



## ICP Test Report Certification Packet

Company name: Littelfuse, Inc.

Product Series: Midi Fuse

Product #: 498xxx Series

Issue Date: March 9, 2012

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 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**

<b>Total Parts</b>	<b>Raw Material Part Number</b>	<b>Raw Material Description</b>	<b>Page(s)</b>
1	425740	Yellow Hot Stamp Foil	3-8
2	425744	Pink Hot Stamp Foil	9-14
3	425743	Blue Hot Stamp Foil	15-20
4	425738	Green Hot Stamp Foil	21-26
5	425739	Red Hot Stamp Foil	27-32
6	425745	Grey Hot Stamp Foil	33-38
7	425741	Brown Hot Stamp Foil	39-44
8	425737	Orange Hot Stamp Foil	45-50
9	425746	Violet Hot Stamp Foil	51-56
10	425747	Black Hot Stamp Foil	57-62
11	425498	White Hot Stamp Foil	63-66
12	692305	Solder	67-71
13	057352	Molding Compound	72-77
14	920-471-xxx	Element-Cu Ca 110 Sn Plated	78-82

**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

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**TEST CONDUCTED**

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

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**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	$\Omega$ 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 <sup>6+</sup> )	ND	0,1% (1000 ppm)
<b>▲ POLYBROMINATED BIPHENYLS (PBBs) Total</b>	<b>ND</b>	<b>0,1% (1000 ppm)</b>
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	---
<b>▲ POLYBROMINATED DIPHENYL ETHERS (PBDEs) Total</b>	<b>ND</b>	<b>0,1% (1000 ppm)</b>
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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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/cm<sup>2</sup> = microgram per square centimeter.

mg/kg WITH 50cm<sup>2</sup> = 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]*  
*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 <sup>6+</sup> ) 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

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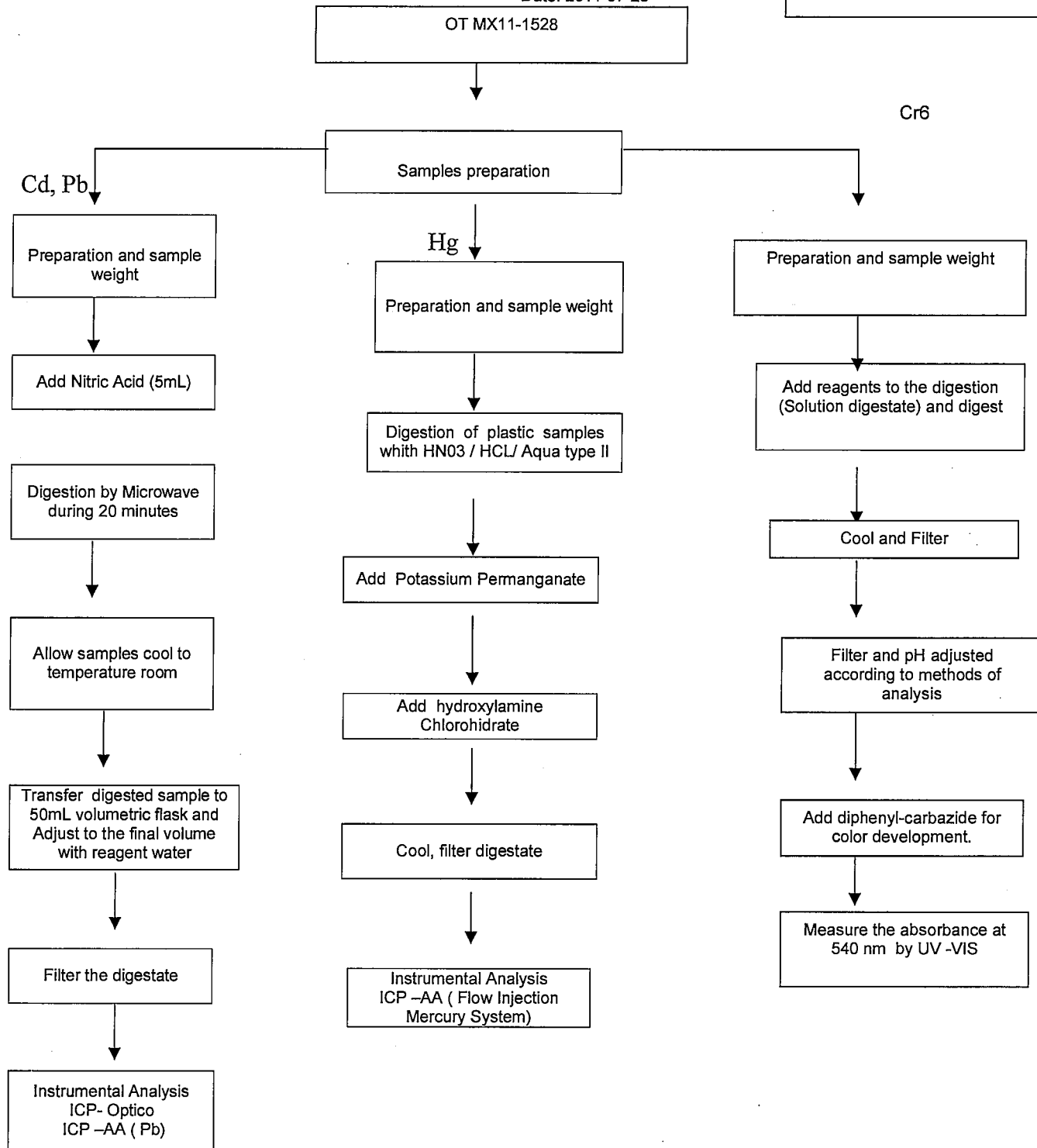
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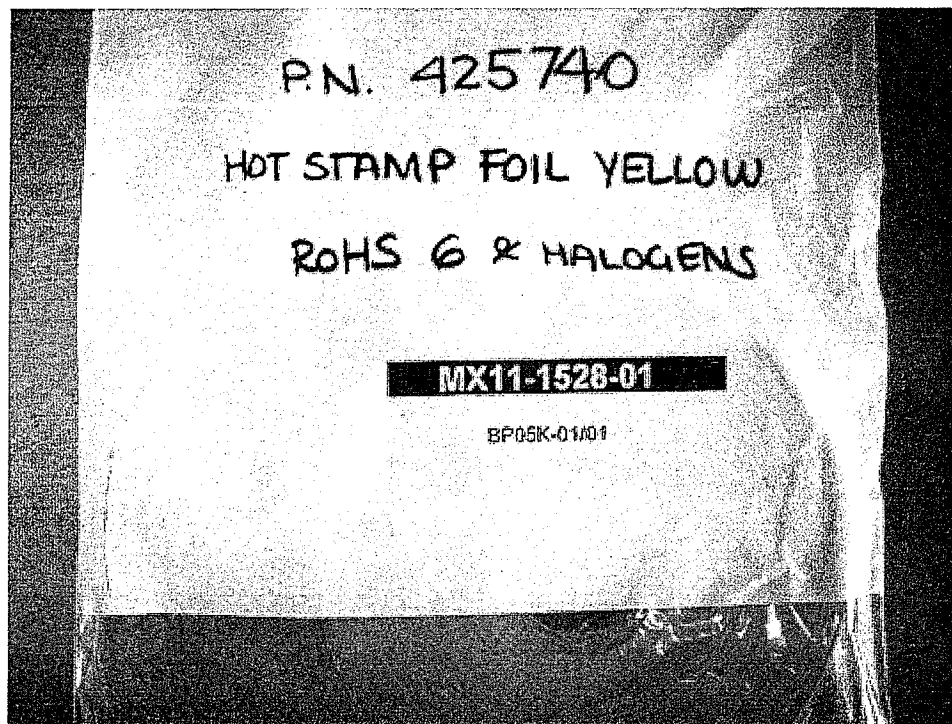
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Report No.: MX11-1531

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 425744 Hot Stamp Foil Pink

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

Sample Number	Testing item	Conclusion	Failed component	Failed result
1	P/N 425744 Hot Stamp Foil Pink	Pass See Result summary	---	---

\*\*\*\*\*

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**TEST CONDUCTED**

Samples:

- 1) P/N 425744 Hot Stamp Foil Pink

**TEST RESULT SUMMARY FOR RoHS DIRECTIVE :**

TESTING ITEM	$\Omega$ 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) ( $\text{Cr}^{6+}$ )	ND	0,1% (1000 ppm)
<b>▲ POLYBROMINATED BIPHENYLS (PBBs) Total</b>	<b>ND</b>	<b>0,1% (1000 ppm)</b>
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	---
<b>▲ POLYBROMINATED DIPHENYL ETHERS (PBDEs) Total</b>	<b>ND</b>	<b>0,1% (1000 ppm)</b>
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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TESTING ITEM	▲ RESULT (ppm)
	(1)
Fluor (F) content	ND
Chlorine (Cl) content	15 050
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. $\text{mg}/\text{kg WITH } 50\text{cm}^2$  = milligram per kilogram with 50 square centimeter.

&lt; = less than.

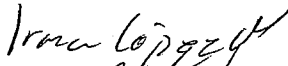
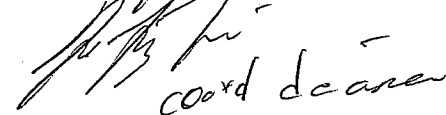
ND = Not detected.

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  $\Omega$ .

Prepared and checked by :

For Intertek

  
  
coord 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 MX11-1531-01 WERE TESTED TOGETHER.

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## Test method :

Sample Number	Testing item	Ω Testing method	Quality control Batch:	Analysis Date:	Analyzed By:	Reporting limit ppm
1	Chromium VI (Cr <sup>6+</sup> ) 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

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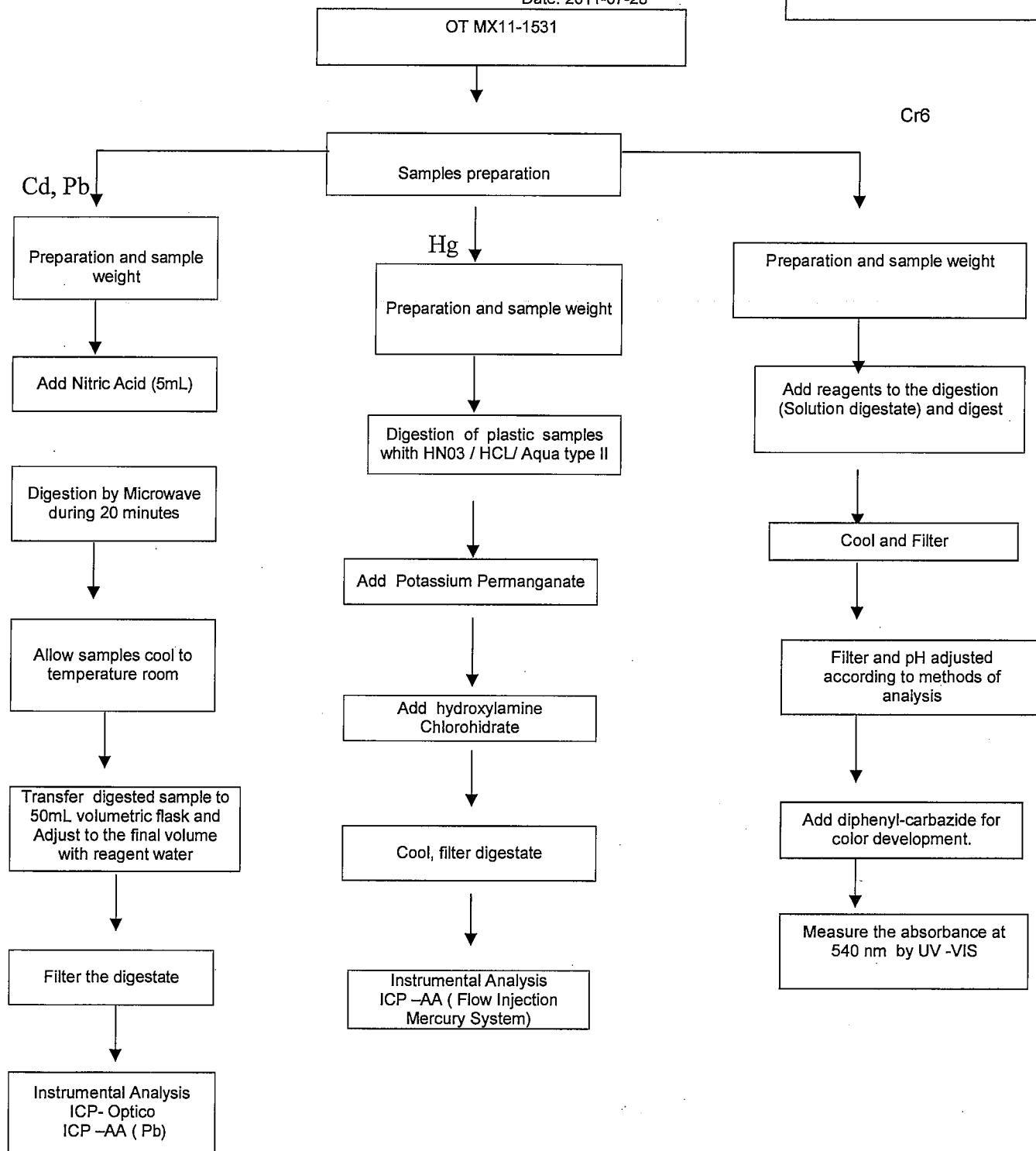
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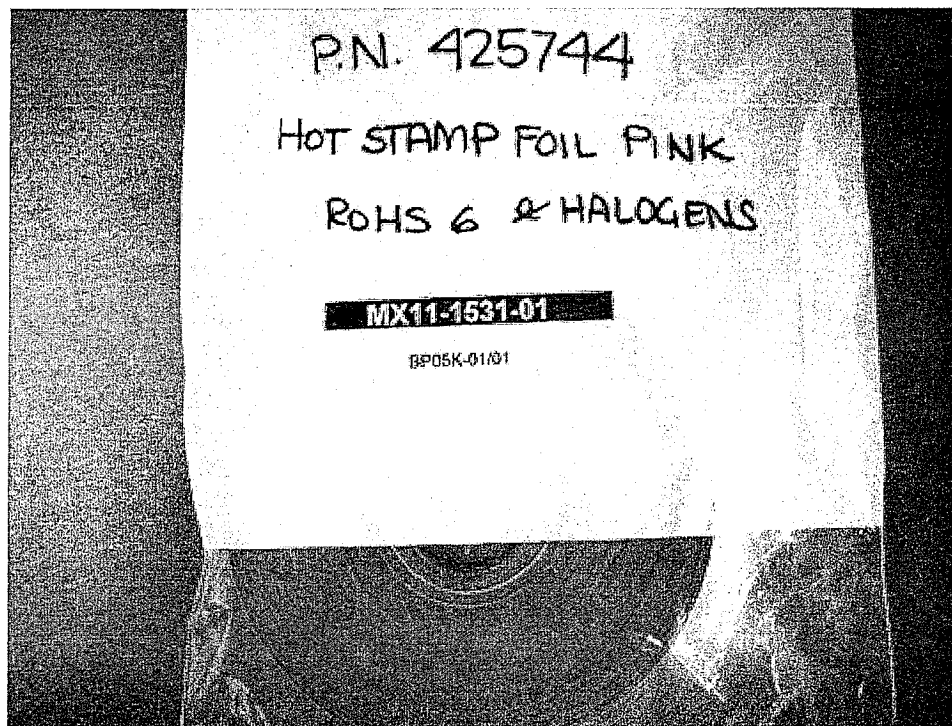
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000007





Report No.: MX11-1530  
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 425743 Hot Stamp Foil Blue

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 425743 Hot Stamp Foil Blue	Pass See Result summary	---	---

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# TEST CONDUCTED

Samples:

- 1) P/N 425743 Hot Stamp Foil Blue

## 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 <sup>6+</sup> )	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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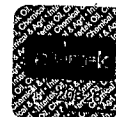
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TESTING ITEM	▲ RESULT (ppm)
	(1)
Fluor (F) content	ND
Chlorine (Cl) content	14 302
Bromine (Br) content	ND
Iodine (I) content	ND

▲ = Contrated test.

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

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

&lt; = less than.

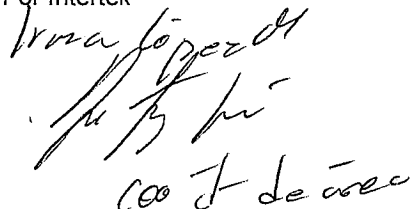
ND = Not detected.

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



Laboratory Manager

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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 MX11-1530-01 WERE TESTED TOGETHER.

0000004



**Test method :**

Sample Number	Testing item	Ω Testing method	Quality control Batch:	Analysis Date:	Analyzed By:	Reporting limit ppm
1	Chromium VI (Cr <sup>6+</sup> ) 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

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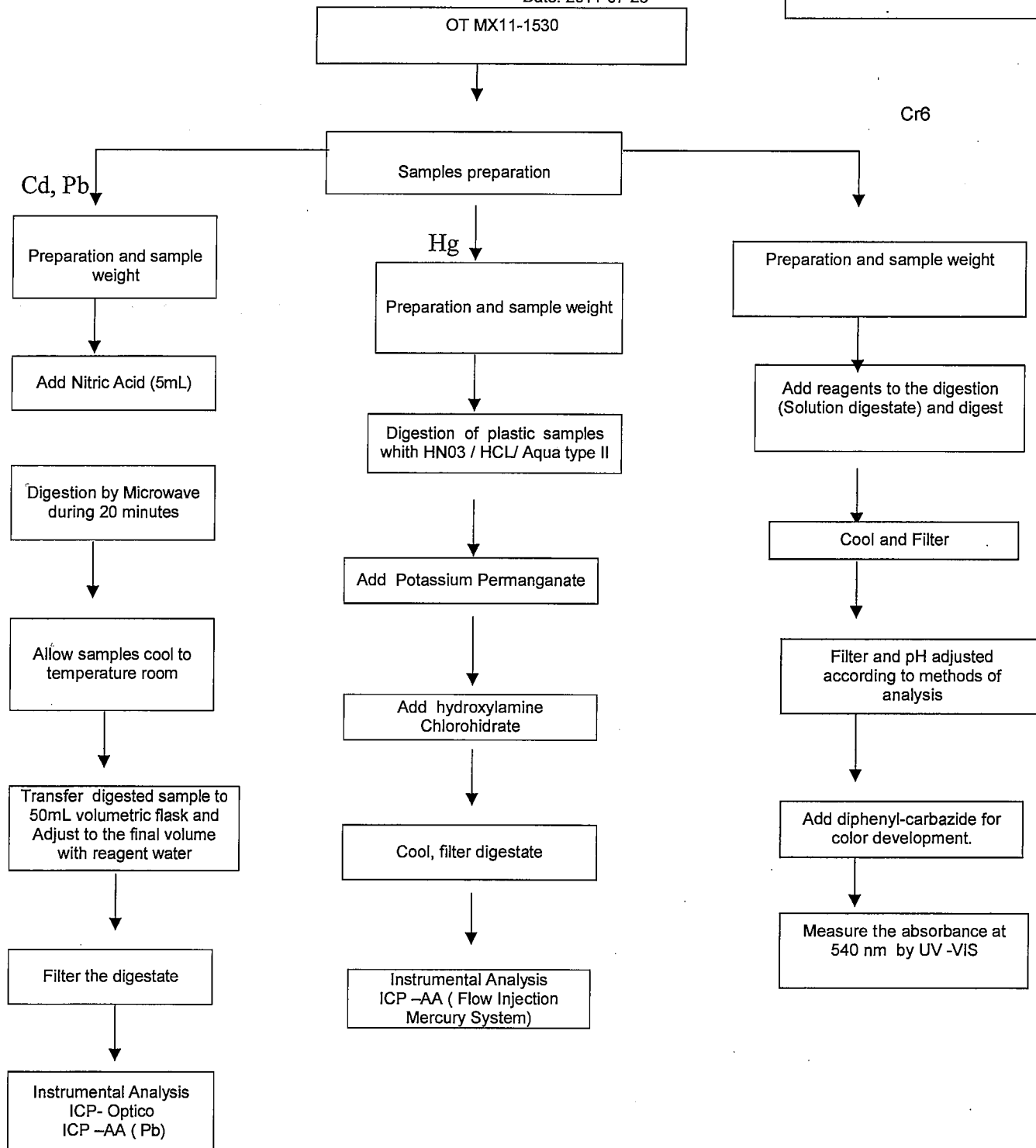
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Report No.: MX11-1530  
Date: 2011-07-28

Plastic samples  
Flow chart for sample: 1



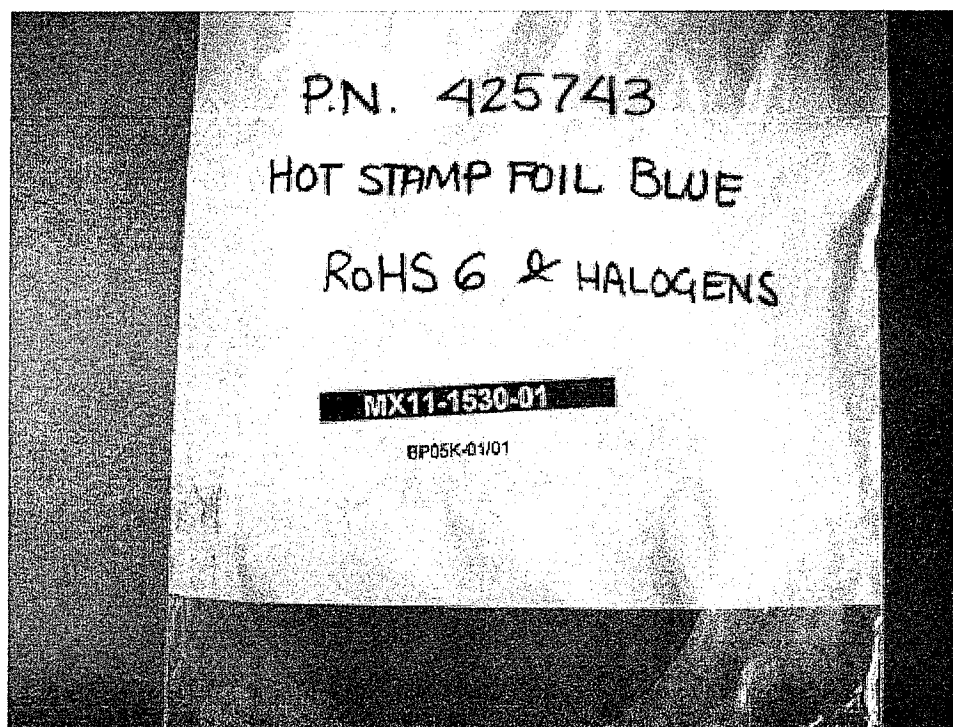
000006

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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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**TEST CONDUCTED**

Samples:

- 1) P/N 425738 Hot Stamp Foil Green

**TEST RESULT SUMMARY FOR RoHS DIRECTIVE :**

TESTING ITEM	$\Omega$ 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 <sup>6+</sup> )	ND	0,1% (1000 ppm)
<b>▲ POLYBROMINATED BIPHENYLS (PBBs) Total</b>	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	---
<b>▲ POLYBROMINATED DIPHENYL ETHERS (PBDEs) Total</b>	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/cm<sup>2</sup> = microgram per square centimeter.

mg/kg WITH 50cm<sup>2</sup> = 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.

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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 <sup>6+</sup> ) 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

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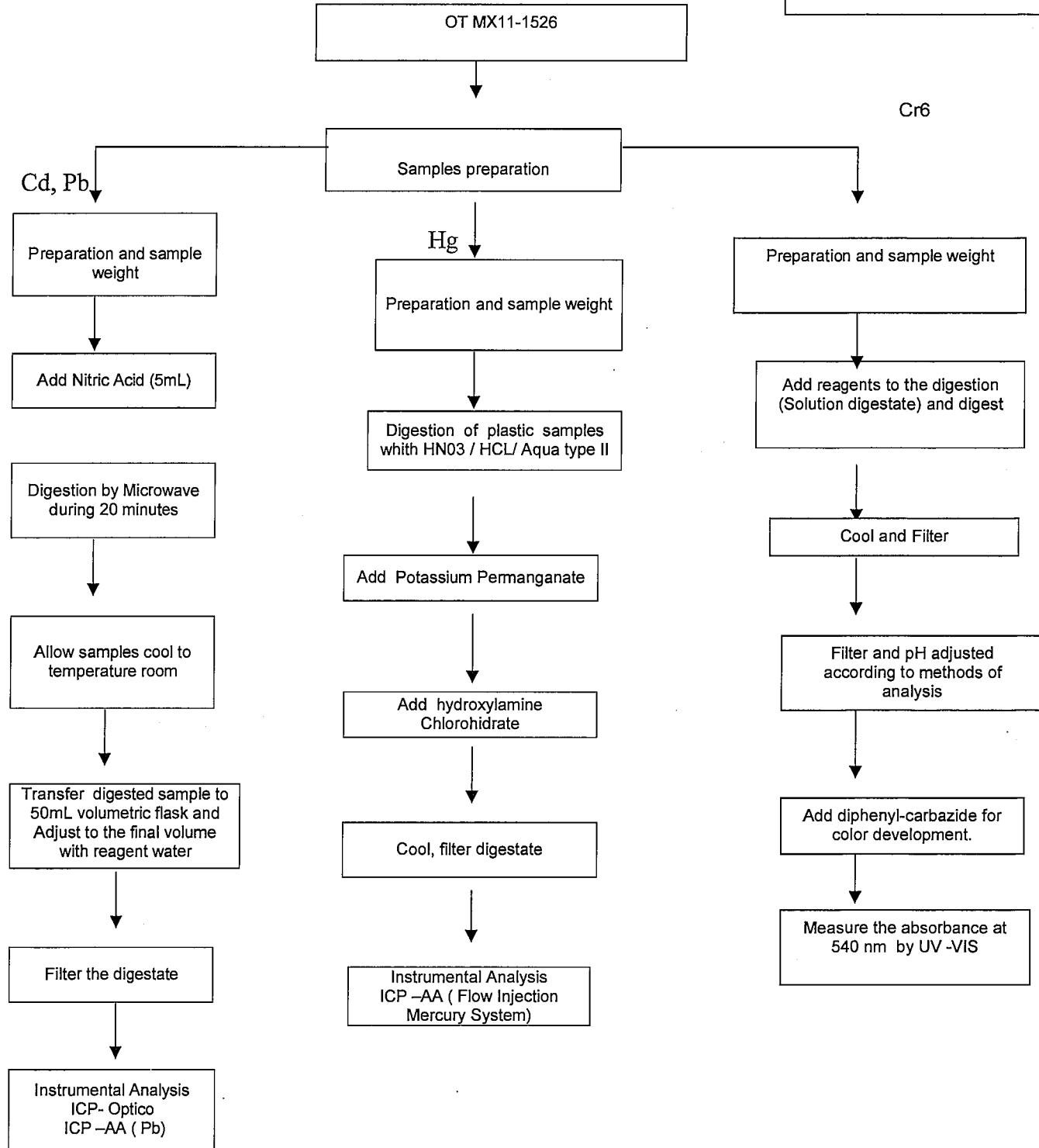
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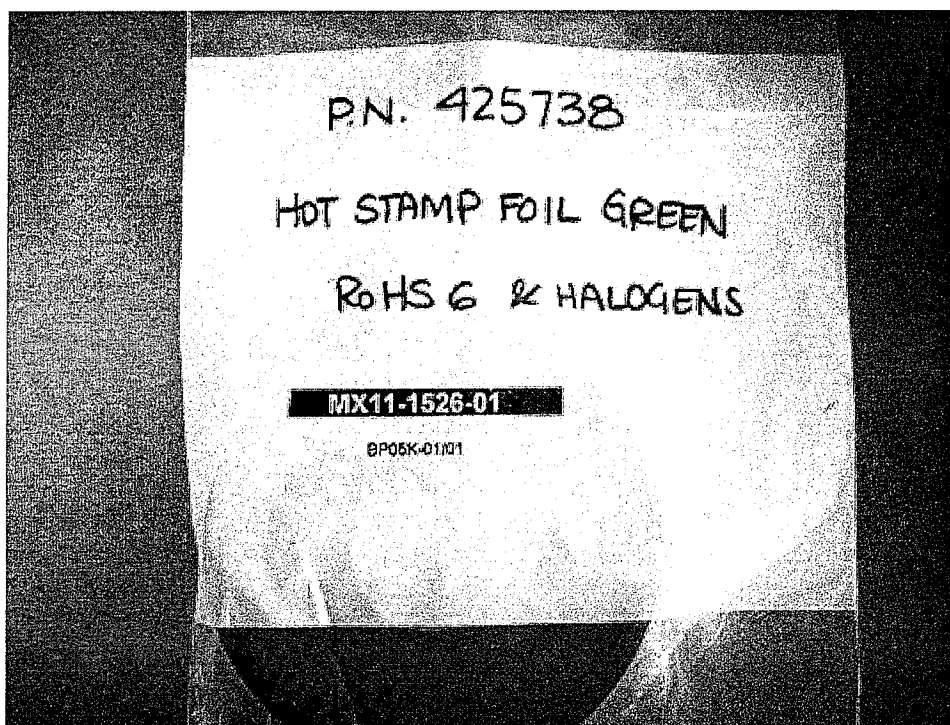
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**TEST REPORT****APPLICANT**

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 425739 Hot Stamp Foil Red

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 425739 Hot Stamp Foil Red	Pass See Result summary	----	---

\*\*\*\*\*

000002



# TEST CONDUCTED

Samples:

- 1) P/N 425739 Hot Stamp Foil Red

## 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 <sup>6+</sup> )	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	13 317
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. $\text{mg}/\text{kg WITH } 50\text{cm}^2$  = milligram per kilogram with 50 square centimeter.

&lt; = less than.

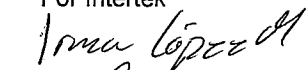
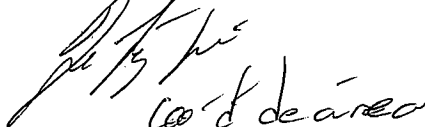
ND = Not detected.

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  $\Omega$ .

Prepared and checked by :

For Intertek

  
  
Co. d. de área

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 MX11-1527-01 WERE TESTED TOGETHER.

000004



**Test method :**

Sample Number	Testing item	Ω Testing method	Quality control Batch:	Analysis Date:	Analyzed By:	Reporting limit ppm
1	Chromium VI (Cr <sup>6+</sup> ) 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

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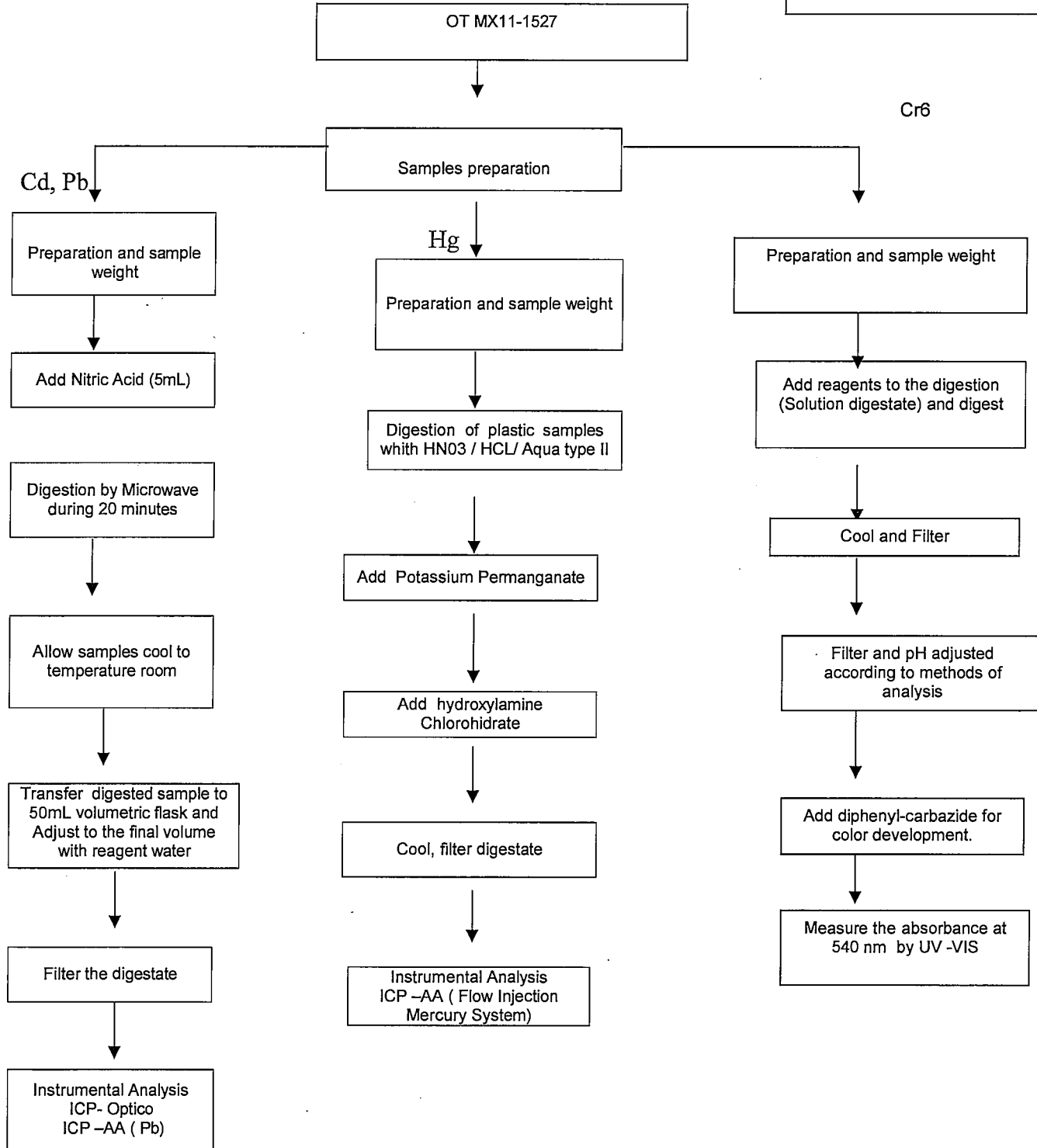
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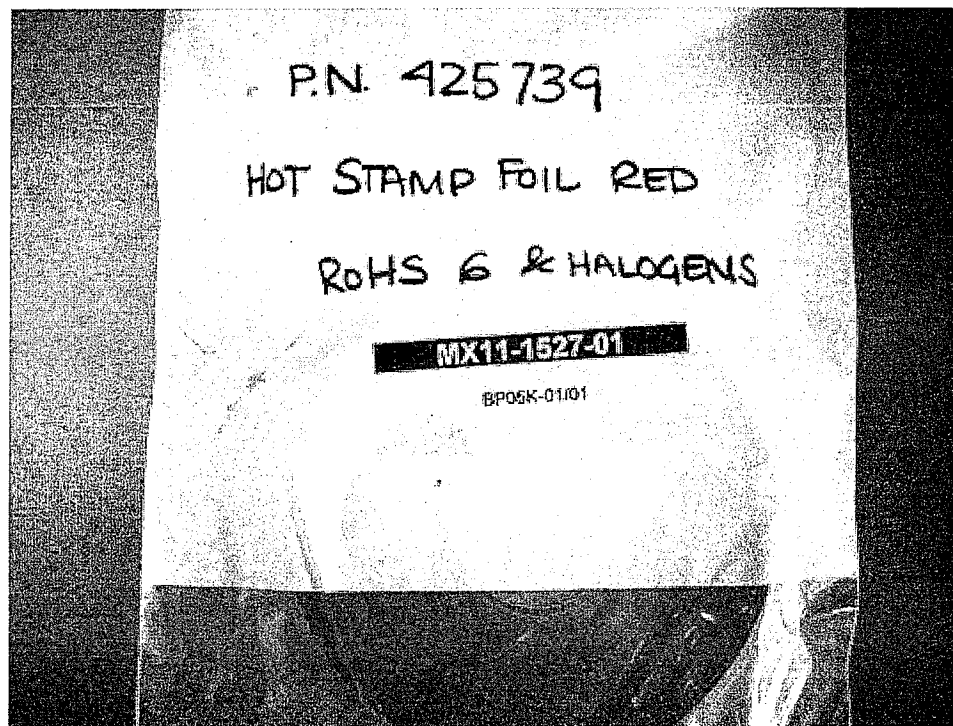


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**TEST REPORT****APPLICANT**

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 425745 Hot Stamp Foil Gray

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 425745 Hot Stamp Foil Gray	Pass See Result summary	---	---

\*\*\*\*\*

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**TEST CONDUCTED**

Samples:

- 1) P/N 425745 Hot Stamp Foil Gray

**TEST RESULT SUMMARY FOR RoHS DIRECTIVE :**

TESTING ITEM	$\Omega$ 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)
<b>▲ POLYBROMINATED BIPHENYLS (PBBs) Total</b>	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	---
<b>▲ POLYBROMINATED DIPHENYL ETHERS (PBDEs) Total</b>	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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Report No.: MX11-1532

Date : 2011-07-28

TESTING ITEM	▲ RESULT (ppm)
	(1)
Fluor (F) content	ND
Chlorine (Cl) content	15 258
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.

$\text{mg}/\text{kg WITH } 50\text{cm}^2$  = 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  $\Omega$ .

Prepared and checked by :

For Intertek

*Irma Lopez*  
*[Signature]*  
*CO-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 MX11-1532-01 WERE TESTED TOGETHER.

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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 <sup>6+</sup> ) 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 8010	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 8010	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

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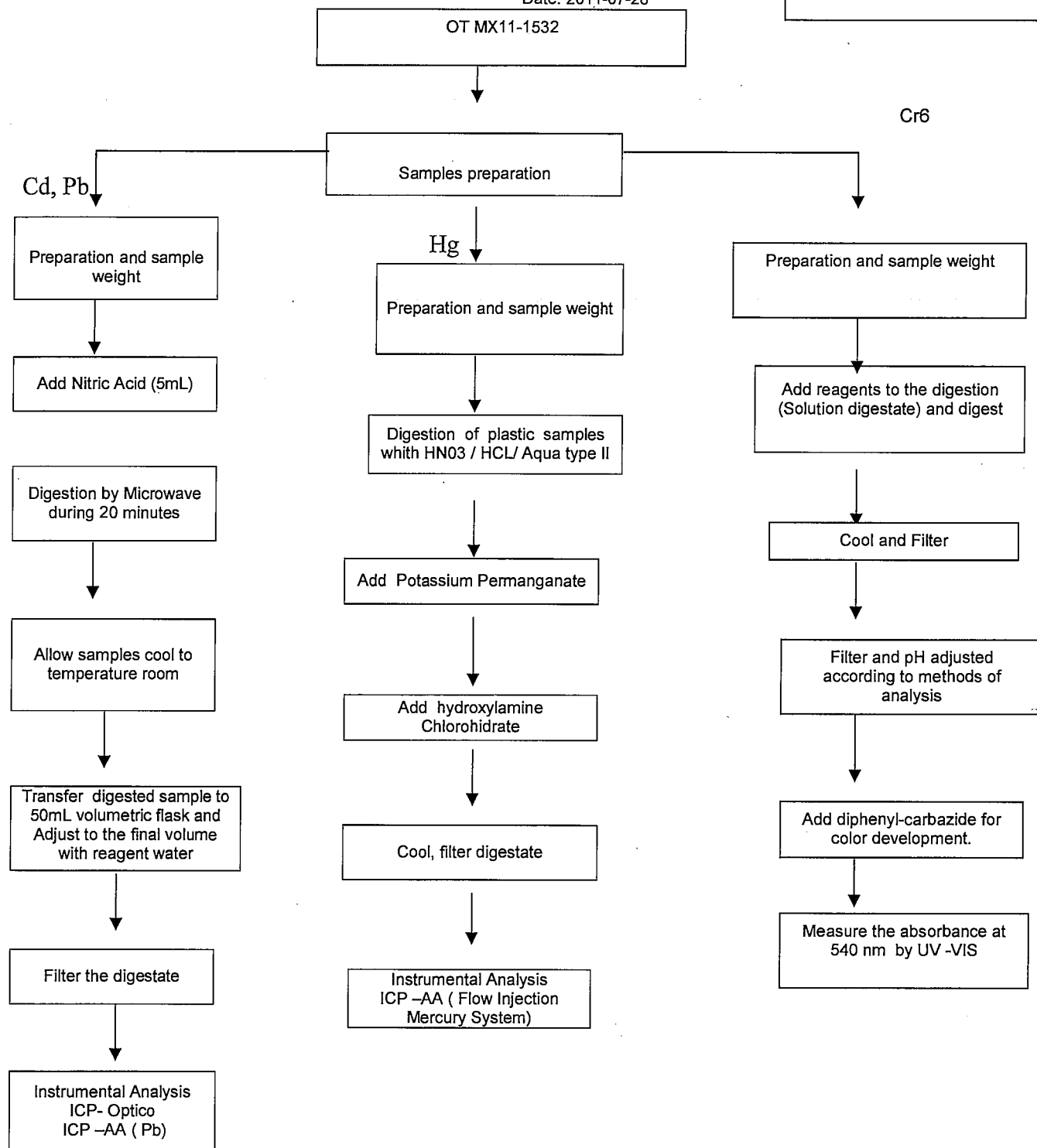
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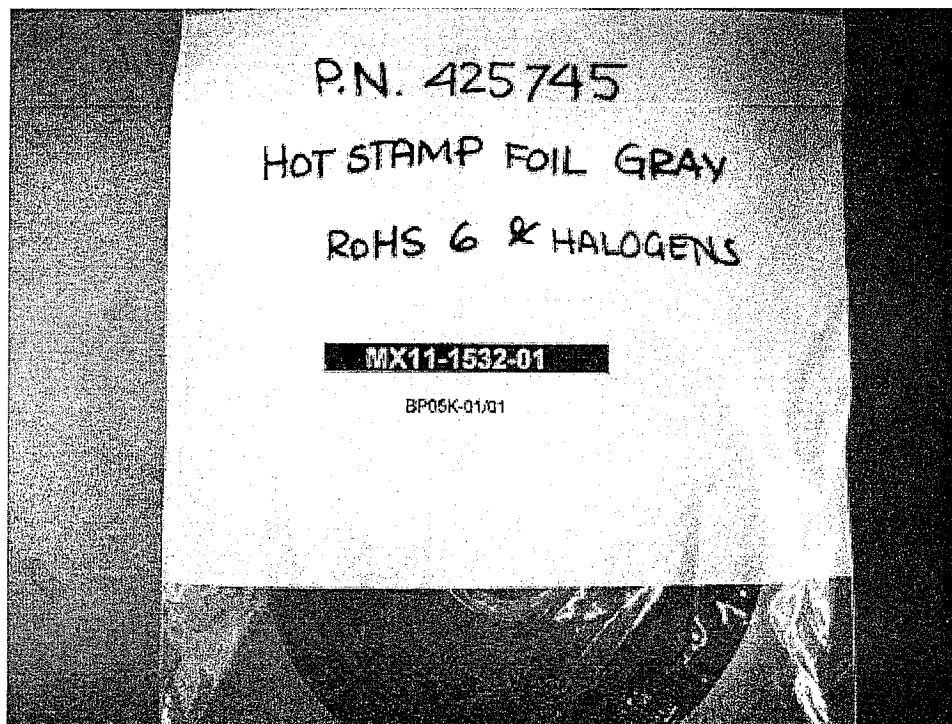
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Report No.: MX11-1529

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 425741 Hot Stamp Foil Brown

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 425741 Hot Stamp Foil Brown	Pass See Result summary	---	---

\*\*\*\*\*

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*Handwritten signature*

# TEST CONDUCTED

Samples:

- 1) P/N 425741 Hot Stamp Foil Brown

## TEST RESULT SUMMARY FOR RoHS DIRECTIVE :

TESTING ITEM	$\Omega$ 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)
<b>▲ POLYBROMINATED BIPHENYLS (PBBs) Total</b>	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	---
<b>▲ POLYBROMINATED DIPHENYL ETHERS (PBDEs) Total</b>	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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TESTING ITEM	▲ RESULT (ppm)
	(1)
Fluor (F) content	ND
Chlorine (Cl) content	14 864
Bromine (Br) content	ND
Iodine (I) content	ND

▲ = Contrated test.

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

µg/cm<sup>2</sup> = microgram per square centimeter.mg/kg WITH 50cm<sup>2</sup> = milligram per kilogram with 50 square centimeter.

&lt; = less than.


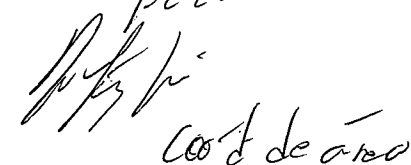
ND = Not detected.

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

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 MX11-1529-01 WERE TESTED TOGETHER.

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## Test method :

Sample Number	Testing item	Ω Testing method	Quality control Batch:	Analysis Date:	Analyzed By:	Reporting limit ppm
1	Chromium VI (Cr <sup>6+</sup> ) 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

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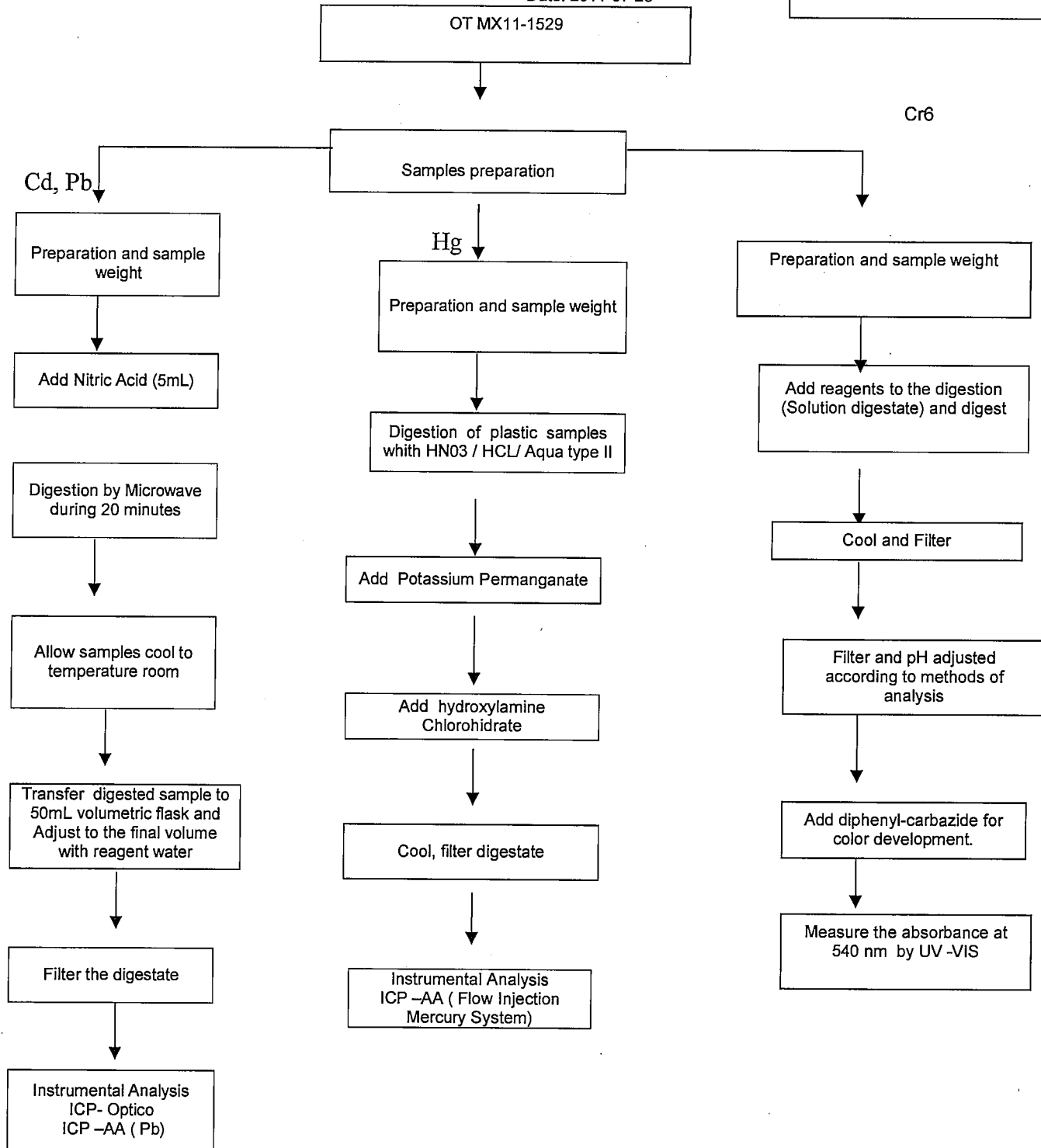
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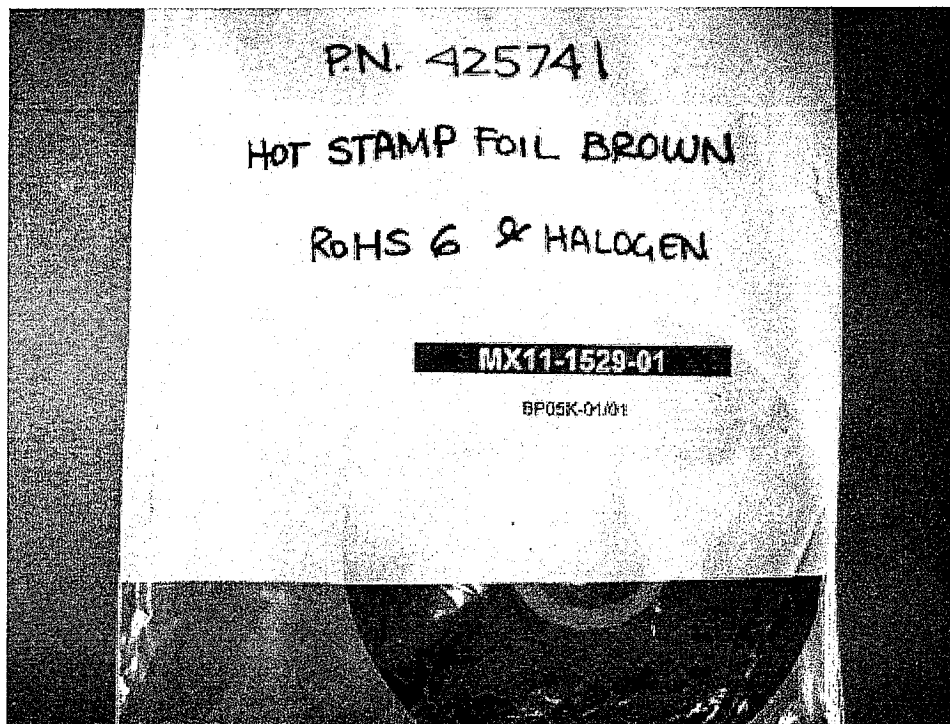
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000007



Report No.: MX11-1525  
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 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	---	---

\*\*\*\*\*

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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	$\Omega$ 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) ( $\text{Cr}^{6+}$ )	ND	0,1% (1000 ppm)
<b>▲ POLYBROMINATED BIPHENYLS (PBBs) Total</b>	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	---
<b>▲ POLYBROMINATED DIPHENYL ETHERS (PBDEs) Total</b>	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 50cm<sup>2</sup> = milligram per kilogram with 50 square centimeter.

&lt; = 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  $\Omega$ .

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 :**

<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 ( $\text{Cr}^{6+}$ ) 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

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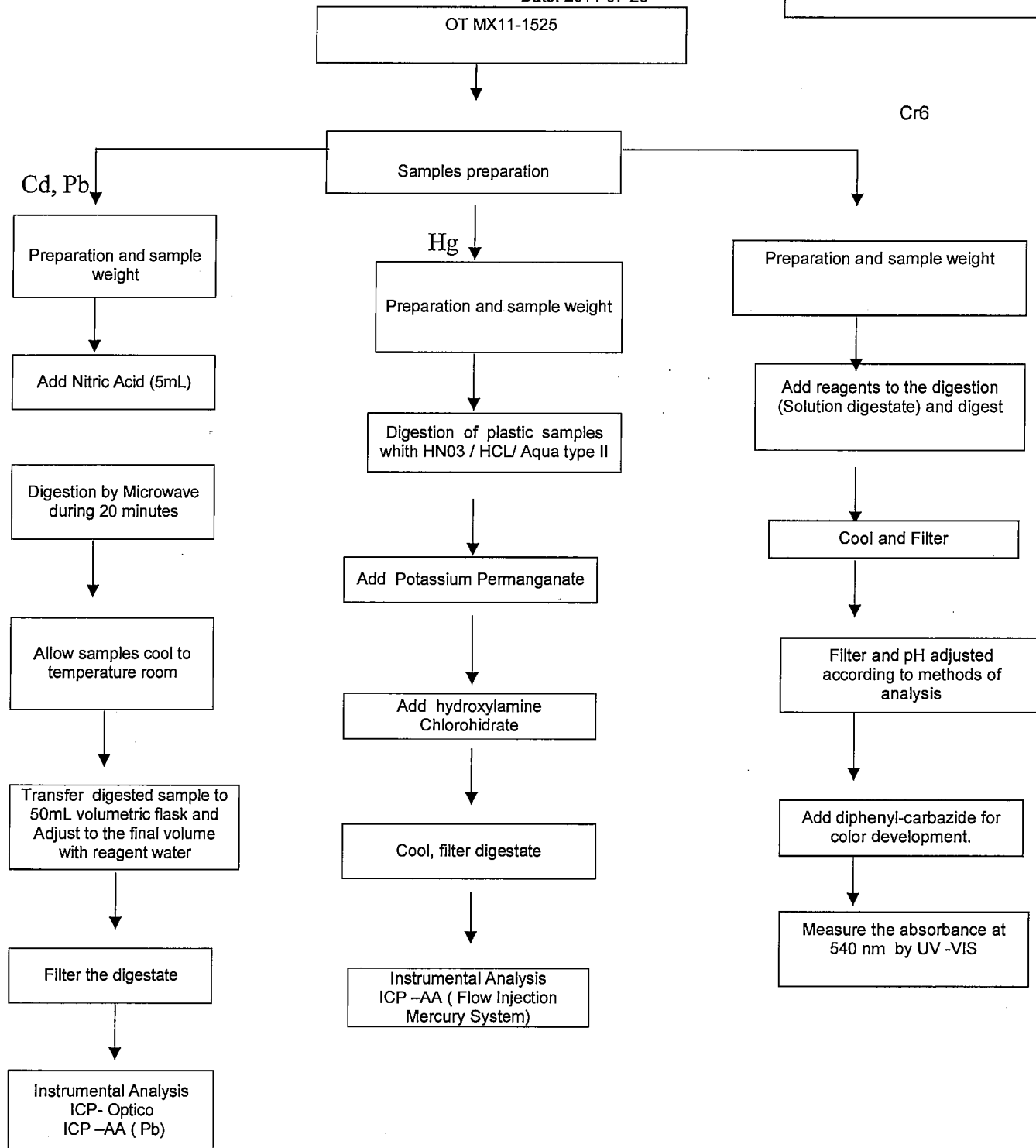
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Report No.: MX11-1525  
Date: 2011-07-28

Plastic samples  
Flow chart for sample: 1



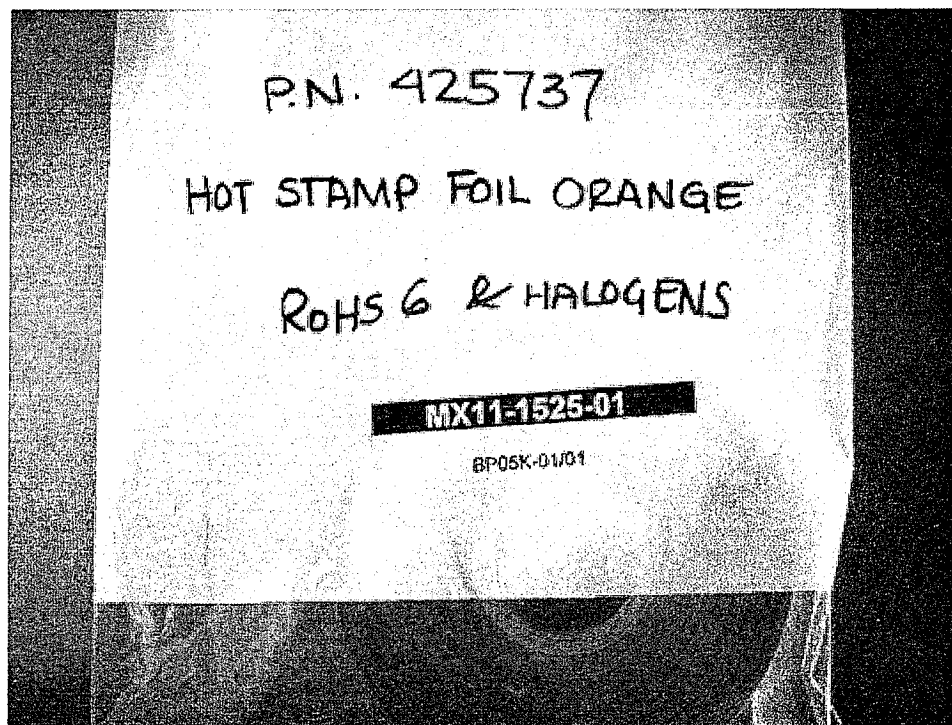
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Report No.: MX11-1533  
Date : 2011-07-28

## 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

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

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**TEST CONDUCTED**

Samples:

- 1) P/N 425746 Hot Stamp Foil Violet

**TEST RESULT SUMMARY FOR RoHS DIRECTIVE :**

TESTING ITEM	$\Omega$ 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 <sup>6+</sup> )	ND	0,1% (1000 ppm)
<b>▲ POLYBROMINATED BIPHENYLS (PBBs) Total</b>	<b>ND</b>	<b>0,1% (1000 ppm)</b>
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	---
<b>▲ POLYBROMINATED DIPHENYL ETHERS (PBDEs) Total</b>	<b>ND</b>	<b>0,1% (1000 ppm)</b>
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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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.

$\text{mg}/\text{kg}$  WITH  $50\text{cm}^2$  = 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  $\Omega$ .

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 <sup>6+</sup> ) 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

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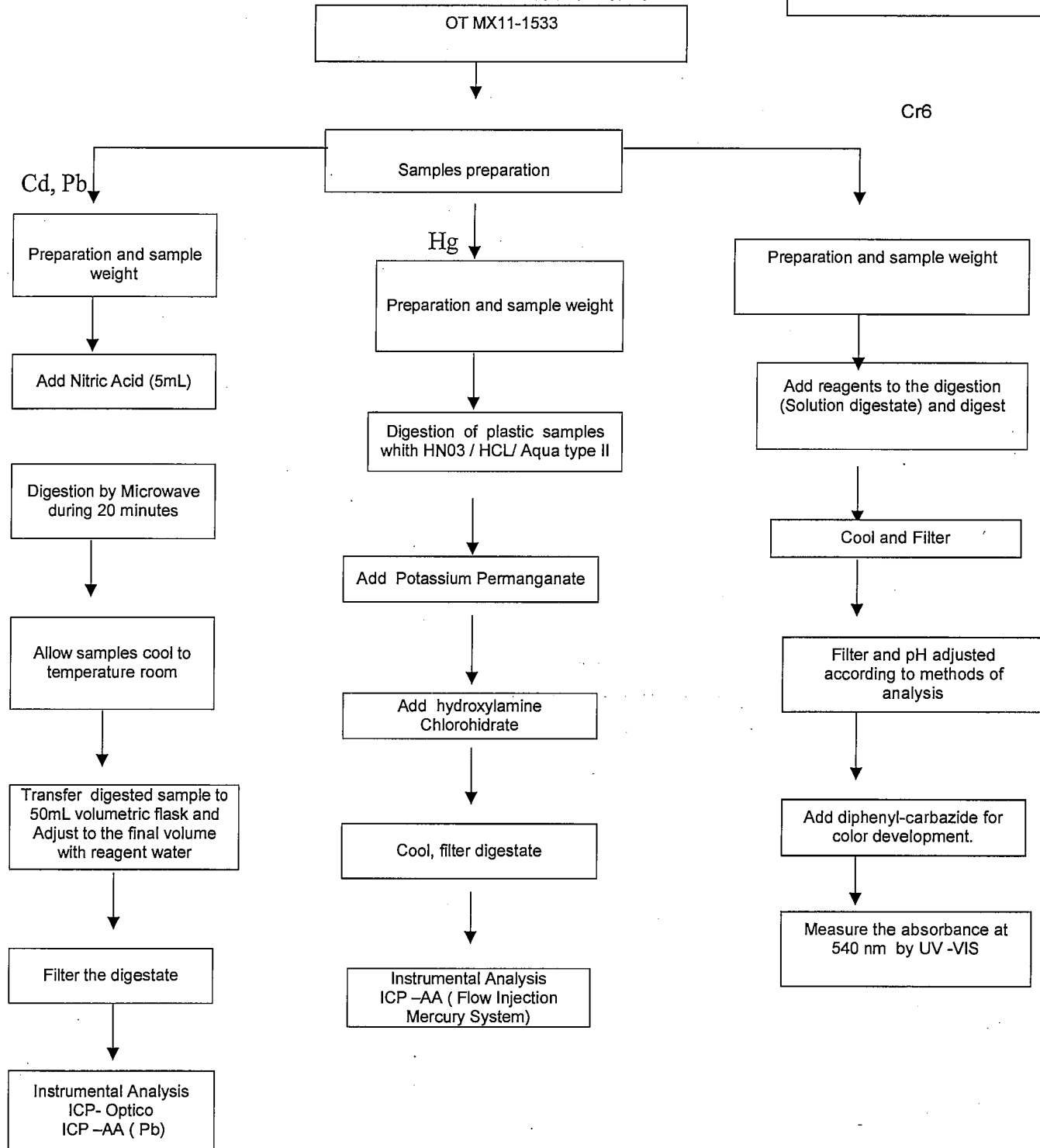
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000005

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

Plastic samples  
Flow chart for sample: 1



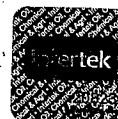
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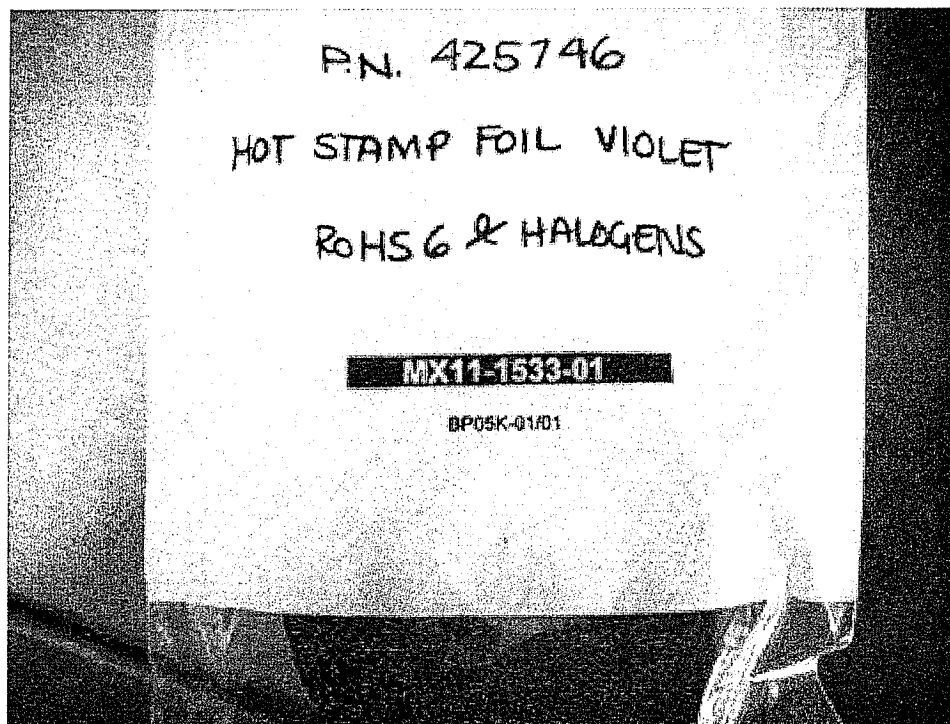
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000007



**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 425747 Hot Stamp Foil Black

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 425747 Hot Stamp Foil Black	Pass See Result summary	---	---

000002

## TEST CONDUCTED

Samples:

- 1) P/N 425747 Hot Stamp Foil Black

## 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 <sup>6+</sup> )	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	15 526
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. $\text{mg}/\text{kg WITH } 50\text{cm}^2$  = milligram per kilogram with 50 square centimeter.

&lt; = less than.

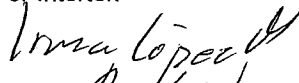
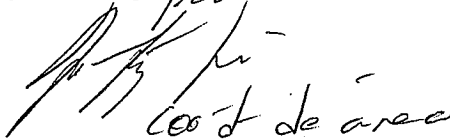
ND = Not detected.

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  $\Omega$ .

Prepared and checked by :

For Intertek

  
  
Coe 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 MX11-1534-01 WERE TESTED TOGETHER.

000004



**Test method :**

Sample Number	Testing item	Ω Testing method	Quality control Batch:	Analysis Date:	Analyzed By:	Reporting limit ppm
1	Chromium VI (Cr <sup>6+</sup> ) content	With reference to USEPA 3060, by EPA 7196	QHU2010-61p91	2011-07-16	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

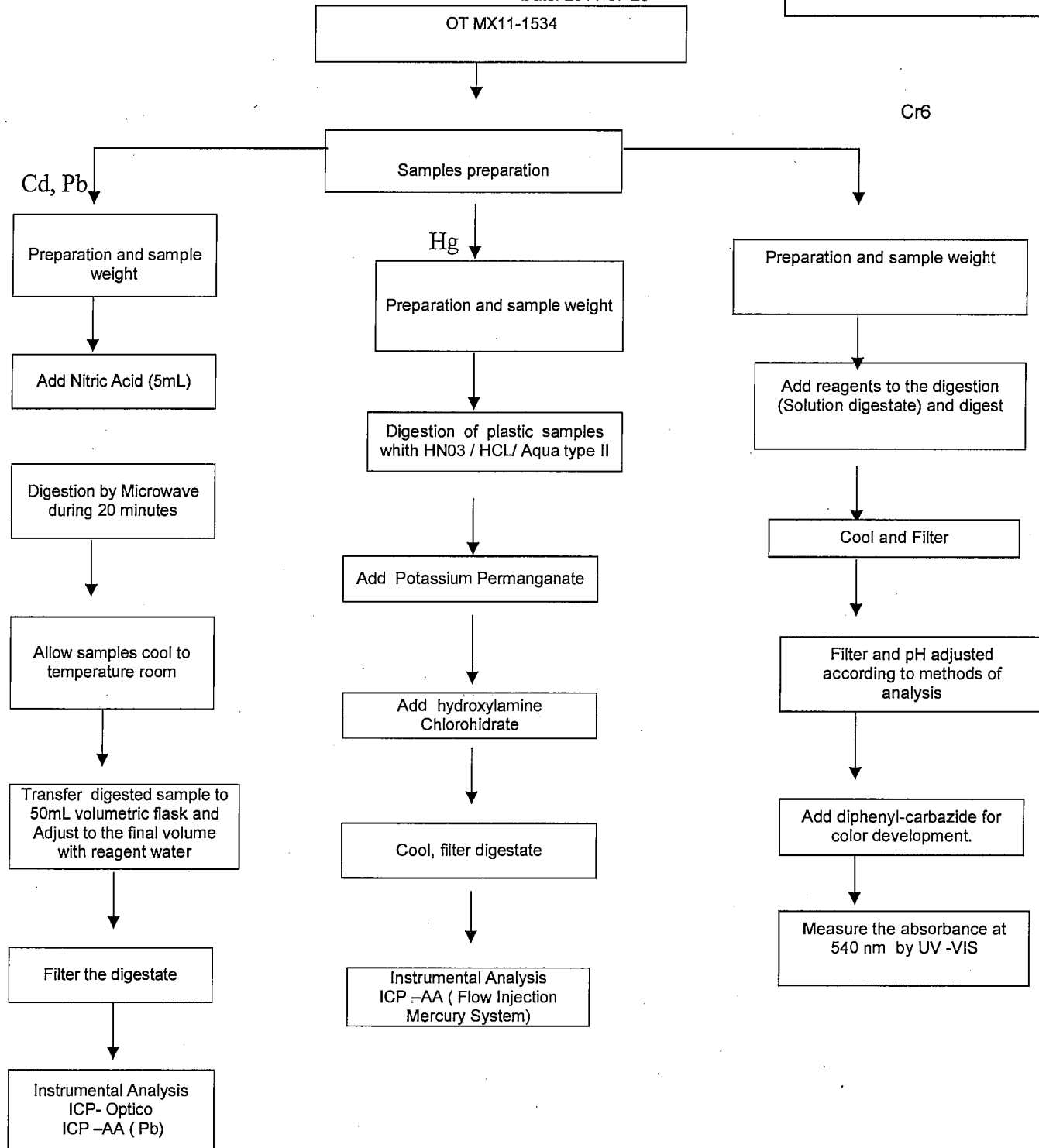
Sample Number	Testing item	Ω Testing method	Quality control Batch:	Analysis Date:	Analyzed By:	Reporting limit ppm
1	Lead (Pb) content	With reference to USEPA 3052, by EPA 6010	MET2011-12p34	2011-07-13	MARY	5,0

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



000006

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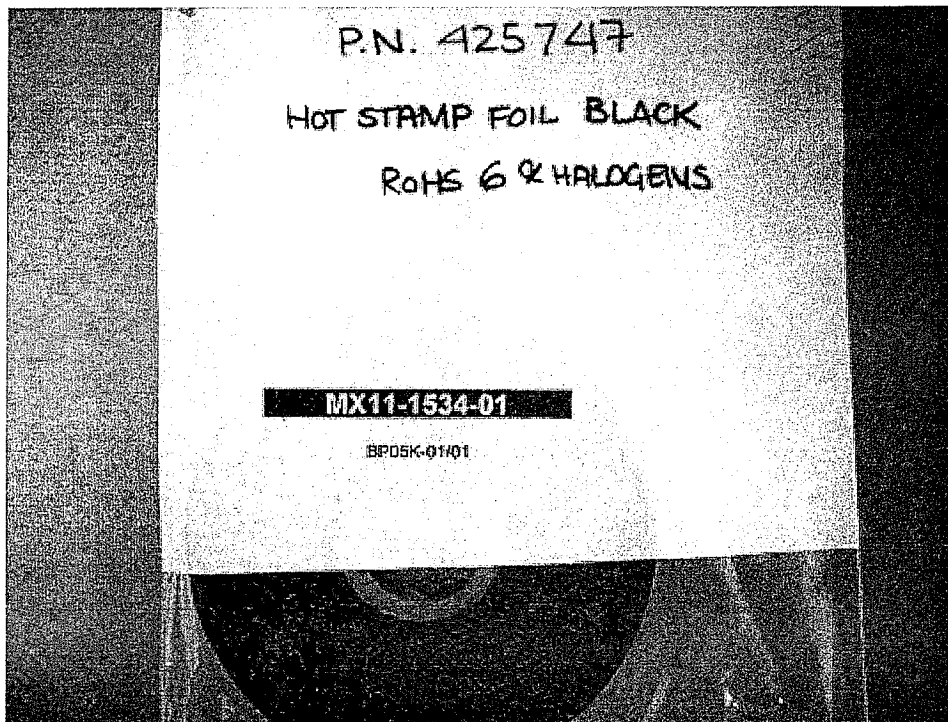
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ILTA/003/GENS-F8





000007



Report No.: MX11-1039-01  
Date : 2011-06-15

## 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 Series: 297,495,891,995,257,287,997  
Item No. 1) N/P 425498 Hot Sample foil White

Country of Origin NP  
Buyer's Name NP  
Supplier's Name NP  
Date sample received 2011-05-19  
Testing period 2011-05-23 to 2011-06-09

\*\*\*\*\*

### 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 425498 Hot Sample foil White	Pass See Result summary	---	---

\*\*\*\*\*

### TEST CONDUCTED

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Samples:

- 1) N/P 425498 Hot Sample foil White

**TEST RESULT SUMMARY FOR RoHS DIRECTIVE :**

TESTING ITEM	$\Omega$ 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 <sup>6+</sup> )	ND	0,1% (1000 ppm)
<b>POLYBROMINATED BIPHENYLS (PBBs) Total</b>	<b>ND</b>	<b>0,1% (1000 ppm)</b>
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	---
<b>POLYBROMINATED DIPHENYL ETHERS (PBDEs) Total</b>	<b>ND</b>	<b>0,1% (1000 ppm)</b>
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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ppm = parts per million based on dry weight of sample.

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

mg/kg WITH  $50\text{cm}^2$  = 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  $\Omega$ .

Prepared and checked by :

For Intertek

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 MX11-1039-01 WERE TESTED TOGETHER.

## Test method :

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Sample Number	Testing item	Ω Testing method	Quality control Batch:	Analysis Date:	Analyzed By:	Reporting limit ppm
1	Chromium VI (Cr <sup>6+</sup> ) content	With reference to USEPA 3060, by EPA 7196	QHU2010-61p76,78	2011-05-26	MELA	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	2011-000307-PCL	2011-06-09	▲ CONT	50,0
1	POLYBROMINATE D DIPHENYL ETHERS (PBDEs)	Determined by GC-MSD	2011-000307-PCL	2011-06-09	▲ 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	MET2010-40p143	2011-05-26	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	MET2010-40p143	2011-05-26	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	MET2010-03p138	2010-05-23	RNC	0,25

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**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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1) N/P 692305 Solder

**TEST RESULT SUMMARY FOR RoHS DIRECTIVE :**

TESTING ITEM	$\Omega$ 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) ( $\text{Cr}^{6+}$ )	ND	0,1% (1000 ppm)

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

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

&lt; = 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  $\Omega$ .

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  $\text{Cr(VI)}$  COATING. IT IS THE  $\text{Cr(VI)}$  CONCENTRATION DETECTED IN THE BOILING-WATER-EXTRACTION SOLUTION AND SHOULD NOT BE INTERPRETED AS THE  $\text{Cr(VI)}$  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 ( $\text{Cr}^{6+}$ ) 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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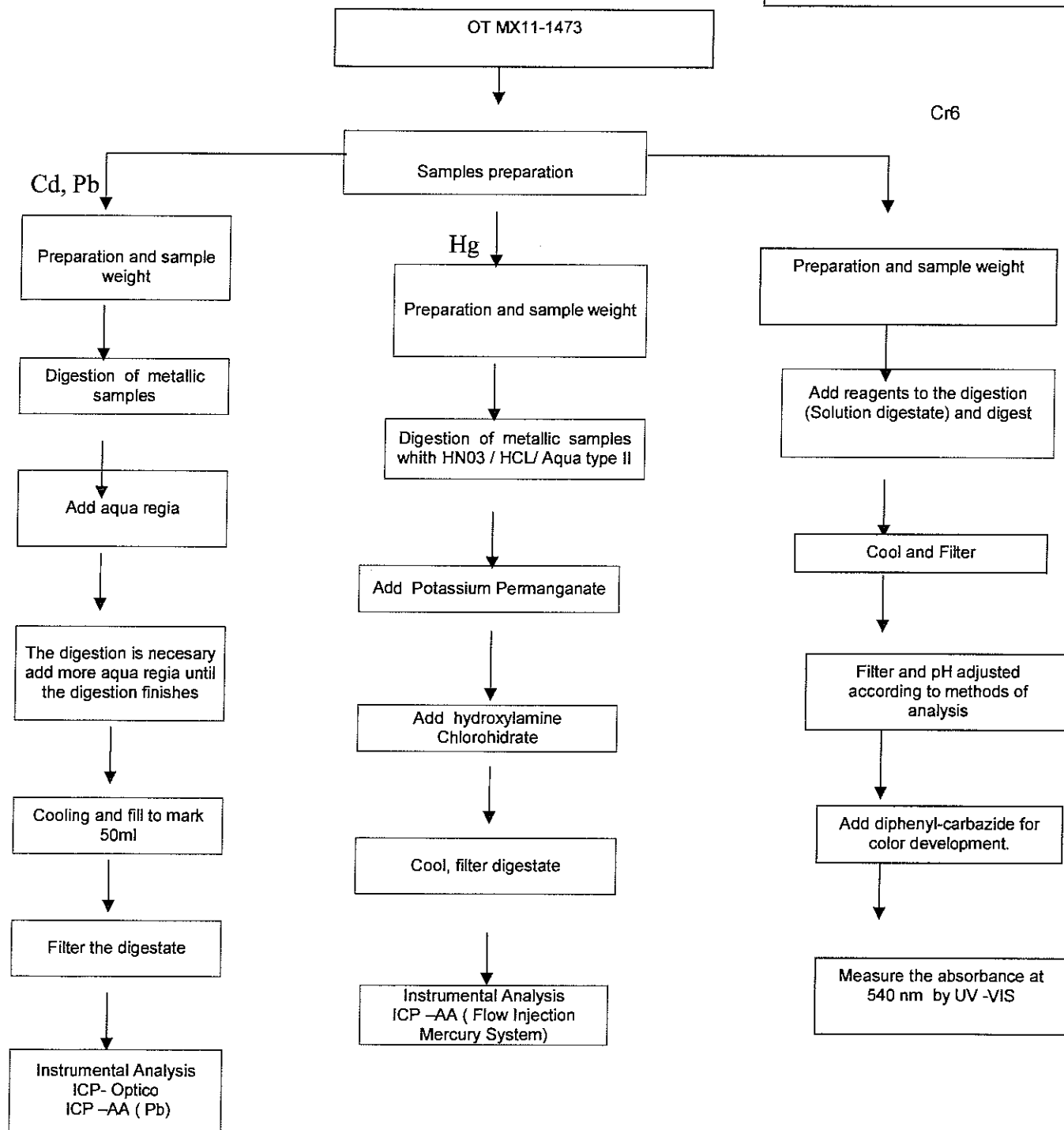
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000006

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**Test Report**

Number : TWNC00214667

Applicant: Littelfuse S.A. de C.V. Automotive Date : Jul 08, 2011  
Business Unit  
Blvd. Fausto Z. Martinez #1800  
Col. Magisterio Seccion 38 C.P.  
260170  
Piedras Negras, Coahuila Mexico.

**Sample Description:**

One (1) group of submitted samples said to be :  
Part Description : BODY (TECHNYL)  
Part Number : 057352  
Date Sample Received : Jul 05, 2011  
Date Test Started : Jul 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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## Test Conducted

## (I) Test Result Summary :

Test Item	Result (ppm)
	Black Plastic Pellets
<b>Heavy Metal</b>	
Cadmium (Cd) content	ND
Lead (Pb) content	ND
Mercury (Hg) content	ND
Chromium VI (Cr <sup>6+</sup> ) content	ND
<b>Polybrominated Biphenyls (PBBs)</b>	
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
<b>Polybrominated Diphenyl Ethers (PBDEs)</b>	
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
<b>Halogen Content</b>	
Fluorine (F)	ND
Chlorine (Cl)	571
Bromine (Br)	ND
Iodine (I)	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 : Jul 05, 2011

Test Period : Jul 05, 2011 To Jul 08, 2011

## Test Conducted

## ( 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 <sup>6+</sup> ) 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.

## ( 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 <sup>6+</sup> ) 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-MSD and further HPLC 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-MSD and further HPLC confirmation when necessary.	5 ppm
Halogen Content	With reference to EN 14582:2007 by calorimetric bomb with oxygen and determined by ion chromatography	50 ppm

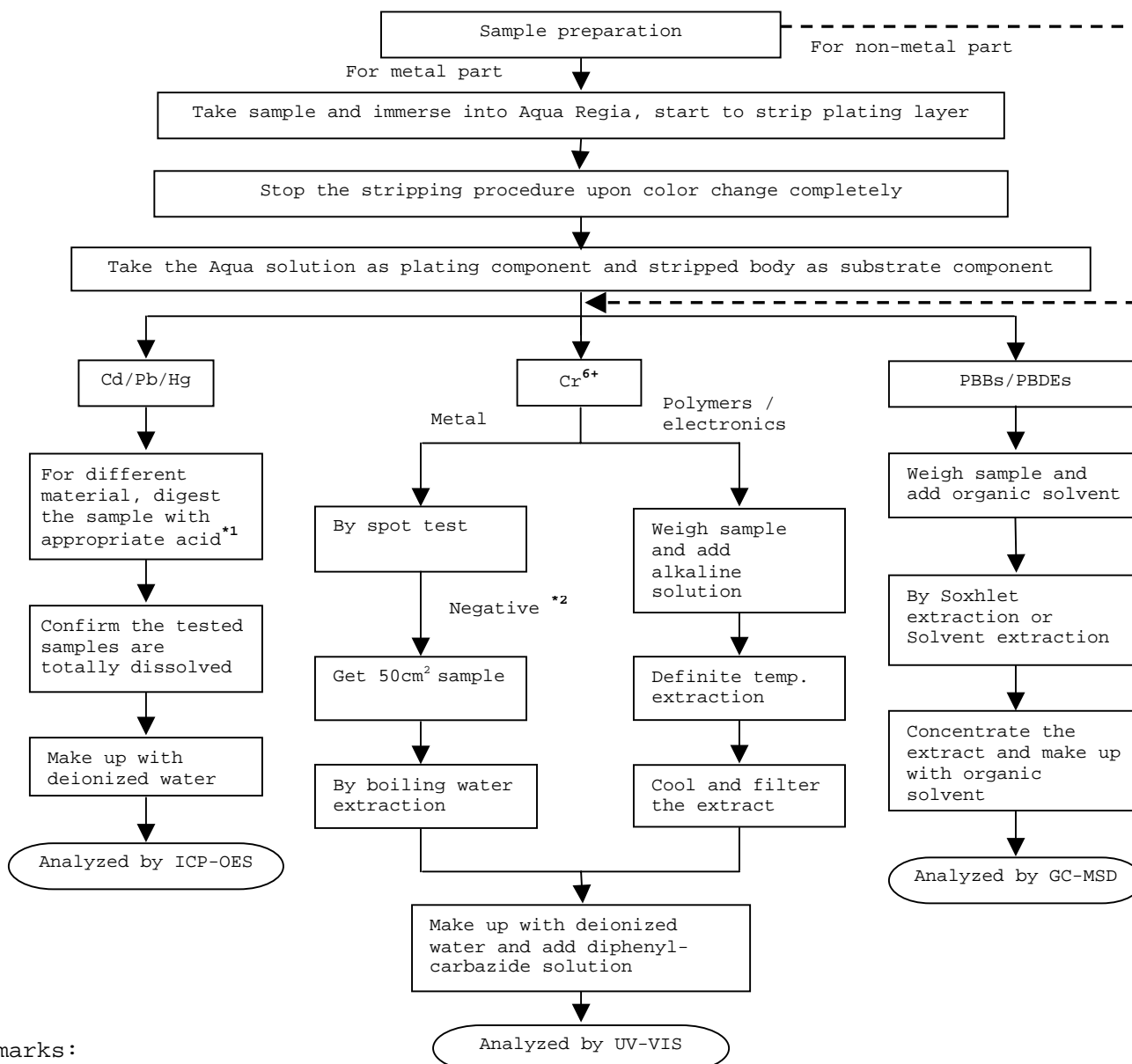
Remark: Reporting limit = Quantitation limit of analyte in sample

## 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:

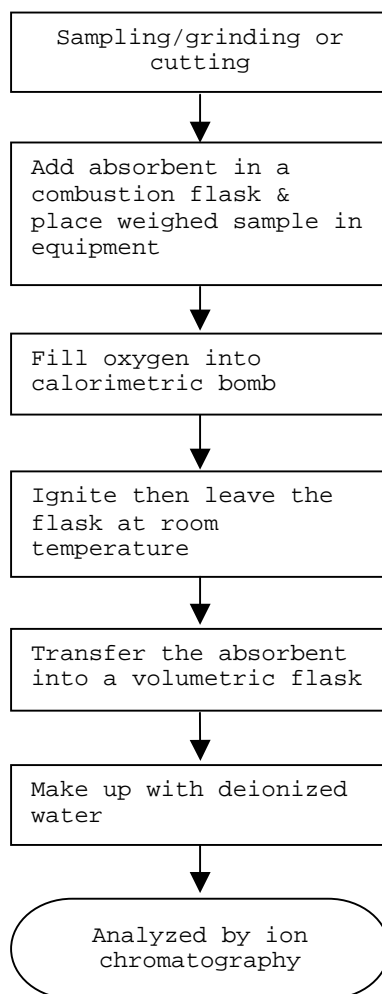
Material	Acid Added For Digestion
Polymers	HNO <sub>3</sub> , HCl, HF, H <sub>2</sub> O <sub>2</sub> , H <sub>3</sub> BO <sub>3</sub>
Metals	HNO <sub>3</sub> , HCl, HF
Electronics	HNO <sub>3</sub> , HCl, H <sub>2</sub> O <sub>2</sub> , HBF <sub>4</sub>

\*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



---

End Of Report

Number : TWNC00214667

Test Conducted

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.

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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>
<b>Heavy Metal</b>		
Cadmium (Cd) content	ND	ND
Lead (Pb) content	16	ND
Mercury (Hg) content	ND	ND
Chromium VI (Cr <sup>6+</sup> ) content (mg/kg with 50cm <sup>2</sup> )	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 50cm<sup>2</sup> = 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 <sup>6+</sup> ) 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 ( $\text{Cr}^{6+}$ ) 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 <sup>2</sup>

Remark: Reporting limit = Quantitation limit of analyte in sample

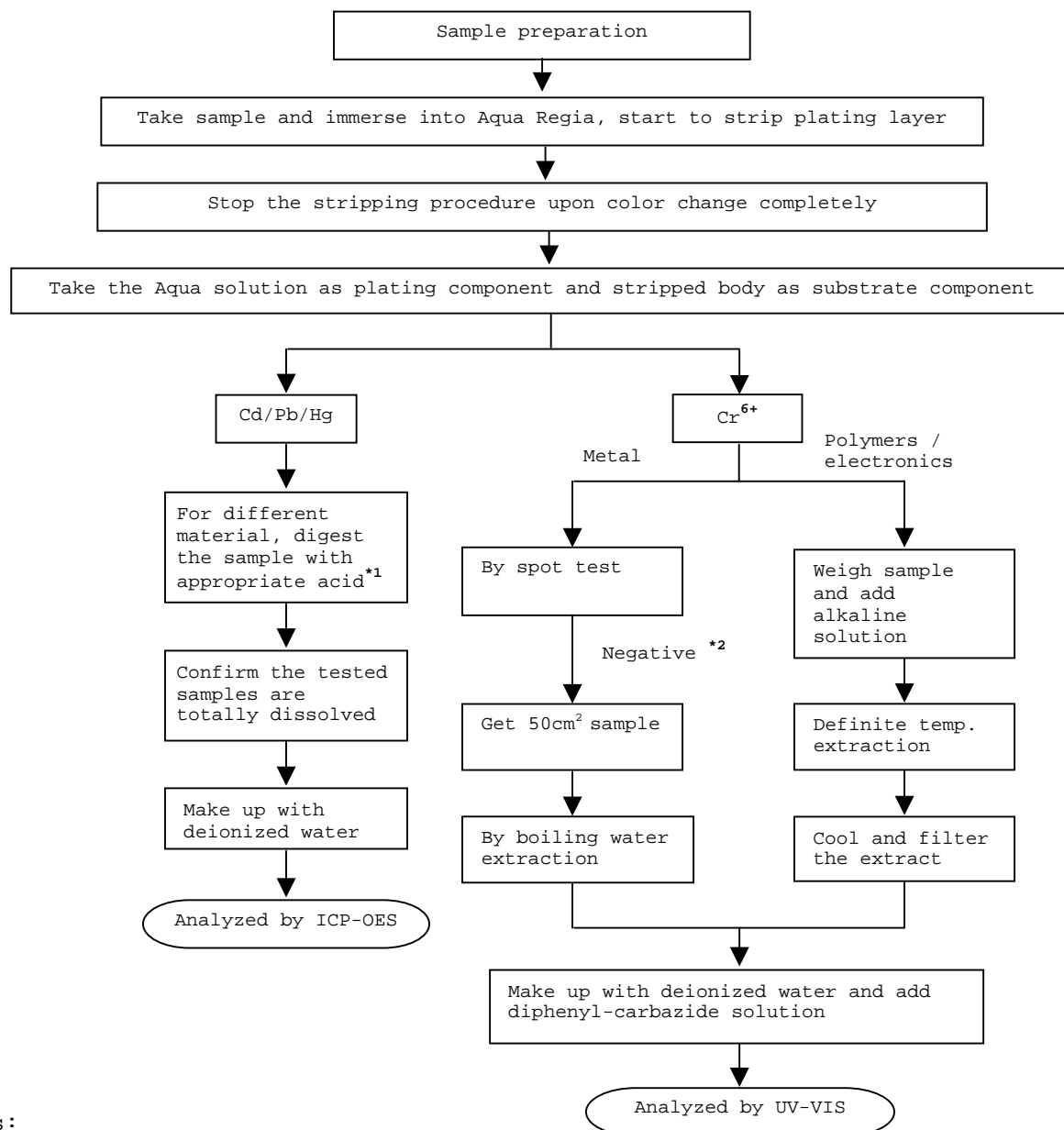


Test Conducted

(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 <sub>3</sub> , HCl, HF, H <sub>2</sub> O <sub>2</sub> , H <sub>3</sub> BO <sub>3</sub>
Metals	HNO <sub>3</sub> , HCl, HF
Electronics	HNO <sub>3</sub> , HCl, H <sub>2</sub> O <sub>2</sub> , HBF <sub>4</sub>

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

End of Report

Test Conducted

Number : TWNC00219091

Photo

