



ICP Test Report Certification Packet

Company name: Littelfuse, Inc.

Product Series: Midi Fuse

Product #: 498xxx Series

Issue Date: October 17, 2012

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: 
KRISTEEN BACILA

<Global EHS Engineer>

(1) Parts, sub-materials and unit parts

This document covers the Midi 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 :

Table 1: List of Raw Materials covered by this report

Total Parts	Raw Material Part Number	Raw Material Description	Page(s)
1	425740	Yellow Hot Stamp Foil	3-8
2	425744	Pink Hot Stamp Foil	9-17
3	425743	Blue Hot Stamp Foil	18-26
4	425738	Green Hot Stamp Foil	27-32
5	425739	Red Hot Stamp Foil	33-41
6	425745	Grey Hot Stamp Foil	42-50
7	425741	Brown Hot Stamp Foil	51-60
8	425737	Orange Hot Stamp Foil	61-66
9	425746	Violet Hot Stamp Foil	67-72
10	425747	Black Hot Stamp Foil	73-81
11	425498	White Hot Stamp Foil	82-90
12	692305	Solder	91-95
13	057352	Molding Compound	96-104
14	920-471-xxx	Element-Cu Ca 110 Sn Plated	105-109

TEST REPORT**APPLICANT**

Littelfuse, S.A. de C.V.
Blvd. Fausto Z. Martínez 1800, Col. Magisterio Sección 38, Piedras Negras, Coahuila
Ing. María Valdez

SAMPLE DESCRIPTION

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

Sample Description P.N. 425XXX

Item No. 1) P/N 425740 Hot Stamp Foil Yellow

Country of Origin NP

Buyer's Name NP

Supplier's Name NP

Date sample received 2011-07-08

Testing period 2011-07-12 to 2011-07-27

TEST CONDUCTED

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

CONCLUSION

<u>Sample Number</u>	<u>Testing item</u>	<u>Conclusion</u>	<u>Failed component</u>	<u>Failed result</u>
1	P/N 425740 Hot Stamp Foil Yellow	Pass See Result summary	---	---

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TEST CONDUCTED

Samples:

- 1) P/N 425740 Hot Stamp Foil Yellow

TEST RESULT SUMMARY FOR RoHS DIRECTIVE :

TESTING ITEM	Ω RESULT (ppm)	Limit
	(1)	
Cadmium (Cd) content	ND	0,01% (100 ppm)
Lead (Pb) content	12,92	0,1% (1000 ppm)
Mercury (Hg) content	ND	0,1% (1000 ppm)
Chromium (VI) (Cr ⁶⁺)	ND	0,1% (1000 ppm)
▲ POLYBROMINATED BIPHENYLS (PBBs) Total	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) Total	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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1ª. Emisión Junio 2005, 1ª Revisión Junio 26, 2009.

ILTA/003/GENS-F8

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Poniente 134 No. 660, Col. Industrial Vallejo
C.P. 02300, Del. Azcapotzalco, México, D.F. Tel.: 50912150

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TESTING ITEM	▲ RESULT (ppm)
	(1)
Fluor (F) content	ND
Chlorine (Cl) content	11 138
Bromine (Br) content	ND
Iodine (I) content	ND

▲ = Contrated test.

ppm = parts per million based on dry weight of sample.

µg/cm² = microgram per square centimeter.

mg/kg WITH 50cm² = milligram per kilogram with 50 square centimeter.

< = less than.

ND = Not detected.

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

These Accreditations only apply for the methods listed in such. Not accredited under EMA Ω.

Prepared and checked by :

For Intertek

Iraa Lopez
[Signature]
co-d de area

Laboratory Manager

The Official Mexican Standard NOM-008-SCFI-1993 establishes like separator decimal the comma (,).

NOTE :DecaBDE IN POLYMERIC APPLICATIONS IS EXEMPTED ACCORDING TO ROHS DIRECTIVE AMENDMENT 2005/717/EC.

=ACCORDING TO IEC 62321, A POSITIVE RESULT INDICATES THE PRESENCE OF Cr(VI) COATING. IT IS THE Cr(VI) CONCENTRATION DETECTED IN THE BOILING-WATER-EXTRACTION SOLUTION AND SHOULD NOT BE INTERPRETED AS THE Cr(VI) CONCENTRATION IN THE COATING LAYER OF THE SAMPLE.

REMARK : AS REQUESTED BY THE APPLICANT, COATING WITH BASE MATERIAL OF TESTED COMPONENTS OF THE SAMPLE MX11-1528-01 WERE TESTED TOGETHER.

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[Signature]



Report No.: MX11-1528

Date : 2011-07-28

Test method :

<u>Sample Number</u>	<u>Testing item</u>	<u>Ω Testing method</u>	<u>Quality control Batch:</u>	<u>Analysis Date:</u>	<u>Analyzed By:</u>	<u>Reporting limit ppm</u>
1	Chromium VI (Cr ⁶⁺) content	With reference to USEPA 3060, by EPA 7196	QHU2010-61p90	2011-07-15	AGM	20,0

<u>Sample Number</u>	<u>Testing item</u>	<u>Ω Testing method</u>	<u>Quality control Batch:</u>	<u>Analysis Date:</u>	<u>Analyzed By:</u>	<u>Reporting limit ppm</u>
1	POLYBROMINATE D BIPHENYLS (PBBs)	Determined by GC-MSD	2011-000443-PCL	2011-07-27	▲ CONT	50,0
1	POLYBROMINATE D DIPHENYL ETHERS (PBDEs)	Determined by GC-MSD	2011-000443-PCL	2011-07-27	▲ CONT	50,0

<u>Sample Number</u>	<u>Testing item</u>	<u>Ω Testing method</u>	<u>Quality control Batch:</u>	<u>Analysis Date:</u>	<u>Analyzed By:</u>	<u>Reporting limit ppm</u>
1	Lead (Pb) content	With reference to USEPA 3052, by EPA 6010	MET2011-12p34	2011-07-13	MARY	5,0

<u>Sample Number</u>	<u>Testing item</u>	<u>Ω Testing method</u>	<u>Quality control Batch:</u>	<u>Analysis Date:</u>	<u>Analyzed By:</u>	<u>Reporting limit ppm</u>
1	Cadmium (Cd) content	With reference to USEPA 3052, by EPA 6010	MET2011-12p34	2011-07-13	MARY	2,0

<u>Sample Number</u>	<u>Testing item</u>	<u>Ω Testing method</u>	<u>Quality control Batch:</u>	<u>Analysis Date:</u>	<u>Analyzed By:</u>	<u>Reporting limit ppm</u>
1	Mercury (Hg) content	With reference to USEPA 7471 by USEPA 7471	MET2011-12p36	2011-07-14	RNC	0,25

<u>Sample Number</u>	<u>Testing item</u>	<u>▲ Testing method</u>	<u>Quality control Batch:</u>	<u>Analysis Date:</u>	<u>Analyzed By:</u>	<u>Reporting limit ppm</u>
1	Fluor	With reference to EN 14582:2007 by calorimetric bomb method with oxygen and determined by ion chromatography	2011-000443-PCL	2011-07-27	▲ CONT	30
1	Chlorine	With reference to EN 14582:2007 by calorimetric bomb method with oxygen and determined by ion chromatography	2011-000443-PCL	2011-07-27	▲ CONT	30
1	Bromine	With reference to EN 14582:2007 by calorimetric bomb method with oxygen and determined by ion chromatography	2011-000443-PCL	2011-07-27	▲ CONT	30
1	Iodine	With reference to EN 14582:2007 by calorimetric bomb method with oxygen and determined by ion chromatography	2011-000443-PCL	2011-07-27	▲ CONT	30

000005

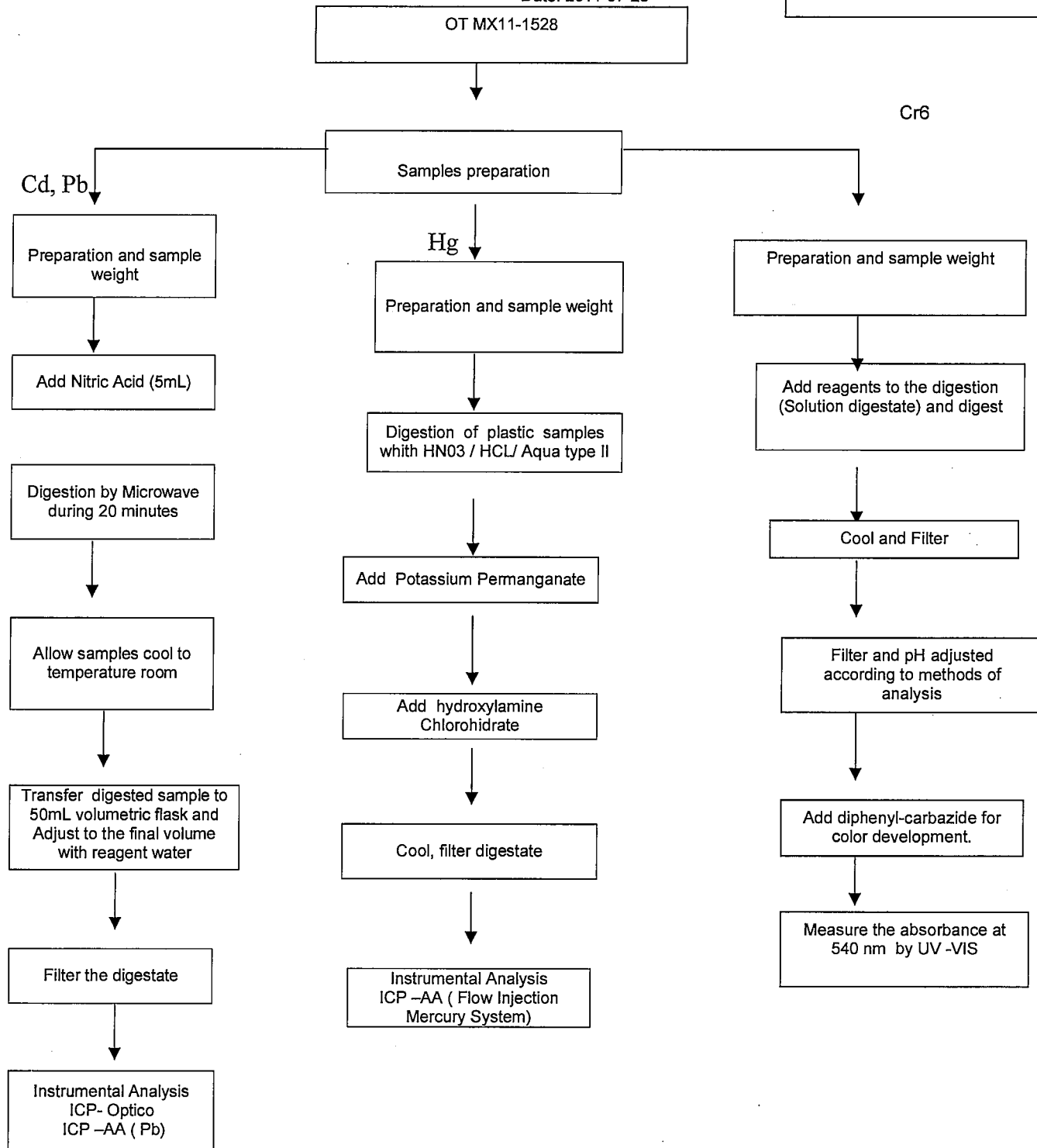
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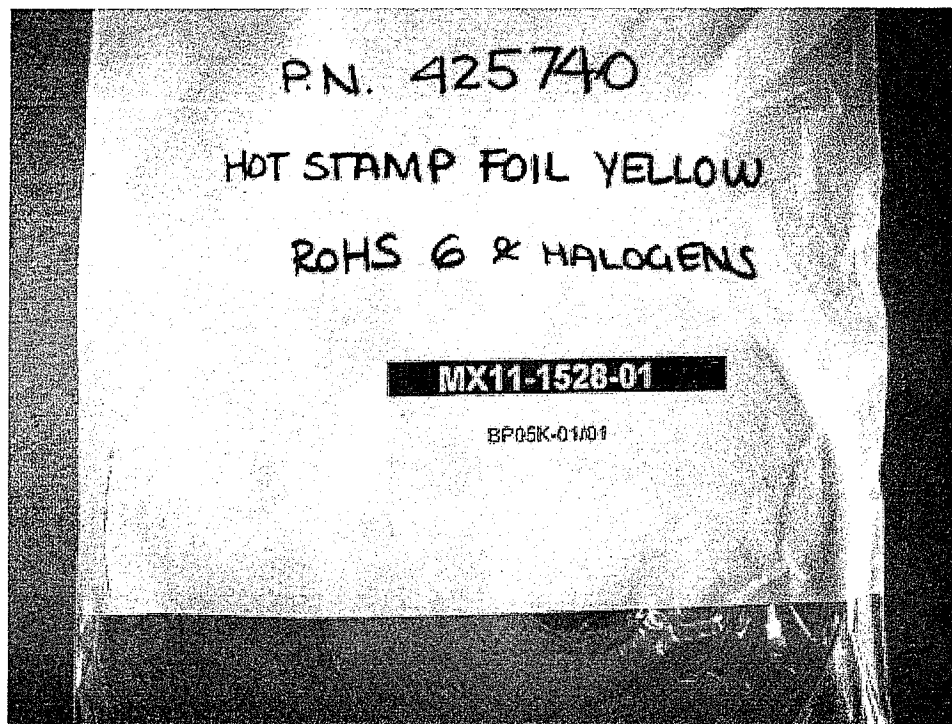
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Test Report

Number : TWNC00279948

Applicant: Littelfuse, S.A. de C.V.
Blvd. Fausto Z. Martinez #1800
Col. Magisterio Seccion 38 C.P.
26070 Piedra Negras, Coahuila,
Mexico

Date : Oct 12, 2012

Sample Description:

One (1) group of submitted samples said to be :
Part Description : HOT STAMP FOIL: PINK
Part Number : 425744
Date Sample Received : Oct 04, 2012
Date Test Started : Oct 05, 2012

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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Page 1 of 9

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Number : TWNC00279948

Test Conducted

(I) Test Result Summary :

Test Item	Result (ppm)
	Pink Plastic Film
Heavy Metal	
Cadmium (Cd) content	ND
Lead (Pb) content	ND
Mercury (Hg) content	ND
Chromium VI (Cr ⁶⁺) content	ND
Polybrominated Biphenyls (PBBs)	
Monobrominated Biphenyls (MonoBB)	ND
Dibrominated Biphenyls (DiBB)	ND
Tribrominated Biphenyls (TriBB)	ND
Tetrabrominated Biphenyls (TetraBB)	ND
Pentabrominated Biphenyls (PentaBB)	ND
Hexabrominated Biphenyls (HexaBB)	ND
Heptabrominated Biphenyls (HeptaBB)	ND
Octabrominated Biphenyls (OctaBB)	ND
Nonabrominated Biphenyls (NonaBB)	ND
Decabrominated Biphenyl (DecaBB)	ND
Polybrominated Diphenyl Ethers (PBDEs)	
Monobrominated Diphenyl Ethers (MonoBDE)	ND
Dibrominated Diphenyl Ethers (DiBDE)	ND
Tribrominated Diphenyl Ethers (TriBDE)	ND
Tetrabrominated Diphenyl Ethers (TetraBDE)	ND
Pentabrominated Diphenyl Ethers (PentaBDE)	ND
Hexabrominated Diphenyl Ethers (HexaBDE)	ND
Heptabrominated Diphenyl Ethers (HeptaBDE)	ND
Octabrominated Diphenyl Ethers (OctaBDE)	ND
Nonabrominated Diphenyl Ethers (NonaBDE)	ND
Decabrominated Diphenyl Ether (DecaBDE)	ND
Halogen Content	
Fluorine (F)	ND
Chlorine (Cl)	9851
Bromine (Br)	ND
Iodine (I)	ND



Page 2 of 9

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Number : TWNC00279948

Test Conducted

(I) Test Result Summary :

<u>Test Item</u>	<u>Result (ppm)</u>
	<u>Pink Plastic Film</u>
Phthalates	
Di(2-ethylhexyl) Phthalate (DEHP)	ND
Dibutyl Phthalate (DBP)	ND
Benzyl Butyl Phthalate (BBP)	ND
Others	
Hexabromocyclododecane (HBCDD)	ND

Remarks: ppm = Parts per million based on weight of tested sample = mg/kg
 ND = Not detected

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

Date Sample Received : Oct 04, 2012

Test Period : Oct 05, 2012 To Oct 12, 2012

(II) RoHS Limits:

<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)
Polybrominated Biphenyls (PBBs)	0.1% (1000ppm)
Polybrominated Diphenyl Ehters (PBDEs)	0.1% (1000ppm)

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



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Test Conducted

(III) Test Method:

Test Item	Test Method	Reporting Limit
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 C, by alkaline digestion and determined by UV-Vis spectrophotometer.	1 ppm
Polybrominated Biphenyls (PBBs)	With reference to IEC 62321 edition 1.0:2008 in annex A, by solvent extraction and determined by GC-MS and further HPLC-DAD confirmation when necessary.	5 ppm
Polybrominated Diphenyl Ethers (PBDEs)	With reference to IEC 62321 edition 1.0:2008 in annex A, by solvent extraction and determined by GC-MS and further HPLC-DAD confirmation when necessary.	5 ppm
Halogen Content	With reference to EN 14582:2007 by calorimetric bomb with oxygen and determined by Ion Chromatograph.	50 ppm
Phthalates	With reference to EN 14372: 2004, by solvent extraction and determined by GC-MS.	50 ppm
Hexabromocyclododecane (HBCDD)	With reference to USEPA 3540C, by solvent extraction and determined by GC-MSD.	10 ppm

Remark: Reporting limit = Quantitation limit of analyte in sample

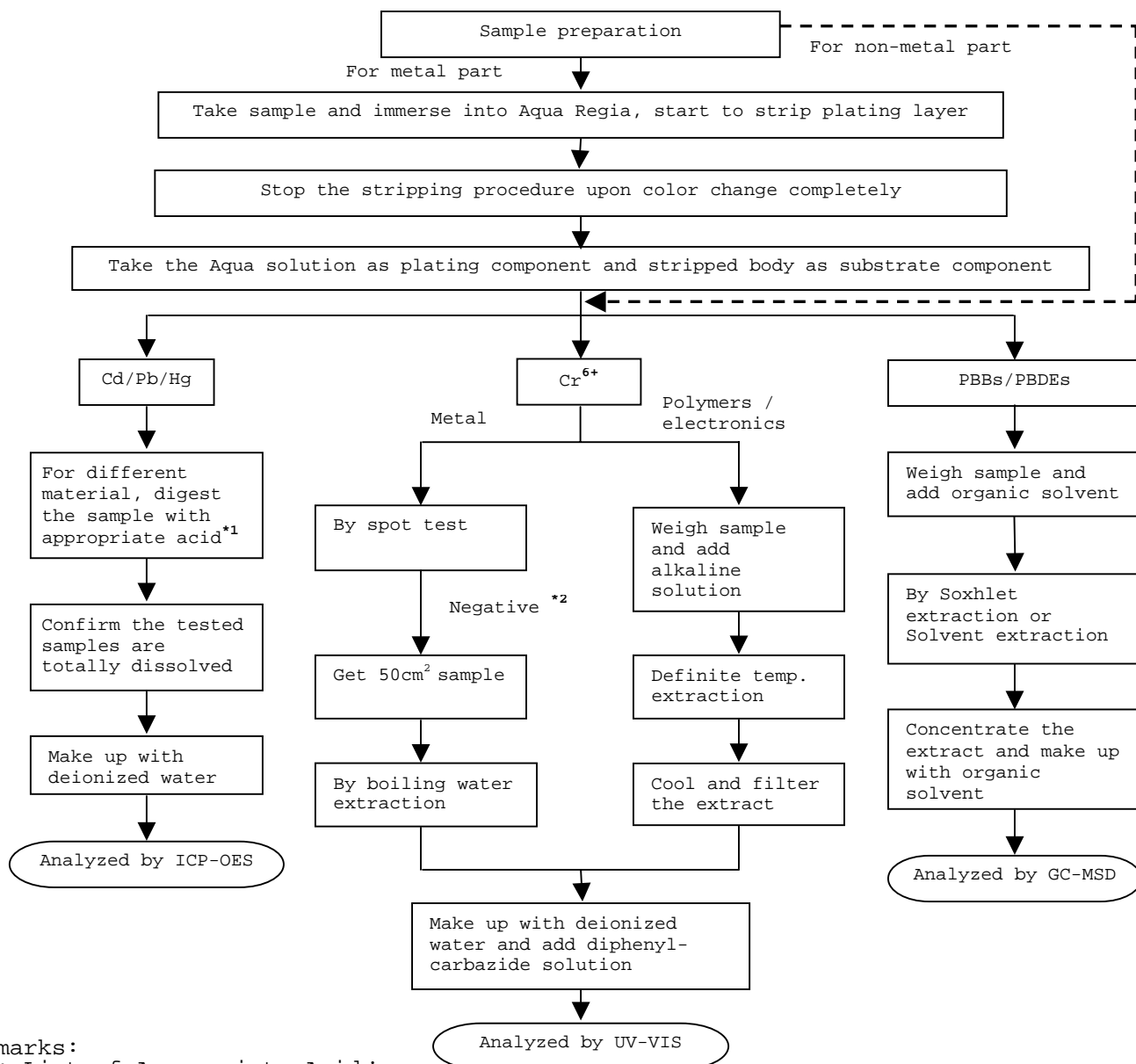


Test Conducted

(IV) Measurement Flowchart:

Test for Cd/Pb/Hg/Chromium (VI)/PBBS/PBDES Contents

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.

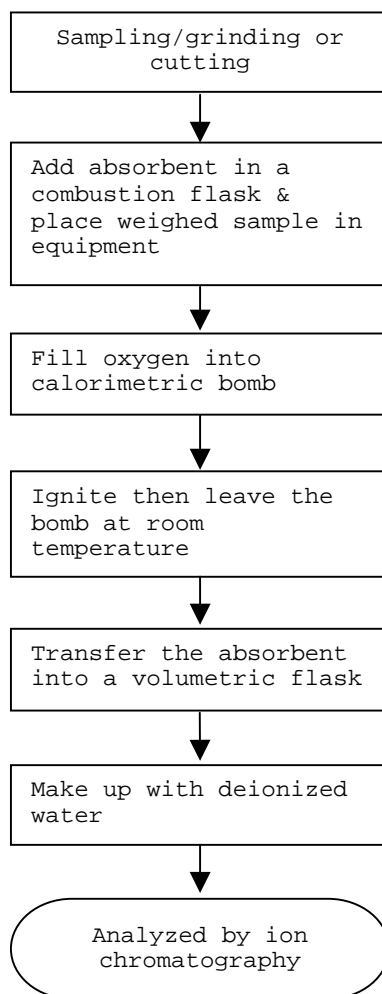


Test Conducted

(IV) Measurement Flowchart:

Test for Halogen Content

Reference Standard : EN 14582

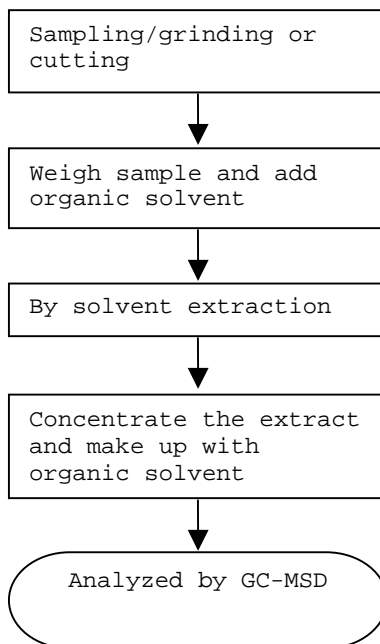


Test Conducted

(IV) Measurement Flowchart:

Test For Phthalates Contents

Reference Method: EN 14372: 2004

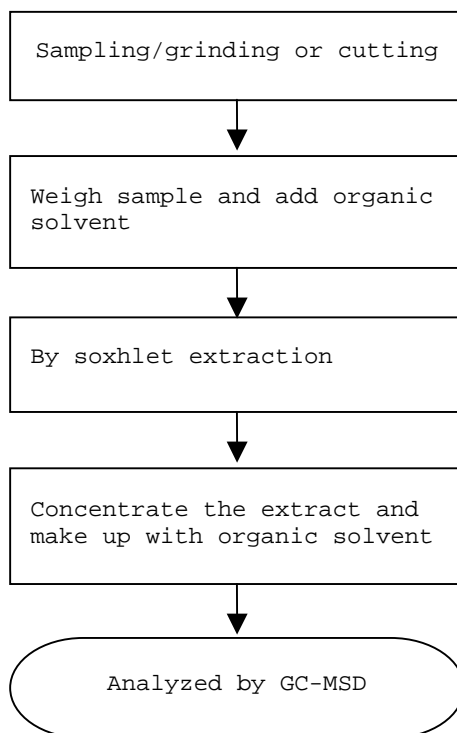


Test Conducted

(IV) Measurement Flowchart:

Test For Hexabromocyclododecane (HBCDD)

Reference Standard : USEPA 3540C



End of Report

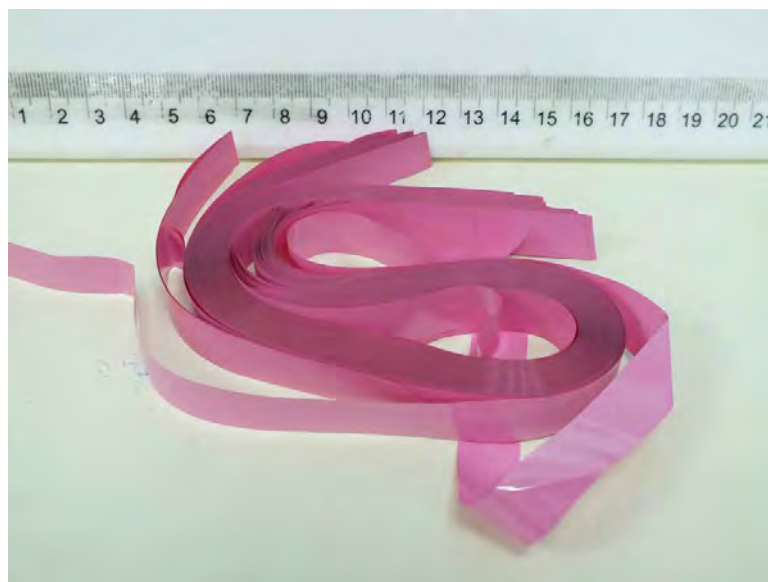
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Test Conducted

Number : TWNC00279948

Photo





Test Report

Number : TWNC00279947

Applicant: Littelfuse, S.A. de C.V.
Blvd. Fausto Z. Martinez #1800
Col. Magisterio Seccion 38 C.P.
26070 Piedra Negras, Coahuila,
Mexico

Date : Oct 12, 2012

Sample Description:

One (1) group of submitted samples said to be :
Part Description : HOT STAMP FOIL: BLUE
Part Number : 425743
Date Sample Received : Oct 04, 2012
Date Test Started : Oct 05, 2012

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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Number : TWNC00279947

Test Conducted

(I) Test Result Summary :

Test Item	Result (ppm)
	Blue Plastic Film
Heavy Metal	
Cadmium (Cd) content	ND
Lead (Pb) content	ND
Mercury (Hg) content	ND
Chromium VI (Cr ⁶⁺) content	ND
Polybrominated Biphenyls (PBBs)	
Monobrominated Biphenyls (MonoBB)	ND
Dibrominated Biphenyls (DiBB)	ND
Tribrominated Biphenyls (TriBB)	ND
Tetrabrominated Biphenyls (TetraBB)	ND
Pentabrominated Biphenyls (PentaBB)	ND
Hexabrominated Biphenyls (HexaBB)	ND
Heptabrominated Biphenyls (HeptaBB)	ND
Octabrominated Biphenyls (OctaBB)	ND
Nonabrominated Biphenyls (NonaBB)	ND
Decabrominated Biphenyl (DecaBB)	ND
Polybrominated Diphenyl Ethers (PBDEs)	
Monobrominated Diphenyl Ethers (MonoBDE)	ND
Dibrominated Diphenyl Ethers (DiBDE)	ND
Tribrominated Diphenyl Ethers (TriBDE)	ND
Tetrabrominated Diphenyl Ethers (TetraBDE)	ND
Pentabrominated Diphenyl Ethers (PentaBDE)	ND
Hexabrominated Diphenyl Ethers (HexaBDE)	ND
Heptabrominated Diphenyl Ethers (HeptaBDE)	ND
Octabrominated Diphenyl Ethers (OctaBDE)	ND
Nonabrominated Diphenyl Ethers (NonaBDE)	ND
Decabrominated Diphenyl Ether (DecaBDE)	ND
Halogen Content	
Fluorine (F)	ND
Chlorine (Cl)	14246
Bromine (Br)	ND
Iodine (I)	ND



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Number : TWNC00279947

Test Conducted

(I) Test Result Summary :

<u>Test Item</u>	<u>Result (ppm)</u>
	<u>Blue Plastic Film</u>
Phthalates	
Di(2-ethylhexyl) Phthalate (DEHP)	ND
Dibutyl Phthalate (DBP)	ND
Benzyl Butyl Phthalate (BBP)	ND
Others	
Hexabromocyclododecane (HBCDD)	ND

Remarks: ppm = Parts per million based on weight of tested sample = mg/kg
 ND = Not detected

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

Date Sample Received : Oct 04, 2012

Test Period : Oct 05, 2012 To Oct 12, 2012

(II) RoHS Limits:

<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)
Polybrominated Biphenyls (PBBs)	0.1% (1000ppm)
Polybrominated Diphenyl Ehters (PBDEs)	0.1% (1000ppm)

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



Page 3 of 9

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Test Conducted

(III) Test Method:

Test Item	Test Method	Reporting Limit
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 C, by alkaline digestion and determined by UV-Vis spectrophotometer.	1 ppm
Polybrominated Biphenyls (PBBs)	With reference to IEC 62321 edition 1.0:2008 in annex A, by solvent extraction and determined by GC-MS and further HPLC-DAD confirmation when necessary.	5 ppm
Polybrominated Diphenyl Ethers (PBDEs)	With reference to IEC 62321 edition 1.0:2008 in annex A, by solvent extraction and determined by GC-MS and further HPLC-DAD confirmation when necessary.	5 ppm
Halogen Content	With reference to EN 14582:2007 by calorimetric bomb with oxygen and determined by Ion Chromatograph.	50 ppm
Phthalates	With reference to EN 14372: 2004, by solvent extraction and determined by GC-MS.	50 ppm
Hexabromocyclododecane (HBCDD)	With reference to USEPA 3540C, by solvent extraction and determined by GC-MSD.	10 ppm

Remark: Reporting limit = Quantitation limit of analyte in sample

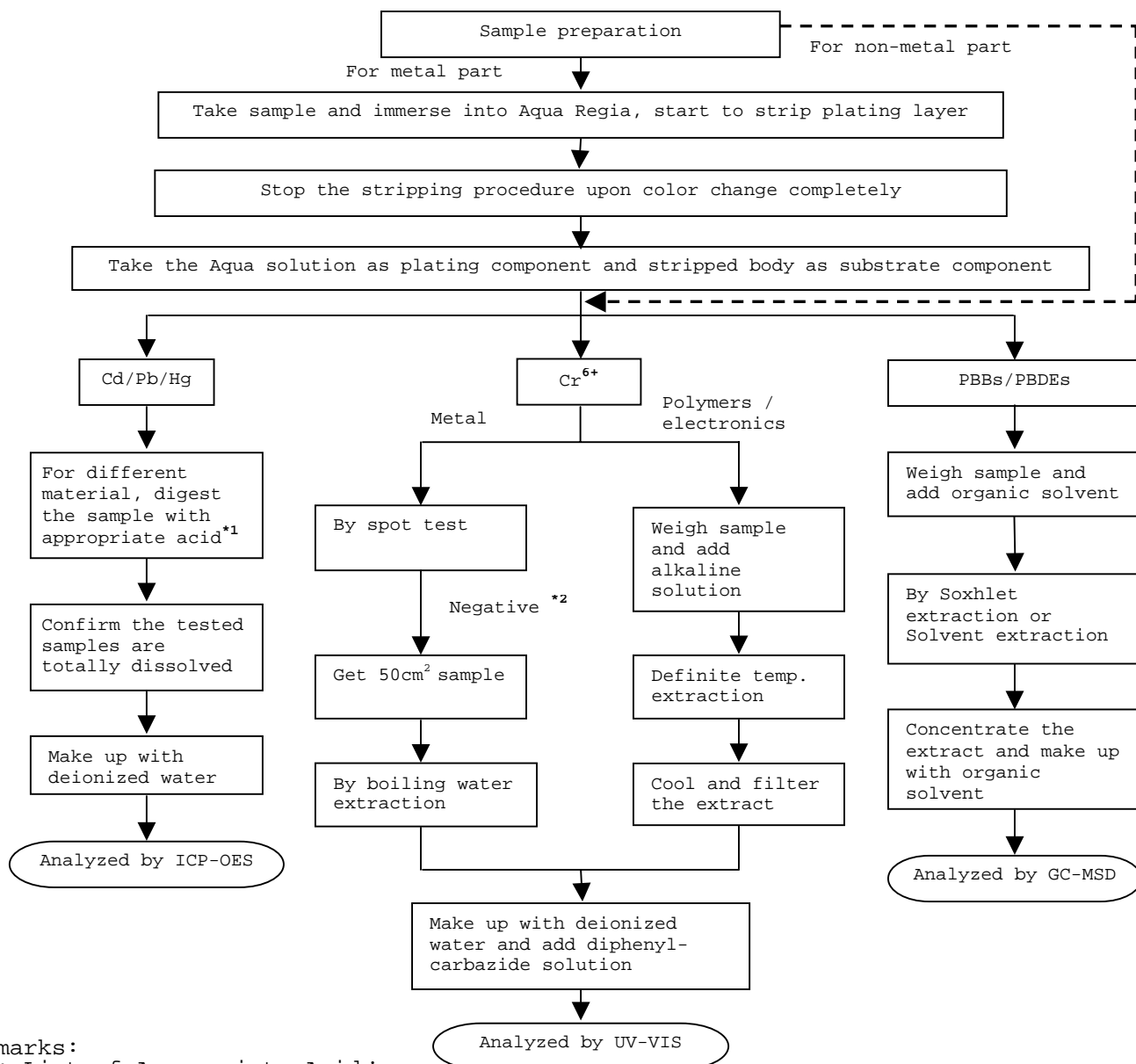


Test Conducted

(IV) Measurement Flowchart:

Test for Cd/Pb/Hg/Chromium (VI)/PBBS/PBDES Contents

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.

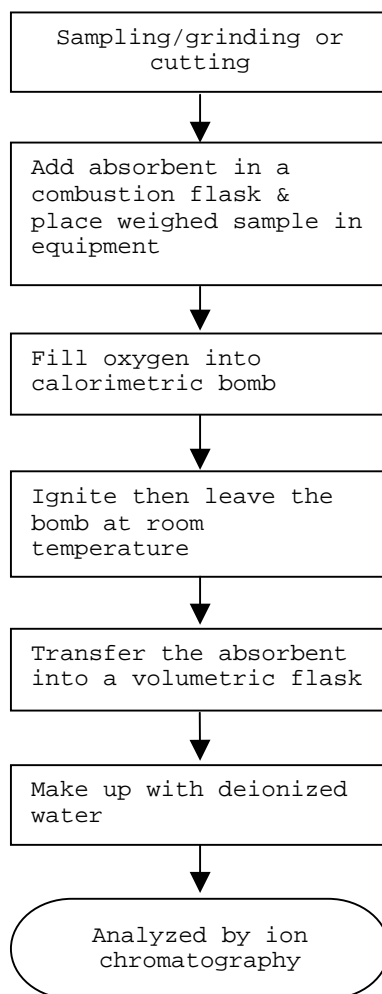


Test Conducted

(IV) Measurement Flowchart:

Test for Halogen Content

Reference Standard : EN 14582

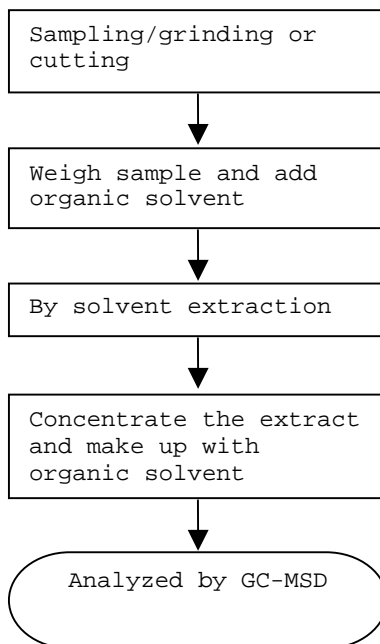


Test Conducted

(IV) Measurement Flowchart:

Test For Phthalates Contents

Reference Method: EN 14372: 2004

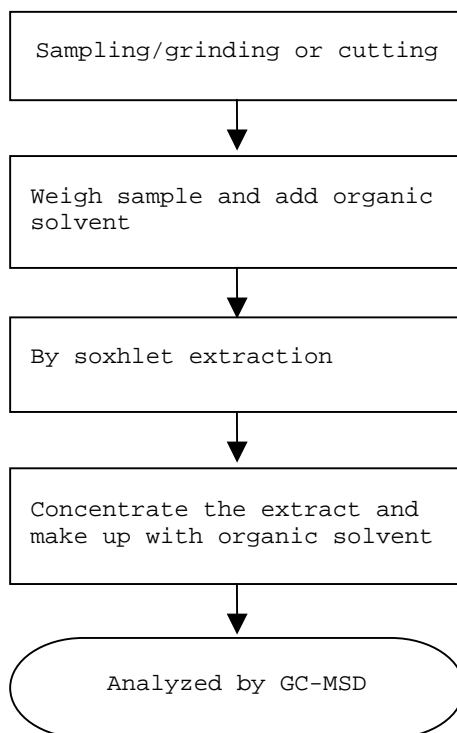


Test Conducted

(IV) Measurement Flowchart:

Test For Hexabromocyclododecane (HBCDD)

Reference Standard : USEPA 3540C



End of Report

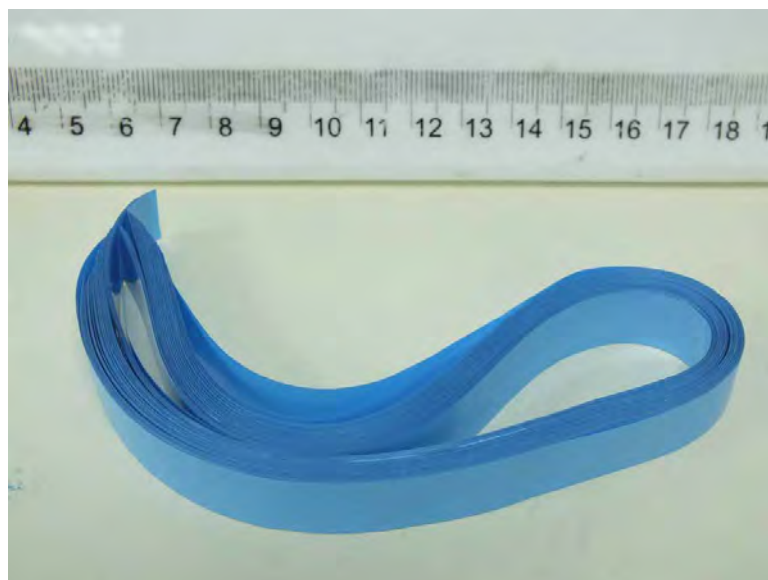
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Test Conducted

Number : TWNC00279947

Photo





Report No.: MX11-1526
Date : 2011-07-28

TEST REPORT

APPLICANT

Littelfuse, S.A. de C.V.
Blvd. Fausto Z. Martínez 1800, Col. Magisterio Sección 38, Piedras Negras, Coahuila
Ing. María Valdez

SAMPLE DESCRIPTION

One (1) group of submitted samples said to be :
Sample Description P.N. 425XXX
Item No. 1) P/N 425738 Hot Stamp Foil Green

Country of Origin NP
Buyer's Name NP
Supplier's Name NP
Date sample received 2011-07-08
Testing period 2011-07-12 to 2011-07-27

TEST CONDUCTED

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

CONCLUSION

<u>Sample Number</u>	<u>Testing item</u>	<u>Conclusion</u>	<u>Failed component</u>	<u>Failed result</u>
1	P/N 425738 Hot Stamp Foil Green	Pass See Result summary	---	---

000002

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1ª. Emisión Junio 2005, 1ª Revisión Junio 26, 2009.

ILTA/003/GENS-F8

Intertek Testing Services de México, S.A. de C.V.
Poniente 134 No. 660, Col. Industrial Vallejo
C.P. 02300, Del. Azcapotzalco, México, D.F. Tel.: 50912150
www.intertek.com



TEST CONDUCTED

Samples:

- 1) P/N 425738 Hot Stamp Foil Green

TEST RESULT SUMMARY FOR RoHS DIRECTIVE :

TESTING ITEM	Ω RESULT (ppm)	Limit
	(1)	
Cadmium (Cd) content	ND	0,01% (100 ppm)
Lead (Pb) content	5,579	0,1% (1000 ppm)
Mercury (Hg) content	ND	0,1% (1000 ppm)
Chromium (VI) (Cr ⁶⁺)	ND	0,1% (1000 ppm)
▲ POLYBROMINATED BIPHENYLS (PBBs) Total	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) Total	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	---

000003

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TESTING ITEM	▲ RESULT (ppm)
	(1)
Fluor (F) content	ND
Chlorine (Cl) content	14 135
Bromine (Br) content	ND
Iodine (I) content	ND

▲ = Contrated test.

ppm = parts per million based on dry weight of sample.

µg/cm² = microgram per square centimeter.

mg/kg WITH 50cm² = milligram per kilogram with 50 square centimeter.

< = less than.

ND = Not detected.

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

These Accreditations only apply for the methods listed in such. Not accredited under EMA Ω.

Prepared and checked by :

For Intertek

Irma Lopez
[Signature]
coord-de-arec

Laboratory Manager

The Official Mexican Standard NOM-008-SCFI-1993 establishes like separator decimal the comma (,).

NOTE :DecaBDE IN POLYMERIC APPLICATIONS IS EXEMPTED ACCORDING TO ROHS DIRECTIVE AMENDMENT 2005/717/EC.

=ACCORDING TO IEC 62321, A POSITIVE RESULT INDICATES THE PRESENCE OF Cr(VI) COATING. IT IS THE Cr(VI) CONCENTRATION DETECTED IN THE BOILING-WATER-EXTRACTION SOLUTION AND SHOULD NOT BE INTERPRETED AS THE Cr(VI) CONCENTRATION IN THE COATING LAYER OF THE SAMPLE.

REMARK : AS REQUESTED BY THE APPLICANT, COATING WITH BASE MATERIAL OF TESTED COMPONENTS OF THE SAMPLE MX11-1526-01 WERE TESTED TOGETHER.

000004

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ILTA/003/GENS-F8

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

Poniente 134 No. 660, Col. Industrial Vallejo
C.P. 02300, Del. Azcapotzalco, México, D.F. Tel.: 50912150

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[Signature]

Test method :

Sample Number	Testing item	Ω Testing method	Quality control Batch:	Analysis Date:	Analyzed By:	Reporting limit ppm
1	Chromium VI (Cr ⁶⁺) content	With reference to USEPA 3060, by EPA 7196	QHU2010-61p90	2011-07-15	AGM	20,0

Sample Number	Testing item	Ω Testing method	Quality control Batch:	Analysis Date:	Analyzed By:	Reporting limit ppm
1	POLYBROMINATE D BIPHENYLS (PBBs)	Determined by GC-MSD	2011-000443-PCL	2011-07-27	▲ CONT	50,0
1	POLYBROMINATE D DIPHENYL ETHERS (PBDEs)	Determined by GC-MSD	2011-000443-PCL	2011-07-27	▲ CONT	50,0

Sample Number	Testing item	Ω Testing method	Quality control Batch:	Analysis Date:	Analyzed By:	Reporting limit ppm
1	Lead (Pb) content	With reference to USEPA 3052, by EPA 6010	MET2011-12p34	2011-07-13	MARY	5,0

Sample Number	Testing item	Ω Testing method	Quality control Batch:	Analysis Date:	Analyzed By:	Reporting limit ppm
1	Cadmium (Cd) content	With reference to USEPA 3052, by EPA 6010	MET2011-12p34	2011-07-13	MARY	2,0

Sample Number	Testing item	Ω Testing method	Quality control Batch:	Analysis Date:	Analyzed By:	Reporting limit ppm
1	Mercury (Hg) content	With reference to USEPA 7471 by USEPA 7471	MET2011-12p36	2011-07-14	RNC	0,25

Sample Number	Testing item	▲ Testing method	Quality control Batch:	Analysis Date:	Analyzed By:	Reporting limit ppm
1	Fluor	With reference to EN 14582:2007 by calorimetric bomb method with oxygen and determined by ion chromatography	2011-000443-PCL	2011-07-27	▲ CONT	30
1	Chlorine	With reference to EN 14582:2007 by calorimetric bomb method with oxygen and determined by ion chromatography	2011-000443-PCL	2011-07-27	▲ CONT	30
1	Bromine	With reference to EN 14582:2007 by calorimetric bomb method with oxygen and determined by ion chromatography	2011-000443-PCL	2011-07-27	▲ CONT	30
1	Iodine	With reference to EN 14582:2007 by calorimetric bomb method with oxygen and determined by ion chromatography	2011-000443-PCL	2011-07-27	▲ CONT	30

000005

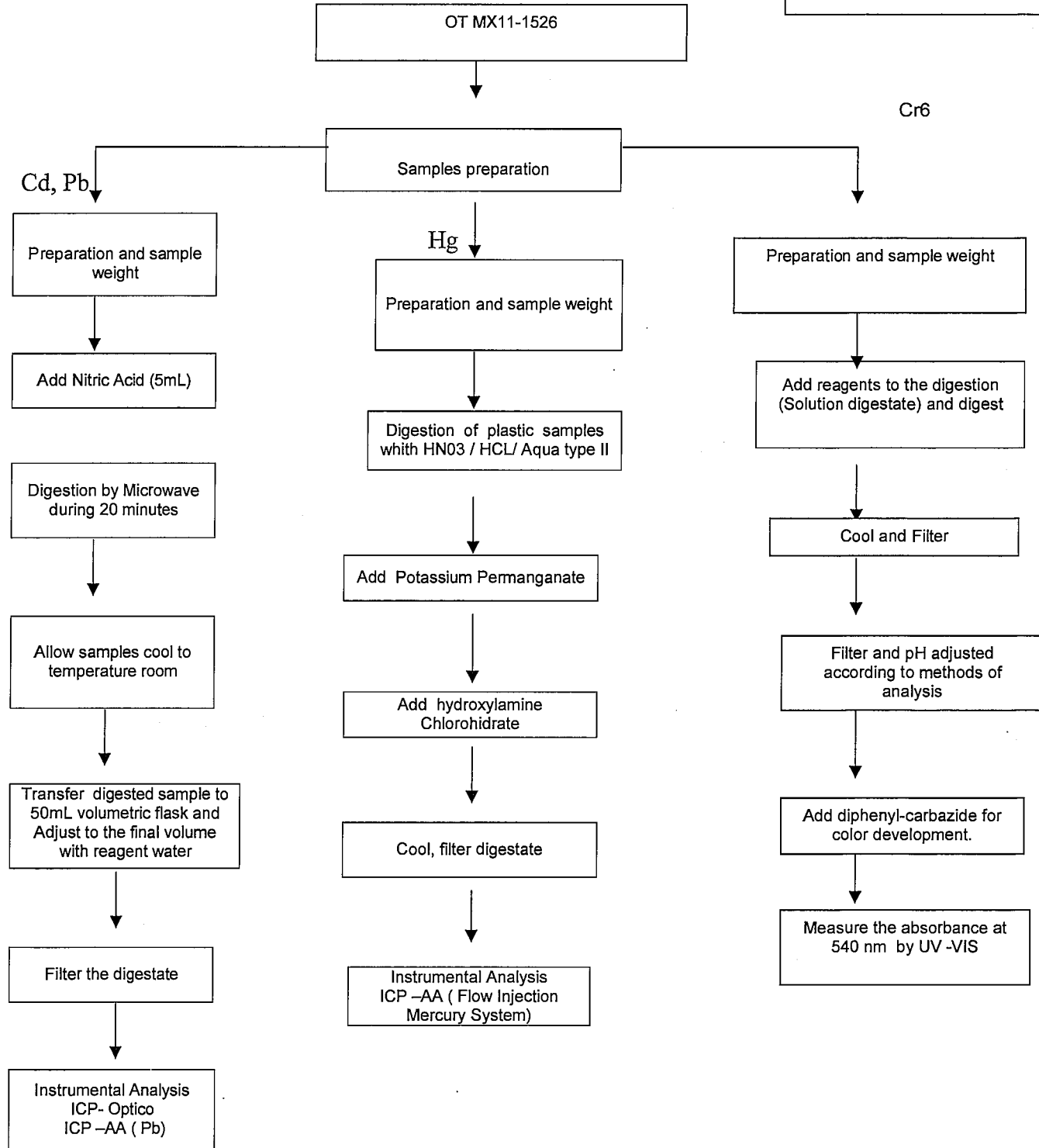
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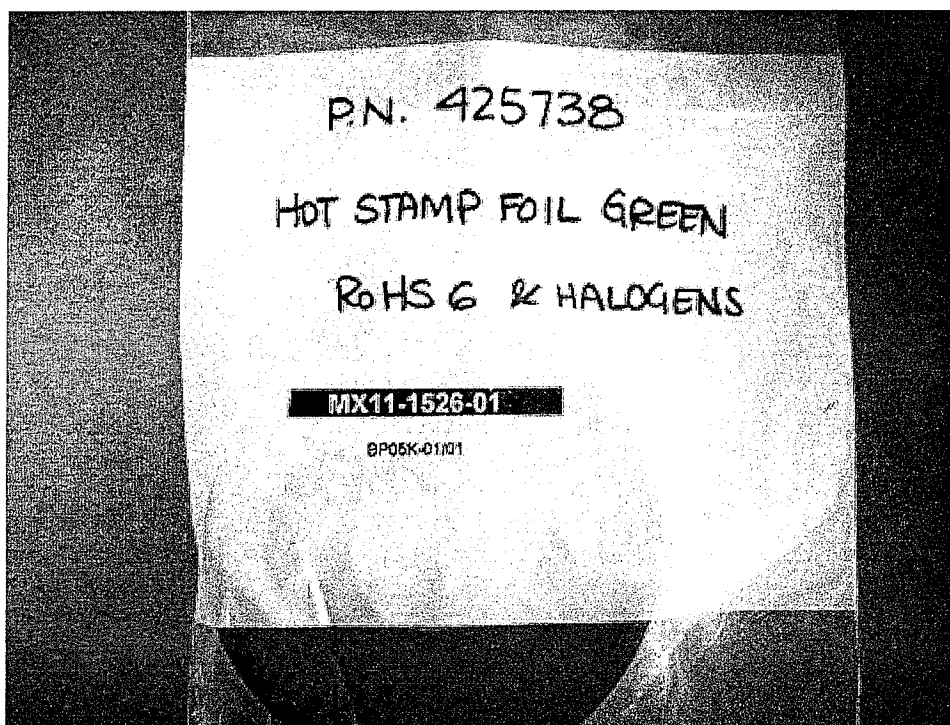
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000006



000007



Test Report

Number : TWNC00279949

Applicant: Littelfuse, S.A. de C.V.
Blvd. Fausto Z. Martinez #1800
Col. Magisterio Seccion 38 C.P.
26070 Piedra Negras, Coahuila,
Mexico

Date : Oct 12, 2012

Sample Description:

One (1) group of submitted samples said to be :
Part Description : HOT STAMP FOIL: RED
Part Number : 425739
Date Sample Received : Oct 04, 2012
Date Test Started : Oct 05, 2012

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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Page 1 of 9

Intertek Testing Services Taiwan Ltd.

8F., No. 423, Ruiguang Rd., Neihu District, Taipei 114, Taiwan, R.O.C.

全國公證檢驗股份有限公司

114 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

Number : TWNC00279949

Test Conducted

(I) Test Result Summary :

Test Item	Result (ppm)
	Red Plastic Film
Heavy Metal	
Cadmium (Cd) content	ND
Lead (Pb) content	ND
Mercury (Hg) content	ND
Chromium VI (Cr ⁶⁺) content	ND
Polybrominated Biphenyls (PBBs)	
Monobrominated Biphenyls (MonoBB)	ND
Dibrominated Biphenyls (DiBB)	ND
Tribrominated Biphenyls (TriBB)	ND
Tetrabrominated Biphenyls (TetraBB)	ND
Pentabrominated Biphenyls (PentaBB)	ND
Hexabrominated Biphenyls (HexaBB)	ND
Heptabrominated Biphenyls (HeptaBB)	ND
Octabrominated Biphenyls (OctaBB)	ND
Nonabrominated Biphenyls (NonaBB)	ND
Decabrominated Biphenyl (DecaBB)	ND
Polybrominated Diphenyl Ethers (PBDEs)	
Monobrominated Diphenyl Ethers (MonoBDE)	ND
Dibrominated Diphenyl Ethers (DiBDE)	ND
Tribrominated Diphenyl Ethers (TriBDE)	ND
Tetrabrominated Diphenyl Ethers (TetraBDE)	ND
Pentabrominated Diphenyl Ethers (PentaBDE)	ND
Hexabrominated Diphenyl Ethers (HexaBDE)	ND
Heptabrominated Diphenyl Ethers (HeptaBDE)	ND
Octabrominated Diphenyl Ethers (OctaBDE)	ND
Nonabrominated Diphenyl Ethers (NonaBDE)	ND
Decabrominated Diphenyl Ether (DecaBDE)	ND
Halogen Content	
Fluorine (F)	578
Chlorine (Cl)	11548
Bromine (Br)	ND
Iodine (I)	ND



Page 2 of 9

Intertek Testing Services Taiwan Ltd.

8F., No. 423, Ruiguang Rd., Neihu District, Taipei 114, Taiwan, R.O.C.

全國公證檢驗股份有限公司

114 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

Number : TWNC00279949

Test Conducted

(I) Test Result Summary :

<u>Test Item</u>	<u>Result (ppm)</u>
	<u>Red Plastic Film</u>
Phthalates	
Di(2-ethylhexyl) Phthalate (DEHP)	ND
Dibutyl Phthalate (DBP)	ND
Benzyl Butyl Phthalate (BBP)	ND
Others	
Hexabromocyclododecane (HBCDD)	ND

Remarks: ppm = Parts per million based on weight of tested sample = mg/kg
 ND = Not detected

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

Date Sample Received : Oct 04, 2012

Test Period : Oct 05, 2012 To Oct 12, 2012

(II) RoHS Limits:

<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)
Polybrominated Biphenyls (PBBs)	0.1% (1000ppm)
Polybrominated Diphenyl Ehters (PBDEs)	0.1% (1000ppm)

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



Page 3 of 9

Intertek Testing Services Taiwan Ltd.

8F., No. 423, Ruiguang Rd., Neihu District, Taipei 114, Taiwan, R.O.C.

全國公證檢驗股份有限公司

114 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 Conducted

(III) Test Method:

Test Item	Test Method	Reporting Limit
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 C, by alkaline digestion and determined by UV-Vis spectrophotometer.	1 ppm
Polybrominated Biphenyls (PBBs)	With reference to IEC 62321 edition 1.0:2008 in annex A, by solvent extraction and determined by GC-MS and further HPLC-DAD confirmation when necessary.	5 ppm
Polybrominated Diphenyl Ethers (PBDEs)	With reference to IEC 62321 edition 1.0:2008 in annex A, by solvent extraction and determined by GC-MS and further HPLC-DAD confirmation when necessary.	5 ppm
Halogen Content	With reference to EN 14582:2007 by calorimetric bomb with oxygen and determined by Ion Chromatograph.	50 ppm
Phthalates	With reference to EN 14372: 2004, by solvent extraction and determined by GC-MS.	50 ppm
Hexabromocyclododecane (HBCDD)	With reference to USEPA 3540C, by solvent extraction and determined by GC-MSD.	10 ppm

Remark: Reporting limit = Quantitation limit of analyte in sample

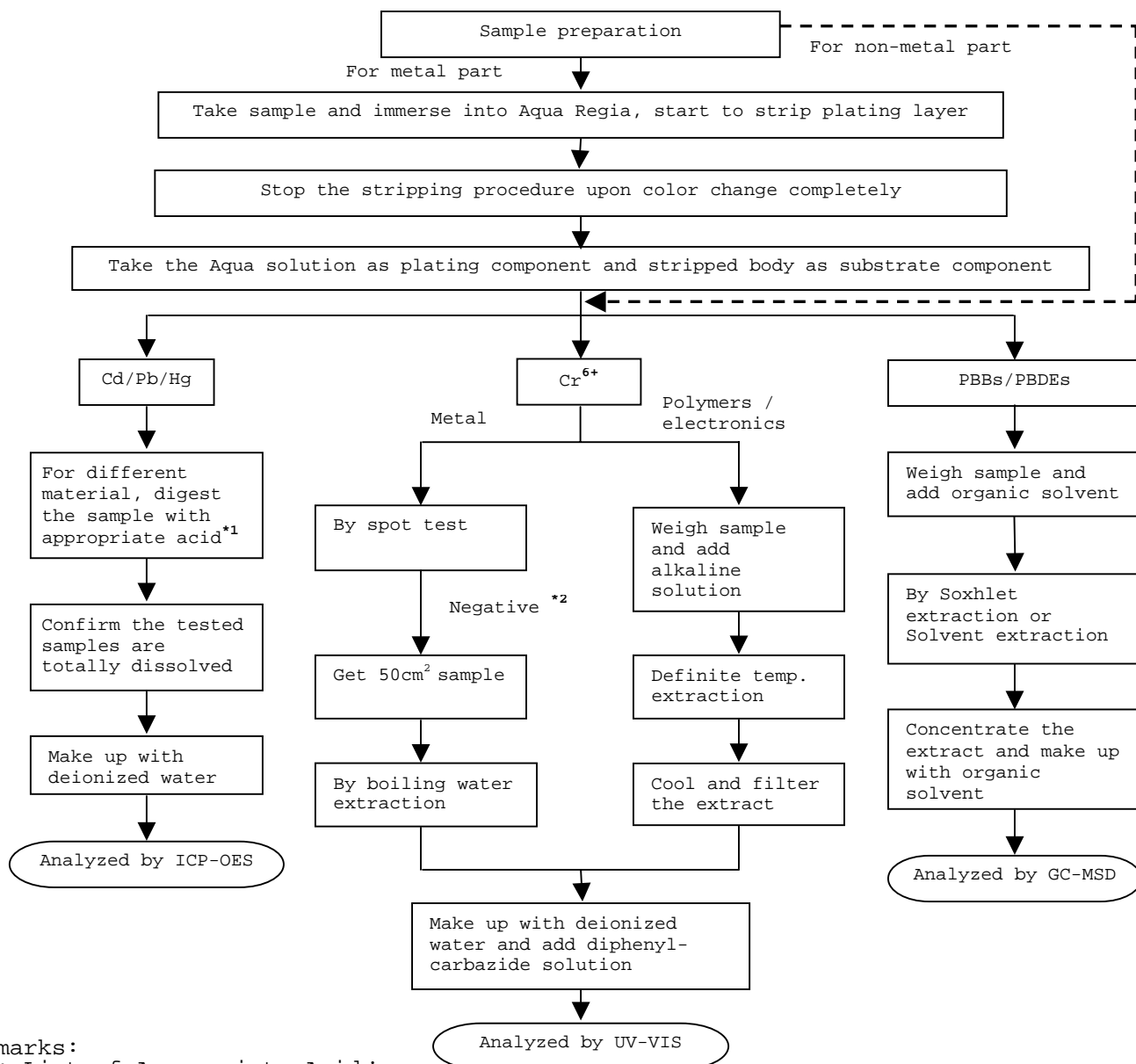


Test Conducted

(IV) Measurement Flowchart:

Test for Cd/Pb/Hg/Chromium (VI)/PBBS/PBDES Contents

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.

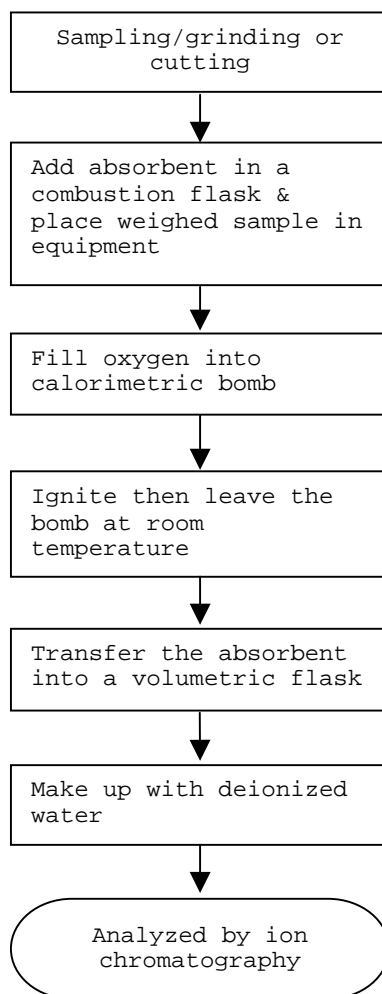


Test Conducted

(IV) Measurement Flowchart:

Test for Halogen Content

Reference Standard: EN 14582

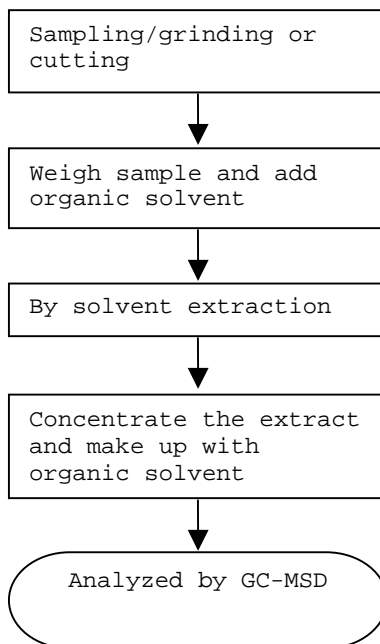


Test Conducted

(IV) Measurement Flowchart:

Test For Phthalates Contents

Reference Method: EN 14372: 2004

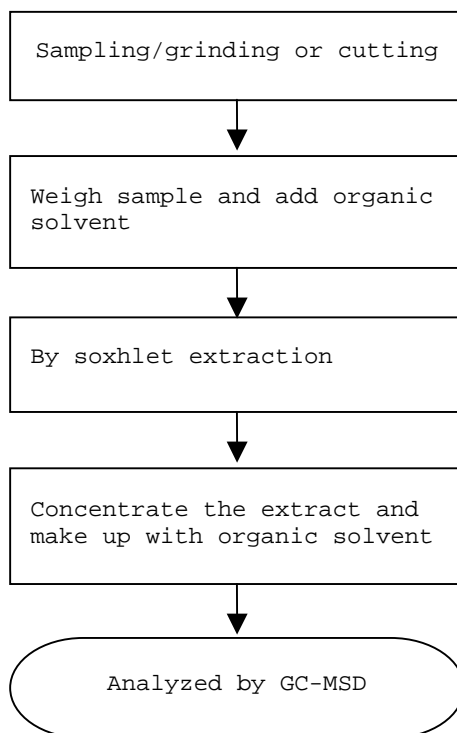


Test Conducted

(IV) Measurement Flowchart:

Test For Hexabromocyclododecane (HBCDD)

Reference Standard : USEPA 3540C



End of Report

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Test Conducted

Number : TWNC00279949

Photo





Test Report

Number : TWNC00274799

Applicant: Littelfuse, S.A. de C.V.
Blvd. Fausto Z. Martinez #1800
Col. Magisterio Seccion 38 C.P.
26070 Piedra Negras, Coahuila,
Mexico

Date : Sep 10, 2012

Sample Description:

One (1) group of submitted samples said to be :
Part Description : HOT STAMP FOIL: GREY
Part Number : 425745
Date Sample Received : Sep 05, 2012
Date Test Started : Sep 05, 2012

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 : TWNC00274799

Test Conducted

(I) Test Result Summary :

Test Item	Result (ppm)
	Grey Plastic Film
Heavy Metal	
Cadmium (Cd) content	ND
Lead (Pb) content	ND
Mercury (Hg) content	ND
Chromium VI (Cr ⁶⁺) content	ND
Polybrominated Biphenyls (PBBs)	
Monobrominated Biphenyls (MonoBB)	ND
Dibrominated Biphenyls (DiBB)	ND
Tribrominated Biphenyls (TriBB)	ND
Tetrabrominated Biphenyls (TetraBB)	ND
Pentabrominated Biphenyls (PentaBB)	ND
Hexabrominated Biphenyls (HexaBB)	ND
Heptabrominated Biphenyls (HeptaBB)	ND
Octabrominated Biphenyls (OctaBB)	ND
Nonabrominated Biphenyls (NonaBB)	ND
Decabrominated Biphenyl (DecaBB)	ND
Polybrominated Diphenyl Ethers (PBDEs)	
Monobrominated Diphenyl Ethers (MonoBDE)	ND
Dibrominated Diphenyl Ethers (DiBDE)	ND
Tribrominated Diphenyl Ethers (TriBDE)	ND
Tetrabrominated Diphenyl Ethers (TetraBDE)	ND
Pentabrominated Diphenyl Ethers (PentaBDE)	ND
Hexabrominated Diphenyl Ethers (HexaBDE)	ND
Heptabrominated Diphenyl Ethers (HeptaBDE)	ND
Octabrominated Diphenyl Ethers (OctaBDE)	ND
Nonabrominated Diphenyl Ethers (NonaBDE)	ND
Decabrominated Diphenyl Ether (DecaBDE)	ND
Halogen Content	
Fluorine (F)	ND
Chlorine (Cl)	13945
Bromine (Br)	ND
Iodine (I)	ND

Number : TWNC00274799

Test Conducted

(I) Test Result Summary :

<u>Test Item</u>	<u>Result (ppm)</u>
	<u>Grey Plastic Film</u>
Phthalates	
Di(2-ethylhexyl) Phthalate (DEHP)	ND
Dibutyl Phthalate (DBP)	ND
Benzyl Butyl Phthalate (BBP)	ND
Others	
Hexabromocyclododecane (HBCDD)	ND

Remarks: ppm = Parts per million based on weight of tested sample = mg/kg
 ND = Not detected

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

Date Sample Received : Sep 05, 2012

Test Period : Sep 05, 2012 To Sep 07, 2012

(II) RoHS Limits:

<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)
Polybrominated Biphenyls (PBBs)	0.1% (1000ppm)
Polybrominated Diphenyl Ehters (PBDEs)	0.1% (1000ppm)

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

Test Conducted

(III) Test Method:

Test Item	Test Method	Reporting Limit
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 C, by alkaline digestion and determined by UV-Vis spectrophotometer.	1 ppm
Polybrominated Biphenyls (PBBs)	With reference to IEC 62321 edition 1.0:2008 in annex A, by solvent extraction and determined by GC-MS and further HPLC-DAD confirmation when necessary.	5 ppm
Polybrominated Diphenyl Ethers (PBDEs)	With reference to IEC 62321 edition 1.0:2008 in annex A, by solvent extraction and determined by GC-MS and further HPLC-DAD confirmation when necessary.	5 ppm
Halogen Content	With reference to EN 14582:2007 by calorimetric bomb with oxygen and determined by Ion Chromatograph.	50 ppm
Phthalates	With reference to EN 14372: 2004, by solvent extraction and determined by GC-MS.	50 ppm
Hexabromocyclododecane (HBCDD)	With reference to USEPA 3540C, by solvent extraction and determined by GC-MSD.	10 ppm

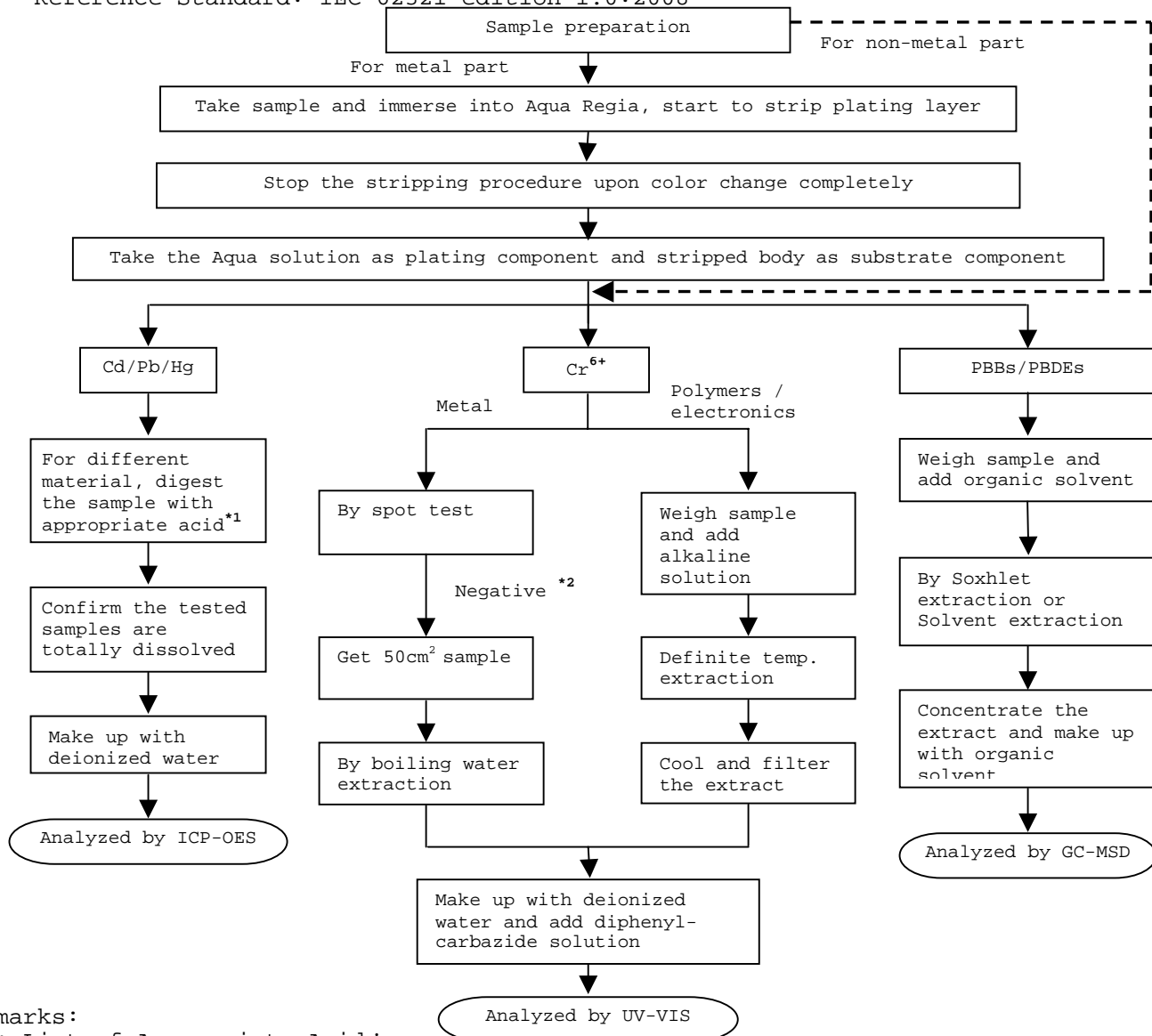
Remark: Reporting limit = Quantitation limit of analyte in sample

Test Conducted

(IV) Measurement Flowchart:

Test for Cd/Pb/Hg/Chromium (VI)/PBBS/PBDES Contents

Reference Standard: IEC 62321 edition 1.0:2008



Remarks:

*1: List of Appropriate Acid:

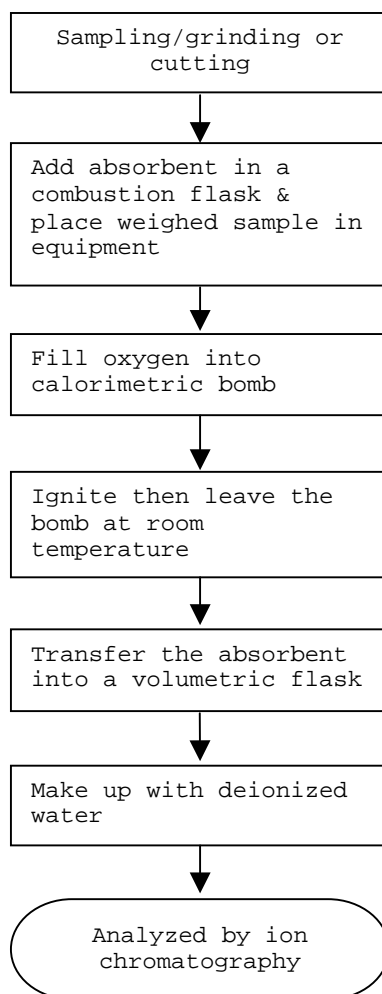
Material	Acid Added for Digestion
Polymers	HNO ₃ , HCl, HF, H ₂ O ₂ , H ₃ BO ₃
Metals	HNO ₃ , HCl, HF
Electronics	HNO ₃ , HCl, H ₂ O ₂ , HBF ₄

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

Test Conducted

(IV) Measurement Flowchart:

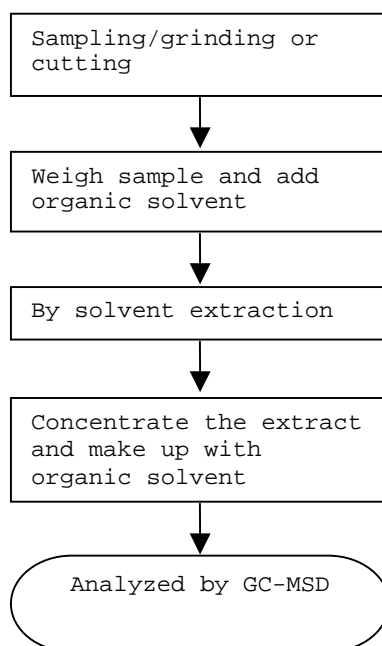
Test for Halogen Content
Reference Standard: EN 14582



Test Conducted

(IV) Measurement Flowchart:

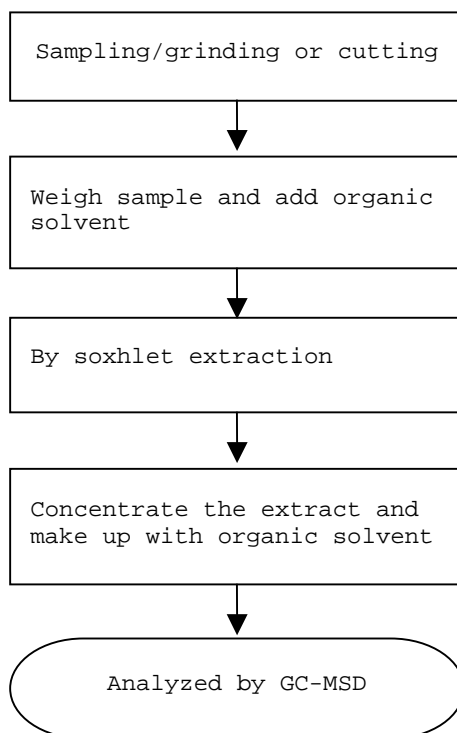
Test For Phthalates Contents
Reference Method: EN 14372: 2004



Test Conducted

(IV) Measurement Flowchart:

Test For Hexabromocyclododecane (HBCDD)
Reference Standard : USEPA 3540C



End of Report

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Number : TWNC00274799

Test Conducted

Photo





Test Report

Number : TWNC00273455

Applicant: Littelfuse, S.A. de C.V.
Blvd. Fausto Z. Martinez #1800
Col. Magisterio Seccion 38 C.P.
26070 Piedra Negras, Coahuila,
Mexico

Date : Aug 31, 2012

Sample Description:

One (1) group of submitted samples said to be :
Part Description : HOT STAMP FOIL: BROWN
Part Number : 425741
Date Sample Received : Aug 28, 2012
Date Test Started : Aug 28, 2012

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 : TWNC00273455

Test Conducted

(I) Test Result Summary :

<u>Test Item</u>	<u>Result (ppm)</u>
	<u>Brown Foil</u>
Heavy Metal	
Cadmium (Cd) content	ND
Lead (Pb) content	ND
Mercury (Hg) content	ND
Chromium VI (Cr ⁶⁺) content	ND
Polybrominated Biphenyls (PBBs)	
Monobrominated Biphenyls (MonoBB)	ND
Dibrominated Biphenyls (DiBB)	ND
Tribrominated Biphenyls (TriBB)	ND
Tetrabrominated Biphenyls (TetraBB)	ND
Pentabrominated Biphenyls (PentaBB)	ND
Hexabrominated Biphenyls (HexaBB)	ND
Heptabrominated Biphenyls (HeptaBB)	ND
Octabrominated Biphenyls (OctaBB)	ND
Nonabrominated Biphenyls (NonaBB)	ND
Decabrominated Biphenyl (DecaBB)	ND
Polybrominated Diphenyl Ethers (PBDEs)	
Monobrominated Diphenyl Ethers (MonoBDE)	ND
Dibrominated Diphenyl Ethers (DiBDE)	ND
Tribrominated Diphenyl Ethers (TriBDE)	ND
Tetrabrominated Diphenyl Ethers (TetraBDE)	ND
Pentabrominated Diphenyl Ethers (PentaBDE)	ND
Hexabrominated Diphenyl Ethers (HexaBDE)	ND
Heptabrominated Diphenyl Ethers (HeptaBDE)	ND
Octabrominated Diphenyl Ethers (OctaBDE)	ND
Nonabrominated Diphenyl Ethers (NonaBDE)	ND
Decabrominated Diphenyl Ether (DecaBDE)	ND
Halogen Content	
Fluorine (F)	ND
Chlorine (Cl)	7890
Bromine (Br)	ND
Iodine (I)	ND

Number : TWNC00273455

Test Conducted

(I) Test Result Summary :

<u>Test Item</u>	<u>Result (ppm)</u>
	<u>Brown Foil</u>
Phthalates	
Di(2-ethylhexyl) Phthalate (DEHP)	ND
Dibutyl Phthalate (DBP)	ND
Benzyl Butyl Phthalate (BBP)	ND
Others	
Hexabromocyclododecane (HBCDD)	ND

Remarks: ppm = Parts per million based on weight of tested sample = mg/kg
ND = Not detected

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

Date Sample Received : Aug 28, 2012

Test Period : Aug 28, 2012 to Aug 31, 2012

(II) RoHS Limits:

<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)
Polybrominated Biphenyls (PBBs)	0.1% (1000ppm)
Polybrominated Diphenyl Ehters (PBDEs)	0.1% (1000ppm)

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

Test Conducted

(III) Test Method:

Test Item	Test Method	Reporting Limit
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 C, by alkaline digestion and determined by UV-Vis spectrophotometer.	1 ppm
Polybrominated Biphenyls (PBBs)	With reference to IEC 62321 edition 1.0:2008 in annex A, by solvent extraction and determined by GC-MS and further HPLC-DAD confirmation when necessary.	5 ppm
Polybrominated Diphenyl Ethers (PBDEs)	With reference to IEC 62321 edition 1.0:2008 in annex A, by solvent extraction and determined by GC-MS and further HPLC-DAD confirmation when necessary.	5 ppm
Halogen Content	With reference to EN 14582:2007 by calorimetric bomb with oxygen and determined by Ion Chromatograph.	50 ppm
Phthalates	With reference to EN 14372: 2004, by solvent extraction and determined by GC-MS.	50 ppm
Hexabromocyclododecane (HBCDD)	With reference to USEPA 3540C, by solvent extraction and determined by GC-MSD.	10 ppm

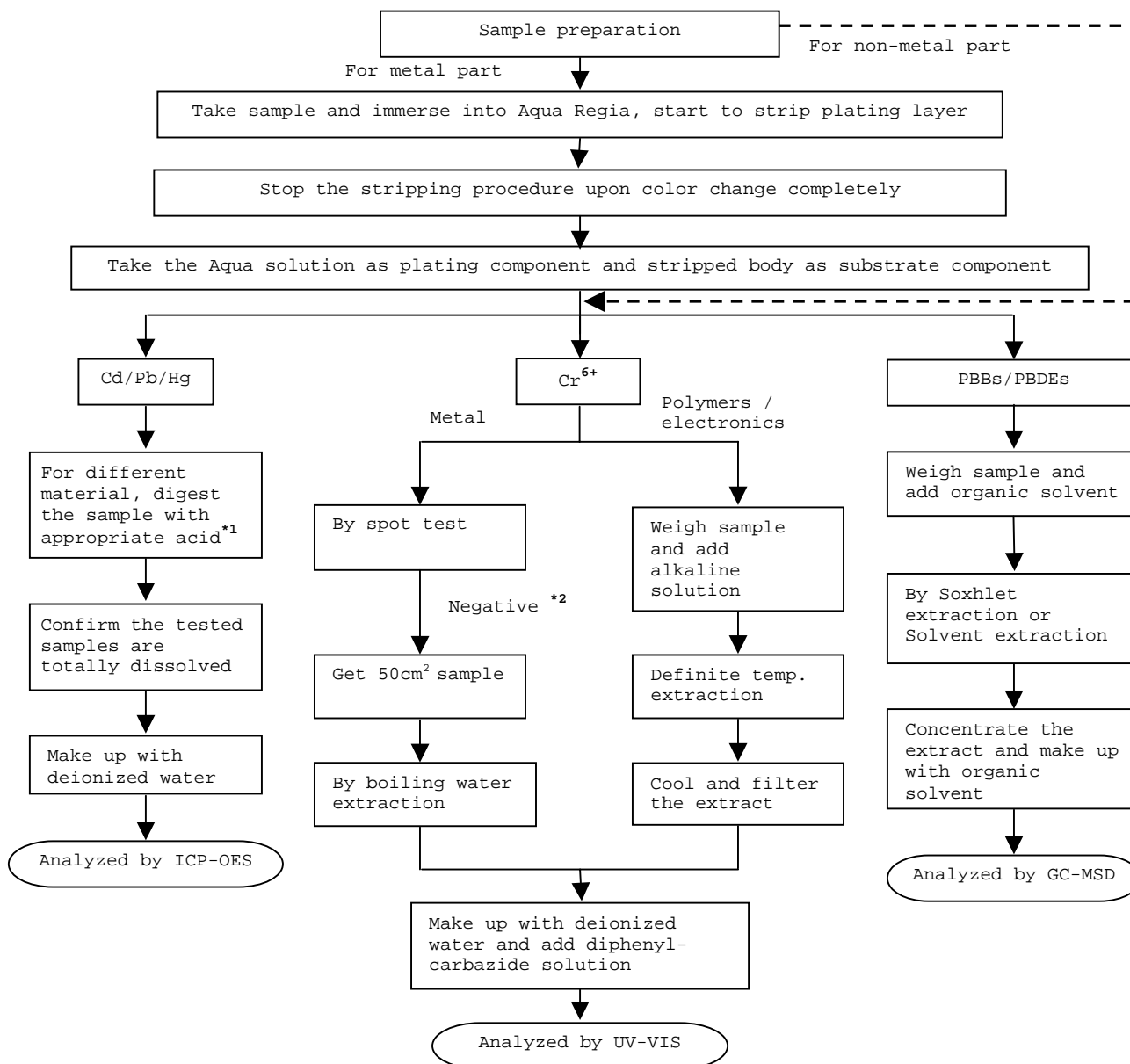
Remark: Reporting limit = Quantitation limit of analyte in sample

Test Conducted

(IV) Measurement Flowchart:

Test for Cd/Pb/Hg/Chromium (VI)/PBBS/PBDES Contents

Reference Standard: IEC 62321 edition 1.0:2008



Number : TWNC00273455

Test Conducted

(IV) Measurement Flowchart:

Remarks:

*1: List of Appropriate Acid:

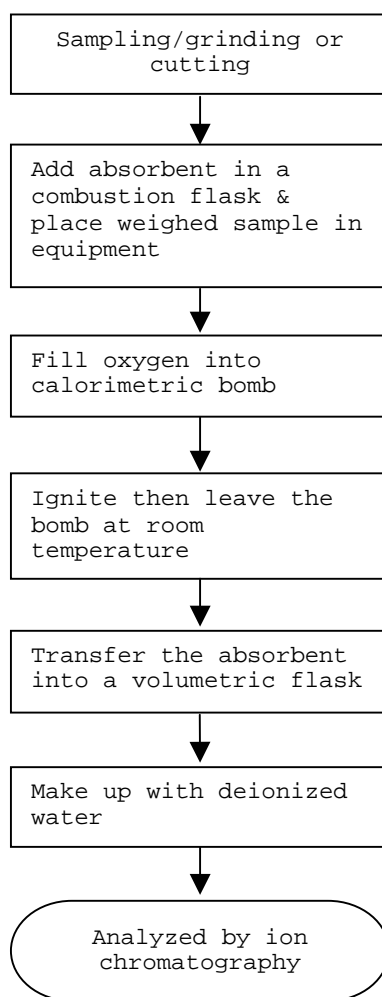
Material	Acid Added for Digestion
Polymers	HNO ₃ , HCl, HF, H ₂ O ₂ , H ₃ BO ₃
Metals	HNO ₃ , HCl, HF
Electronics	HNO ₃ , HCl, H ₂ O ₂ , HBF ₄

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

Test Conducted

(IV) Measurement Flowchart:

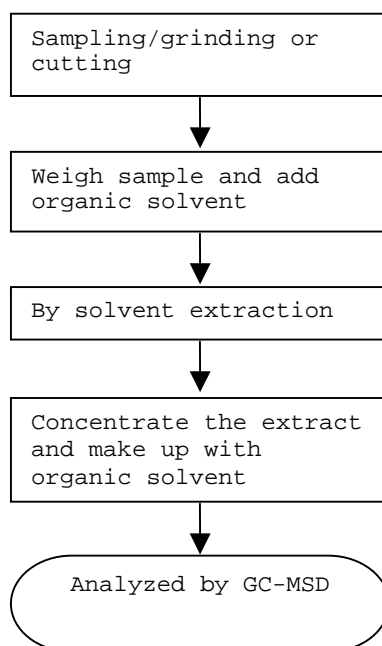
Test for Halogen Content
Reference Standard: EN 14582



Test Conducted

(IV) Measurement Flowchart:

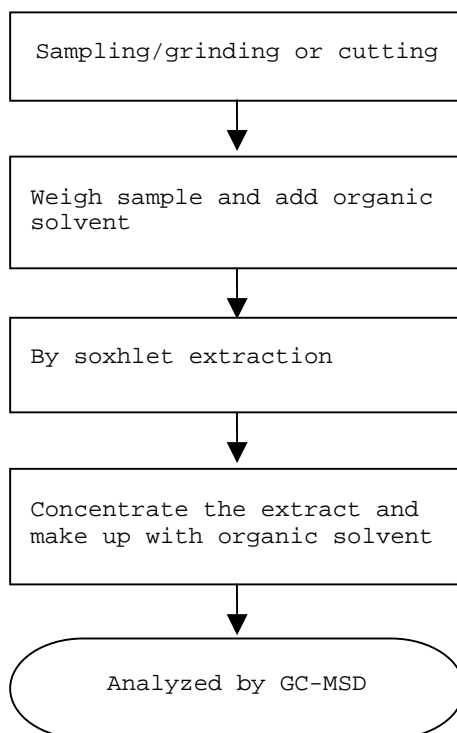
Test For Phthalates Contents
Reference Method: EN 14372: 2004



Test Conducted

(IV) Measurement Flowchart:

Test For Hexabromocyclododecane (HBCDD)
Reference Standard : USEPA 3540C



End of Report

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Number : TWNC00273455

Test Conducted

Photo





Report No.: MX11-1525

Date : 2011-07-28

TEST REPORT

APPLICANT

Littelfuse, S.A. de C.V.

Bld. Fausto Z. Martínez 1800, Col. Magisterio Sección 38, Piedras Negras, Coahuila

Ing. María Valdez

SAMPLE DESCRIPTION

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

Sample Description P.N. 425XXX

Item No. 1) P/N 425737 Hot Stamp Foil Orange

Country of Origin NP

Buyer's Name NP

Supplier's Name NP

Date sample received 2011-07-08

Testing period 2011-07-12 to 2011-07-27

TEST CONDUCTED

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

CONCLUSION

<u>Sample Number</u>	<u>Testing item</u>	<u>Conclusion</u>	<u>Failed component</u>	<u>Failed result</u>
1	P/N 425737 Hot Stamp Foil Orange	Pass See Result summary	---	---

000002

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Report No.: MX11-1525
Date : 2011-07-28

TEST CONDUCTED

Samples:

- 1) P/N 425737 Hot Stamp Foil Orange

TEST RESULT SUMMARY FOR RoHS DIRECTIVE :

TESTING ITEM	Ω RESULT (ppm)	Limit
	(1)	
Cadmium (Cd) content	ND	0,01% (100 ppm)
Lead (Pb) content	ND	0,1% (1000 ppm)
Mercury (Hg) content	ND	0,1% (1000 ppm)
Chromium (VI) (Cr^{6+})	ND	0,1% (1000 ppm)
▲ POLYBROMINATED BIPHENYLS (PBBs) Total	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) Total	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	---

000003

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TESTING ITEM	▲ RESULT (ppm)
	(1)
Fluor (F) content	ND
Chlorine (Cl) content	15 819
Bromine (Br) content	ND
Iodine (I) content	ND

▲ = Contrated test.

ppm = parts per million based on dry weight of sample.

 $\mu\text{g}/\text{cm}^2$ = microgram per square centimeter.mg/kg WITH 50cm² = milligram per kilogram with 50 square centimeter.

< = less than.

ND = Not detected.

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

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Prepared and checked by :

For Intertek

Irma López
[Signature]
coo & de ase

Laboratory Manager

The Official Mexican Standard NOM-008-SCFI-1993 establishes like separator
decimal the comma (,).

NOTE :DecaBDE IN POLYMERIC APPLICATIONS IS EXEMPTED ACCORDING TO
ROHS DIRECTIVE AMENDMENT 2005/717/EC.

=ACCORDING TO IEC 62321, A POSITIVE RESULT INDICATES THE PRESENCE OF
Cr(VI) COATING. IT IS THE Cr(VI) CONCENTRATION DETECTED IN THE
BOILING-WATER-EXTRACTION SOLUTION AND SHOULD NOT BE INTERPRETED AS
THE Cr(VI) CONCENTRATION IN THE COATING LAYER OF THE SAMPLE.

REMARK : AS REQUESTED BY THE APPLICANT, COATING WITH BASE MATERIAL OF
TESTED COMPONENTS OF THE SAMPLE MX11-1525-01 WERE TESTED TOGETHER.

000004

[Signature]



Report No.: MX11-1525
Date : 2011-07-28

Test method :

Sample Number	Testing item	Ω Testing method	Quality control Batch:	Analysis Date:	Analyzed By:	Reporting limit ppm
1	Chromium VI (Cr ⁶⁺) content	With reference to USEPA 3060, by EPA 7196	QHU2010-61p90	2011-07-15	AGM	20,0

Sample Number	Testing item	Ω Testing method	Quality control Batch:	Analysis Date:	Analyzed By:	Reporting limit ppm
1	POLYBROMINATE D BIPHENYLS (PBBs)	Determined by GC-MSD	2011-000443-PCL	2011-07-27	▲ CONT	50,0
1	POLYBROMINATE D DIPHENYL ETHERS (PBDEs)	Determined by GC-MSD	2011-000443-PCL	2011-07-27	▲ CONT	50,0

Sample Number	Testing item	Ω Testing method	Quality control Batch:	Analysis Date:	Analyzed By:	Reporting limit ppm
1	Lead (Pb) content	With reference to USEPA 3052, by EPA 6010	MET2011-12p34	2011-07-13	MARY	5,0

Sample Number	Testing item	Ω Testing method	Quality control Batch:	Analysis Date:	Analyzed By:	Reporting limit ppm
1	Cadmium (Cd) content	With reference to USEPA 3052, by EPA 6010	MET2011-12p34	2011-07-13	MARY	2,0

Sample Number	Testing item	Ω Testing method	Quality control Batch:	Analysis Date:	Analyzed By:	Reporting limit ppm
1	Mercury (Hg) content	With reference to USEPA 7471 by USEPA 7471	MET2011-12p36	2011-07-14	RNC	0,25

Sample Number	Testing item	▲ Testing method	Quality control Batch:	Analysis Date:	Analyzed By:	Reporting limit ppm
1	Fluor	With reference to EN 14582:2007 by calorimetric bomb method with oxygen and determined by ion chromatography	2011-000443-PCL	2011-07-27	▲ CONT	30
1	Chlorine	With reference to EN 14582:2007 by calorimetric bomb method with oxygen and determined by ion chromatography	2011-000443-PCL	2011-07-27	▲ CONT	30
1	Bromine	With reference to EN 14582:2007 by calorimetric bomb method with oxygen and determined by ion chromatography	2011-000443-PCL	2011-07-27	▲ CONT	30
1	Iodine	With reference to EN 14582:2007 by calorimetric bomb method with oxygen and determined by ion chromatography	2011-000443-PCL	2011-07-27	▲ CONT	30

000005

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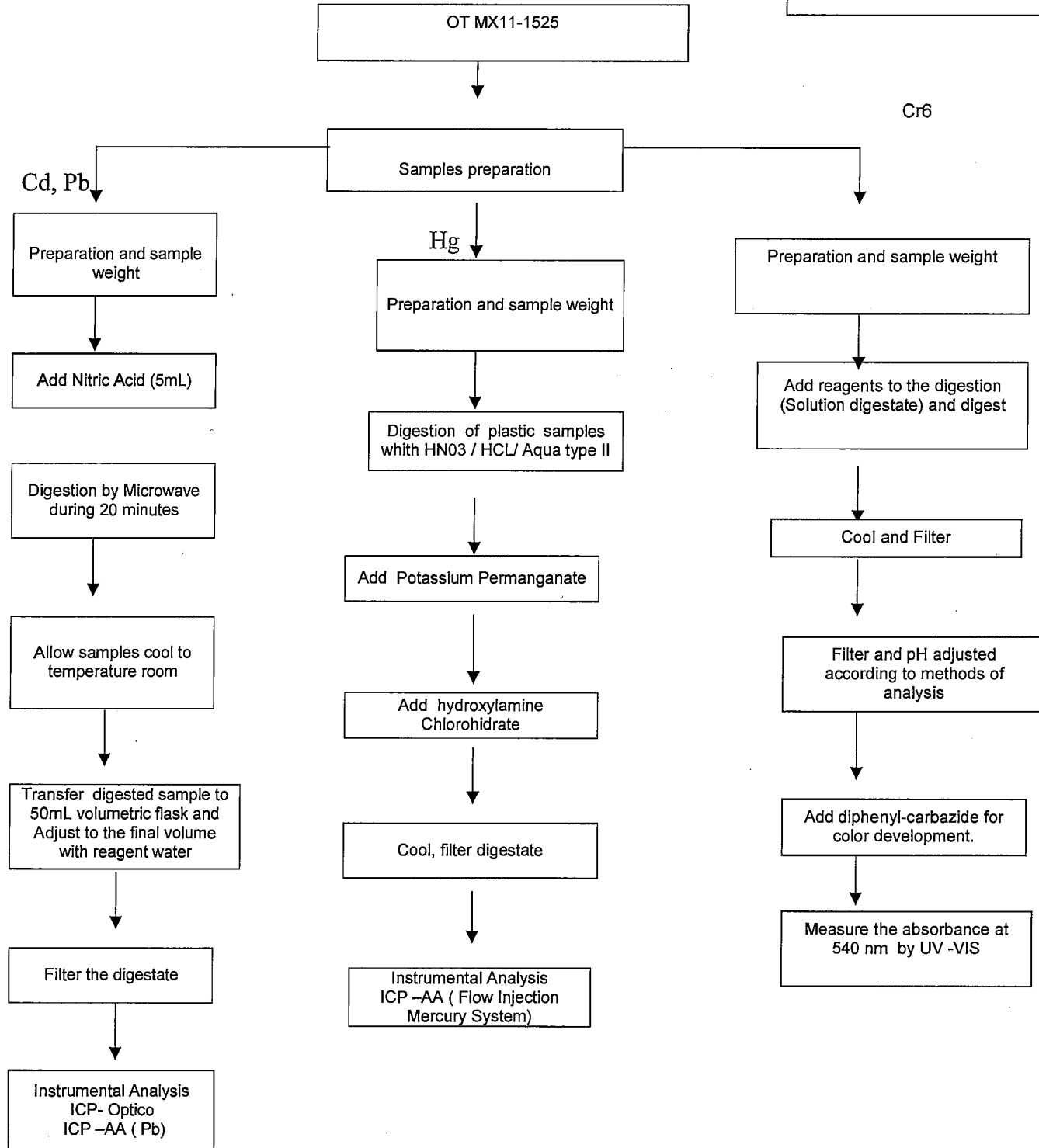
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Report No.: MX11-1525
Date: 2011-07-28

Plastic samples
Flow chart for sample: 1



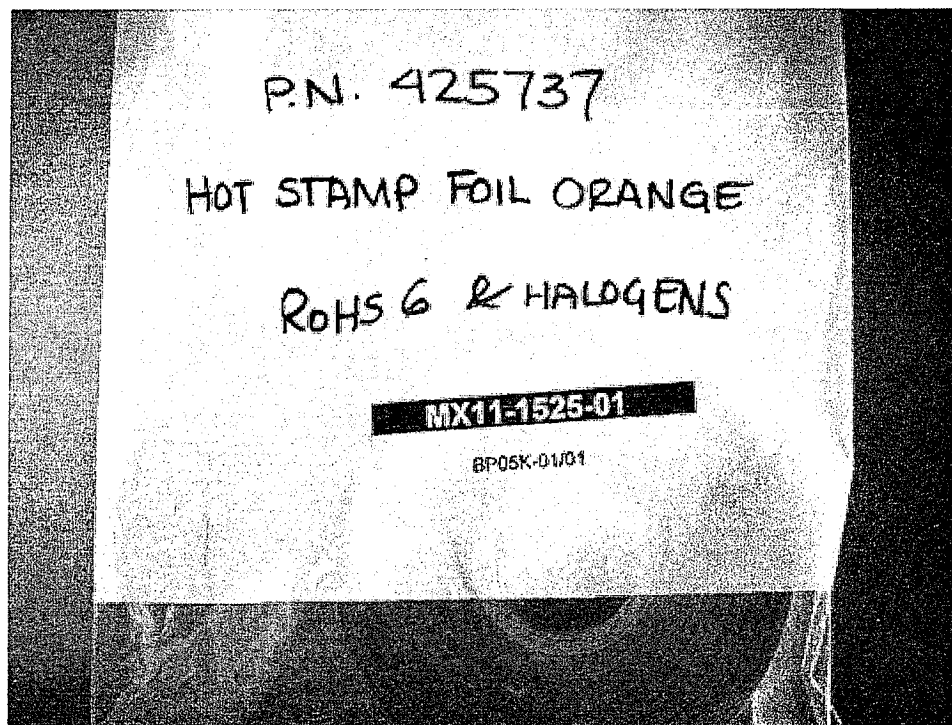
000006

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000007

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Report No.: MX11-1533
Date : 2011-07-28

TEST REPORT

APPLICANT

Littelfuse, S.A. de C.V.
Blvd. Fausto Z. Martínez 1800, Col. Magisterio Sección 38, Piedras Negras, Coahuila
Ing. María Valdez

SAMPLE DESCRIPTION

One (1) group of submitted samples said to be :
Sample Description P.N. 425XXX
Item No. 1) P/N 425746 Hot Stamp Foil Violet
Country of Origin NP
Buyer's Name NP
Supplier's Name NP
Date sample received 2011-07-08
Testing period 2011-07-12 to 2011-07-27

TEST CONDUCTED

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

CONCLUSION

<u>Sample Number</u>	<u>Testing item</u>	<u>Conclusion</u>	<u>Failed component</u>	<u>Failed result</u>
1	P/N 425746 Hot Stamp Foil Violet	Pass See Result summary	---	---

000002

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ILTA/003/GENS-F8



TEST CONDUCTED

Samples:

- 1) P/N 425746 Hot Stamp Foil Violet

TEST RESULT SUMMARY FOR RoHS DIRECTIVE :

TESTING ITEM	Ω RESULT (ppm)	Limit
	(1)	
Cadmium (Cd) content	ND	0,01% (100 ppm)
Lead (Pb) content	ND	0,1% (1000 ppm)
Mercury (Hg) content	ND	0,1% (1000 ppm)
Chromium (VI) (Cr ⁶⁺)	ND	0,1% (1000 ppm)
▲ POLYBROMINATED BIPHENYLS (PBBs) Total	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) Total	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	---

000003

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TESTING ITEM	▲ RESULT (ppm)
	(1)
Fluor (F) content	ND
Chlorine (Cl) content	19 671
Bromine (Br) content	ND
Iodine (I) content	ND

▲ = Contrated test.

ppm = parts per million based on dry weight of sample.

$\mu\text{g}/\text{cm}^2$ = microgram per square centimeter.

mg/kg WITH 50cm^2 = milligram per kilogram with 50 square centimeter.

< = less than.

ND = Not detected.

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

These Accreditations only apply for the methods listed in such. Not accredited under EMA Ω .

Prepared and checked by :

For Intertek

Irma Lopez
cof de aree

Laboratory Manager

The Official Mexican Standard NOM-008-SCFI-1993 establishes like separator decimal the comma (,).

NOTE :DecaBDE IN POLYMERIC APPLICATIONS IS EXEMPTED ACCORDING TO ROHS DIRECTIVE AMENDMENT 2005/717/EC.

=ACCORDING TO IEC 62321, A POSITIVE RESULT INDICATES THE PRESENCE OF Cr(VI) COATING. IT IS THE Cr(VI) CONCENTRATION DETECTED IN THE BOILING-WATER-EXTRACTION SOLUTION AND SHOULD NOT BE INTERPRETED AS THE Cr(VI) CONCENTRATION IN THE COATING LAYER OF THE SAMPLE.

REMARK : AS REQUESTED BY THE APPLICANT, COATING WITH BASE MATERIAL OF TESTED COMPONENTS OF THE SAMPLE MX11-1533-01 WERE TESTED TOGETHER.

0000004

[Signature]

Test method :

Sample Number	Testing item	Ω Testing method	Quality control Batch:	Analysis Date:	Analyzed By:	Reporting limit ppm
1	Chromium VI (Cr ⁶⁺) content	With reference to USEPA 3060, by EPA 7196	QHU2010-61p80	2011-07-15	AGM	20,0

Sample Number	Testing item	Ω Testing method	Quality control Batch:	Analysis Date:	Analyzed By:	Reporting limit ppm
1	POLYBROMINATE D BIPHENYLS (PBBs)	Determined by GC-MSD	2011-000443-PCL	2011-07-27	▲ CONT	50,0
1	POLYBROMINATE D DIPHENYL ETHERS (PBDEs)	Determined by GC-MSD	2011-000443-PCL	2011-07-27	▲ CONT	50,0

Sample Number	Testing item	Ω Testing method	Quality control Batch:	Analysis Date:	Analyzed By:	Reporting limit ppm
1	Lead (Pb) content	With reference to USEPA 3052, by EPA 6010	MET2011-12p34	2011-07-13	MARY	5,0

Sample Number	Testing item	Ω Testing method	Quality control Batch:	Analysis Date:	Analyzed By:	Reporting limit ppm
1	Cadmium (Cd) content	With reference to USEPA 3052, by EPA 6010	MET2011-12p34	2011-07-13	MARY	2,0

Sample Number	Testing item	Ω Testing method	Quality control Batch:	Analysis Date:	Analyzed By:	Reporting limit ppm
1	Mercury (Hg) content	With reference to USEPA 7471 by USEPA 7471	MET2011-12p36	2011-07-14	RNC	0,25

Sample Number	Testing item	▲ Testing method	Quality control Batch:	Analysis Date:	Analyzed By:	Reporting limit ppm
1	Fluor	With reference to EN 14582:2007 by calorimetric bomb method with oxygen and determined by ion chromatography	2011-000443-PCL	2011-07-27	▲ CONT	30
1	Chlorine	With reference to EN 14582:2007 by calorimetric bomb method with oxygen and determined by ion chromatography	2011-000443-PCL	2011-07-27	▲ CONT	30
1	Bromine	With reference to EN 14582:2007 by calorimetric bomb method with oxygen and determined by ion chromatography	2011-000443-PCL	2011-07-27	▲ CONT	30
1	Iodine	With reference to EN 14582:2007 by calorimetric bomb method with oxygen and determined by ion chromatography	2011-000443-PCL	2011-07-27	▲ CONT	30

000005

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ILTAJ003/GENS-F8

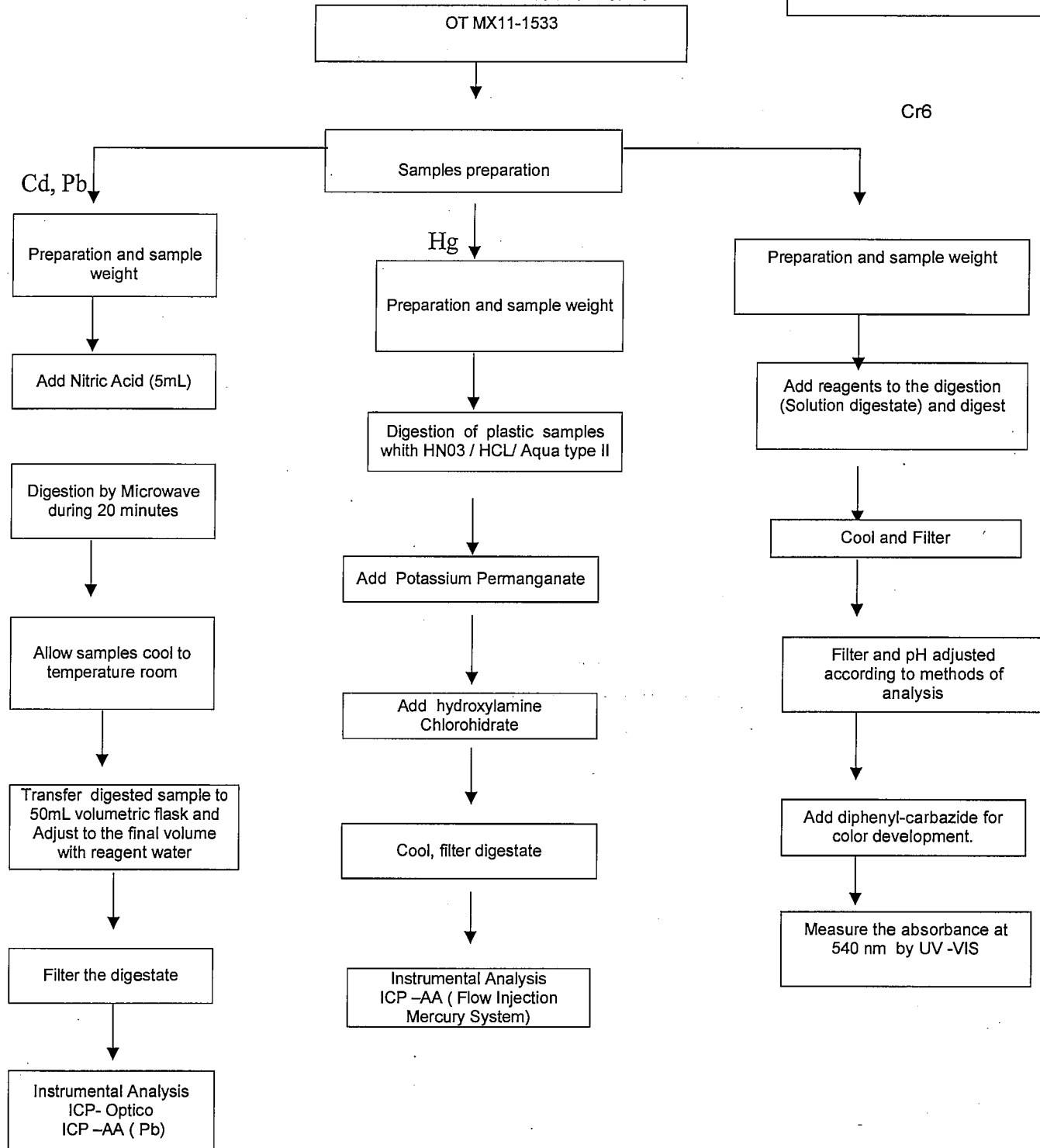
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Poniente 134 No. 660, Col. Industrial Vallejo
C.P. 02300, Del. Azcapotzalco, México, D.F. Tel.: 50912150
www.intertek.com



Report No.: MX11-1533
Date: 2011-07-28

Plastic samples
Flow chart for sample: 1



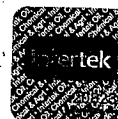
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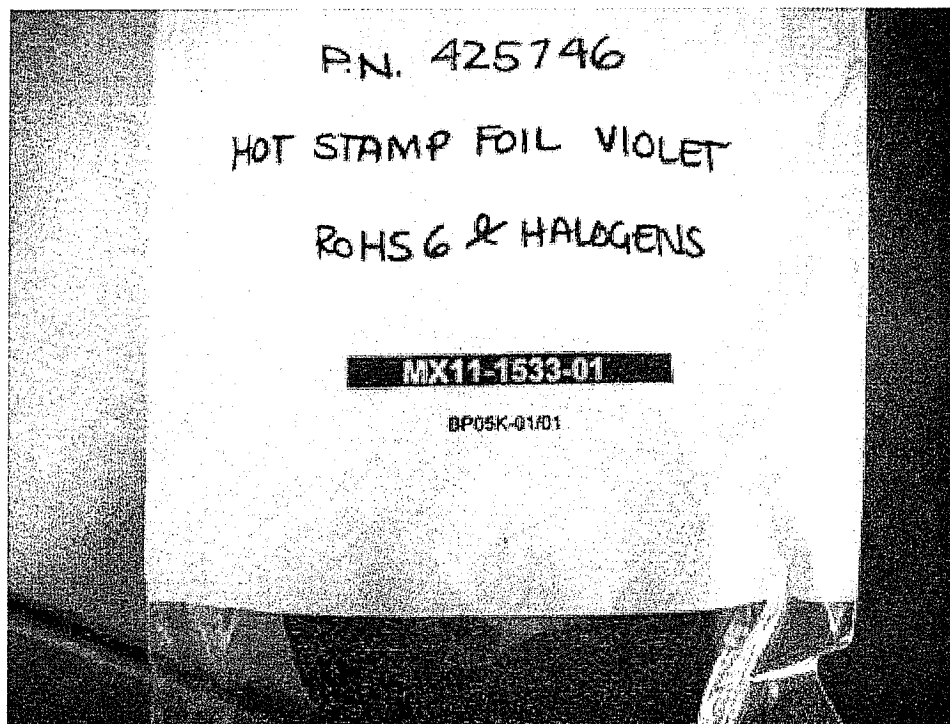
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www.intertek.com

1ª. Emisión Junio 2005, 1ª Revisión Junio 26, 2009.

ILTA/003/GENS-F8





000007



Test Report

Number : TWNC00274801

Applicant: Littelfuse, S.A. de C.V.
Blvd. Fausto Z. Martinez #1800
Col. Magisterio Seccion 38 C.P.
26070 Piedra Negras, Coahuila,
Mexico

Date : Sep 10, 2012

Sample Description:

One (1) group of submitted samples said to be :
Part Description : HOT STAMP FOIL: BLACK
Part Number : 425747
Date Sample Received : Sep 05, 2012
Date Test Started : Sep 05, 2012

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 : TWNC00274801

Test Conducted

(I) Test Result Summary :

Test Item	Result (ppm)
	Black Plastic Film
Heavy Metal	
Cadmium (Cd) content	ND
Lead (Pb) content	ND
Mercury (Hg) content	ND
Chromium VI (Cr ⁶⁺) content	ND
Polybrominated Biphenyls (PBBs)	
Monobrominated Biphenyls (MonoBB)	ND
Dibrominated Biphenyls (DiBB)	ND
Tribrominated Biphenyls (TriBB)	ND
Tetrabrominated Biphenyls (TetraBB)	ND
Pentabrominated Biphenyls (PentaBB)	ND
Hexabrominated Biphenyls (HexaBB)	ND
Heptabrominated Biphenyls (HeptaBB)	ND
Octabrominated Biphenyls (OctaBB)	ND
Nonabrominated Biphenyls (NonaBB)	ND
Decabrominated Biphenyl (DecaBB)	ND
Polybrominated Diphenyl Ethers (PBDEs)	
Monobrominated Diphenyl Ethers (MonoBDE)	ND
Dibrominated Diphenyl Ethers (DiBDE)	ND
Tribrominated Diphenyl Ethers (TriBDE)	ND
Tetrabrominated Diphenyl Ethers (TetraBDE)	ND
Pentabrominated Diphenyl Ethers (PentaBDE)	ND
Hexabrominated Diphenyl Ethers (HexaBDE)	ND
Heptabrominated Diphenyl Ethers (HeptaBDE)	ND
Octabrominated Diphenyl Ethers (OctaBDE)	ND
Nonabrominated Diphenyl Ethers (NonaBDE)	ND
Decabrominated Diphenyl Ether (DecaBDE)	ND
Halogen Content	
Fluorine (F)	ND
Chlorine (Cl)	8786
Bromine (Br)	ND
Iodine (I)	ND

Number : TWNC00274801

Test Conducted

(I) Test Result Summary :

<u>Test Item</u>	<u>Result (ppm)</u>
	<u>Black Plastic Film</u>
Phthalates	
Di(2-ethylhexyl) Phthalate (DEHP)	ND
Dibutyl Phthalate (DBP)	ND
Benzyl Butyl Phthalate (BBP)	ND
Others	
Hexabromocyclododecane (HBCDD)	ND

Remarks: ppm = Parts per million based on weight of tested sample = mg/kg
 ND = Not detected

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

Date Sample Received : Sep 05, 2012

Test Period : Sep 05, 2012 To Sep 07, 2012

(II) RoHS Limits:

<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)
Polybrominated Biphenyls (PBBs)	0.1% (1000ppm)
Polybrominated Diphenyl Ehters (PBDEs)	0.1% (1000ppm)

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

Number : TWNC00274801

Test Conducted

(III) Test Method:

Test Item	Test Method	Reporting Limit
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 C, by alkaline digestion and determined by UV-Vis spectrophotometer.	1 ppm
Polybrominated Biphenyls (PBBs)	With reference to IEC 62321 edition 1.0:2008 in annex A, by solvent extraction and determined by GC-MS and further HPLC-DAD confirmation when necessary.	5 ppm
Polybrominated Diphenyl Ethers (PBDEs)	With reference to IEC 62321 edition 1.0:2008 in annex A, by solvent extraction and determined by GC-MS and further HPLC-DAD confirmation when necessary.	5 ppm
Halogen Content	With reference to EN 14582:2007 by calorimetric bomb with oxygen and determined by Ion Chromatograph.	50 ppm
Phthalates	With reference to EN 14372: 2004, by solvent extraction and determined by GC-MS.	50 ppm
Hexabromocyclododecane (HBCDD)	With reference to USEPA 3540C, by solvent extraction and determined by GC-MSD.	10 ppm

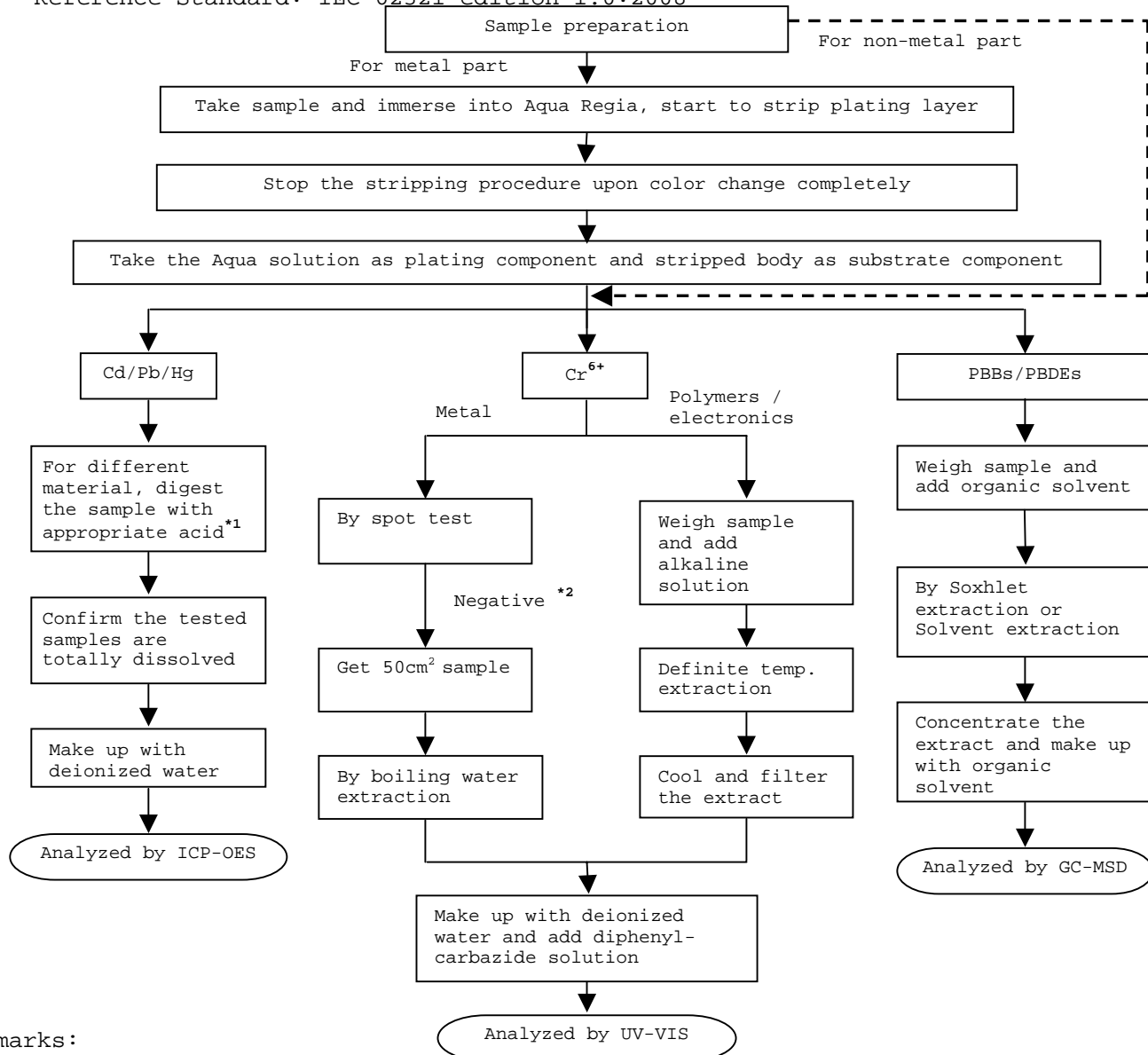
Remark: Reporting limit = Quantitation limit of analyte in sample

Test Conducted

(IV) Measurement Flowchart:

Test for Cd/Pb/Hg/Chromium (VI)/PBBS/PBDES Contents

Reference Standard: IEC 62321 edition 1.0:2008



Remarks:

*1: List of Appropriate Acid:

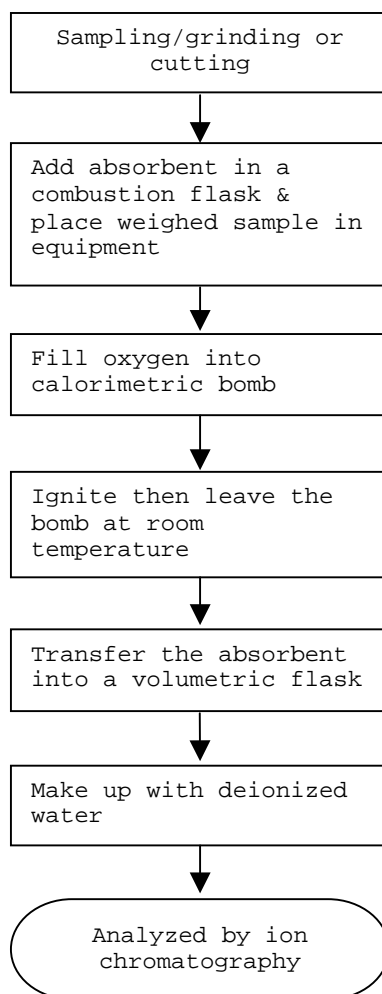
Material	Acid Added for Digestion
Polymers	HNO ₃ , HCl, HF, H ₂ O ₂ , H ₃ BO ₃
Metals	HNO ₃ , HCl, HF
Electronics	HNO ₃ , HCl, H ₂ O ₂ , HBF ₄

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

Test Conducted

(IV) Measurement Flowchart:

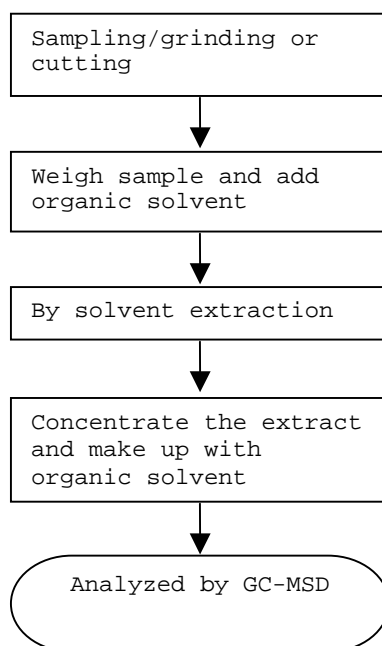
Test for Halogen Content
Reference Standard: EN 14582



Test Conducted

(IV) Measurement Flowchart:

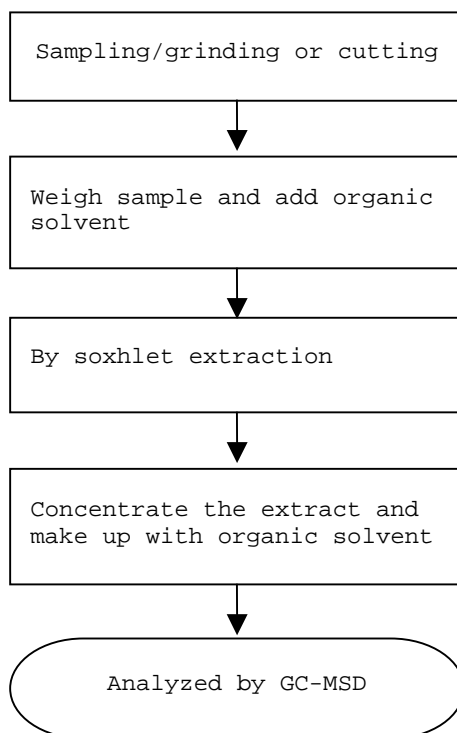
Test For Phthalates Contents
Reference Method: EN 14372: 2004



Test Conducted

(IV) Measurement Flowchart:

Test For Hexabromocyclododecane (HBCDD)
Reference Standard : USEPA 3540C



End of Report

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Number : TWNC00274801

Test Conducted

Photo



Test Report

Number : TWNC00240941

Applicant: Littelfuse, S.A. de C.V.
Blvd. Fausto Z. Martinez #1800
Col. Magisterio Seccion 38 C.P.
26070 Piedra Negras, Coahuila, Mexico

Date : Jan 19, 2012

Sample Description:

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

Part Description : WHITE FOIL

Part Number : 425498

Date Sample Received : Jan 16, 2012

Date Test Started : Jan 16, 2012

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.

Test Conducted

(I) Test Result Summary :

Test Item	Result (ppm)
	White Plastic Film
Heavy Metal	
Cadmium (Cd) content	ND
Lead (Pb) content	ND
Mercury (Hg) content	ND
Chromium VI (Cr ⁶⁺) content	ND
Polybrominated Biphenyls (PBBs)	
Monobrominated Biphenyls (MonoBB)	ND
Dibrominated Biphenyls (DiBB)	ND
Tribrominated Biphenyls (TriBB)	ND
Tetrabrominated Biphenyls (TetraBB)	ND
Pentabrominated Biphenyls (PentaBB)	ND
Hexabrominated Biphenyls (HexaBB)	ND
Heptabrominated Biphenyls (HeptaBB)	ND
Octabrominated Biphenyls (OctaBB)	ND
Nonabrominated Biphenyls (NonaBB)	ND
Decabrominated Biphenyl (DecaBB)	ND
Polybrominated Diphenyl Ethers (PBDEs)	
Monobrominated Diphenyl Ethers (MonoBDE)	ND
Dibrominated Diphenyl Ethers (DiBDE)	ND
Tribrominated Diphenyl Ethers (TriBDE)	ND
Tetrabrominated Diphenyl Ethers (TetraBDE)	ND
Pentabrominated Diphenyl Ethers (PentaBDE)	ND
Hexabrominated Diphenyl Ethers (HexaBDE)	ND
Heptabrominated Diphenyl Ethers (HeptaBDE)	ND
Octabrominated Diphenyl Ethers (OctaBDE)	ND
Nonabrominated Diphenyl Ethers (NonaBDE)	ND
Decabrominated Diphenyl Ether (DecaBDE)	ND
Halogen Content	
Fluorine (F)	ND
Chlorine (Cl)	5837
Bromine (Br)	ND
Iodine (I)	ND

Number : TWNC00240941

Test Conducted

(I) Test Result Summary :

Test Item	Result (ppm)
	White Plastic Film
Phthalates	
Di(2-ethylhexyl) Phthalate (DEHP)	ND
Dibutyl Phthalate (DBP)	ND
Benzyl Butyl Phthalate (BBP)	ND
Others	
Hexabromocyclododecane (HBCDD)	ND

Remarks: ppm = Parts per million based on weight of tested sample = mg/kg
ND = Not detected

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

Date Sample Received : Jan 16, 2012

Test Period : Jan 16, 2012 To Jan 19, 2012

(II) RoHS Requirement:

Restricted Substances	Limits
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)
Polybrominated Biphenyls (PBBs)	0.1% (1000ppm)
Polybrominated Diphenyl Ehters (PBDEs)	0.1% (1000ppm)

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

Test Conducted

(III) Test Method:

Test Item	Test Method	Reporting Limit
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 C, by alkaline digestion and determined by UV-Vis spectrophotometer.	1 ppm
Polybrominated Biphenyls (PBBs)	With reference to IEC 62321 edition 1.0:2008 in annex A, by solvent extraction and determined by GC-MS and further HPLC-DAD confirmation when necessary.	5 ppm
Polybrominated Diphenyl Ethers (PBDEs)	With reference to IEC 62321 edition 1.0:2008 in annex A, by solvent extraction and determined by GC-MS and further HPLC-DAD confirmation when necessary.	5 ppm
Halogen Content	With reference to EN 14582:2007 by calorimetric bomb with oxygen and determined by Ion Chromatograph.	50 ppm
Phthalates	With reference to ASTM D3421-75, by solvent extraction and determined by GC-MSD or GC-FID	10 ppm
Hexabromocyclododecane (HBCDD)	With reference to USEPA 3540C, by solvent extraction and determined by GC-MSD	10 ppm

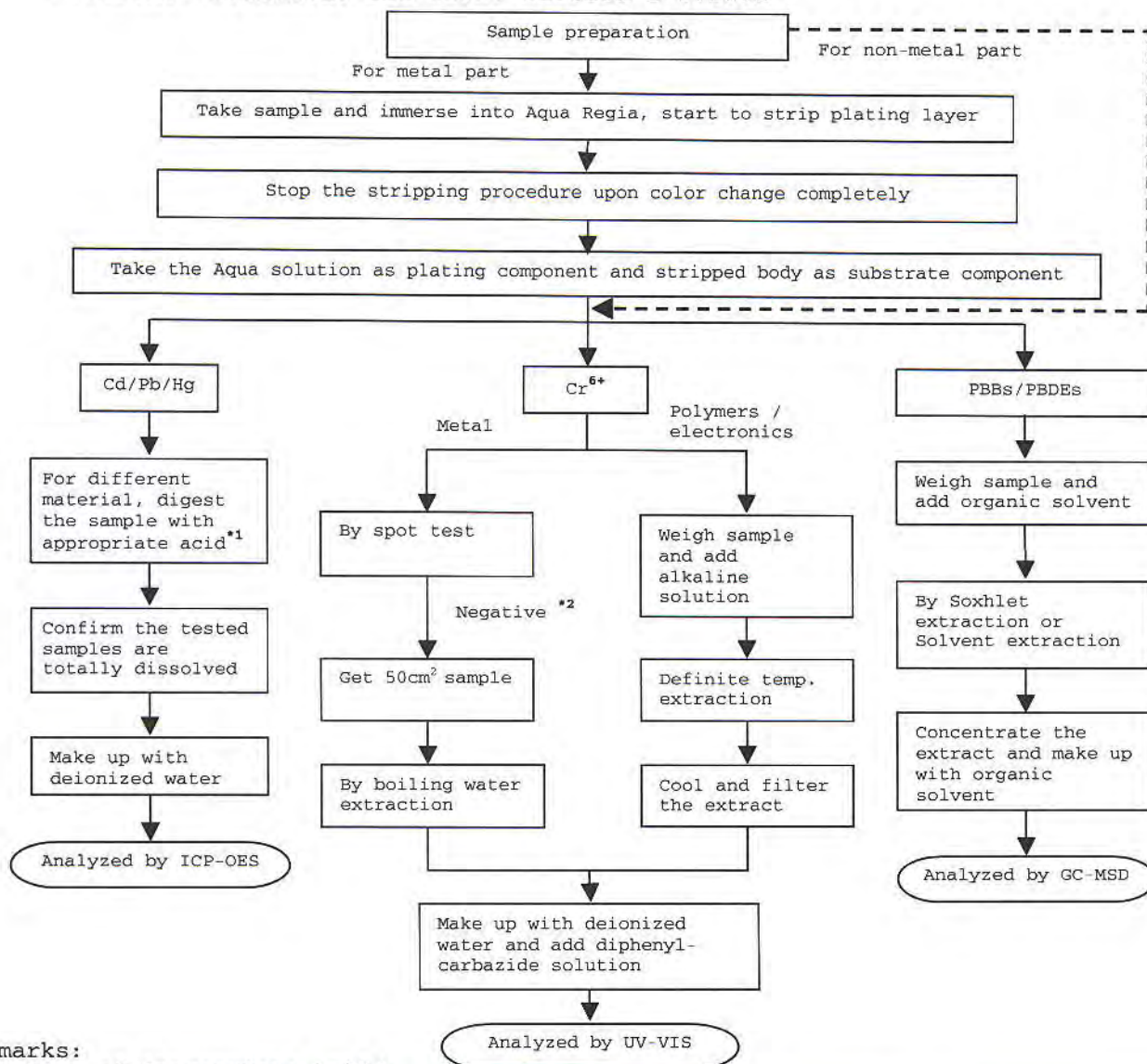
Remark: Reporting limit = Quantitation limit of analyte in sample

Test Conducted

(IV) Measurement Flowchart:

Test for Cd/Pb/Hg/Chromium (VI)/PBBS/PBDES Contents

Reference Standard: IEC 62321 edition 1.0:2008



Remarks:

*1: List of Appropriate Acid:

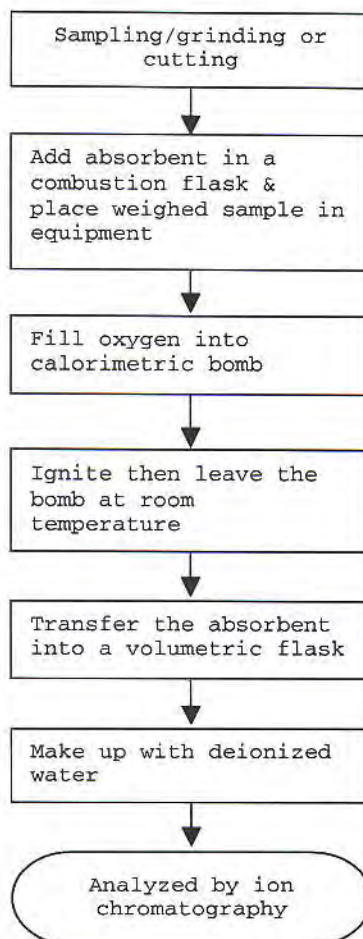
Material	Acid Added for Digestion
Polymers	HNO ₃ , HCl, HF, H ₂ O ₂ , H ₃ BO ₃
Metals	HNO ₃ , HCl, HF
Electronics	HNO ₃ , HCl, H ₂ O ₂ , HBF ₄

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

Test Conducted

(IV) Measurement Flowchart:

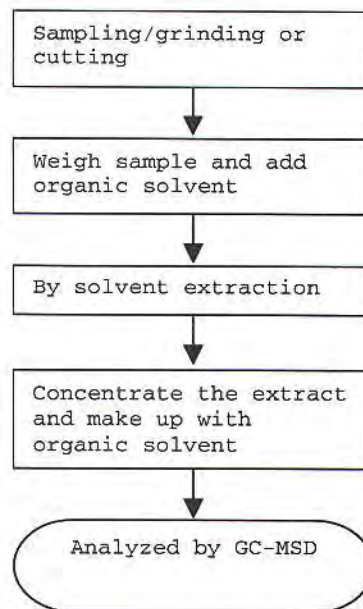
Test for Halogen Content
Reference Standard : EN 14582



Test Conducted

(IV) Measurement Flowchart:

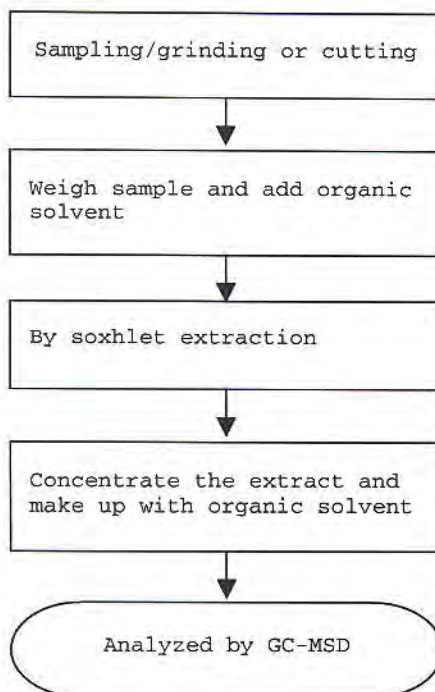
Test For Phthalates Contents
Reference Method: EN 14372: 2004



Test Conducted

(IV) Measurement Flowchart:

Test For Hexabromocyclododecane (HBCDD)
Reference Standard: USEPA 3540C

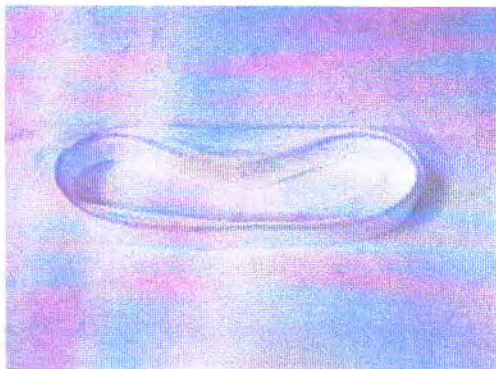
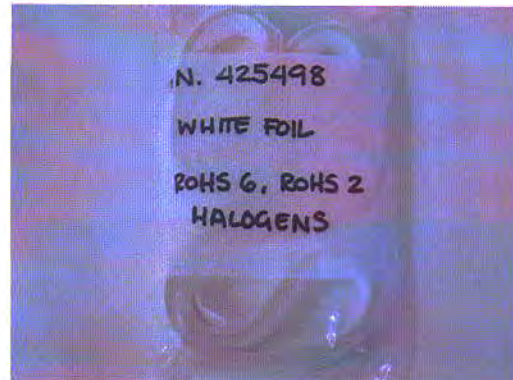
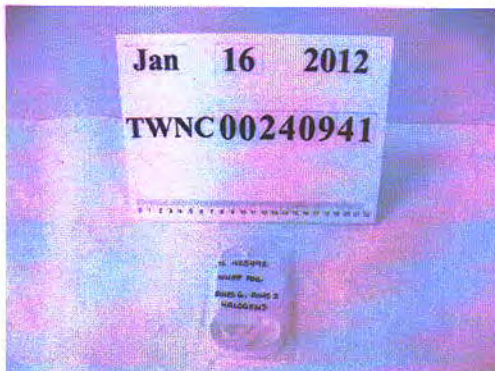


End of Report

Test Conducted

Number : TWNC00240941

Photo



TEST REPORT**APPLICANT**

Littelfuse, S.A. de C.V.

Blvd. Fausto Z. Martínez 1800, Col. Magisterio Sección 38, Piedras Negras, Coahuila

Ing. María Valdez

SAMPLE DESCRIPTION

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

Sample Description NP

Item No. 1) N/P 692305 Solder

Country of Origin NP

Buyer's Name NP

Supplier's Name NP

Date sample received 2011-07-06

Testing period 2011-07-06 to 2011-07-08

TEST CONDUCTED

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

CONCLUSION

<u>Sample Number</u>	<u>Testing item</u>	<u>Conclusion</u>	<u>Failed component</u>	<u>Failed result</u>
1	N/P 692305 Solder	Pass See Result summary	---	---

TEST CONDUCTED

Samples:

000002

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Poniente 134 No. 660, Col. Industrial Vallejo
C.P. 02300, Del. Azcapotzalco, México, D.F. Tel.: 50912150

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1) N/P 692305 Solder

TEST RESULT SUMMARY FOR RoHS DIRECTIVE :

TESTING ITEM	Ω RESULT (ppm)	Limit
	(1)	
Cadmium (Cd) content	ND	0,01% (100 ppm)
Lead (Pb) content	95,24	0,1% (1000 ppm)
Mercury (Hg) content	ND	0,1% (1000 ppm)
Chromium (VI) (Cr ⁶⁺)	ND	0,1% (1000 ppm)

ppm = parts per million based on dry weight of sample.

µg/cm² = microgram per square centimeter.

mg/kg WITH 50cm² = milligram per kilogram with 50 square centimeter.

< = less than.

ND = Not detected.

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

These Accreditations only apply for the methods listed in such. Not accredited under EMA Ω.

Prepared and checked by :

For Intertek

Irma Lopez

[Signature]

Laboratory Manager

The Official Mexican Standard NOM-008-SCFI-1993 establishes like separator decimal the comma (,).

NOTE : DecaBDE IN POLYMERIC APPLICATIONS IS EXEMPTED ACCORDING TO ROHS DIRECTIVE AMENDMENT 2005/717/EC.

=ACCORDING TO IEC 62321, A POSITIVE RESULT INDICATES THE PRESENCE OF Cr(VI) COATING. IT IS THE Cr(VI) CONCENTRATION DETECTED IN THE BOILING-WATER-EXTRACTION SOLUTION AND SHOULD NOT BE INTERPRETED AS THE Cr(VI) CONCENTRATION IN THE COATING LAYER OF THE SAMPLE.

REMARK : AS REQUESTED BY THE APPLICANT, COATING WITH BASE MATERIAL OF TESTED COMPONENTS OF THE SAMPLE MX11-1473-01 WERE TESTED TOGETHER.

000003

[Signature]



Report No.: MX11-1473-01

Date : 2011-07-18

Test method :

<u>Sample Number</u>	<u>Testing item</u>	<u>Ω Testing method</u>	<u>Quality control Batch:</u>	<u>Analysis Date:</u>	<u>Analyzed By:</u>	<u>Reporting limit ppm</u>
1	Chromium VI (Cr^{6+}) content	With reference to USEPA 3060, by EPA 7196	QHU2010-61p89	2011-07-08	AGM,ILM	20,0

<u>Sample Number</u>	<u>Testing item</u>	<u>Ω Testing method</u>	<u>Quality control Batch:</u>	<u>Analysis Date:</u>	<u>Analyzed By:</u>	<u>Reporting limit ppm</u>
1	Lead (Pb) content	With reference to USEPA 3050MOD, by EPA 7420	MET2011-12p32	2011-07-08	MARY	5,0

<u>Sample Number</u>	<u>Testing item</u>	<u>Ω Testing method</u>	<u>Quality control Batch:</u>	<u>Analysis Date:</u>	<u>Analyzed By:</u>	<u>Reporting limit ppm</u>
1	Cadmium (Cd) content	With reference to USEPA 3050MOD, by EPA 6010	MET2011-12p32	2011-07-08	MARY	2,0

<u>Sample Number</u>	<u>Testing item</u>	<u>Ω Testing method</u>	<u>Quality control Batch:</u>	<u>Analysis Date:</u>	<u>Analyzed By:</u>	<u>Reporting limit ppm</u>
1	Mercury (Hg) content	With reference to USEPA 7471 by USEPA 7471	MET2011-12p29	2011-07-07	RNC	0,25

000004

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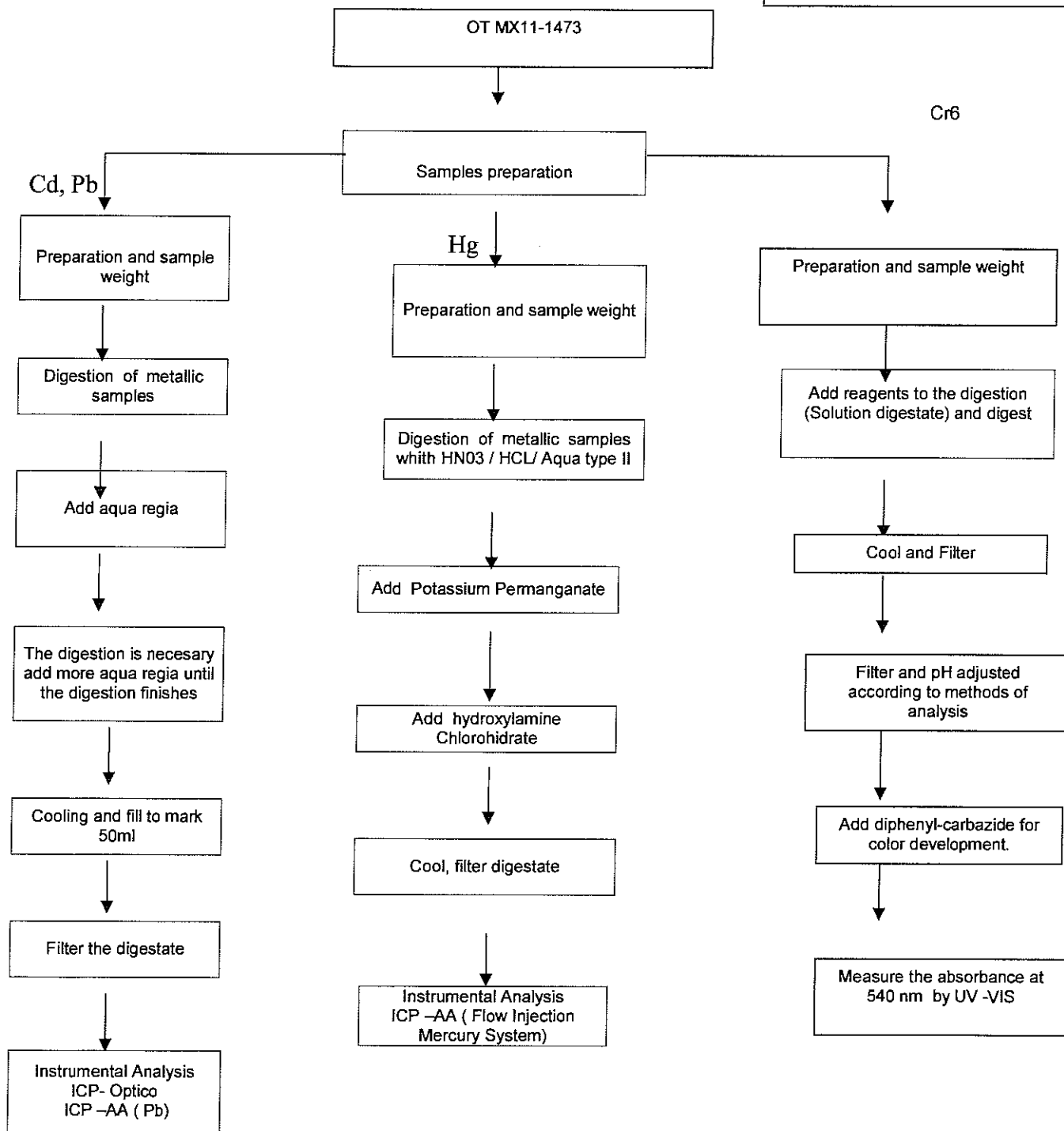
ILTA/D03/GENS-F8

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

Poniente 134 No. 680, Col. Industrial Vallejo
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Poniente 134 No. 660, Col. Industrial Vallejo
C.P. 02300, Del. Azcapotzalco, México, D.F. Tel.: 50912150
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Test Report

Number : TWNC00279943

Applicant: Littelfuse, S.A. de C.V.
Blvd. Fausto Z. Martinez #1800
Col. Magisterio Seccion 38 C.P.
26070 Piedra Negras, Coahuila,
Mexico

Date : Oct 12, 2012

Sample Description:

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

Part Description : TECHNYL A20

Part Number : 057352

Date Sample Received : Oct 04, 2012

Date Test Started : Oct 05, 2012

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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Page 1 of 9

Intertek Testing Services Taiwan Ltd.

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全國公證檢驗股份有限公司

114 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

Number : TWNC00279943

Test Conducted

(I) Test Result Summary :

<u>Test Item</u>	<u>Result (ppm)</u>
	<u>Black Plastic Pellets</u>
Heavy Metal	
Cadmium (Cd) content	ND
Lead (Pb) content	ND
Mercury (Hg) content	ND
Chromium VI (Cr ⁶⁺) content	ND
Polybrominated Biphenyls (PBBs)	
Monobrominated Biphenyls (MonoBB)	ND
Dibrominated Biphenyls (DiBB)	ND
Tribrominated Biphenyls (TriBB)	ND
Tetrabrominated Biphenyls (TetraBB)	ND
Pentabrominated Biphenyls (PentaBB)	ND
Hexabrominated Biphenyls (HexaBB)	ND
Heptabrominated Biphenyls (HeptaBB)	ND
Octabrominated Biphenyls (OctaBB)	ND
Nonabrominated Biphenyls (NonaBB)	ND
Decabrominated Biphenyl (DecaBB)	ND
Polybrominated Diphenyl Ethers (PBDEs)	
Monobrominated Diphenyl Ethers (MonoBDE)	ND
Dibrominated Diphenyl Ethers (DiBDE)	ND
Tribrominated Diphenyl Ethers (TriBDE)	ND
Tetrabrominated Diphenyl Ethers (TetraBDE)	ND
Pentabrominated Diphenyl Ethers (PentaBDE)	ND
Hexabrominated Diphenyl Ethers (HexaBDE)	ND
Heptabrominated Diphenyl Ethers (HeptaBDE)	ND
Octabrominated Diphenyl Ethers (OctaBDE)	ND
Nonabrominated Diphenyl Ethers (NonaBDE)	ND
Decabrominated Diphenyl Ether (DecaBDE)	ND



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Tel: (+886-2) 6602-2888 · 2797-8885 Fax: (+886-2) 6602-2410

Number : TWNC00279943

Test Conducted

(I) Test Result Summary :

<u>Test Item</u>	<u>Result (ppm)</u>
	<u>Black Plastic Pellets</u>
Halogen Content	
Fluorine (F)	ND
Chlorine (Cl)	805
Bromine (Br)	ND
Iodine (I)	ND
Phthalates	
Di(2-ethylhexyl) Phthalate (DEHP)	ND
Dibutyl Phthalate (DBP)	ND
Benzyl Butyl Phthalate (BBP)	ND
Others	
Hexabromocyclododecane (HBCDD)	ND

Remarks: ppm = Parts per million based on weight of tested sample = mg/kg
 ND = Not detected

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

Date Sample Received : Oct 04, 2012

Test Period : Oct 05, 2012 To Oct 09, 2012

(II) RoHS Limits:

<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)
Polybrominated Biphenyls (PBBs)	0.1% (1000ppm)
Polybrominated Diphenyl Ehters (PBDEs)	0.1% (1000ppm)

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



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Test Conducted

(III) Test Method:

<u>Test Item</u>	<u>Test 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 C, by alkaline digestion and determined by UV-Vis spectrophotometer.	1 ppm
Polybrominated Biphenyls (PBBs)	With reference to IEC 62321 edition 1.0:2008 in annex A, by solvent extraction and determined by GC-MS and further HPLC-DAD confirmation when necessary.	5 ppm
Polybrominated Diphenyl Ethers (PBDEs)	With reference to IEC 62321 edition 1.0:2008 in annex A, by solvent extraction and determined by GC-MS and further HPLC-DAD confirmation when necessary.	5 ppm
Halogen Content	With reference to EN 14582:2007 by calorimetric bomb with oxygen and determined by Ion Chromatograph.	50 ppm
Phthalates	With reference to EN 14372: 2004, by solvent extraction and determined by GC-MS.	50 ppm
Hexabromocyclododecane (HBCDD)	With reference to USEPA 3540C, by solvent extraction and determined by GC-MSD.	10 ppm

Remark: Reporting limit = Quantitation limit of analyte in sample

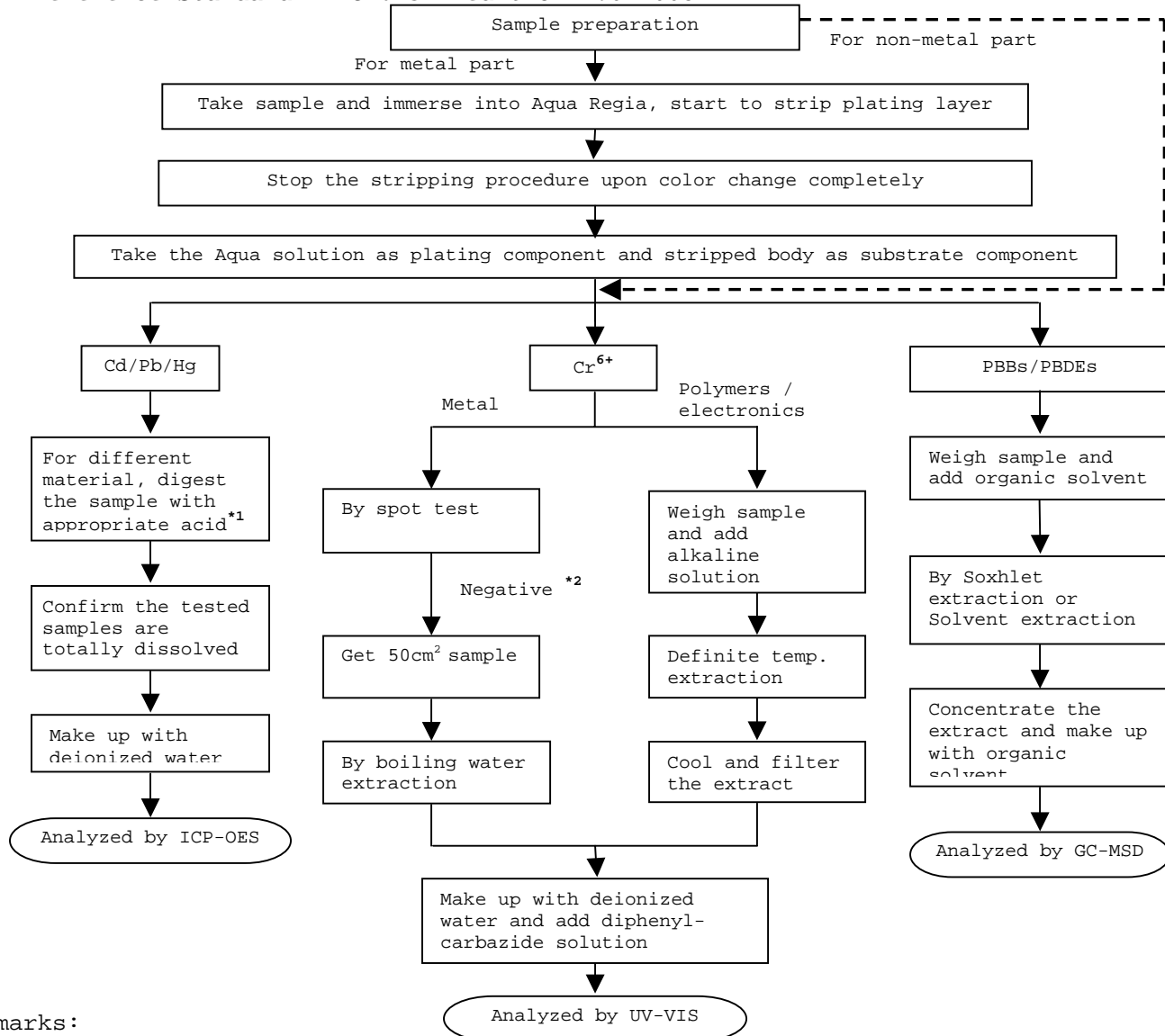


Test Conducted

(IV) Measurement Flowchart:

Test for Cd/Pb/Hg/Chromium (VI)/PBBS/PBDES Contents

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.

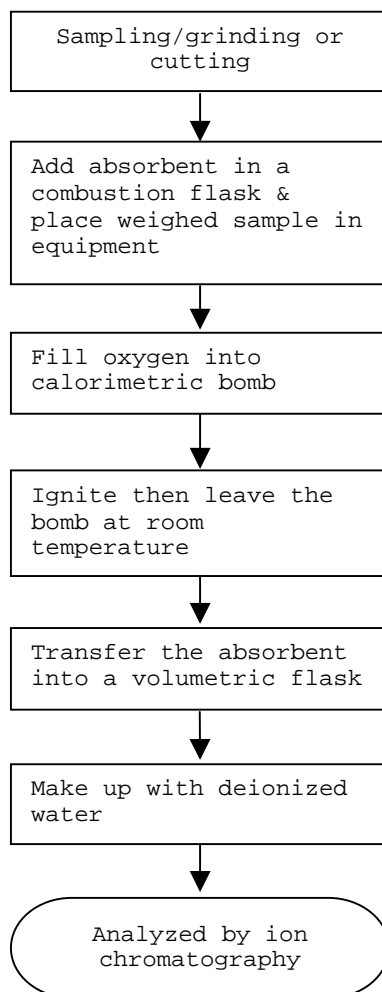


Test Conducted

(IV) Measurement Flowchart:

Test for Halogen Content

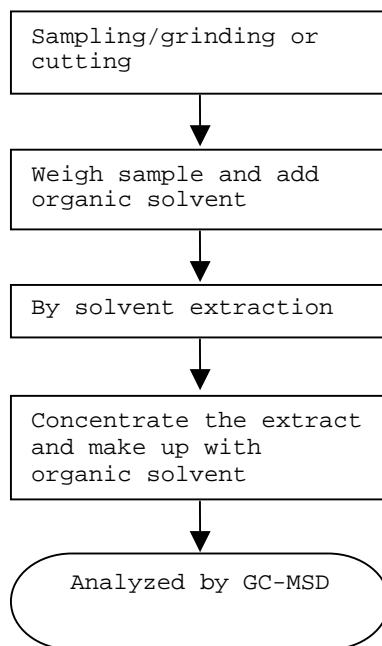
Reference Standard : EN 14582



Test Conducted

(IV) Measurement Flowchart:

Test For Phthalates Contents
Reference Method: EN 14372: 2004

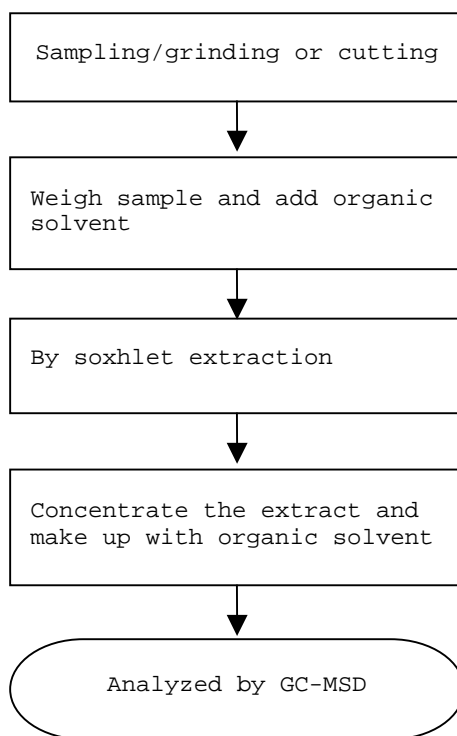


Test Conducted

(IV) Measurement Flowchart:

Test For Hexabromocyclododecane (HBCDD)

Reference Standard: USEPA 3540C



End of Report

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Test Conducted

Number : TWNC00279943

Photo





Test Report

Number : TWNC00219091

Applicant: Littelfuse, S.A. de C.V.
Blvd. Fausto Z. Martinez #1800
Col. Magisterio Seccion 38 C.P.
26070 Piedra Negras, Coahuila,
Mexico

Date : Aug 09, 2011

Sample Description:

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

Part Description	: ELEMENT MIDI 30A,ELEMENT MIDI 40A, ELEMENT MIDI 60A,ELEMENT MIDI 70A, ELEMENT MIDI 80A,ELEMENT MIDI 100A, ELEMENT MIDI 125A,ELEMENT MIDI 150A, ELEMENT MIDI 200A,ELEMENT MIDI 175A,
Part Number	: 920-471-002,920-471-003,920-471-005,920-471-006, 920-471-007,920-471-008,920-471-010,920-471-011, 920-471-012,920-471-013
Date Sample Received	: Aug 04, 2011
Date Test Started	: Aug 05, 2011

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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Number : TWNC00219091

Test Conducted

(I) Test Result Summary :

<u>Test Item</u>	<u>Result (ppm)</u>	
	<u>(1)</u>	<u>(2)</u>
Heavy Metal		
Cadmium (Cd) content	ND	ND
Lead (Pb) content	16	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 Test.

Tested Components

- (1) Coppery Metal Base Material
- (2) Silvery Plating Layer

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

Date Sample Received : Aug 04, 2011

Test Period : Aug 05, 2011 To Aug 09, 2011

(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 : TWNC00219091

Test Conducted

(III) Test Method:

<u>Test Item</u>	<u>Test 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

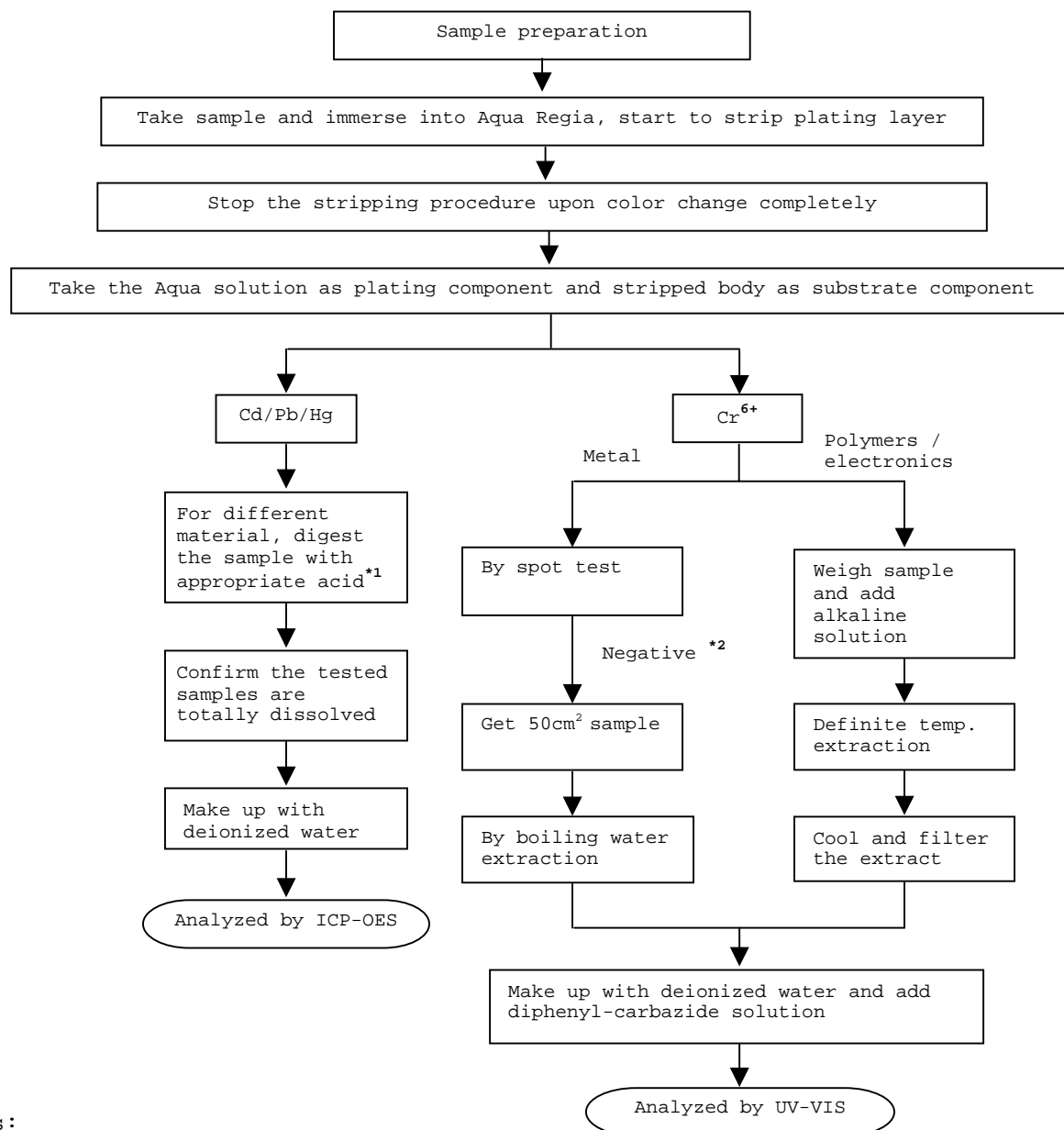
Remark: Reporting limit = Quantitation limit of analyte in sample

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.

End of Report

Test Conducted

Number : TWNC00219091

Photo

