

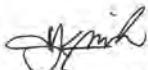


ICP Test Report Certification Packet

Company name: Littelfuse, Inc.
Product Series: L600 Series - 600V Fuse Block for Midget Fuses
Product #: L600xxx-xC
Issue Date: July 28, 2010

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

Issued by:


KRISTEEN BACILA

<Global EHS Engineer>

(1) Parts, sub-materials and unit parts

This document covers the L600 Series - 600V Fuse Block for Midget Fuse 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 :

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Table 1: List of Raw Materials covered by this report

Total Parts	Raw Material Part Number	Raw Material Description	Page(s)
1	902-124	Headless Screw Set	3-7
2	902-122	Type B Self Tapping Philips	8-10
3	880-012	Copper Box Lug	11-16
4	100062	Fuse Clip	17-22
5	868-069	Fuse Block	23-25



Test Report

Applicant: Littelfuse, Inc.
800 E. NORTHWEST HWY
DESPLAINES IL 60016

Number : TWNC00127040

Date : Sep 29, 2009

Sample Description:

One (1) group of submitted samples said to be :

Part Description : Headless Screw
(A)Base material
(B)Plating

Part Number : 902-124

Date Sample Received : Jul 30, 2009 / Sep 23, 2009

Date Test Started : Jul 31, 2009 / Sep 23, 2009

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

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except in full, without the written
approval of the laboratory.



Number : TWNC00127040

Test Conducted

(I) Test Result Summary :

<u>Testing Item</u>	<u>Result (ppm)</u>	
	<u>(A)</u>	<u>(B)</u>
Heavy Metal		
Cadmium (Cd) content	ND	ND
Lead (Pb) content	ND	ND
Mercury (Hg) content	ND	ND
Chromium VI (Cr ⁶⁺) content (mg/kg with 50cm ²)	Negative (< 0.02)	Negative (< 0.02)

Remarks: ppm = Parts per million based on weight of tested sample = mg/kg
ND = Not detected
< = Less than
mg/kg with 50cm² = milligram per kilogram with 50 square centimetre
Negative = A negative test result indicated positive observation
was not found at the time of testing.

Responsibility Of Chemist : Irene Chiou / Kevin Liu / Cathy Chen

Date Sample Received : Jul 30, 2009
Testing Period : Sep 23, 2009 To Sep 28, 2009

(II) RoHS Requirement:

<u>Restricted Substances</u>	<u>Limits</u>
Cadmium (Cd) Content	0.01% (100ppm)
Lead (Pb) Content	0.1% (1000ppm)
Mercury (Hg) Content	0.1% (1000ppm)
Chromium VI (Cr ⁶⁺) Content	0.1% (1000ppm)

The above limits were quoted from 2002/95/EC and amendment 2005/618/EC for homogeneous material.



Number : TWNC00127040

Test Conducted

(III) Test Method:

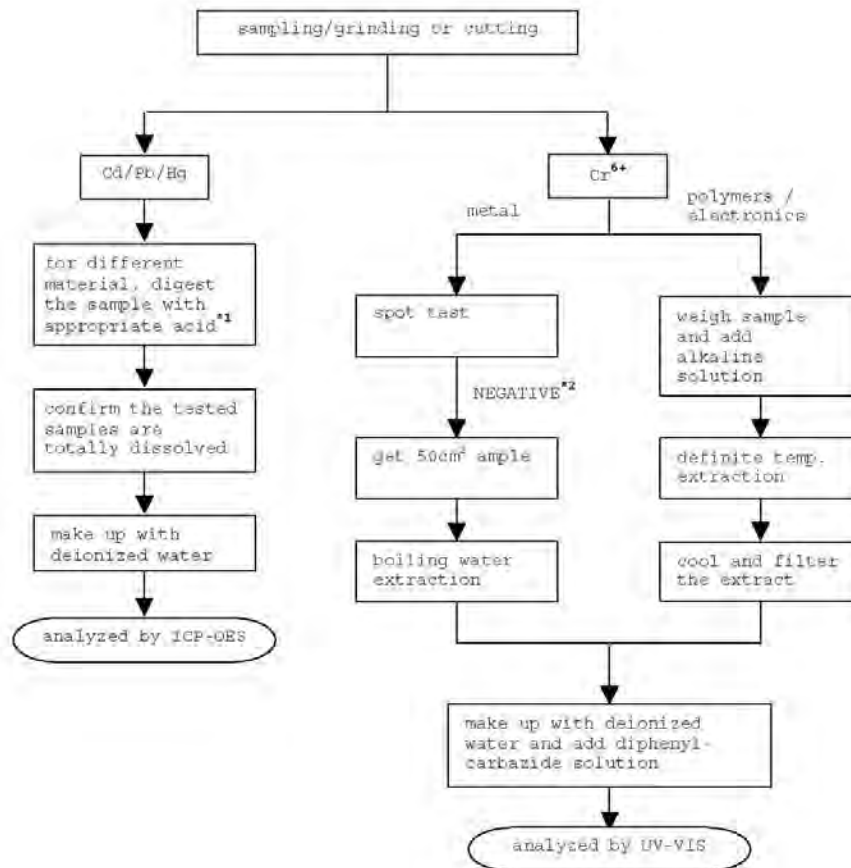
<u>Testing Item</u>	<u>Testing Method</u>	<u>Reporting Limit</u>
Cadmium (Cd) content	With reference to IEC 62321 edition 1.0:2008 in clause 8/9/10, by microwave digestion until the tested samples are totally dissolved and determined by ICP-OES.	2 ppm
Lead (Pb) content	With reference to IEC 62321 edition 1.0:2008 in clause 8/9/10, by microwave digestion until the tested samples are totally dissolved and determined by ICP-OES.	2 ppm
Mercury (Hg) content	With reference to IEC 62321 edition 1.0:2008 in clause 7, by microwave digestion until the tested samples are totally dissolved and determined by ICP-OES.	2 ppm
Chromium VI (Cr ⁶⁺) content	With reference to IEC 62321 edition 1.0:2008 in annex B, by boiling water extraction and determined by UV-Vis spectrophotometer.	0.02 mg/kg with 50cm ²

Remark: Reporting limit = Quantitation limit of analyte in sample

Test Conducted

(IV) Measurement Flowchart:

Test For Cd/Pb/Hg/Chromium (VI)
Reference Standard : IEC 62321 edition 1.0:2008



Remarks:

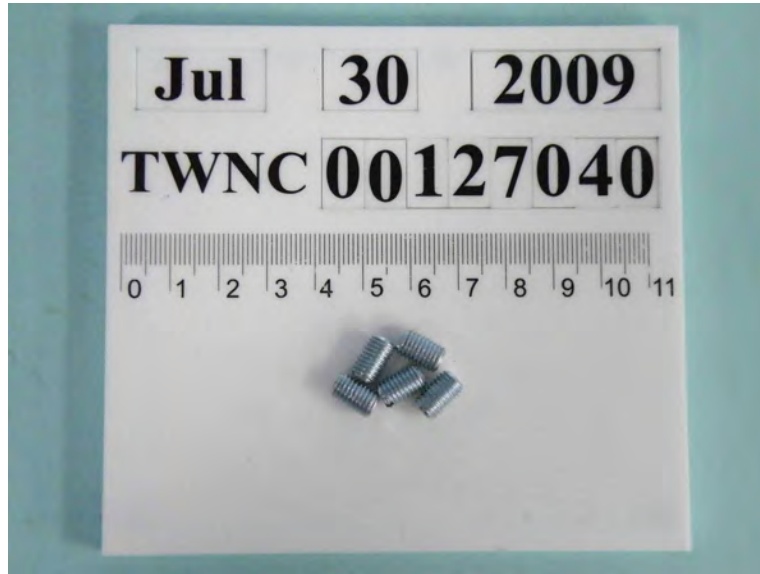
*1: List Of Appropriate Acid:

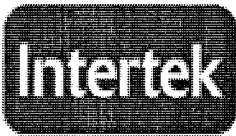
Material	Acid Added For Digestion
Polymers	HNO ₃ , HCl, HF, H ₂ O ₂ , H ₃ BO ₃
Metals	HNO ₃ , HCl, HF
Electronics	HNO ₃ , HCl, H ₂ O ₂ , HBF ₄

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

Test Conducted

Photo





TEST REPORT

APPLICANT

Littelfuse, S.A. de C.V.
Poder Judicial No. 1005, Col. Burócratas, Piedras Negras, Coahuila, C.P. 26020
Berenice Casas / Mario Falcón

SAMPLE DESCRIPTION

One (1) group of submitted samples said to be :

- Sample Description NP
1) P/N: 902-122 Serie: L600XXX-XPQ
2) P/N: 903-117 Serie: L600XXX-XPQ
Item No. 4) P/N: 902-140 Serie L600XXX-XPQ
21) P/N: 868-069 Serie: L600XXX-XPQ

Country of Origin NP
Buyer's Name NP
Supplier's Name NP
Date sample received 2010-04-20
Testing period 2010-04-29 to 2009-05-22

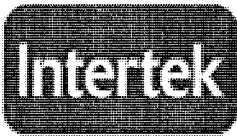
TEST CONDUCTED

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

CONCLUSION

Table with 5 columns: Item No., Testing item, Conclusion, Failed component, Failed result. Rows 1, 2, 4, 21 all show 'Pass' results.

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Report No.: MX10-0928-Serie L600XXX-XPQ

Date : 2010-05-31

TEST CONDUCTED

One (1) group of submitted samples said to be :

- 1) P/N: 902-122 Serie: L600XXX-XPQ
- 2) P/N: 903-117 Serie: L600XXX-XPQ
- 4) P/N: 902-140 Serie L600XXX-XPQ

TEST RESULT SUMMARY FOR RoHS DIRECTIVE :

TESTING ITEM	Ω RESULT (ppm)			Limit #
	(1)	(2)	(4)	
Cadmium (Cd) content	58,493	25,093	15,321	0,01% (100 ppm)
Lead (Pb) content	17,26	5,70	3,661	0,1% (1000 ppm)
Mercury (Hg) content	ND	ND	ND	0,1% (1000 ppm)
Chromium (VI) (Cr ⁶⁺)	0,210	ND	0,043	0,1% (1000 ppm)

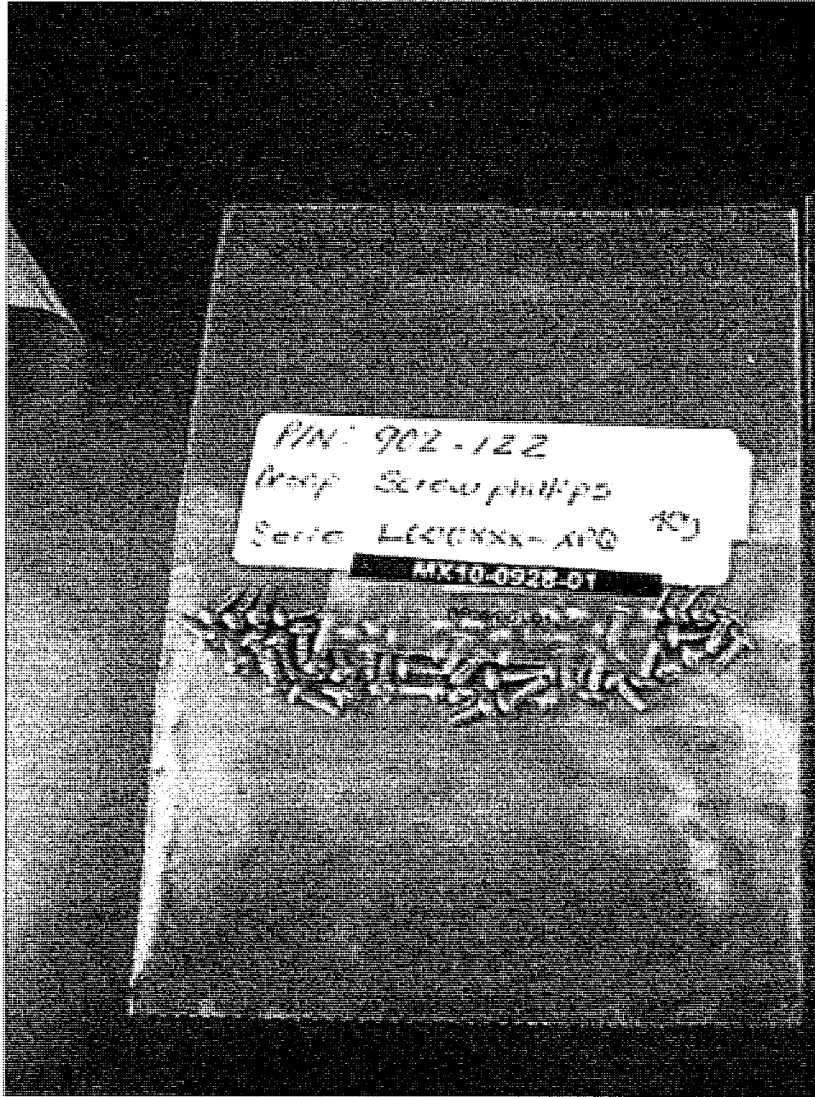
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The results that appear in this report belong solely to (s) shows (s) analyzed (s).

Intertek Testing Services de México, S.A. de C.V.

Bldv. Manuel Ávila Camacho No. 182 Col. Lomas de Chapultepec
C.P. 11650, México, D.F. Tel.: 50912150 Fax: 55407863

www.intertek.com

MX10-0928-01





TEST REPORT

NUMBER : TWNC00104282

APPLICANT: LITTELFUSE, INC.
800 E. NORTHWEST HWY
DESPLAINES IL 60016

DATE : JAN 19, 2009

SAMPLE DESCRIPTION:

ONE (1) GROUP OF SUBMITTED SAMPLES SAID TO BE :
PART DESCRIPTION : COPPER BOX LUG
PART NUMBER : 880-012
FACILITY : PIEDRAS
DATE SAMPLE RECEIVED : JAN 14, 2009
DATE TEST STARTED : JAN 14, 2009

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

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APPROVAL OF THE LABORATORY.



NUMBER : TWNC00104282

TEST CONDUCTED

(I) TEST RESULT SUMMARY :

<u>TESTING ITEM</u>	<u>RESULT (ppm)</u>
	<u>SILVER METAL</u>
HEAVY METAL	
CADMIUM (Cd) CONTENT	ND
LEAD (Pb) CONTENT	11
MERCURY (Hg) CONTENT	ND
CHROMIUM VI (Cr ⁶⁺) CONTENT	ND

REMARKS : ppm = PARTS PER MILLION BASED ON WEIGHT OF TESTED SAMPLE
ND = NOT DETECTED

RESPONSIBILITY OF CHEMIST: IRENE CHIOU / KEVIN LIU

DATE SAMPLE RECEIVED : JAN 14, 2009
TESTING PERIOD : JAN 14, 2009 TO JAN 17, 2009

(II) ROHS REQUIREMENT :

<u>RESTRICTED SUSTANCES</u>	<u>LIMITS</u>
CADMIUM (Cd)	0.01% (100ppm)
LEAD (Pb)	0.1% (1000ppm)
MERCURY (Hg)	0.1% (1000ppm)
CHROMIUM (VI) (Cr ⁶⁺)	0.1% (1000ppm)



NUMBER : TWNC00104282

TEST CONDUCTED

(III) TEST METHOD :

TESTING ITEM	TESTING METHOD	REPORTING LIMIT
CADMIUM (Cd) CONTENT	WITH REFERENCE TO IEC 62321-111/95/CDV IN CLAUES 8/9/10, BY MICROWAVE DIGESTION UNTIL THE TESTED SAMPLES ARE TOTALLY DISSOLVED AND DETERMINED BY ICP-OES	2 ppm
LEAD (Pb) CONTENT	WITH REFERENCE TO IEC 62321-111/95/CDV IN CLAUES 8/9/10, BY MICROWAVE DIGESTION UNTIL THE TESTED SAMPLES ARE TOTALLY DISSOLVED AND DETERMINED BY ICP-OES	2 ppm
MERCURY (Hg) CONTENT	WITH REFERENCE TO IEC 62321-111/95/CDV IN CLAUES 7, BY MICROWAVE DIGESTION UNTIL THE TESTED SAMPLES ARE TOTALLY DISSOLVED AND DETERMINED BY ICP-OES	2 ppm
CHROMIUM VI (Cr ⁶⁺) CONTENT	WITH REFERENCE TO USEPA 3060A & 7196A, BY ALKALINE DIGESTION AND DETERMINED BY UV-VIS SPECTROPHOTOMETER	1 ppm

REMARKS : REPORTING LIMIT = QUANTITATION LIMIT OF ANALYTE IN SAMPLE TESTS WERE CONDUCTED WITH REFERENCE TO 111/95/CDV VERSION 2007-10-12 WHICH IS STILL A DRAFT METHOD AND SUBJECT TO FUTURE CHANGES PRIOR TO PUBLICATION.



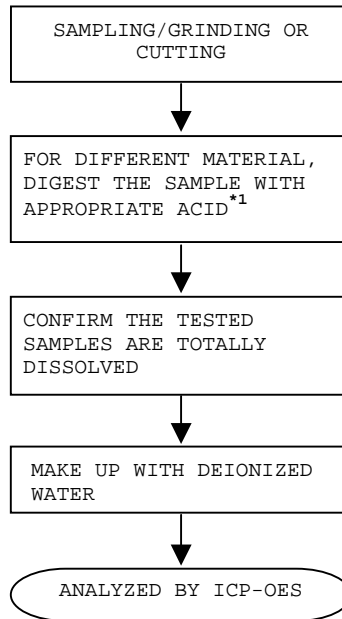
NUMBER : TWNC00104282

TEST CONDUCTED

(IV) MEASUREMENT FLOWCHART:

TEST FOR Cd/Pb/Hg

REFERENCE STANDARD : IEC 62321 (111/95/CDV)



REMARKS:

*1: LIST OF APPROPRIATE ACID :

<u>MATERIAL</u>	<u>ACID ADDED FOR DIGESTION</u>
POLYMERS	HNO ₃ , HCl, HF, H ₂ O ₂ , H ₃ BO ₃
METALS	HNO ₃ , HCl, HF
ELECTRONICS	HNO ₃ , HCl, H ₂ O ₂ , HBF ₄



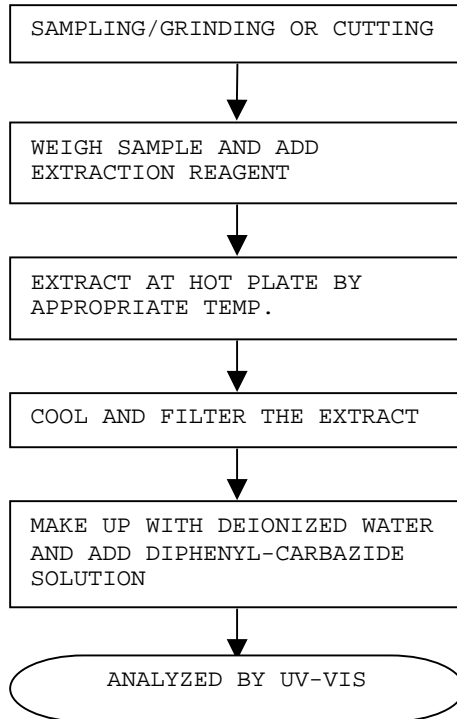
NUMBER : TWNC00104282

TEST CONDUCTED

(IV) MEASUREMENT FLOWCHART:

TEST FOR CHROMIUM (VI) CONTENT

REFERENCE STANDARD : USEPA 3060A/7196A



END OF REPORT

TEST CONDUCTED

PHOTO





TEST REPORT

NUMBER : TWNC00104284

APPLICANT: LITTELFUSE, INC.
800 E. NORTHWEST HWY
DESPLAINES IL 60016

DATE : JAN 19, 2009

SAMPLE DESCRIPTION:

ONE (1) GROUP OF SUBMITTED SAMPLES SAID TO BE :
PART DESCRIPTION : CLASS CC FUSE CLIP
PART NUMBER : 100062
FACILITY : PIEDRAS
DATE SAMPLE RECEIVED : JAN 14, 2009
DATE TEST STARTED : JAN 14, 2009

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

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APPROVAL OF THE LABORATORY.



NUMBER : TWNC00104284

TEST CONDUCTED

(I) TEST RESULT SUMMARY :

<u>TESTING ITEM</u>	<u>RESULT (ppm)</u>
	<u>SILVER METAL</u>
HEAVY METAL	
CADMIUM (Cd) CONTENT	ND
LEAD (Pb) CONTENT	11
MERCURY (Hg) CONTENT	ND
CHROMIUM VI (Cr ⁶⁺) CONTENT	ND

REMARKS : ppm = PARTS PER MILLION BASED ON WEIGHT OF TESTED SAMPLE
ND = NOT DETECTED

RESPONSIBILITY OF CHEMIST: IRENE CHIOU / KEVIN LIU

DATE SAMPLE RECEIVED : JAN 14, 2009
TESTING PERIOD : JAN 14, 2009 TO JAN 17, 2009

(II) ROHS REQUIREMENT :

<u>RESTRICTED SUSTANCES</u>	<u>LIMITS</u>
CADMIUM (Cd)	0.01% (100ppm)
LEAD (Pb)	0.1% (1000ppm)
MERCURY (Hg)	0.1% (1000ppm)
CHROMIUM (VI) (Cr ⁶⁺)	0.1% (1000ppm)



NUMBER : TWNC00104284

TEST CONDUCTED

(III) TEST METHOD :

TESTING ITEM	TESTING METHOD	REPORTING LIMIT
CADMIUM (Cd) CONTENT	WITH REFERENCE TO IEC 62321-111/95/CDV IN CLAUES 8/9/10, BY MICROWAVE DIGESTION UNTIL THE TESTED SAMPLES ARE TOTALLY DISSOLVED AND DETERMINED BY ICP-OES	2 ppm
LEAD (Pb) CONTENT	WITH REFERENCE TO IEC 62321-111/95/CDV IN CLAUES 8/9/10, BY MICROWAVE DIGESTION UNTIL THE TESTED SAMPLES ARE TOTALLY DISSOLVED AND DETERMINED BY ICP-OES	2 ppm
MERCURY (Hg) CONTENT	WITH REFERENCE TO IEC 62321-111/95/CDV IN CLAUES 7, BY MICROWAVE DIGESTION UNTIL THE TESTED SAMPLES ARE TOTALLY DISSOLVED AND DETERMINED BY ICP-OES	2 ppm
CHROMIUM VI (Cr ⁶⁺) CONTENT	WITH REFERENCE TO USEPA 3060A & 7196A, BY ALKALINE DIGESTION AND DETERMINED BY UV-VIS SPECTROPHOTOMETER	1 ppm

REMARKS : REPORTING LIMIT = QUANTITATION LIMIT OF ANALYTE IN SAMPLE TESTS WERE CONDUCTED WITH REFERENCE TO 111/95/CDV VERSION 2007-10-12 WHICH IS STILL A DRAFT METHOD AND SUBJECT TO FUTURE CHANGES PRIOR TO PUBLICATION.



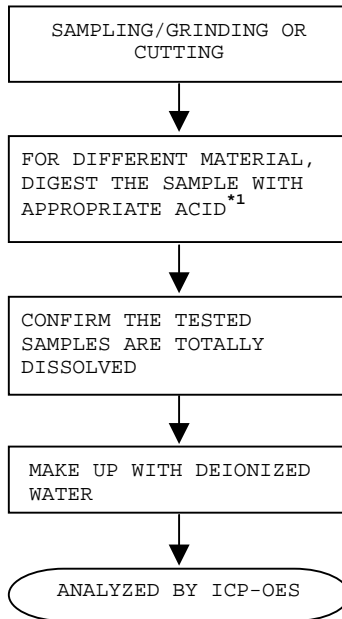
NUMBER : TWNC00104284

TEST CONDUCTED

(IV) MEASUREMENT FLOWCHART:

TEST FOR Cd/Pb/Hg

REFERENCE STANDARD : IEC 62321 (111/95/CDV)



REMARKS:

*1: LIST OF APPROPRIATE ACID :

<u>MATERIAL</u>	<u>ACID ADDED FOR DIGESTION</u>
POLYMERS	HNO ₃ , HCl, HF, H ₂ O ₂ , H ₃ BO ₃
METALS	HNO ₃ , HCl, HF
ELECTRONICS	HNO ₃ , HCl, H ₂ O ₂ , HBF ₄

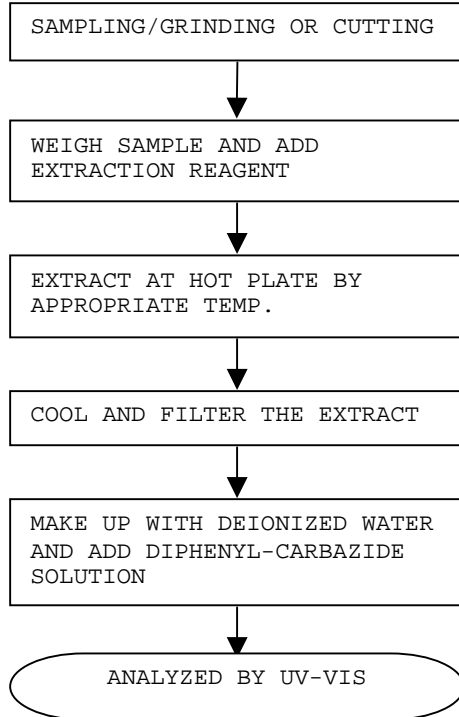


NUMBER : TWNC00104284

TEST CONDUCTED

(IV) MEASUREMENT FLOWCHART:

TEST FOR CHROMIUM (VI) CONTENT
REFERENCE STANDARD : USEPA 3060A/7196A

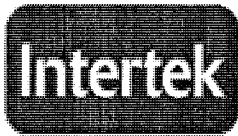


END OF REPORT

TEST CONDUCTED

PHOTO





TEST REPORT

APPLICANT

Littelfuse, S.A. de C.V.
Poder Judicial No. 1005, Col. Burócratas, Piedras Negras, Coahuila, C.P. 26020
Berenice Casas / Mario Falcón

SAMPLE DESCRIPTION

One (1) group of submitted samples said to be :

- Sample Description NP
1) P/N: 902-122 Serie: L600XXX-XPQ
2) P/N: 903-117 Serie: L600XXX-XPQ
Item No. 4) P/N: 902-140 Serie L600XXX-XPQ
21) P/N: 868-069 Serie: L600XXX-XPQ

Country of Origin NP
Buyer's Name NP
Supplier's Name NP
Date sample received 2010-04-20
Testing period 2010-04-29 to 2009-05-22

TEST CONDUCTED

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

CONCLUSION

Table with 5 columns: Item No., Testing item, Conclusion, Failed component, Failed result. Rows 1, 2, 4, 21 all show 'Pass' results.

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Report No.: MX10-0928-Serie L600XXX-XPQ

Date : 2010-05-31

TEST CONDUCTED

One (1) group of submitted samples said to be :

21) P/N: 868-069 Serie: L600XXX-XPQ

TEST RESULT SUMMARY FOR RoHS DIRECTIVE :

TESTING ITEM	Ω RESULT (ppm)	Limit #
	(21)	
Cadmium (Cd) content	ND	0,01% (100 ppm)
Lead (Pb) content	13,39	0,1% (1000 ppm)
Mercury (Hg) content	ND	0,1% (1000 ppm)
Chromium (VI) (Cr ⁶⁺)	ND	0,1% (1000 ppm)
POLYBROMINATED BIPHENYLS (PBBs)	ND	0,1% (1000 ppm)
Monobromobiphenyl (MonoBB)	ND	---
Dibromobiphenyl (DiBB)	ND	---
Tribromobiphenyl (TriBB)	ND	---
Tetrabromobiphenyl (TetraBB)	ND	---
Pentabromobiphenyl (PentaBB)	ND	---
Hexabromobiphenyl (HexaBB)	ND	---
Heptabromobiphenyl (HeptaBB)	ND	---
Octabromobiphenyl (OctaBB)	ND	---
Nonabromobiphenyl (NonaBB)	ND	---
Decabromobiphenyl (DecaBB)	ND	---
POLYBROMINATED DIPHENYL ETHERS (PBDEs)	ND	0,1% (1000 ppm)
Monobromodiphenyl (MonoBDE)	ND	---
Dibromodiphenyl (DiBDE)	ND	---
Tribromodiphenyl (TriBDE)	ND	---
Tetrabromodiphenyl (TetraBDE)	ND	---
Pentabromodiphenyl (PentaBDE)	ND	---
Hexabromodiphenyl (HexaBDE)	ND	---
Heptabromodiphenyl (HeptaBDE)	ND	---
Octabromodiphenyl (OctaBDE)	ND	---
Nonabromodiphenyl (NonaBDE)	ND	---
Decabromodiphenyl (DecaBDE)	ND	---

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Intertek Testing Services de México, S.A. de C.V.

Bldv. Manuel Ávila Camacho No. 182 Col. Lomas de Chapultepec
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MX10-0928-21

