safety and security of working conditions, sites and installations during the performance of the required services.
9.6 take all necessary steps to eliminate or remedy any obstruction to or interruptions in the performance of the required services and repack all inspected goods immediately after inspection or survey of them;

9.7 inform the Company in advance of any known hazards or dangers, actual or potential, associated with any request for the provision of services by the Company including but not limited to the presence or risk of radiation, toxic or noxious or explosive elements or materials, environmental pollution or poisons;

10. The Principal shall guarantee, hold harmless and indemnify the Company and its officers, employees, agents or subcontractors against

10.1 all claims made by any third party for any loss, damage or expense of whatsoever nature and howsoever arising relating to the performance, purported performance or non-performance of any of its services to the extent that the aggregate of any such claims relating to any one service exceeds the limit mentioned in Condition 4.2.

10.2 any loss or damage suffered by the Company as a result of the provision of services by the Company to the Principal otherwise than resulting from the Company’s own error, negligence or wilful default.

11.1 The Principal will punctually pay the Company immediately upon presentation of the relevant invoice or within such other period as may have been agreed in writing by the Company all charges rendered by the Company failing which interest will become due at the rate of 1.5 per cent per month from the date of invoice until payment. The Principal further agrees and undertakes to reimburse the Company all disbursements reasonably incurred in connection with the provision of services.

11.2 The Principal shall not be entitled to retain or defer payment of any sums due to the Company on account of any dispute, cross claim or set off which it may allege against the Company.

11.3 In the event of any suspension of payment arrangement with creditors, bankruptcy, insolvency, receivership or cessation of business or failure of the Principal to pay part or all of any sums owing to the Company, the Company shall be entitled to suspend further performance of its services and withhold the issue of any test report, survey, certificate of inspection or other material requested forthwith and without liability until payment of all sums owing to the Company together with interest thereon is made.

12. Without prejudice to any rights the Company may have at law or under the Conditions, the Company has the following rights in the event of non-payment of sums owing to the Company as set out below.

12.1 The Company has a general and particular lien over all samples delivered to be tested for all claims and sums owing by the Principal to the Company under any contract whatsoever and in any other way whatsoever.

12.2 During the currency of any such lien the Company is entitled to be paid reasonable storage charges for samples retained in the Company’s custody.

12.3 Without prejudice to the Company’s lien and other rights under Conditions 12.1 to 12.2 above, if test, inspection or survey of the goods takes place on the premises of the Company, the Company may give notice to the Principal that the goods (or any part thereof) are ready for collection and the Principal shall collect the same within three (3) calendar days (Saturdays, Sundays and Public Holidays excepted). Upon the expiry of this period, if the goods are not collected by the Principal, at the sole discretion of the Company the goods may be deemed abandoned and/or destroyed.

12.4 Without prejudice to Conditions 12.3 above, the Company shall have the discretion to store the goods (or any of them) at their own premises or elsewhere at the Principal’s expense if the Principal has deposited the goods at the Company’s premises for the performance of these services and has subsequently failed to collect the said goods.

12.5 The expenses by way of disbursements that the Company may reclaim from the Principal include all reasonable costs incurred by the Company (whether by way of storage, insurance or otherwise) in respect of the goods and it is expressly declared that it shall be reasonable but not mandatory for the Company to effect comprehensive insurance in respect of the goods.

12.6 Without prejudice to the Company’s lien and other rights under Conditions 12.1 to 12.5 above, the risk and property in the goods shall remain at all times in the Principal.

13. In the event of the Company being prevented by reason of any cause whatsoever outside the Company’s control from performing or completing any service for which an order has been given or an agreement made, the Principal will pay the Company

13.1 the amount of all abortive expenditure actually made or incurred, and

13.2 a proportion of the agreed fee or commission equal to the proportion (if any) of the service actually earned out, and the Company shall be relieved of all responsibility whatsoever for the partial or total non-performance of the required service.

14. The Company shall be discharged from all liability to the Principal for all claims for loss, damage or expense unless suit is brought within twelve (12) months after the date of the performance by the Company of the service which gives rise to the claim or in the event of any alleged non-performance within twelve (12) months of the data when such service should have been completed.

15. In the event that any unforeseen additional time or costs are incurred in the course of carrying out any of its services the Company shall be entitled to render additional charges as shall reasonably reflect such additional time and costs incurred.

16. All contracts for provision of services by the Company and the Conditions shall be construed in accordance with and governed by the laws of the ROC and for the purpose of any arbitral or litigation proceedings such contracts shall be deemed to have been made and performed in Taiwan. If any provision contained in the Conditions is and/or becomes invalid, illegal or unenforceable in any respect under the laws of the ROC, the validity, legality and enforceability of the remaining provisions hereof shall not in any way be affected or impaired thereby.

17. Any dispute or claim arising out of or relating to the provision of, or any agreement to provide, services by the Company shall be referred to and determined by arbitration subject to the Company’s sole and overriding discretion to commence litigation proceedings in the courts of Taiwan or the courts of any other country as the Company may choose. The parties may agree to the appointment of an arbitrator failing which either party may, after having made a written request to concur in the appointment of an arbitrator, request the ROC Arbitration Association to appoint an arbitrator. The place of arbitration shall be in Taiwan. There shall only be one arbitrator.
Test Report

Applicant: Littelfuse Philippines Inc.
LIMA Technology Center, Lipa City,
Malvar, Batangas

Number: TWNC00319522
Date: Jun 27, 2013

Sample Description:
One (1) group of submitted samples said to be:
Part Description: Photoimageable soldermask Green
Part Number: 090363
Date Sample Received: Jun 21, 2013
Date Test Started: Jun 24, 2013

Test Conducted:
As requested by the applicant, for details please refer to attached pages.

Authorized by:
On Behalf of Intertek Testing Services
Taiwan Limited

K. Y. Liang
Director
### Test Result Summary:

<table>
<thead>
<tr>
<th>Test Item</th>
<th>Unit</th>
<th>Test Method</th>
<th>Result</th>
<th>RL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Heavy Metal</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cadmium (Cd) content ppm</td>
<td>ppm</td>
<td>With reference to IEC 62321: 2008, by microwave digestion and determined by ICP-OES.</td>
<td>ND</td>
<td>2</td>
</tr>
<tr>
<td>Lead (Pb) content ppm</td>
<td>ppm</td>
<td>With reference to IEC 62321: 2008, by microwave digestion and determined by ICP-OES.</td>
<td>ND</td>
<td>2</td>
</tr>
<tr>
<td>Mercury (Hg) content ppm</td>
<td>ppm</td>
<td>With reference to IEC 62321: 2008, by microwave digestion and determined by ICP-OES.</td>
<td>ND</td>
<td>2</td>
</tr>
<tr>
<td>Antimony (Sb) Content ppm</td>
<td>ppm</td>
<td>With reference to USEPA 3052, by microwave digestion and determined by ICP-OES.</td>
<td>ND</td>
<td>2</td>
</tr>
<tr>
<td>Chromium VI (Cr&lt;sup&gt;6+&lt;/sup&gt;) content ppm</td>
<td>ppm</td>
<td>With reference to IEC 62321: 2008, by alkaline digestion and determined by UV-Vis Spectrophotometer.</td>
<td>ND</td>
<td>1</td>
</tr>
<tr>
<td><strong>Polybrominated Biphenyls (PBBs)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monobrominated Biphenyls (MonoBB)</td>
<td>ppm</td>
<td>ND</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Dibrominated Biphenyls (DiBB)</td>
<td>ppm</td>
<td>ND</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Tribrominated Biphenyls (TriBB)</td>
<td>ppm</td>
<td>ND</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Tetra brominated Biphenyls (TetraBB)</td>
<td>ppm</td>
<td>ND</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Pentabrominated Biphenyls (PentaBB)</td>
<td>ppm</td>
<td>ND</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Hexabrominated Biphenyls (HexaBB)</td>
<td>ppm</td>
<td>ND</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Heptabrominated Biphenyls (HeptaBB)</td>
<td>ppm</td>
<td>ND</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Octabrominated Biphenyls (OctaBB)</td>
<td>ppm</td>
<td>ND</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Nonabrominated Biphenyls (NonaBB)</td>
<td>ppm</td>
<td>ND</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Decabrominated Biphenyl (DecaBB)</td>
<td>ppm</td>
<td>ND</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Test Item</td>
<td>Unit</td>
<td>Test Method</td>
<td>Result</td>
<td>RL</td>
</tr>
<tr>
<td>-----------</td>
<td>------</td>
<td>-------------</td>
<td>--------</td>
<td>----</td>
</tr>
<tr>
<td>Green paste</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Polybrominated Diphenyl Ethers (PBDEs)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monobrominated Diphenyl Ethers (MonoBDE)</td>
<td>ppm</td>
<td>With reference to IEC 62321: 2008, by solvent extraction and determined by GC-MS and further HPLC-DAD confirmation when necessary.</td>
<td>ND</td>
<td>5</td>
</tr>
<tr>
<td>Dibrominated Diphenyl Ethers (DiBDE)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
</tr>
<tr>
<td>Tribrominated Diphenyl Ethers (TriBDE)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
</tr>
<tr>
<td>Tetrabrominated Diphenyl Ethers (TetraBDE)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
</tr>
<tr>
<td>Pentabrominated Diphenyl Ethers (PentaBDE)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
</tr>
<tr>
<td>Hexabrominated Diphenyl Ethers (HexaBDE)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
</tr>
<tr>
<td>Heptabrominated Diphenyl Ethers (HeptaBDE)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
</tr>
<tr>
<td>Octabrominated Diphenyl Ethers (OctaBDE)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
</tr>
<tr>
<td>Nonabrominated Diphenyl Ethers (NonaBDE)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
</tr>
<tr>
<td>Decabrominated Diphenyl Ether (DecaBDE)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>5</td>
</tr>
<tr>
<td><strong>Halogen Content</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluorine (F)</td>
<td>ppm</td>
<td>With reference to EN 14582:2007 by calorimetric bomb with oxygen and determined by Ion Chromatograph.</td>
<td>229</td>
<td>50</td>
</tr>
<tr>
<td>Chlorine (Cl)</td>
<td>ppm</td>
<td></td>
<td>3016</td>
<td>50</td>
</tr>
<tr>
<td>Bromine (Br)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>50</td>
</tr>
<tr>
<td>Iodine (I)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>50</td>
</tr>
<tr>
<td><strong>Phthalates</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Di(2-ethylhexyl) Phthalate (DEHP)</td>
<td>ppm</td>
<td>With reference to EN 14372: 2004, by solvent extraction and determined by GC-MS.</td>
<td>ND</td>
<td>10</td>
</tr>
<tr>
<td>Dibutyl Phthalate (DBP)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>10</td>
</tr>
<tr>
<td>Benzyl Butyl Phthalate (BBP)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>10</td>
</tr>
<tr>
<td>Diisobutyl Phthalate (DIBP)</td>
<td>ppm</td>
<td></td>
<td>ND</td>
<td>10</td>
</tr>
<tr>
<td><strong>Others</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hexabromocyclododecane (HBCDD)</td>
<td>ppm</td>
<td>With reference to USEPA 3540C, by solvent extraction and determined by GC-MS.</td>
<td>ND</td>
<td>10</td>
</tr>
</tbody>
</table>
Test Report

Number: TWNC00319522

Test Conducted

Remarks: ppm = parts per million based on wet weight of tested sample = mg/kg
        ND = Not detected
        RL = Reporting Limit, Quantitation limit of analyte in sample

Responsibility of Chemist: Kevin Liu/ Irene Chiou/ Vico Lin

Date Sample Received : Jun 21, 2013
Test Period : Jun 24, 2013 To Jun 26, 2013

RoHS Limit

<table>
<thead>
<tr>
<th>Restricted Substances</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cadmium (Cd) content</td>
<td>0.01% (100ppm)</td>
</tr>
<tr>
<td>Lead (Pb) content</td>
<td>0.1% (1000ppm)</td>
</tr>
<tr>
<td>Mercury (Hg) content</td>
<td>0.1% (1000ppm)</td>
</tr>
<tr>
<td>Chromium VI (Cr^{6+}) content</td>
<td>0.1% (1000ppm)</td>
</tr>
<tr>
<td>Polybrominated Biphenyls (PBBs)</td>
<td>0.1% (1000ppm)</td>
</tr>
<tr>
<td>Polybrominated Diphenyl Ethers (PBDEs)</td>
<td>0.1% (1000ppm)</td>
</tr>
</tbody>
</table>

The above limits were quoted from Annex II of 2011/65/EU for homogeneous material.
Test Report

Number: TWNC00319522

Test Conducted
Measurement Flowchart:

Test for Cd/Pb/Hg/Chromium (VI)/PBBs/PBDEs Contents

Remarks:
*1: List of Appropriate Acid:

<table>
<thead>
<tr>
<th>Material</th>
<th>Acid Added for Digestion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polymers</td>
<td>HNO₃, HCl, HF, H₂O₂, H₃BO₃</td>
</tr>
<tr>
<td>Metals</td>
<td>HNO₃, HCl, HF</td>
</tr>
<tr>
<td>Electronics</td>
<td>HNO₃, HCl, H₂O₂, HBF₄</td>
</tr>
</tbody>
</table>

*2: If the result of spot test is positive, Chromium VI would be determined as detected.
Measurement Flowchart:

Test for Heavy Metal (Sb) Contents
Reference Method : USEPA 3052

1. Sampling
2. Weigh sample and digest in microwave digestion oven with suitable acid
3. Confirm the tested samples are totally dissolved
4. Transfer the digested solution and make up with deionized water
5. Analyzed by ICP-OES
Test Conducted
Test for Halogen Contents
Reference Method: EN 14582

Sampling

Add absorbent in a combustion flask & place weighed sample in equipment

Fill oxygen into calorimetric bomb

Ignite then leave the bomb at room temperature

Transfer the absorbent into a volumetric flask

Make up with deionized water

Analyzed by ion chromatography
Test Conducted
Test for Phthalates Contents
Reference Method: EN 14372: 2004

Sampling

Weigh sample and add organic solvent

By solvent extraction

Concentrate the extract and make up with organic solvent

Analyzed by GC-MS
Test Conducted
Test for Hexabromocyclododecane (HBCDD) Content
Reference Method: USEPA 3540C

Sampling

Weigh sample and add organic solvent

By soxhlet extraction

Concentrate the extract and make up with organic solvent

Analyzed by GC-MS
Test Report

Number: TWNC00319522

End of Report

This report is made solely on the basis of your instructions and/or information and materials supplied by you. It is not intended to be a recommendation for any particular course of action. Intertek does not accept a duty of care or any other responsibility to any person other than the Client in respect of this report and only accepts liability to the Client insofar as is expressly contained in the terms and conditions governing Intertek’s provision of services to you. Intertek makes no warranties or representations either express or implied with respect to this report save as provided for in those terms and conditions. We have aimed to conduct the Review on a diligent and careful basis and we do not accept any liability to you for any loss arising out of or in connection with this report, in contract, tort or otherwise, except in the event of our gross negligence or wilful misconduct.
1. Intertek Testing Services Taiwan Ltd. (hereinafter "the Company") agrees to provide its services in accordance with and subject to the terms and conditions herein contained (hereinafter "the Conditions"). The Conditions may only be modified by a variation expressed in writing and signed on behalf of the Company by a director and no other action on the part of the Company or its employees or agents shall be construed as an acceptance of any other terms and conditions.

2. The Company acts for the person or body from whom the request to provide its services has originated (hereinafter "the Principal"). No other party is entitled to give instructions to the Company unless agreed by the Company.

3. All rights (including but not limited to copyright) in any test reports, surveys, certificates of inspection or other material produced by the Company in the course of providing its services shall remain vested in the Company. The Principal shall not reproduce or make copies, publish or disseminate the contents of any such material or extracts thereof to any third party without the Company’s prior written consent, which may be refused at its discretion. The Principal further undertakes that its servants and agents shall keep confidential and shall not publish or otherwise use any information that may be acquired relating to the Company’s activities.

4. 4.1 The Company undertakes to exercise due care and skill in the performance of its services and accepts responsibility only where such skill and care is not exercised.

4.2 The liability of the Company in respect of any claims for loss, damage or expense of whatsoever nature and howsoever arising in respect of any breach of contract and/or any failure to exercise due care and skill by the Company shall in no circumstances exceed a total aggregate sum equal to ten (10) times the amount of the fee or commission payable in respect of the specific services required under the particular contract with the Company which gives rise to such claims provided however that the Company shall have no liability in respect of any claims for indirect or consequential loss including loss of profit and/or loss of future business and/or loss of production and/or cancellation of contracts entered into by the Principal.

4.3 The Company shall not in any event be liable for any loss or damage caused by delay in performance or non-performance of any of its services where the same is occasioned by any cause whatsoever that is beyond the Company’s control including but not limited to war, civil disturbance, requisitioning, governmental or parliamentary restrictions, prohibitions or enactment of any kind, import or export regulations, strike or trade dispute (whether involving its own employees or those of any other person), difficulties in obtaining workmen or materials, breakdown of machinery, fire or accident. Should any such event occur the Company may cancel or suspend any contract for the provision of services without incurring any liability whatsoever.

4.4 The Company will not be liable to the Principal for any loss or damage whatsoever sustained by the Principal as a result of any failure by the Company to comply with any time estimate given by the Company relating to the provision of its services. [See clause 9.1] [See clause 9.2]

4.5 The Principal acknowledges that samples may be damaged or destroyed in the course of testing carried out by the Company or any of the Company’s agents or subcontractor as part of the necessary testing process and the Company shall not in any event be liable for any loss or damage arising from the damage or destruction of the samples subject to testing.

4.6 In the event that the Principal requests for the return of the samples, the Company shall not be responsible for any re-packing of the samples prior to such return and the Company shall in no circumstances be liable for any loss or damage caused to any of the samples during or as a result of their shipment to the Principal for the purpose of this clause 4.6.

5. 5.1 Subject to the Principal’s instructions as accepted by the Company, the test reports, surveys, certificates of inspection or other material produced by the Company shall contain statements of opinion made with due care within the limitations of the instructions received by the Company. The Company is under no obligation to refer to or report upon any facts or circumstances which are outside the specific instructions received.

5.2 For pre-shipment inspection or survey of goods, the Company’s inspector shall perform the inspection or survey when good are 100% completed, packed and marked (unless otherwise agreed between the Company and the Principal). Goods for inspection or survey shall be unpacked in the presence of the Company’s inspector and inspection or survey shall, subject to Condition 5.3, take place at the location specified by the Principal.

5.3 If the Company’s inspector finds that the location is not suitable for carrying out a proper inspection or survey of goods or where necessary equipment for inspection or survey is not available the inspector may, if practical in the circumstances, draw samples of goods from the location and carry out the inspection or survey at the premises of the Company. The Principal shall be responsible for all costs and expenses incurred in relation thereto.

5.4 Reports, surveys or certificates issued following testing or analysis of samples contain the Company’s specific opinion on those samples only but do not express any opinion upon the bulk from which the samples were drawn. If an opinion on the bulk is required special arrangements in writing must be made in advance with the Company for the inspection and sampling of the bulk. In no circumstances shall the Company’s responsibility extend beyond inspection, testing and reporting upon the samples actually drawn from the bulk and inspected, tested and surveyed by the Company and any inference to be drawn from the results of such inspection or survey or testing shall be entirely in the discretion and at the sole and exclusive responsibility of the Principal.

6. The Company shall be entitled at its discretion to delegate the performance of the whole or any part of the services contracted for with the Principal to any agent or sub-contractor.

7. Every officer, employee, agent or sub-contractor of the Company shall have the benefit of the limitations of liability and the indemnities contained in the General Conditions. So far as relates to such limitations and indemnities, any contract entered into by the Company is entered into not only on its own behalf but also as agent and trustee for such person as aforesaid.

8. If the requirements of the Principal necessitate the analysis of samples by the Principal or by any third party the Company will pass on the results of the analysis but without responsibility for its accuracy. Where the Company is only able to witness an analysis by the Principal or by any third party the Company will provide confirmation, if such be the case, that a correct sample has been analysed but will not otherwise be responsible for the accuracy of such analyses.

9. The Principal will

9.1 ensure that instructions to the Company are given in due time and are accompanied by sufficient information to enable the required services to be performed effectively.

9.2 accept that documents reflecting arrangements or agreements made between the Principal and any third party, or third party documents such as copies of contracts of sale, letters of credit, bills of lading, etc. are received by the Company considered to be for information only, without extending or restricting the services to be provided or obligations accepted by the Company.

9.3 ensure all necessary access for the Company’s representatives to enable the required services to be performed effectively.

9.4 supply, if required, any special equipment and personal necessary for the performance of the required services.

9.5 ensure that all necessary measures are taken for safety and security of working conditions, sites and installations during the performance of the required services.
9.6 take all necessary steps to eliminate or remedy any obstruction to or interruptions in the performance of the required services and repack all inspected goods immediately after any inspection or survey of them;

9.7 inform the Company in advance of any known hazards or dangers, actual or potential, associated with any request for the provision of services by the Company including but not limited to the presence or risk of radiation, toxic or noxious or explosive elements or materials, environmental pollution or poisons;

10. The Principal shall guarantee, hold harmless and indemnify the Company and its officers, employees, agents or subcontractors against

10.1 all claims made by any third party for any loss, damage or expense of whatsoever nature and howsoever arising relating to the performance, purported performance or non-performance of any of its services to the extent that the aggregate of any such claims relating to any one service exceeds the limit mentioned in Condition 4.2;

10.2 any loss or damage suffered by the Company as a result of the provision of services by the Company to the Principal otherwise than resulting from the Company’s own error, negligence or wilful default.

11.1 The Principal will punctually pay the Company immediately upon presentation of the relevant invoice or within such other period as may have been agreed in writing by the Company all charges rendered by the Company failing which interest will become due at the rate of 1.5 per cent per month from the date of invoice until payment. The Principal further agrees and undertakes to reimburse the Company all disbursements reasonably incurred in connection with the provision of services.

11.2 The Principal shall not be entitled to retain or defer payment of any sums due to the Company on account of any dispute, cross claim or set off which it may allege against the Company.

11.3 In the event of any suspension of payment arrangement with creditors, bankruptcy, insolvency, receivership or cessation of business or failure of the Principal to pay part or all of any sums owing to the Company, the Company shall be entitled to suspend all further performance of its services and withhold the issue of any test report, survey, certificate of inspection or other material requested forthwith and without liability until payment of all sums owing to the Company together with interest thereon is made.

12. Without prejudice to any rights the Company may have at law or under the Conditions, the Company has the following rights in the event of non-payment of sums owing to the Company as set out below:

12.1 The Company has a general and particular lien over all samples delivered to be tested for all claims and sums owing by the Principal to the Company under any contract whatsoever and in any other way whatsoever.

12.2 During the currency of any such lien the Company is entitled to pay reasonable storage charges for samples retained in the Company’s custody.

12.3 Without prejudice to the Company’s lien and other rights under Conditions 12.1 to 12.2 above, if test, inspection or survey of the goods takes place on the premises of the Company, the Company may give notice to the Principal that the goods (or any part thereof) are ready for collection and the Principal shall collect the same within the three (3) calendar days (Saturdays, Sundays and Public Holidays excepted). Upon the expiry of this period, if the goods are not collected by the Principal, at the sole discretion of the Company the goods may be deemed abandoned and/or destroyed.

12.4 Without prejudice to Conditions 12.3 above, the Company shall have the discretion to store the goods (or any of them) at their own premises or elsewhere at the Principal’s expense if the Principal has deposited the goods at the Company’s premises for the performance of these services and has subsequently failed to collect the said goods.

12.5 The expenses by way of disbursements that the Company may reclaim from the Principal include all reasonable costs incurred by the Company (whether by way of storage, insurance or otherwise) in respect of the goods and it is expressly declared that it shall be reasonable but not mandatory for the Company to effect comprehensive insurance in respect of the goods.

12.6 Without prejudice to the Company’s lien and other rights under Conditions 12.1 to 12.5 above, the risk and property in the goods shall remain at all times in the Principal.

13. In the event of the Company being prevented by reason of any cause whatsoever outside the Company’s control from performing or completing any service for which an order has been given or an agreement made, the Principal will pay to the Company:

13.1 the amount of all abortive expenditure actually made or incurred, and

13.2 a proportion of the agreed fee or commission equal to the proportion (if any) of the service actually carried out, and

13.3 the Principal shall be relieved of all responsibility whatsoever for the partial or total non-performance of the required service.

14. The Company shall be discharged from all liability to the Principal for all claims for loss, damage or expense unless suit is brought within twelve (12) months after the date of the performance by the Company of the service which gives rise to the claim or in the event of any alleged non-performance within twelve (12) months of the date when such service should have been completed.

15. In the event that any unforeseen additional time or costs are incurred in the course of carrying out any of its services the Company shall be entitled to render additional charges as shall reasonably reflect such additional time and costs incurred.

16. All contracts for provision of services by the Company and the Conditions shall be construed in accordance with and governed by the laws of the ROC and for the purpose of any arbitration or litigation proceedings such contracts shall be deemed to have been made and performed in Taiwan. If any provision contained in the Conditions is and/or becomes invalid, illegal or unenforceable in any respect under the laws of the ROC, the validity, legality and enforceability of the remaining provisions hereof shall not in any way be affected or impaired thereby.

17. Any dispute or claim arising out of or relating to the provision of, or any agreement to provide, services by the Company shall be referred to and determined by arbitration subject to the Company’s sole and overriding discretion to commence litigation proceedings in the courts of Taiwan or the courts of any other country as the Company may choose. The parties may agree to the appointment of an arbitrator failing which either party may, after having made a written request to concur in the appointment of an arbitrator, request the ROC Arbitration Association to appoint an arbitrator. The place of arbitration shall be in Taiwan. There shall only be one arbitrator.
Test Report

Number : TWNC00333036
Date : Sep 24, 2013

Applicant: Littelfuse Philippines Inc.
LIMA Technology Center, Lipa City,
Malvar, Batangas

Sample Description:
One (1) group of submitted samples said to be:
Sample Description : Photoimageable soldermask Green
Style / Item No. : 090363
Date Sample Received : Sep 18, 2013
Date Test Started : Sep 20, 2013

Test Conducted:
As requested by the applicant, for details please refer to attached pages.

Authorized by:
On Behalf of Intertek Testing Services
Taiwan Limited

K. Y. Liang
Director
## Test Result Summary:

<table>
<thead>
<tr>
<th>Test Item</th>
<th>Unit</th>
<th>Test Method</th>
<th>Result</th>
<th>RL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perfluorooctane Sulfonates (PFOS)</td>
<td>ppm</td>
<td>With reference to CEN/TS 15968:2010, by solvent extraction and determined by LC-MS-MS.</td>
<td>ND</td>
<td>0.05</td>
</tr>
<tr>
<td>Perfluorooctanoic Acid (PFOA)</td>
<td>ppm</td>
<td>With reference to CEN/TS 15968:2010, by solvent extraction and determined by LC-MS-MS.</td>
<td>ND</td>
<td>0.05</td>
</tr>
</tbody>
</table>

Remarks:  
ppm = parts per million based on wet weight of tested sample = mg/kg  
ND = Not detected  
RL = Reporting Limit, Quantitation limit of analyte in sample

Responsibility of Chemist:  Kevin Liu/ Vico Lin

Date Sample Received : Sep 18, 2013  
Test Period : Sep 20, 2013 To Sep 24, 2013
Test Conducted
Measurement Flowchart:

Test for Perfluorooctane Sulfonates (PFOS) / Perfluorooctanoic Acid (PFOA) Contents
Reference Method: CEN/TS 15968:2010

Measurement Flowchart:

Sampling

Get appropriate weigh or surface of sample and add organic solvent

By solvent extraction

Concentrate the extract and make up with organic solvent

Analyzed by LC-MS-MS
Test Report

End of Report

This report is made solely on the basis of your instructions and/or information and materials supplied by you. It is not intended to be a recommendation for any particular course of action. Intertek does not accept a duty of care or any other responsibility to any person other than the Client in respect of this report and only accepts liability to the Client as is expressly contained in the terms and conditions governing Intertek’s provision of services to you. Intertek makes no warranties or representations either express or implied with respect to this report save as provided for in those terms and conditions. We have aimed to conduct the Review on a diligent and careful basis and we do not accept any liability to you for any loss arising out of or in connection with this report, in contract, tort, by statute or otherwise, except in the event of our gross negligence or wilful misconduct.
TERMS AND CONDITIONS OF BUSINESS

1. Intertek Testing Services Taiwan Ltd. (hereinafter “the Company”) agrees to provide its services in accordance with and subject to the terms and conditions herein contained (hereinafter “the Conditions”). The Conditions may be modified by a variation expressed in writing and signed on behalf of the Company by a director and no other action on the part of the Company or its employees or agents shall be construed as an acceptance of any other terms and conditions.

2. The Company acts for the person or body from whom the request to provide its services has originated (hereinafter “the Principal”). No other party is entitled to give instructions to the Company unless agreed by the Company.

3. All rights (including but not limited to copyright) in any test reports, surveys, certificates of inspection or other material produced by the Company in the course of providing its services shall remain vested in the Company. The Principal shall not reproduce or make copies, publish or disclose the contents of any such material or extracts thereof to any third party without the Company’s prior written consent, which may be refused at its discretion. The Principal further undertakes that its servants and agents shall keep confidential and shall not publish or otherwise use any information that may be acquired relating to the Company’s activities.

4. The Company undertakes to exercise due care and skill in the performance of its services and accepts responsibility only where such care and skill is not exercised.

4.1 The liability of the Company in respect of any claims for loss, damage or expense of whatsoever nature and however arising in respect of any breach of contract and/or any failure to exercise due care and skill by the Company shall in no circumstances exceed a total aggregate sum equal to ten (10) times the amount of the fee or commission payable in respect of the specific service required under the particular contract with the Company which gives rise to such claims provided, however, that the Company shall have no liability in respect of any claims for indirect or consequential loss including loss of profit and/or loss of future business and/or loss of production and/or cancellation of contracts entered into by the Principal.

4.2 The Company shall not in any event be liable for any loss or damage caused by delay in performance or non-performance of any of its services where the same is occasioned by any cause whatsoever that is beyond the Company’s control including but not limited to war, civil disturbance, requisitioning, governmental or parliamentary restriction, prohibitions or enactment of any kind, import or export regulations, strike or trade dispute (whether involving its own employees or those of any other person), difficulties in obtaining workmen or materials, breakdown of machinery, fire or accident. Should any such event occur the Company may cancel or suspend any contract for the provision of services without incurring any liability whatsoever.

4.3 The Company will not be liable to the Principal for any loss or damage whatsoever sustained by the Principal as a result of any failure by the Company to comply with any time estimate given by the Company relating to the provision of its services. [See clause 3.1] [See clause 3.2]

4.4 The Principal acknowledges that samples may be damaged or destroyed in the course of testing carried out by the Company or by any of the Company’s agent or subcontractor as part of the necessary testing process and the Company shall not in any event be liable for any loss or damage arising from the damage or destruction of the samples subject to testing.

4.5 In the event that the Principal requests for the return of the samples, the Company shall not be responsible for any re-packaging of the samples prior to such return and the Company shall in no circumstances be liable for any loss or damage caused to any of the samples during or as a result of their shipment to the Principal for the purpose of this Clause 4.6.

5.1 Subject to the Principal’s instructions as accepted by the Company, the test reports, surveys, certificates of inspection or other material produced by the Company shall contain statements of opinion made with due care within the limitations of the instructions received by the Company. The Company is under no obligation to refer to or report upon any facts or circumstances which are outside the specific instructions received.

5.2 For pre-shipping inspection or survey of goods, the Company’s inspector shall perform the inspection or survey when goods are 100% completed, packed and marked (unless otherwise agreed between the Company and the Principal). Goods for inspection or survey shall be unpacked in the presence of the Company’s inspector and inspection or survey shall, subject to Condition 5.3, take place at the place specified by the Principal.

5.3 If the Company’s inspector finds that the location is not suitable for carrying out a proper inspection or survey of goods or where necessary equipment for inspection or survey is not available the inspector may, if practical in the circumstances, draw samples of goods from the location and carry out the inspection or survey at the premises of the Company. The Principal shall be responsible for all costs and expenses incurred in relation thereto.

5.4 Reports, surveys or certificates issued following testing or analysis of samples contain the Company’s specific opinion on those samples only but do not express any opinion upon the bulk from which the samples were drawn. If an opinion on the bulk is required special arrangements in writing must be made in advance for the Company for the inspection and sampling of the bulk. In no circumstances shall the Company’s responsibility extend beyond inspection, testing and reporting upon the samples actually drawn from the bulk and inspected, tested and surveyed by the Company and any reference to be drawn from the results of such inspection or survey testing shall be entirely in the discretion and at the sole and exclusive responsibility of the Principal.

6. The Company shall be entitled at its discretion to delegate the performance of the whole or any part of the services contracted for with the Principal to any agent or subcontractor.

7. Every officer, employee, agent or subcontractor of the Company shall have the benefit of the limitations of liability and the indemnities contained in the General Conditions. So far as relates to such limitations and indemnities, any contract entered into by the Company is entered into not only on its own behalf but also as agent and trustee for every such person as aforesaid.

8. If the requirements of the Principal necessitate the analysis of samples by the Principal only by any third party the Company will pass on the results of the analysis but without responsibility for its accuracy. Where the Company is only able to witness an analysis by the Principal or by any third party the Company will provide confirmation, if such be the case, that a correct sample has been analysed but will not otherwise be responsible for the accuracy of such analysis.

9.1 Ensure that instructions to the Company are given in due time and are accompanied by sufficient information to enable the required services to be performed effectively.

9.2 Accept that documents reflecting arrangements or agreements made between the Principal and any third party, or third party documents such as copies of contracts of sale, letters of credit, bills of lading, etc. are - if received by the Company considered to be for information only, without extending or restricting the services to be provided or obligations accepted by the Company.

9.3 Ensure all necessary access for the Company’s representatives to enable the required services to be performed effectively.

9.4 Supply, if required, any special equipment and personnel necessary for the performance of the required services.

9.5 Ensure that all necessary measures are taken for safety and security of working conditions, sites and installations during the performance of the required services.
9.6 take all necessary steps to eliminate or remedy any obstruction to or interruptions in the performance of the required services and repack all inspected goods immediately after any inspection or survey of them;

9.7 inform the Company in advance of any known hazards or dangers, actual or potential, associated with any request for the provision of services by the Company including but not limited to the presence or risk of radiation, toxic or noxious or explosive elements or materials, environmental pollution or poisons, including but not limited to any request for the provision of services by the Company including but not limited to the presence or risk of radiation, toxic or noxious or explosive elements or materials, environmental pollution or poisons;

10. The Principal shall guarantee, hold harmless and indemnify the Company and its officers, employees, agents or subcontractors against

demands, claims, or damage suffered by the Company as a result of the provision of services by the Company to the Principal otherwise than resulting from the Company’s own error, negligence or willful default.

11.1 The Principal will punctually pay the Company immediately upon presentation of the relevant invoice or within such other period as may have been agreed in writing by the Company all charges rendered by the Company failing which interest will become due at the rate of 1.5% per cent per month from the date of invoice until payment. The Principal further agrees and undertakes to reimburse the Company all disbursements reasonably incurred in connection with the provision of services.

11.2 The Principal shall not be entitled to retain or defer payment of any sums due to the Company on account of any dispute, cross claim or set off which may allege against the Company.

11.3 In the event of any suspension of payment arrangement with creditors, bankruptcy, insolvency, receivership or cessation of business or failure of the Principal to pay part or all of any sums owing to the Company, the Company shall be entitled to suspend all further performance of its services and withhold the issue of any test report, survey, certificate of inspection or other material requested forthwith and without liability until payment of all sums owing to the Company together with interest thereon is made.

12. Without prejudice to any rights the Company may have at law or under the Conditions, the Company has the following rights in the event of non-payment of sums owing to the Company as set out below.

12.1 The Company has a general and particular lien over all samples delivered to be tested for all claims and sums owing by the Principal to the Company under any contract whatsoever and in any other way whatsoever.

12.2 During the currency of any such lien the Company is entitled to be paid reasonable storage charges for samples retained in the Company’s custody.

12.3 Without prejudice to the Company’s lien and other rights under Conditions 12.1 to 12.2 above, if test, inspection or survey of the goods takes place on the premises of the Company, the Company may give notice to the Principal that the goods (or any part thereof) are ready for collection and the Principal shall collect the same within three (3) calendar days (Saturdays, Sundays and Public Holidays excepted). Upon the expiry of this period, if the goods are not collected by the Principal, at the sole discretion of the Company the goods may be deemed abandoned and/or destroyed.

12.4 Without prejudice to Conditions 12.3 above, the Company shall have the discretion to store the goods (or any of them) at its own premises or elsewhere at the Principal’s expense if the Principal has deposited the goods at the Company’s premises for the performance of these services and has subsequently failed to collect the said goods.

12.5 The expenses by way of disbursements that the Company may reclaim from the Principal include all reasonable costs incurred by the Company (whether by way of storage, insurance or otherwise) in respect of the goods and it is expressly declared that it shall be reasonable but not mandatory for the Company to effect comprehensive insurance in respect of the goods.

12.6 Without prejudice to the Company’s lien and other rights under Conditions 12.1 to 12.5 above, the risk and property in the goods shall remain at all times in the Principal.

13. In the event of the Company being prevented by reason of any cause whatsoever outside the Company’s control from performing or completing any service for which an order has been given or an agreement made, the Principal will pay the Company

13.1 the amount of all abortive expenditure actually made or incurred; and

13.2 a proportion of the agreed fee or commission equal to the proportion (if any) of the service actually earned out, and

14. The Company shall be discharged from all liability to the Principal for all claims for loss, damage or expense unless suit is brought within twelve (12) months after the date of the performance by the Company of the service which gives rise to the claim or in the event of any alleged non-performance within twelve (12) months of the date when such service should have been completed.

15. In the event that any unforeseen additional time or costs are incurred in the course of carrying out any of its services the Company shall be entitled to render additional charges as shall reasonably reflect such additional time and costs incurred.

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