

Company name: Littelfuse, Inc.

# **ICP Test Report Certification Packet**

Product Series:	895 series				
Product #:	895 series				
Issue Date:	August 17, 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=""></global>				
(1) Parts, sub-materials a This document cov Littelfuse, Inc.	and unit parts vers the 895 series RoHS-Compliant series products manufactured by				
< Raw Materials U Please see Tab					
(2) The ICP data on all I	measurable substances propriate pages as identifed 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	080707	Element-Olin 19025 98 Cu/ 1Ni/ 5Zn/o5P	3-13
2	080706	Element-Olin 151 99.9 Cu / Zn	3-13
3	425706	White Foil	14-19
4	057353	Housing	20-23
5	692536	Solder	24-28
6	057700	Base Cover	29-37
7	057785	Housing - Pink	38-46
8	057786	Housing - Green	47-55
9	057901	Colorant- Yellow	56-61
10	057787	Colorant- Red	62-68
11	057892	Colorant- Natural	69-74
12	057784	Colorant- Blue	75-78



Date: 2010-06-18

#### **TEST REPORT**

#### **APPLICANT**

Littelfuse, S.A. de C.V. Blvd. Fausto Z. mtz. 1800, Col. Magisterio Sección 38, Piedras Negras, Coahuila Ing. Mario A. Falcón

#### SAMPLE DESCRIPTION

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

Sample Description

NP

4) Serie 0895 P/N: 80707

Serie 0895 P/N: 80706

Item No.

Serie 895 P/N: 057860

Serie 895 P/N: 425706

Serie 895 P/N: 057353

Country of Origin

NΡ

Buyer's Name

NP

Supplier's Name

NP

Date sample received 2010-05-26

Testing period

2010-06-01 to 2010-06-18

#### **TEST CONDUCTED**

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

#### CONCLUSION

	Testing item	Conclusion	Failed component	Failed result
4	Serie 0895 P/N: 80707	Pass		
4	Selle 0095 P/N. 80707	See Result summary		<del></del>
5	Serie 0895 P/N: 80706	Pass		
3	Selle 0095 P/N. 80706	See Result summary	<del></del>	
	Corio 905 D/N: 057960	Pass		
6	Serie 895 P/N: 057860	See Result summary	<del></del>	
7	Corio 905 D/N: 425706	Pass		
'	Serie 895 P/N: 425706	See Result summary		
	Cario 905 D/N: 057353	Pass		
8 .	Serie 895 P/N: 057353	See Result summary		<b></b>



Date: 2010-06-18

#### **TEST CONDUCTED**

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

Serie 0895 P/N: 80707

5) Serie 0895 P/N: 80706

#### **TEST RESULT SUMMARY FOR RoHS DIRECTIVE:**

TESTING ITEM	ΩRI	<u>Limit</u>	
1201110112111	(4)	(5)	
Cadmium (Cd) content	ND	ND	0,01% (100 ppm)
Lead (Pb) content	15,6	ND	0,1% (1000 ppm)
Mercury (Hg) content	ND	, ND	0,1% (1000 ppm)
Chromium (VI) (Cr <sup>6+</sup> )	ND	ND	0,1% (1000 ppm)



Date: 2010-06-18

#### **TEST CONDUCTED**

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

Serie 895 P/N: 057860 7) Serie 895 P/N: 425706 8) Serie 895 P/N: 057353

**TEST RESULT SUMMARY FOR RoHS DIRECTIVE:** 

TEST RESULT SUMMARY FOR RO		RESULT (ppm	)	Limit
TESTING ITEM	(6)	(7)	(8)	<u> </u>
Cadmium (Cd) content	ND	ND	ND	0,01% (100 ppm)
Lead (Pb) content	ND	12,100	ND	0,1% (1000 ppm)
Mercury (Hg) content	ND	ND	ND .	0,1% (1000 ppm)
Chromium (VI) (Cr <sup>6+</sup> )	ND	ND	ND	0,1% (1000 ppm)
POLYBROMINATED BIPHENYLS (PBBs)	ND	ND.	ND.	0,1% (1000 ppm)
Monobromobiphenyl (MonoBB)	ND	ND	ND	
Dibromobiphenyl (DiBB)	ND	ND	ND 1	
Tribromobiphenyl (TriBB)	ND	ND	ND	
Tetrabromobiphenyl (TetraBB)	ND	ND	ND	
Pentabromobiphenyl (PentaBB)	ND	ND	ND	
Hexabromobiphenyl (HexaBB)	ND	ND	ND	
Heptabromobiphenyl (HeptaBB)	ND	ND	ND	
Octabromobiphenyl (OctaBB)	ND	ND	ND	
Nonabromobiphenyl (NonaBB)	ND	ND	ND	
Decabromobiphenyl (DecaBB)	ND	ND	- ND	
POLYBROMINATED DIPHENYL ETHERS (PBDEs)	, ND	, ND	ND '	( 0,1% (1000 ppm)
Monobromodiphenyl (MonoBDE)	ND	ND	ND	
Dibromodiphenyl (DiBDE)	ND	ND	ND	
Tribromodiphenyl (TriBDE)	ND	ND	ND	
Tetrabromodiphenyl (TetraBDE)	ND	ND	ND	
Pentabromodiphenyl (PentaBDE)	ND	ND	ND	·
Hexabromodiphenyl (HexaBDE)	ND	ND	ND	ale de ser
Heptabromodiphenyl (HeptaBDE)	ND	ND	ND .	
Octabromodiphenyl (OctaBDE)	ND	ND	ND	
Nonabromodiphenyl (NonaBDE)	ND	ND	ND	es sat to
Decabromodiphenyl (DecaBDE)	ND	ND	ND	



Date: 2010-06-18

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  $\Omega$ .

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 \_\_\_MX10 1165-4 WERE TESTED TOGETHER.

REMARK: AS REQUESTED BY THE APPLICANT, COATING WITH BASE MATERIAL OF TESTED COMPONENTS OF THE SAMPLE MX10 1165-5, WERE TESTED TOGETHER.

REMARK: AS REQUESTED BY THE APPLICANT, COATING WITH BASE MATERIAL OF TESTED COMPONENTS OF THE SAMPLE <u>MX10 1165-6 W</u>ERE TESTED TOGETHER.

REMARK: AS REQUESTED BY THE APPLICANT, COATING WITH BASE MATERIAL OF TESTED COMPONENTS OF THE SAMPLE <u>MX10 1165-7</u> WERE TESTED TOGETHER.

REMARK: AS REQUESTED BY THE APPLICANT, COATING WITH BASE MATERIAL OF TESTED COMPONENTS OF THE SAMPLE <u>MX10 1165-8</u> WERE TESTED TOGETHER.

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Intertek Testing Services de México, S.A. de C.V.
Blvd. Manuel Ávila Camacho No. 182 Col. Lomas de Chapultepec
C.P. 11650, México, D.F. Tel.: 50912150 Fax: 55407863
www.intertek.com

. }





Date: 2010-06-18

# Test method:

No. de Muestra	Testing item	Ω Testing method	Quality control Batch:	Analysis Date:	Analyzed <u>By:</u>	Reporting limit ppm
	l 6.	With reference to USEPA 3060, by EPA 7196	QHU2009-3p99,100	2010-06-05	MTCM	2,0

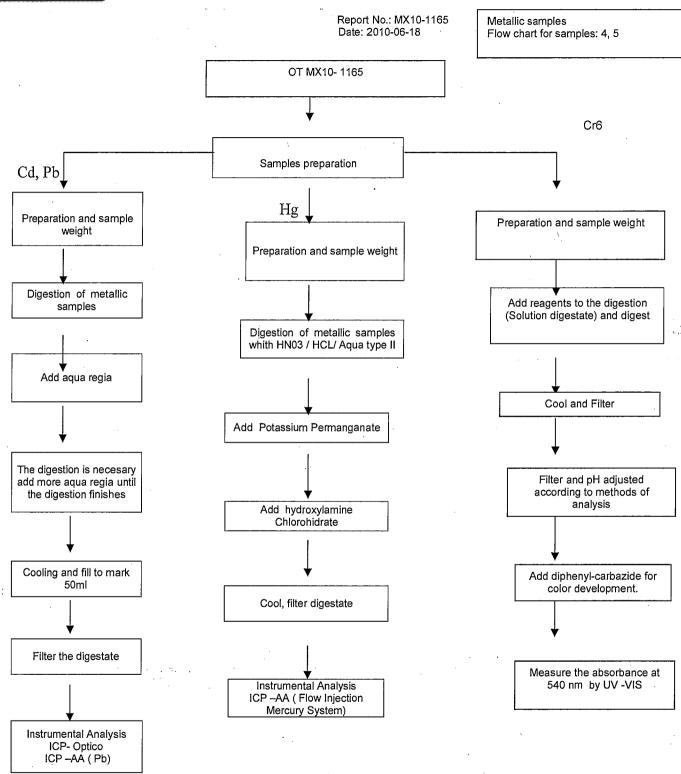
No. de Muestra	Testing item	Ω Testing method	Quality control Batch:	<u>Analysis</u> <u>Date:</u>	Analyzed _By:	Reporting limit ppm
	POLYBROMINAT ED BIPHENYLS (PBBs)	Determined by GC-MSD	2010-004481-PCL	2010-06-18	▲ Contract	50
	POLYBROMINAT ED DIPHENYL ETHERS (PBDEs)	potominou by oo mob	2010-004481-PCL	2010-06-18	▲ Contract	. 50

No. de Muestra	Testing item	Ω Testing method	Quality control Batch:	<u>Analysis</u> <u>Date:</u>	Analyzed By:	Reporting limit ppm
4	Lead (Pb) content	With reference to USEPA 3050MOD, by EPA 7420	MET2010-8p26	2010-06-03	MARY	10,0
5	Lead (Pb) content	With reference to USEPA 3050MOD, by EPA 7420	MET2010-8p26	2010-06-03	MARY	10,0
6	Lead (Pb) content	With reference to USEPA 3052MOD, by EPA 7420	MET2010-8p27	2010-06-03	MARY	10,0
7	Lead (Pb) content	With reference to USEPA 3052MOD, by EPA 7420	MET2010-8p27	2010-06-03	MARY	10,0
8	Lead (Pb) content	With reference to USEPA 3052MOD, by EPA 7420	MET2010-8p27	2010-06-03	MARY	10,0

No. de Muestra	Testing item	Ω Testing method	Quality control Batch:	<u>Analysis</u> <u>Date:</u>	Analyzed By:	Reporting limit ppm
4	Cadmium (Cd) content	With reference to USEPA 3050MOD, by EPA 7130	MET2010-8p26	2010-06-03	MARY	2,5
5	Cadmium (Cd) content	With reference to USEPA 3050MOD, by EPA 7130	MET2010-8p26	2010-06-03	MARY	2,5
6	Cadmium (Cd) content	With reference to USEPA 3052MOD, by EPA 7130	MET2010-8p27	2010-06-03	MARY -	2,5
7	Cadmium (Cd) content	With reference to USEPA 3052MOD, by EPA 7130	MET2010-8p27	2010-06-03	MARY	2,5
8	Cadmium (Cd) content	With reference to USEPA 3052MOD, by EPA 7130	MET2010-8p27	2010-06-03	MARY	2,5

No. de Muestra	Testing item	Ω <u>Testing method</u>	Quality control Batch:	<u>Analysis</u> <u>Date:</u>	Analyzed By:	Reporting limit ppm
4	Mercury (Hg) content	With reference to USEPA 7471 by USEPA 7471	MET2010-8p23	2010-06-02	JAPM	0,083
5	Mercury (Hg) content-	With reference to USEPA 7471 by USEPA 7471	MET2010-8p23	2010-06-02	JAPM	0,083
6	Mercury (Hg) content	With reference to USEPA 7471 by USEPA 7471	MET2010-8p22	2010-06-02	JAPM	0,083
7	Mercury (Hg) content	With reference to USEPA 7471 by USEPA 7471	MET2010-8p22	2010-06-02	JAPM	0,083
8	Mercury (Hg) content	With reference to USEPA 7471 by USEPA 7471	MET2010-8p22	2010-06-02	JAPM	0,083





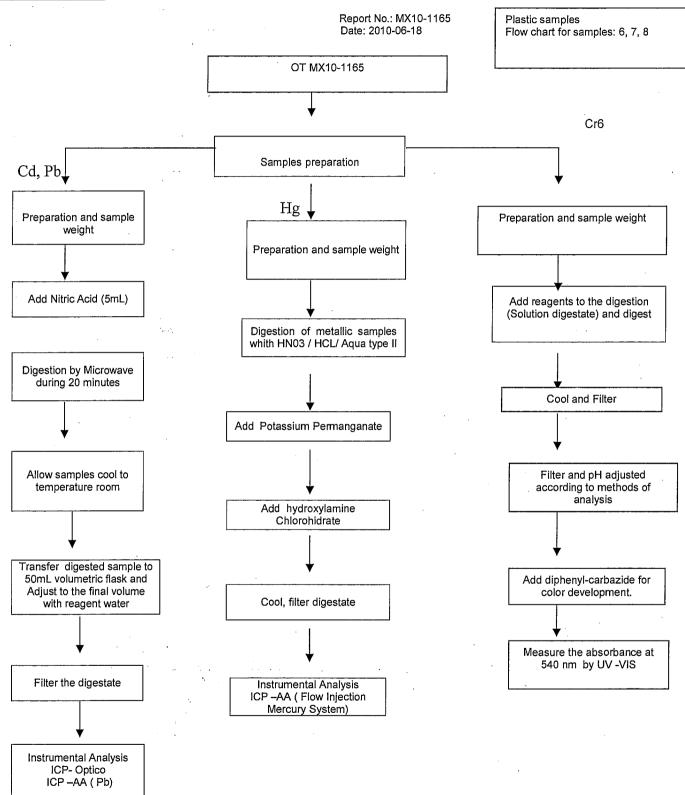
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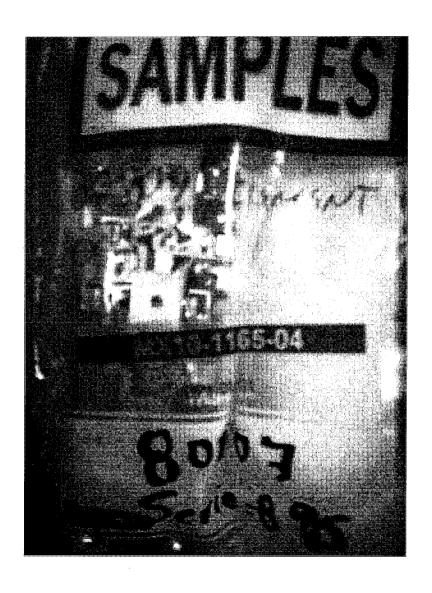
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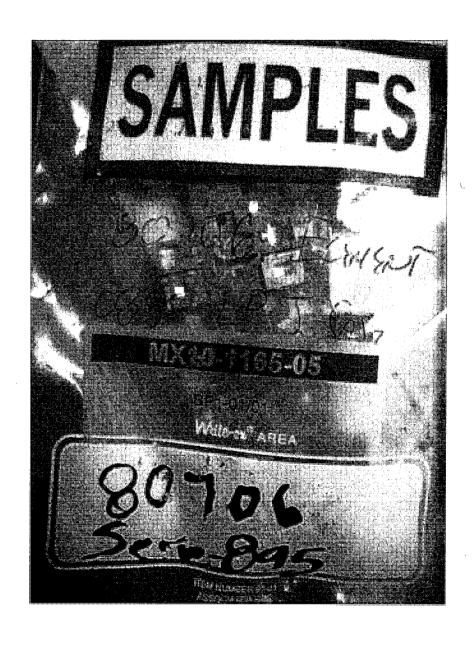




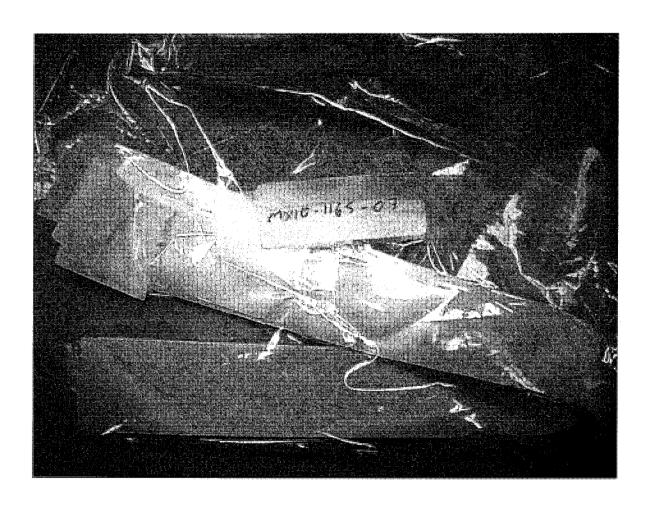


















Report No.: MX11-1519 Date: 2011-07-28

#### **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 425706 Foil White

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 425706 Foil White	Pass See Result summary		graphed fine





Report No.: MX11-1519 Date: 2011-07-28

#### **TEST CONDUCTED**

Samples:

1) P/N 425706 Foil White

### TEST RESULT SUMMARY FOR RoHS DIRECTIVE:

	Ω RESULT (ppm)	
TESTING ITEM	(1)	<u>Limit</u>
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)
A POLYBROMINATED BIPHENYLS (PBBS) Total	HE ND 2 LET I	0,1% (1000 ppvn)
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	
A POLYBROMINATED DIPHENYL ETHERS (PBDES) Total	NOT THE REPORT OF THE PARTY OF	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	





Date	:	201	1-03	7-28

TESTING ITEM	▲ RESULT (ppm)
TESTINGTIEM	(1)
Fluor (F) content	ND
Chlorine (CI) content	14 512
Bromine (Br) content	ND
lodine (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  $\Omega$ .

Prepared and checked by:

For Intertek

Vrnalopee M Con of de agree

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  $\underline{\mathsf{MX11-1519-01}}$  WERE TESTED TOGETHER.





Report No.: MX11-1519 Date: 2011-07-28

### Test method:

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

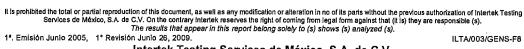
Sample Number	Testing item	Ω Testing method	Quality control Batch:	Analysis Date:	Analyzed By:	Reporting limit ppm
1	POLYBROMINATE D BIPHENYLS (PBBs)	Determined by GC-MSD	2011-000443-PCL	2011-07-27	▲ CONT	50,0
1	POLYBROMINATE D DIPHENYL ETHERS (PBDEs)	Determined by GC-MSD	2011-000443-PCL	2011-07-27	CONT	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	▲ <u>Testing method</u>	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	lodine	With reference to EN 14582:2007 by calonmetric bomb method with oxygen and determined by ion chromatography	2011-000443-PCL	2011-07-27	▲ CONT	30

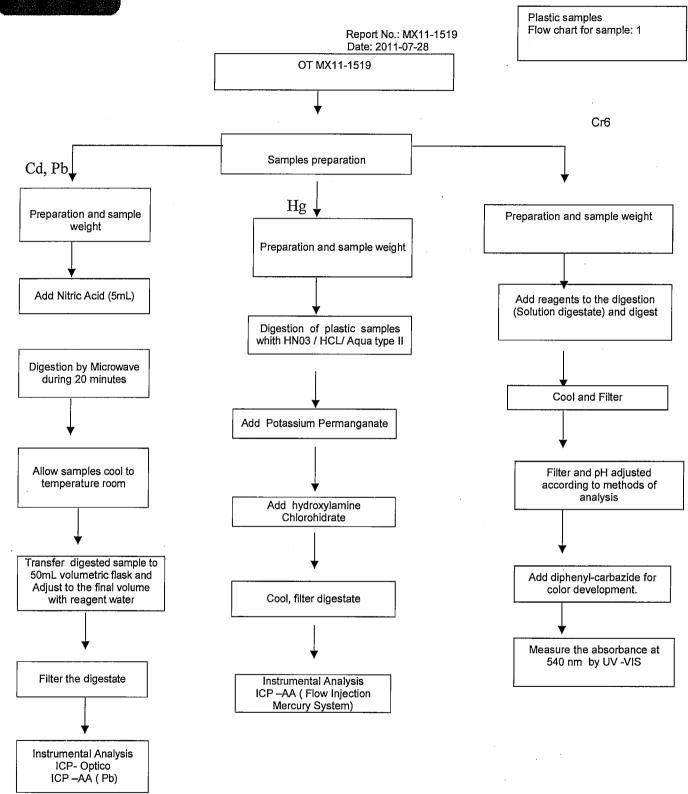




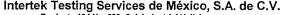




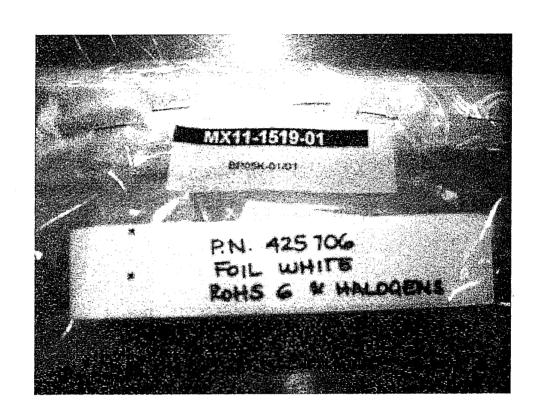




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#### **TEST REPORT**

#### **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 Serie 895

Item No. 1) N/P 057353 Resin

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

Sample Number	Testing item	Conclusion	Failed component	Failed result
1	N/P 057353 Resin	Pass See Result summary		

**TEST CONDUCTED** 

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

ILTA/003/GENS-F8



#### Samples:

### 1) N/P 057353 Resin

#### **TEST RESULT SUMMARY FOR RoHS DIRECTIVE:**

TESTING ITEM	Ω RESULT (ppm)	<u>Limit</u>
Codmium (Cd) content	(1) ND	0.019/ (100 mm)
Cadmium (Cd) content		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	



TESTING ITEM	▲ RESULT (ppm)
TESTING ITEM	(1)
Fluor (F) content	ND
Chlorine (CI) content	ND
Bromine (Br) content	ND
lodine (I) content	ND

|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.

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Prepared and checked by :

For Intertek

### Laboratory Manager

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REMARK: AS REQUESTED BY THE APPLICANT, COATING WITH BASE MATERIAL OF TESTED COMPONENTS OF THE SAMPLE MX11-1038-01 WERE TESTED TOGETHER.

#### Test method:



Sample Number	Testing item	Ω Testing method	Quality control Batch:	Analysis Date:	Analyzed By:	Reporting limit ppm
TI I	, ,	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:	<u>Analysis</u> <u>Date:</u>	Analyzed By:	Reporting limit ppm
	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	MET2010-40p144	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	MET2010-40p144	2011-05-26	MARY	2,0

Sample Number	Testing item	Ω Testing method	Quality control Batch:	<u>Analysis</u> <u>Date:</u>	Analyzed By:	Reporting limit ppm
1	Mercury (Hg) content	With reference to USEPA 7471 by USEPA 7471	MET2010-40p139	2010-05-23	RNC	0,25

Sample Number	Testing item	▲ <u>Testing method</u>	Quality control Batch:	<u>Analysis</u> <u>Date:</u>	Analyzed By:	Reporting limit ppm
1	Fluor	With reference to EN 14582:2007 by calorimetric bomb method with oxygen and determined by ion chromatography	2011-000307-PCL	2011-06-09	▲ CONT	30
1	Chlorine	With reference to EN 14582:2007 by calorimetric bomb method with oxygen and determined by ion chromatography	2011-000307-PCL	2011-06-09	▲ CONT	30
1	Bromine	With reference to EN 14582:2007 by calorimetric bomb method with oxygen and determined by ion chromatography	2011-000307-PCL	2011-06-09	▲ CONT	30
1	lodine	With reference to EN 14582:2007 by calorimetric bomb method with oxygen and determined by ion chromatography	2011-000307-PCL	2011-06-09	▲ CONT	30



Test Report Number: TWNC00234714

Applicant: Littelfuse, S.A. de C.V.

Blvd. Fausto Z. Martinez #1800 Col. Magisterio Seccion 38 C.P. 26070 Piedra Negras, Coahuila,

Mexico

Sample Description:

One (1) group of submitted samples said to be :
Part Description : SOLID CORE SOLDER

Part Number : 692536

Date Sample Received : Nov 28, 2011
Date Test Started : Nov 29, 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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Date : Dec 01, 2011

Page 1 of 5



# Test Conducted

#### ( I ) Test Result Summary :

,	
Test Item	Result (ppm)
	<u>Silvery Metal</u>
Heavy Metal	
Cadmium (Cd) content	ND
Lead (Pb) content	250
Mercury (Hg) content	ND
Chromium VI (Cr <sup>6+</sup> ) content (mg/kg with 50cm <sup>2</sup> )	Negative (< 0.02)

Remarks: ppm = Parts per million based on weight of tested sample = mg/kg

ND = Not detected
< = Less than</pre>

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.

Responsibility of Chemist : Irene Chiou / Kevin Liu

Date Sample Received : Nov 28, 2011

Test Period : Nov 29, 2011 To Dec 01, 2011

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

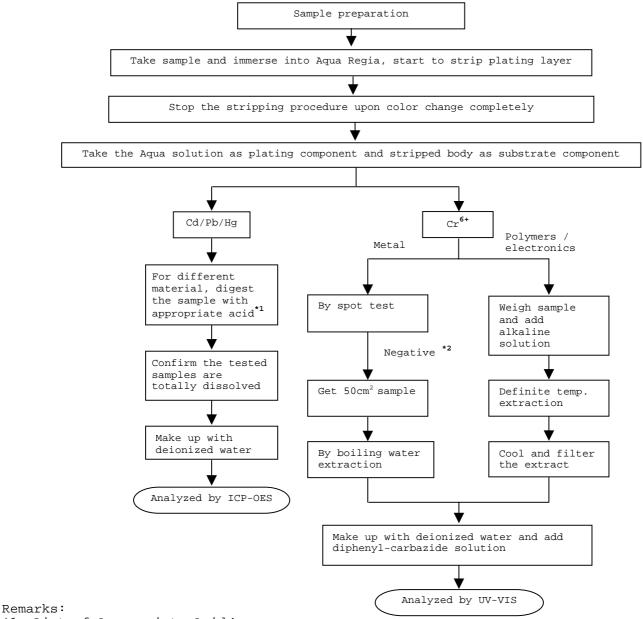


Test Conducted

(IV) Measurement Flowchart:

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

Reference Standard: IEC 62321 edition 1.0:2008



\*1: List of Appropriate Acid:

disc 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

Page 4 of 5



Test Conducted

Number: TWNC00234714

### Photo





Test Report Number: TWNC00254945

Applicant: Littelfuse, S.A. de C.V.

Blvd. Fausto Z. Martinez #1800 Col. Magisterio Seccion 38 C.P. 26070 Piedra Negras, Coahuila,

Mexico

Sample Description:

One (1) group of submitted samples said to be :
Part Description : BASE MATERIAL RESIN

Part Number : 057700

Date Sample Received : Apr 27, 2012 Date Test Started : Apr 27, 2012

Test Conducted :

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

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Director

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Date : May 04, 2012

Page 1 of 9



Test Conducted

( I ) Test Result Summary :

, rest resure summary	Result (ppm)
Test Item	Transparent Plastic
	Pellets
Heavy Metal	
Cadmium (Cd) content	ND
Lead (Pb) content	ND
Mercury (Hg) content	ND
Chromium VI (Cr <sup>6+</sup> ) 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)	ND
Bromine (Br)	ND
Iodine (I)	ND
Phthalates	
Di(2-ethylhexyl) Phthalate (DEHP)	ND
Dibutyl Phthalate (DBP)	ND
Benzyl Butyl Phthalate (BBP)	ND



#### Test Conducted

## ( I ) Test Result Summary :

	Result (ppm)
Test Item	Transparent Plastic
	Pellets
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 : Apr 27, 2012

Test Period : Apr 27, 2012 To May 03, 2012

### ( $\Pi$ ) RoHS Requirement:

Restricted Substances	<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.



# Test Conducted $(\coprod)$ 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 <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-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.	
Hexabromocyclododecane (HBCDD)	With reference to MSEDA 3540C by	10 ppm

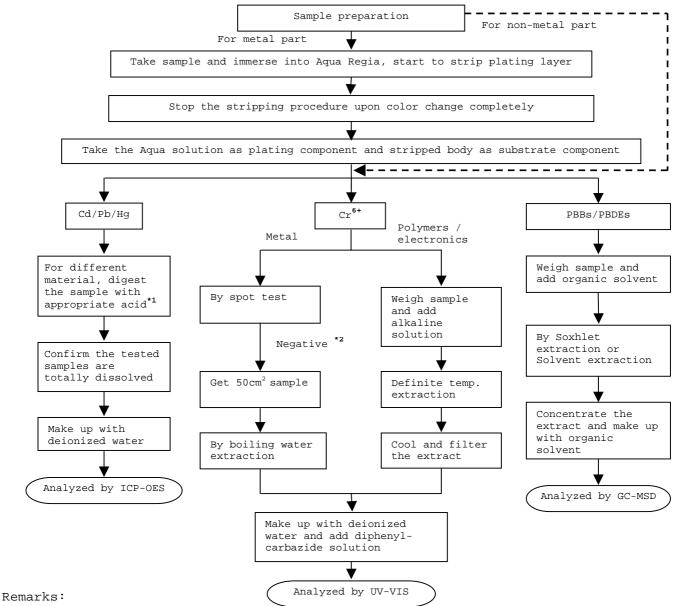
Remark: Reporting limit = Quantitation limit of analyte in sample



#### Test Conducted

#### (IV) Measurement Flowchart:

Test for Cd/Pb/Hg/Chromium (VI)/PBBS/PBDES Contents Reference Standard: IEC 62321 edition 1.0:2008



\*1: List of Appropriate Acid:

disc of Appropriace Acid.		
<u>Material</u>	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.

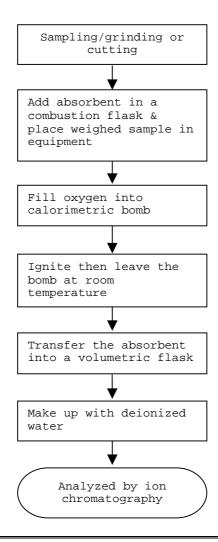
Tel: (+886-2) 6602-2888 · 2797-8885 Fax: (+886-2) 6602-2400 · 6602-2401



Test Conducted

(IV) Measurement Flowchart:

Test for Halogen Content Reference Standard: EN 14582

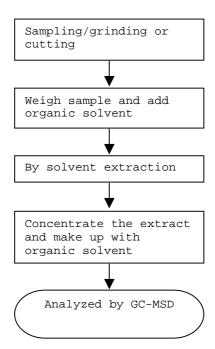




Test Conducted

 $(\operatorname{IV})$  Measurement Flowchart:

Test For Phthalates Contents Reference Method: EN 14372: 2004



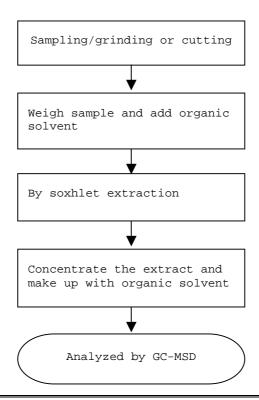
Tel: (+886-2) 6602-2888 · 2797-8885 Fax: (+886-2) 6602-2400 · 6602-2401



Test Conducted

#### (IV) Measurement Flowchart:

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



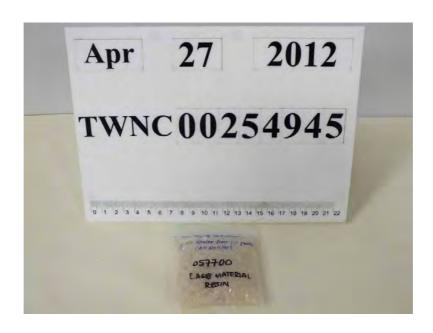
End of Report

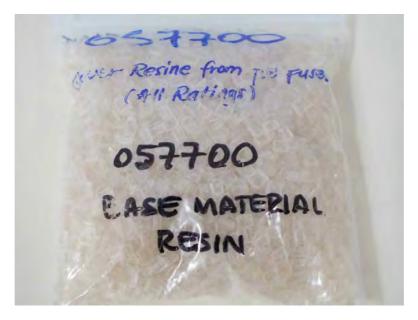


Test Conducted

Number: TWNC00254945

# Photo





Tel: (+886-2) 6602-2888 · 2797-8885 Fax: (+886-2) 6602-2400 · 6602-2401



Test Report Number: TWNC00237450

Applicant: Littelfuse, S.A. de C.V.

Date : Dec 21, 2011 Blvd. Fausto Z. Martinez #1800

Col. Magisterio Seccion 38 C.P. 26070 Piedra Negras, Coahuila,

Mexico

Sample Description:

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

Part Description : PINK COLOR CONCENTRATE

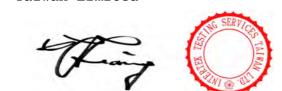
Part Number : 057785

: Dec 19, 2011 Date Sample Received Date Test Started : Dec 20, 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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Page 1 of 9



Test Conducted

# ( I ) Test Result Summary :

To the Theorem Sammary	Result (ppm)
Test Item	Pink Plastic Pellet
Heavy Metal	
Cadmium (Cd) content	ND
Lead (Pb) content	ND
Mercury (Hg) content	ND
Chromium VI (Cr <sup>6+</sup> ) 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)	ND
Bromine (Br)	ND
Iodine (I)	ND



## Test Conducted

# (I) Test Result Summary:

Test Item	Result (ppm)		
	Pink Plastic Pellet		
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 : Dec 19, 2011

Test Period : Dec 19, 2011 To Dec 21, 2011

# ( $\Pi$ ) 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 <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.



# Test Conducted

# (Ⅲ) Test Method:

Test Method:		
Test Item	<u>Test Method</u>	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 <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-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 MSEDA 3540C by	10 ppm

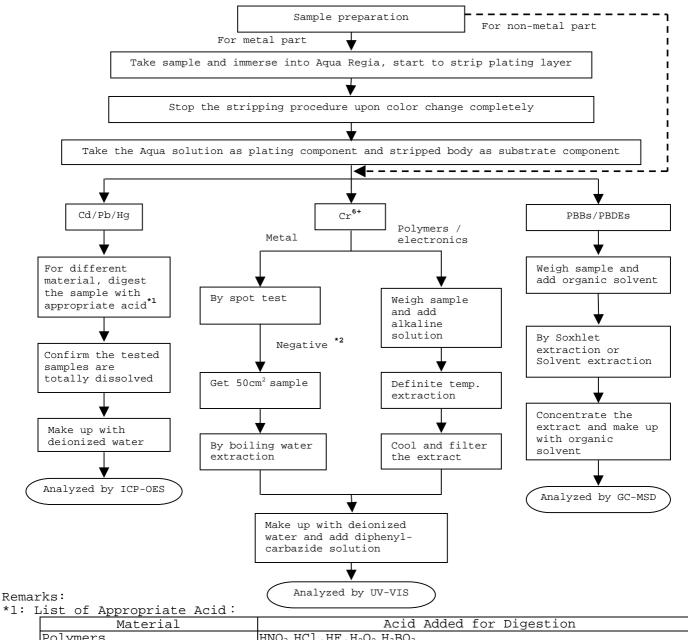
Remark: Reporting limit = Quantitation limit of analyte in sample



## Test Conducted

## (IV) Measurement Flowchart:

Test for Cd/Pb/Hg/Chromium (VI)/PBBS/PBDES Contents Reference Standard: IEC 62321 edition 1.0:2008



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>

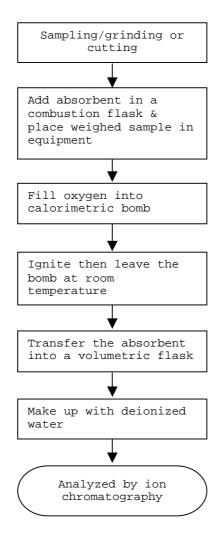
\*2: If the result of spot test is positive, Chromium VI would be determined as detected.



## Test Conducted

# (IV) Measurement Flowchart:

Test for Halogen Content Reference Standard: EN 14582

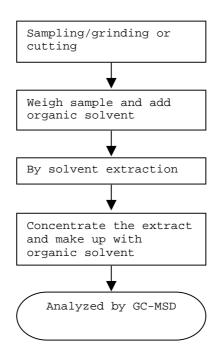




Test Conducted

# (IV) Measurement Flowchart:

Test For Phthalates Contents Reference Method: EN 14372: 2004

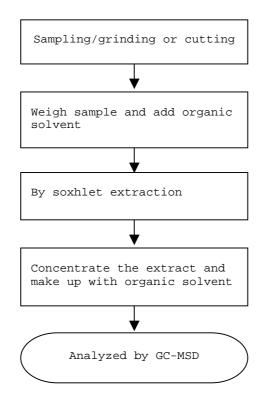




## Test Conducted

# (IV) Measurement Flowchart:

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



End of Report



Test Conducted

# Photo







Test Report Number: TWNC00237449

Applicant: Littelfuse, S.A. de C.V.

Date : Dec 23, 2011

Blvd. Fausto Z. Martinez #1800 Col. Magisterio Seccion 38 C.P.

26070 Piedra Negras, Coahuila, Mexico

Sample Description:

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

Part Description : GREEN COLOR CONCENTRATE

Part Number : 057786

Date Sample Received : Dec 19, 2011
Date Test Started : Dec 19, 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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Page 1 of 9



Test Conducted

# ( I ) Test Result Summary :

/ Test Result Summary :	
	Result (ppm)
Test Item	Green Plastic
	Pellet
Heavy Metal	
Cadmium (Cd) content	ND
Lead (Pb) content	ND
Mercury (Hg) content	ND
Chromium VI (Cr <sup>6+</sup> ) 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)	11996
Bromine (Br)	ND
Iodine (I)	ND



Test Conducted

## ( I ) Test Result Summary :

, rese nesare summer,	
	Result (ppm)
Test Item	Green Plastic
	<u>Pellet</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 : Dec 19, 2011

Test Period : Dec 19, 2011 To Dec 23, 2011

# (II) RoHS Requirement:

·	
Restricted Substances	<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.



# Test Conducted

# (Ⅲ) Test Method:

) 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 <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-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

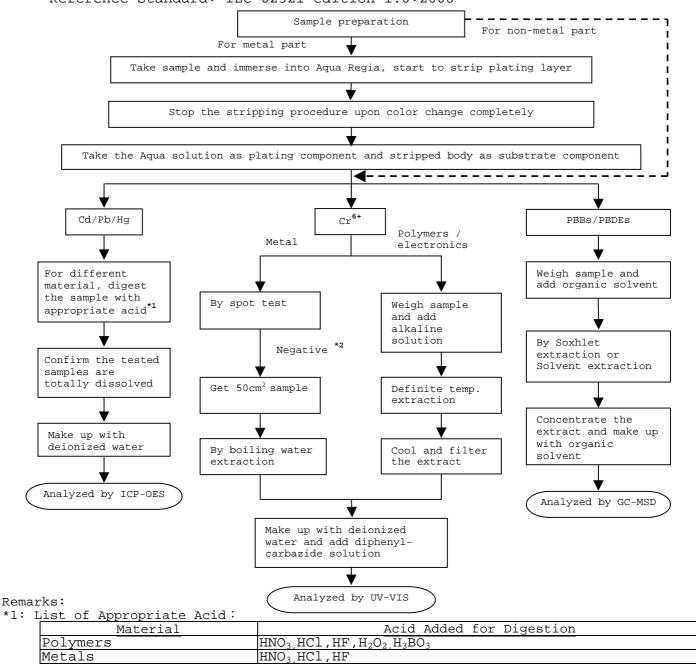
Remark: Reporting limit = Quantitation limit of analyte in sample



#### Test Conducted

## (IV) Measurement Flowchart:

Test for Cd/Pb/Hg/Chromium (VI)/PBBS/PBDES Contents Reference Standard: IEC 62321 edition 1.0:2008



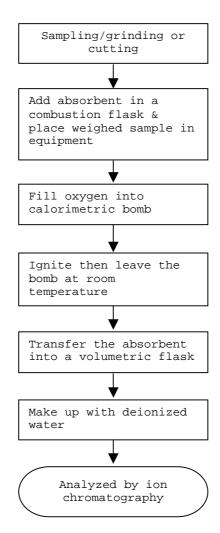
Electronics  $HNO_3$ ,HCl, $H_2O_2$ , $HBF_4$ \*2: If the result of spot test is positive, Chromium VI would be determined as detected.



## Test Conducted

# (IV) Measurement Flowchart:

Test for Halogen Content Reference Standard: EN 14582

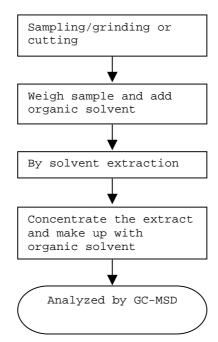




Test Conducted

# (IV) Measurement Flowchart:

Test For Phthalates Contents Reference Method: EN 14372: 2004

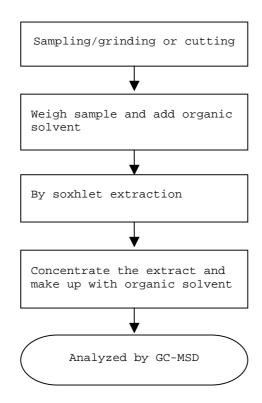




Test Conducted

# (IV) Measurement Flowchart:

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



End of Report



Test Conducted

Number : TWNC00237449

# Photo







Report No.: MX11-1393

Date: 2011-07-12

#### **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) PN 057901 Colorant Yellow

Country of Origin

NP

Buyer's Name

NP

Supplier's Name

NP

Date sample received 2011-06-27

Testing period

2011-06-28 to 2011-07-11

# **TEST CONDUCTED**

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

## CONCLUSION

Sample Number	<u>Testing item</u>	Conclusion	Failed component	Failed result
1	PN 057901 Colorant Yellow	Pass		
<b>.</b>	114 03/301 Colorant Tenew	See Result summary		

600002





Report No.: MX11-1393

Date: 2011-07-12

## **TEST CONDUCTED**

Samples:

1) PN 057901 Colorant Yellow

## **TEST RESULT SUMMARY FOR ROHS DIRECTIVE:**

	O DEGULE (	
TESTING ITEM	Ω RESULT (ppm) (1)	<u>Limit</u>
Cadmium (Cd) content	2,793	0,01% (100 ppm)
Lead (Pb) content	37,33	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 I DE LEGIS	0,1% (1000 ppin)
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	NO PERMIT	11 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





Report No.: MX11-1393 Date: 2011-07-12

#### **TEST CONDUCTED**

Samples:

1) PN 057901 Colorant Yellow

#### **TEST RESULT SUMMARY FOR RoHS DIRECTIVE:**

TESTING ITEM	▲ RESULT (ppm)	
TESTING ITEM	(1)	
Fluor (F) content	ND	
Chlorine (CI) content	ND	
Bromine (Br) content	ND ·	
lodine (I)	ND	

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  $\Omega$ .

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 MX11-1393-01 WERE TESTED TOGETHER.

000004

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

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

ILTA/003/GENS-F8





Report No.: MX11-1393 Date: 2011-07-12

# Test method:

Sample Number	Testing item	Ω Testing method	Quality control Batch:	<u>Analysis</u> <u>Date:</u>	Analyzed By:	Reporting limit ppm
1		With reference to USEPA 3060, by EPA 7196	QHU2010-61p86	2011-07-03	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	2011-000415-PCL	2011-07-11	CONT	50,0
1	POLYBROMINATE D DIPHENYL ETHERS (PBDEs)	Determined by GC-MSD	2011-000415-PCL	2011-07-11	▲ CONT	50,0

Sample Number	Testing item	Ω Testing method	Quality control Batch:	Analysis Date:	Analyzed By:	Reporting limit ppm
1	Fluor	With reference to EN 14582:2007by calorimetric bomb method with oxygen and determined by ion chromatography	2011-000415-PCL	2011-07-11	▲ CONT	30
1	Chlorine	With reference to EN 14582:2007by calorimetric bomb method with oxygen and determined by ion chromatography	2011-000415-PCL	2011-07-11	▲ CONT	30
1	Bromine	With reference to EN 14582:2007by calonmetric bomb method with oxygen and determined by ion chromatography	2011-000415-PCL	2011-07-11	▲ CONT	30
1	lodine	With reference to EN 14582:2007by calonmetric bomb method with oxygen and determined by ion chromatography	2011-000415-PCL	2011-07-11	▲ CONT	30

<u>Sample</u> <u>Number</u>	Testing item	Ω Testing method	Quality control Batch:	<u>Analysis</u> <u>Date:</u>	Analyzed By:	Reporting limit ppm
1	Lead (Pb) content	With reference to USEPA 3052, by EPA 6010	MET2011-12p23	2011-06-29	MARY	5,0

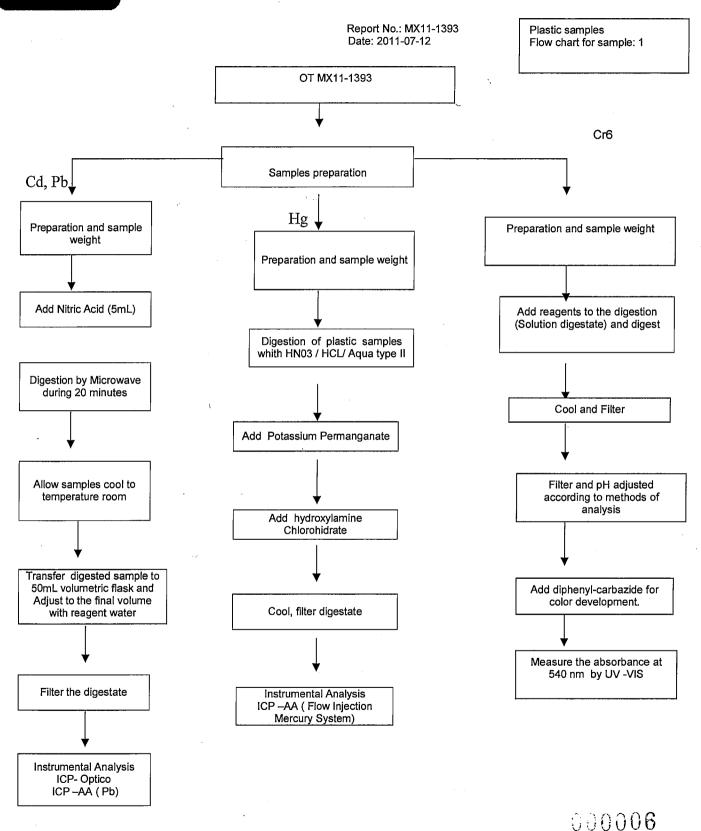
Sample Number	Testing item	Ω Testing method	Quality control Batch:	<u>Analysis</u> <u>Date:</u>	Analyzed By:	Reporting limit ppm
1	Cadmium (Cd) content	With reference to USEPA 3052, by EPA 6010	MET2011-12p23	2011-06-29	MARY	2,0

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	MET2011-12p25	2011-07-01	RNC	0,25

000005



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000007





Test Report Number: TWNC00218376

Applicant: Littelfuse, S.A. de C.V.

Blvd. Fausto Z. Martinez #1800 Col. Magisterio Seccion 38 C.P. 26070 Piedra Negras, Coahuila,

Mexico

Sample Description:

One (1) group of submitted samples said to be :
Part Description : RED COLOR CONCENTRATE

Part Number : 057787

Date Sample Received : Jul 29, 2011
Date Test Started : Aug 01, 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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Date : Aug 11, 2011

Page 1 of 7



# Test Conducted

# (I) Test Result Summary:

Cadmium (Cd) content	Test Result Summary :	
Heavy Metal  Cadmium (Cd) content  Lead (Pb) content  Mercury (Hg) content  Chromium VI (Cr <sup>5*</sup> ) content  Monobrominated Biphenyls (PBBs)  Monobrominated Biphenyls (MonoBB)  Dibrominated Biphenyls (TriBB)  Tribrominated Biphenyls (TriBB)  ND  Tetrabrominated Biphenyls (TriBB)  ND  Pentabrominated Biphenyls (PentaBB)  ND  Hexabrominated Biphenyls (HexaBB)  ND  Hexabrominated Biphenyls (NonaBB)  ND  Octabrominated Biphenyls (OctaBB)  ND  Octabrominated Biphenyls (NonaBB)  ND  Decabrominated Biphenyls (NonaBB)  ND  Docabrominated Biphenyls (NonaBB)  ND  Docabrominated Biphenyl (DecaBB)  Monobrominated Biphenyl Ethers (MonoBDE)  Monobrominated Diphenyl Ethers (TriBDE)  Tribrominated Diphenyl Ethers (TriBDE)  Tetrabrominated Diphenyl Ethers (TetraBDE)  ND  Tetrabrominated Diphenyl Ethers (TetraBDE)  ND  Hexabrominated Diphenyl Ethers (HexaBDE)  ND  Hexabrominated Diphenyl Ethers (HexaBDE)  ND  Hexabrominated Diphenyl Ethers (HexaBDE)  ND  Octabrominated Diphenyl Ethers (HexaBDE)  ND  ND  Nonabrominated Diphenyl Ethers (HexaBDE)  ND  ND  Nonabrominated Diphenyl Ethers (NonaBDE)  ND  Docabrominated Diphenyl Ethers (NonaBDE)  ND  Nonabrominated Diphenyl Ethers (NonaBDE)  ND  Decabrominated Diphenyl Ethers (NonaBDE)	Togt Itom	Result (ppm)
Cadmium (Cd) content  Lead (Pb) content  Mercury (Hg) content  Chromium VI (Cr <sup>6+</sup> ) content  Polybrominated Biphenyls (PBBs)  Monobrominated Biphenyls (MonoBB)  Dibrominated Biphenyls (DiBB)  Tribrominated Biphenyls (TriBB)  Tetrabrominated Biphenyls (TetraBB)  Pentabrominated Biphenyls (PentaBB)  Hexabrominated Biphenyls (HexaBB)  ND  Hexpadianted Biphenyls (HexaBB)  ND  Octabrominated Biphenyls (NonaBB)  ND  Nonabrominated Biphenyls (NonaBB)  ND  Polybrominated Biphenyls (NonaBB)  ND  Nonabrominated Biphenyls (NonaBB)  ND  Tribrominated Diphenyl Ethers (PBDEs)  Monobrominated Diphenyl Ethers (TriBDE)  Dibrominated Diphenyl Ethers (TriBDE)  Tribrominated Diphenyl Ethers (TetraBDE)  ND  Tetrabrominated Diphenyl Ethers (HexaBDE)  ND  Pentabrominated Diphenyl Ethers (HexaBDE)  ND  Tetrabrominated Diphenyl Ethers (HexaBDE)  ND  Hexabrominated Diphenyl Ethers (HexaBDE)  ND  Octabrominated Diphenyl Ethers (HexaBDE)  ND  Hexabrominated Diphenyl Ethers (HexaBDE)  ND  Octabrominated Diphenyl Ethers (HexaBDE)  ND  ND  Octabrominated Diphenyl Ethers (HexaBDE)  ND  Nonabrominated Diphenyl Ethers (NonaBDE)  ND  Nonabrominated Diphenyl Ethers (NonaBDE)  ND  Nonabrominated Diphenyl Ethers (NonaBDE)  ND  Decabrominated Diphenyl Ethers (NonaBDE)  ND  Nonabrominated Diphenyl Ethers (NonaBDE)  ND  Nonabrominated Diphenyl Ethers (NonaBDE)  ND  Nonabrominated Diphenyl Ethers (NonaBDE)  ND  Decabrominated Diphenyl Ethers (NonaBDE)  ND  Nonabrominated Diphenyl Ethers (NonaBDE)  ND  Decabrominated Diphenyl Ethers (NonaBDE)  ND  Decabrominated Diphenyl Ethers (NonaBDE)	<u>rest rtem</u>	Red Plastic Pellets
Lead (Pb) content  Mercury (Hg) content  Chromium VI (Cr <sup>6+</sup> ) content  Polybrominated Biphenyls (PBBs)  Monobrominated Biphenyls (MonoBB)  Dibrominated Biphenyls (DiBB)  Tribrominated Biphenyls (TriBB)  Tetrabrominated Biphenyls (TetraBB)  Pentabrominated Biphenyls (PentaBB)  Hexabrominated Biphenyls (HexaBB)  ND  Hetpabrominated Biphenyls (HexaBB)  ND  Octabrominated Biphenyls (HexaBB)  ND  Nonabrominated Biphenyls (NonaBB)  ND  Polybrominated Biphenyls (NonaBB)  Decabrominated Biphenyls (NonaBB)  ND  Tolybrominated Biphenyl (DecaBB)  Polybrominated Diphenyl Ethers (PBDES)  Monobrominated Diphenyl Ethers (MonoBDE)  Dibrominated Diphenyl Ethers (TriBDE)  Tribrominated Diphenyl Ethers (TetraBDE)  Pentabrominated Diphenyl Ethers (TetraBDE)  ND  Tetrabrominated Diphenyl Ethers (HexaBDE)  Hexabrominated Diphenyl Ethers (HexaBDE)  Hexabrominated Diphenyl Ethers (HexaBDE)  ND  Octabrominated Diphenyl Ethers (HexaBDE)  ND  Heptabrominated Diphenyl Ethers (HeyaBDE)  ND  Octabrominated Diphenyl Ethers (HeyaBDE)  ND  ND  Nonabrominated Diphenyl Ethers (NonaBDE)  ND  Nonabrominated Diphenyl Ethers (NonaBDE)  ND  Decabrominated Diphenyl Ethers (NonaBDE)  ND  Nonabrominated Diphenyl Ethers (NonaBDE)  ND  Decabrominated Diphenyl Ethers (NonaBDE)  ND  Nonabrominated Diphenyl Ethers (NonaBDE)  ND  Decabrominated Diphenyl Ethers (NonaBDE)	Heavy Metal	
Mercury (Hg) content Chromium VI (Cr <sup>6+</sup> ) content  Polybrominated Biphenyls (PBBs)  Monobrominated Biphenyls (MonoBB) Dibrominated Biphenyls (DiBB) Tribrominated Biphenyls (TriBB) Tetrabrominated Biphenyls (TetraBB) Pentabrominated Biphenyls (PentaBB) ND Hexabrominated Biphenyls (HexaBB) Heptabrominated Biphenyls (HexaBB) ND Octabrominated Biphenyls (HeptaBB) ND Octabrominated Biphenyls (NonaBB) Decabrominated Biphenyls (NonaBB) Decabrominated Biphenyl (DecaBB) Polybrominated Diphenyl Ethers (MonoBDE) Dibrominated Diphenyl Ethers (TriBDE) Tribrominated Diphenyl Ethers (TriBDE) ND Tetrabrominated Diphenyl Ethers (TetraBDE) Pentabrominated Diphenyl Ethers (PentaBDE) ND Hexabrominated Diphenyl Ethers (HexaBDE) ND Hexabrominated Diphenyl Ethers (HexaBDE) ND Hexabrominated Diphenyl Ethers (HeptaBDE) ND Hexabrominated Diphenyl Ethers (HeptaBDE) ND Hexabrominated Diphenyl Ethers (OctaBDE) ND Nonabrominated Diphenyl Ethers (NonaBDE) ND Nonabrominated Diphenyl Ethers (NonaBDE) ND Nonabrominated Diphenyl Ethers (NonaBDE) ND Decabrominated Content	Cadmium (Cd) content	ND
Chromium VI (Cr6+) 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  Hexabrominated Biphenyls (HexaBB) ND  Octabrominated Biphenyls (OctaBB) ND  Nonabrominated Biphenyls (NonaBB) ND  Decabrominated Biphenyls (NonaBB) ND  Polybrominated Biphenyl (DecaBB) ND  Docabrominated Diphenyl Ethers (PBDEs)  Monobrominated Diphenyl Ethers (MonoBDE) ND  Tribrominated Diphenyl Ethers (TriBDE) ND  Tetrabrominated Diphenyl Ethers (TetraBDE) ND  Pentabrominated Diphenyl Ethers (PentaBDE) ND  Hexabrominated Diphenyl Ethers (HexaBDE) ND  Hexabrominated Diphenyl Ethers (HexaBDE) ND  Hexabrominated Diphenyl Ethers (HexaBDE) ND  Hexabrominated Diphenyl Ethers (OctaBDE) ND  Nonabrominated Diphenyl Ethers (NonaBDE) ND	Lead (Pb) 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 (HexaBB) ND Octabrominated Biphenyls (HeytaBB) ND Nonabrominated Biphenyls (OctaBB) ND Nonabrominated Biphenyls (NonaBB) ND Decabrominated Biphenyls (NonaBB) ND Decabrominated Biphenyl (DecaBB) ND Tolybrominated Diphenyl Ethers (PBDES) Monobrominated Diphenyl Ethers (MonoBDE) ND Tribrominated Diphenyl Ethers (TriBDE) ND Tetrabrominated Diphenyl Ethers (TetraBDE) ND Pentabrominated Diphenyl Ethers (PentaBDE) ND Pentabrominated Diphenyl Ethers (PentaBDE) ND Hexabrominated Diphenyl Ethers (HexaBDE) ND Heptabrominated Diphenyl Ethers (HexaBDE) ND Octabrominated Diphenyl Ethers (OctaBDE) ND Nonabrominated Diphenyl Ethers (NonaBDE) ND Decabrominated Diphenyl Ethers (NonaBDE) ND Nonabrominated Diphenyl Ethers (NonaBDE) ND Decabrominated Diphenyl Ethers (NonaBDE) ND		ND
Monobrominated Biphenyls (MonoBB) Dibrominated Biphenyls (DiBB) ND Tribrominated Biphenyls (TriBB) ND Tetrabrominated Biphenyls (TetraBB) Pentabrominated Biphenyls (PentaBB) ND Hexabrominated Biphenyls (PentaBB) ND Hexabrominated Biphenyls (HexaBB) ND Heptabrominated Biphenyls (HexaBB) ND Octabrominated Biphenyls (OctaBB) ND Nonabrominated Biphenyls (NonaBB) ND Polybrominated Biphenyl (DecaBB) ND Polybrominated Diphenyl Ethers (PBDES) Monobrominated Diphenyl Ethers (MonoBDE) Dibrominated Diphenyl Ethers (TriBDE) Tribrominated Diphenyl Ethers (TriBDE) ND Tetrabrominated Diphenyl Ethers (TetraBDE) Pentabrominated Diphenyl Ethers (PentaBDE) ND Hexabrominated Diphenyl Ethers (HexaBDE) ND Heptabrominated Diphenyl Ethers (HeptaBDE) ND Octabrominated Diphenyl Ethers (HeptaBDE) ND Nonabrominated Diphenyl Ethers (NonaBDE) ND Decabrominated Diphenyl Ethers (NonaBDE) ND Halogen Content	Chromium VI (Cr <sup>6+</sup> ) content	ND
Dibrominated Biphenyls (DiBB)  Tribrominated Biphenyls (TriBB)  Tetrabrominated Biphenyls (TetraBB)  Pentabrominated Biphenyls (PentaBB)  Hexabrominated Biphenyls (PentaBB)  Heptabrominated Biphenyls (HexaBB)  ND  Octabrominated Biphenyls (OctaBB)  ND  Nonabrominated Biphenyls (NonaBB)  Decabrominated Biphenyl (DecaBB)  ND  Polybrominated Biphenyl (DecaBB)  Monobrominated Diphenyl Ethers (PBDES)  Monobrominated Diphenyl Ethers (MonoBDE)  Dibrominated Diphenyl Ethers (TriBDE)  Tribrominated Diphenyl Ethers (TetraBDE)  ND  Tetrabrominated Diphenyl Ethers (PentaBDE)  ND  Pentabrominated Diphenyl Ethers (HexaBDE)  Hexabrominated Diphenyl Ethers (HexaBDE)  ND  Hexabrominated Diphenyl Ethers (HexaBDE)  ND  Hexabrominated Diphenyl Ethers (HexaBDE)  ND  Octabrominated Diphenyl Ethers (NonaBDE)  ND  Nonabrominated Diphenyl Ethers (NonaBDE)  ND  Nonabrominated Diphenyl Ethers (NonaBDE)  ND  ND  Decabrominated Diphenyl Ethers (NonaBDE)  ND  Halogen Content	Polybrominated Biphenyls (PBBs)	
Tribrominated Biphenyls (TriBB)  Tetrabrominated Biphenyls (TetraBB)  Pentabrominated Biphenyls (PentaBB)  Hexabrominated Biphenyls (HexaBB)  Heptabrominated Biphenyls (HeptaBB)  Octabrominated Biphenyls (OctaBB)  ND  Nonabrominated Biphenyls (NonaBB)  Decabrominated Biphenyl (DecaBB)  Polybrominated Biphenyl (DecaBB)  Monobrominated Diphenyl Ethers (PBDES)  Monobrominated Diphenyl Ethers (MonoBDE)  Dibrominated Diphenyl Ethers (DiBDE)  Tribrominated Diphenyl Ethers (TriBDE)  Tetrabrominated Diphenyl Ethers (TetraBDE)  Pentabrominated Diphenyl Ethers (PentaBDE)  ND  Hexabrominated Diphenyl Ethers (HexaBDE)  Hexabrominated Diphenyl Ethers (HexaBDE)  ND  Heptabrominated Diphenyl Ethers (HexaBDE)  ND  Octabrominated Diphenyl Ethers (HeptaBDE)  ND  Nonabrominated Diphenyl Ethers (NonaBDE)  ND  Nonabrominated Diphenyl Ethers (NonaBDE)  ND  Decabrominated Diphenyl Ether (DecaBDE)	Monobrominated Biphenyls (MonoBB)	ND
Tetrabrominated Biphenyls (TetraBB) Pentabrominated Biphenyls (PentaBB) ND Hexabrominated Biphenyls (HexaBB) ND Heptabrominated Biphenyls (HeptaBB) Octabrominated Biphenyls (OctaBB) ND Nonabrominated Biphenyls (NonaBB) Decabrominated Biphenyl (DecaBB) ND Polybrominated Diphenyl Ethers (PBDES) Monobrominated Diphenyl Ethers (MonoBDE) Dibrominated Diphenyl Ethers (TriBDE) Tribrominated Diphenyl Ethers (TriBDE) ND Tetrabrominated Diphenyl Ethers (TetraBDE) ND Pentabrominated Diphenyl Ethers (PentaBDE) ND Hexabrominated Diphenyl Ethers (HexaBDE) Heptabrominated Diphenyl Ethers (HexaBDE) ND Heptabrominated Diphenyl Ethers (HeptaBDE) ND Octabrominated Diphenyl Ethers (OctaBDE) ND Nonabrominated Diphenyl Ethers (NonaBDE) ND Decabrominated Diphenyl Ethers (NonaBDE) ND Decabrominated Diphenyl Ether (DecaBDE)	Dibrominated Biphenyls (DiBB)	ND
Pentabrominated Biphenyls (PentaBB)  Hexabrominated Biphenyls (HexaBB)  ND  Heptabrominated Biphenyls (HeptaBB)  Octabrominated Biphenyls (OctaBB)  ND  Nonabrominated Biphenyls (NonaBB)  Decabrominated Biphenyl (DecaBB)  ND  Polybrominated Diphenyl Ethers (PBDES)  Monobrominated Diphenyl Ethers (MonoBDE)  Dibrominated Diphenyl Ethers (DiBDE)  Tribrominated Diphenyl Ethers (TriBDE)  Tetrabrominated Diphenyl Ethers (TetraBDE)  ND  Tetrabrominated Diphenyl Ethers (PentaBDE)  ND  Hexabrominated Diphenyl Ethers (HexaBDE)  Heptabrominated Diphenyl Ethers (HexaBDE)  ND  Heptabrominated Diphenyl Ethers (HeptaBDE)  ND  Octabrominated Diphenyl Ethers (OctaBDE)  ND  Nonabrominated Diphenyl Ethers (NonaBDE)  ND  Decabrominated Diphenyl Ethers (NonaBDE)  ND  Halogen Content	Tribrominated Biphenyls (TriBB)	ND
Hexabrominated Biphenyls (HexaBB)  Heptabrominated Biphenyls (HeptaBB)  Octabrominated Biphenyls (OctaBB)  ND  Nonabrominated Biphenyls (NonaBB)  Decabrominated Biphenyl (DecaBB)  Polybrominated Diphenyl Ethers (PBDEs)  Monobrominated Diphenyl Ethers (MonoBDE)  Dibrominated Diphenyl Ethers (DiBDE)  Tribrominated Diphenyl Ethers (TriBDE)  Tetrabrominated Diphenyl Ethers (TetraBDE)  Pentabrominated Diphenyl Ethers (PentaBDE)  ND  Hexabrominated Diphenyl Ethers (HexaBDE)  Heptabrominated Diphenyl Ethers (HeptaBDE)  Octabrominated Diphenyl Ethers (HeptaBDE)  ND  Nonabrominated Diphenyl Ethers (OctaBDE)  ND  Nonabrominated Diphenyl Ethers (NonaBDE)  ND  Decabrominated Diphenyl Ethers (NonaBDE)  ND  Halogen Content	Tetrabrominated Biphenyls (TetraBB)	ND
Heptabrominated Biphenyls (HeptaBB)  Octabrominated Biphenyls (OctaBB)  ND  Nonabrominated Biphenyls (NonaBB)  Decabrominated Biphenyl (DecaBB)  Polybrominated Diphenyl Ethers (PBDES)  Monobrominated Diphenyl Ethers (MonoBDE)  Dibrominated Diphenyl Ethers (DiBDE)  Tribrominated Diphenyl Ethers (TriBDE)  Tetrabrominated Diphenyl Ethers (TetraBDE)  Pentabrominated Diphenyl Ethers (PentaBDE)  ND  Pentabrominated Diphenyl Ethers (PentaBDE)  Hexabrominated Diphenyl Ethers (HexaBDE)  ND  Heptabrominated Diphenyl Ethers (HeptaBDE)  Octabrominated Diphenyl Ethers (OctaBDE)  ND  Nonabrominated Diphenyl Ethers (NonaBDE)  Decabrominated Diphenyl Ethers (NonaBDE)  ND  Halogen Content	Pentabrominated Biphenyls (PentaBB)	ND
Octabrominated Biphenyls (OctaBB) Nonabrominated Biphenyls (NonaBB) Decabrominated Biphenyl (DecaBB) ND Polybrominated Diphenyl Ethers (PBDES) Monobrominated Diphenyl Ethers (MonoBDE) Dibrominated Diphenyl Ethers (DiBDE) Tribrominated Diphenyl Ethers (TriBDE) Tetrabrominated Diphenyl Ethers (TetraBDE) ND Pentabrominated Diphenyl Ethers (PentaBDE) ND Hexabrominated Diphenyl Ethers (PentaBDE) Heptabrominated Diphenyl Ethers (HexaBDE) Octabrominated Diphenyl Ethers (OctaBDE) ND Nonabrominated Diphenyl Ethers (NonaBDE) ND Decabrominated Diphenyl Ethers (NonaBDE) ND Decabrominated Diphenyl Ether (DecaBDE) ND Halogen Content	Hexabrominated Biphenyls (HexaBB)	ND
Nonabrominated Biphenyls (NonaBB) Decabrominated Biphenyl (DecaBB) ND  Polybrominated Diphenyl Ethers (PBDES) Monobrominated Diphenyl Ethers (MonoBDE) Dibrominated Diphenyl Ethers (DiBDE) Tribrominated Diphenyl Ethers (TriBDE) Tetrabrominated Diphenyl Ethers (TetraBDE) Pentabrominated Diphenyl Ethers (PentaBDE) ND Hexabrominated Diphenyl Ethers (PentaBDE) Heptabrominated Diphenyl Ethers (HexaBDE) ND Octabrominated Diphenyl Ethers (OctaBDE) ND Nonabrominated Diphenyl Ethers (NonaBDE) Decabrominated Diphenyl Ether (DecaBDE) ND Halogen Content	Heptabrominated Biphenyls (HeptaBB)	ND
Decabrominated Biphenyl (DecaBB)  Polybrominated Diphenyl Ethers (PBDES)  Monobrominated Diphenyl Ethers (MonoBDE)  Dibrominated Diphenyl Ethers (DiBDE)  Tribrominated Diphenyl Ethers (TriBDE)  Tetrabrominated Diphenyl Ethers (TetraBDE)  Pentabrominated Diphenyl Ethers (PentaBDE)  Hexabrominated Diphenyl Ethers (HexaBDE)  Heptabrominated Diphenyl Ethers (HeptaBDE)  Octabrominated Diphenyl Ethers (HeptaBDE)  ND  Nonabrominated Diphenyl Ethers (OctaBDE)  ND  Nonabrominated Diphenyl Ethers (NonaBDE)  Decabrominated Diphenyl Ether (DecaBDE)  ND  Halogen Content	Octabrominated Biphenyls (OctaBB)	ND
Polybrominated Diphenyl Ethers (PBDEs)  Monobrominated Diphenyl Ethers (MonoBDE)  Dibrominated Diphenyl Ethers (DiBDE)  Tribrominated Diphenyl Ethers (TriBDE)  Tetrabrominated Diphenyl Ethers (TetraBDE)  Pentabrominated Diphenyl Ethers (PentaBDE)  Hexabrominated Diphenyl Ethers (HexaBDE)  Heptabrominated Diphenyl Ethers (HeptaBDE)  Octabrominated Diphenyl Ethers (HeptaBDE)  ND  Octabrominated Diphenyl Ethers (OctaBDE)  Nonabrominated Diphenyl Ethers (NonaBDE)  Decabrominated Diphenyl Ether (DecaBDE)  ND  Halogen Content	Nonabrominated Biphenyls (NonaBB)	ND
Monobrominated Diphenyl Ethers (MonoBDE)  Dibrominated Diphenyl Ethers (DiBDE)  Tribrominated Diphenyl Ethers (TriBDE)  Tetrabrominated Diphenyl Ethers (TetraBDE)  Pentabrominated Diphenyl Ethers (PentaBDE)  Hexabrominated Diphenyl Ethers (HexaBDE)  ND  Heptabrominated Diphenyl Ethers (HeptaBDE)  Octabrominated Diphenyl Ethers (OctaBDE)  ND  Nonabrominated Diphenyl Ethers (NonaBDE)  ND  Decabrominated Diphenyl Ether (DecaBDE)  ND  Halogen Content	Decabrominated Biphenyl (DecaBB)	ND
Dibrominated Diphenyl Ethers (DiBDE)  Tribrominated Diphenyl Ethers (TriBDE)  ND  Tetrabrominated Diphenyl Ethers (TetraBDE)  Pentabrominated Diphenyl Ethers (PentaBDE)  Hexabrominated Diphenyl Ethers (HexaBDE)  ND  Heptabrominated Diphenyl Ethers (HeptaBDE)  Octabrominated Diphenyl Ethers (OctaBDE)  ND  Nonabrominated Diphenyl Ethers (NonaBDE)  Decabrominated Diphenyl Ether (DecaBDE)  ND  Halogen Content	Polybrominated Diphenyl Ethers (PBDEs)	
Tribrominated Diphenyl Ethers (TriBDE)  Tetrabrominated Diphenyl Ethers (TetraBDE)  Pentabrominated Diphenyl Ethers (PentaBDE)  Hexabrominated Diphenyl Ethers (HexaBDE)  Heptabrominated Diphenyl Ethers (HeptaBDE)  Octabrominated Diphenyl Ethers (OctaBDE)  Nonabrominated Diphenyl Ethers (NonaBDE)  Nonabrominated Diphenyl Ethers (NonaBDE)  Decabrominated Diphenyl Ether (DecaBDE)  Halogen Content	Monobrominated Diphenyl Ethers (MonoBDE)	ND
Tetrabrominated Diphenyl Ethers (TetraBDE)  Pentabrominated Diphenyl Ethers (PentaBDE)  Hexabrominated Diphenyl Ethers (HexaBDE)  Heptabrominated Diphenyl Ethers (HeptaBDE)  Octabrominated Diphenyl Ethers (OctaBDE)  ND  Nonabrominated Diphenyl Ethers (NonaBDE)  Decabrominated Diphenyl Ether (DecaBDE)  ND  Halogen Content	Dibrominated Diphenyl Ethers (DiBDE)	ND
Pentabrominated Diphenyl Ethers (PentaBDE)  Hexabrominated Diphenyl Ethers (HexaBDE)  ND  Heptabrominated Diphenyl Ethers (HeptaBDE)  Octabrominated Diphenyl Ethers (OctaBDE)  NO  Nonabrominated Diphenyl Ethers (NonaBDE)  Decabrominated Diphenyl Ether (DecaBDE)  ND  Halogen Content	Tribrominated Diphenyl Ethers (TriBDE)	ND
Hexabrominated Diphenyl Ethers (HexaBDE)  Heptabrominated Diphenyl Ethers (HeptaBDE)  Octabrominated Diphenyl Ethers (OctaBDE)  Nonabrominated Diphenyl Ethers (NonaBDE)  Decabrominated Diphenyl Ether (DecaBDE)  ND  Halogen Content	Tetrabrominated Diphenyl Ethers (TetraBDE)	ND
Heptabrominated Diphenyl Ethers (HeptaBDE)  Octabrominated Diphenyl Ethers (OctaBDE)  Nonabrominated Diphenyl Ethers (NonaBDE)  Decabrominated Diphenyl Ether (DecaBDE)  ND  Halogen Content	Pentabrominated Diphenyl Ethers (PentaBDE)	ND
Octabrominated Diphenyl Ethers (OctaBDE)  Nonabrominated Diphenyl Ethers (NonaBDE)  Decabrominated Diphenyl Ether (DecaBDE)  ND  Halogen Content	Hexabrominated Diphenyl Ethers (HexaBDE)	ND
Nonabrominated Diphenyl Ethers (NonaBDE)  Decabrominated Diphenyl Ether (DecaBDE)  ND  Halogen Content	Heptabrominated Diphenyl Ethers (HeptaBDE)	ND
Decabrominated Diphenyl Ether (DecaBDE) ND Halogen Content	Octabrominated Diphenyl Ethers (OctaBDE)	ND
Halogen Content	Nonabrominated Diphenyl Ethers (NonaBDE)	ND
	Decabrominated Diphenyl Ether (DecaBDE)	ND
Fluorine (F) ND	` '	ND
Chlorine (Cl) ND	Chlorine (Cl)	ND
Bromine (Br) ND	Bromine (Br)	ND
Iodine (I) 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 29, 2011

Test Period : Aug 01, 2011 To Aug 05, 2011



# Test Conducted

# (Ⅱ) RoHS Requirement:

Restricted Substances	<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:

Test Item	Test Method	Reporting Limit
<u>lest item</u>	rest 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 <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



# Test Conducted

# (Ⅲ) Test Method:

Test Item	Test Method	Reporting Limit
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

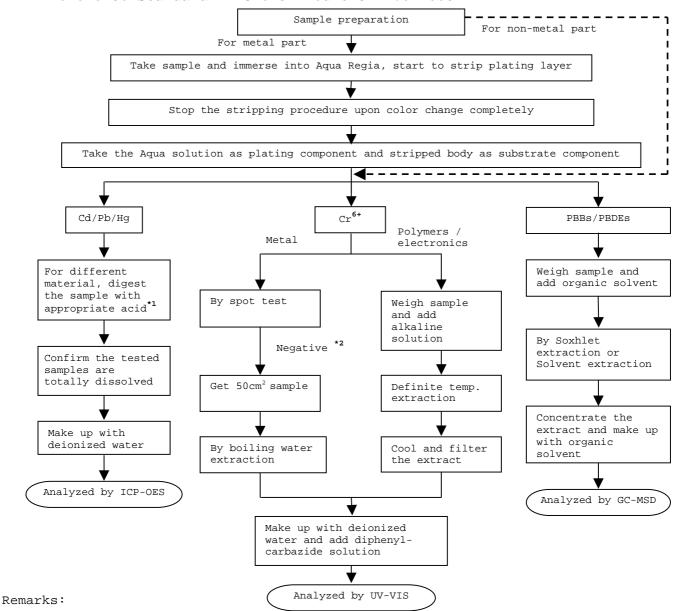
Remark: Reporting limit = Quantitation limit of analyte in sample



#### Test Conducted

## (IV) Measurement Flowchart:

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



# \*1: List Of Appropriate Acid:

Libe of helicate here	20 01 1461 061 1616			
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>			

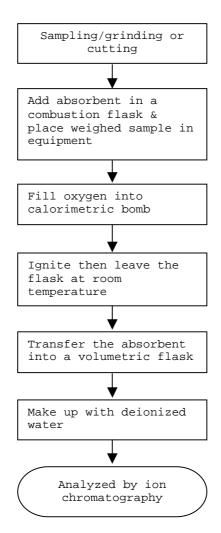
\*2: If the result of spot test is positive, Chromium VI would be determined as detected.



## Test Conducted

# (IV) Measurement Flowchart:

Test For Halogen Content Reference Standard: EN 14582



End of Report



Test Conducted

# Photo







Report No.: MX11-1392 Date: 2011-07-12

# **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) PN 057892 Natural Colorant

Country of Origin

NP

Buyer's Name

NΡ

Supplier's Name

NP

Date sample received 2011-06-27

Testing period

2011-06-28 to 2011-07-11

# 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	PN 057892 Natural Colorant	Pass See Result summary		

.000002





Report No.: MX11-1392 Date: 2011-07-12

# **TEST CONDUCTED**

Samples:

1) PN 057892 Natural Colorant

# TEST RESULT SUMMARY FOR RoHS DIRECTIVE:

TESTING ITEM	Ω RESULT (ppm)	Limit
	(1)	<u>=</u>
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	THE RELIGIOUS AND A SHIP	, 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





Report No.: MX11-1392

Date: 2011-07-12

#### **TEST CONDUCTED**

Samples:

1) PN 057892 Natural Colorant

## TEST RESULT SUMMARY FOR RoHS DIRECTIVE:

TESTING ITEM	▲ RESULT (ppm)
TESTING ITEM	(1)
Fluor (F) content	ND
Chlorine (CI) content	. ND
Bromine (Br) content	ND
lodine (I) content	ND

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

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 MX11-1392-01 WERE TESTED TOGETHER.

600004

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

ILTA/003/GENS-F8



Report No.: MX11-1392 Date: 2011-07-12

# Test method:

Sample Number	Testing item	Ω <u>Testing method</u>	Quality control Batch:	<u>Analysis</u> <u>Date:</u>	Analyzed By:	Reporting limit ppm
1	Chromium VI (Cr <sup>6+</sup> ) content	With reference to USEPA 3060, by EPA 7196	QHU2010-61p86	2011-07-03	MELA	20,0

Sample Number	Testing item	Ω <u>Testing method</u>	Quality control Batch:	Analysis Date:	Analyzed By:	Reporting limit ppm
1	POLYBROMINATE D BIPHENYLS (PBBs)	Determined by GC-MSD	2011-000415-PCL	2011-07-11	▲ CONT	50,0
1 ,	POLYBROMINATE D DIPHENYL ETHERS (PBDEs)	Determined by GC-MSD	2011-000415-PCL	2011-07-11	CONT	50,0

Sample Number	Testing item	Ω Testing method	Quality control Batch:	Analysis Date:	Analyzed By:	Reporting limit ppm
1	Fluor	With reference to EN 14582:2007by calonmetric bomb method with oxygen and determined by ion chromatography	2011-000415-PCL	2011-07-11	▲ CONT	30
1	Chlorine	With reference to EN 14582:2007by calorimetric bomb method with oxygen and determined by ion chromatography	2011-000415-PCL	2011-07-11	CONT	30
1	Bromine	With reference to EN 14582:2007by calorimetric bomb method with oxygen and determined by ion chromatography	2011-000415-PCL	2011-07-11	CONT	30
1	Iodine	With reference to EN 14582:2007by calorimetric bomb method with oxygen and determined by ion chromatography	2011-000415-PCL	2011-07-11	▲ CONT	30

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	MET2011-12p23	2011-06-29	MARY	5,0

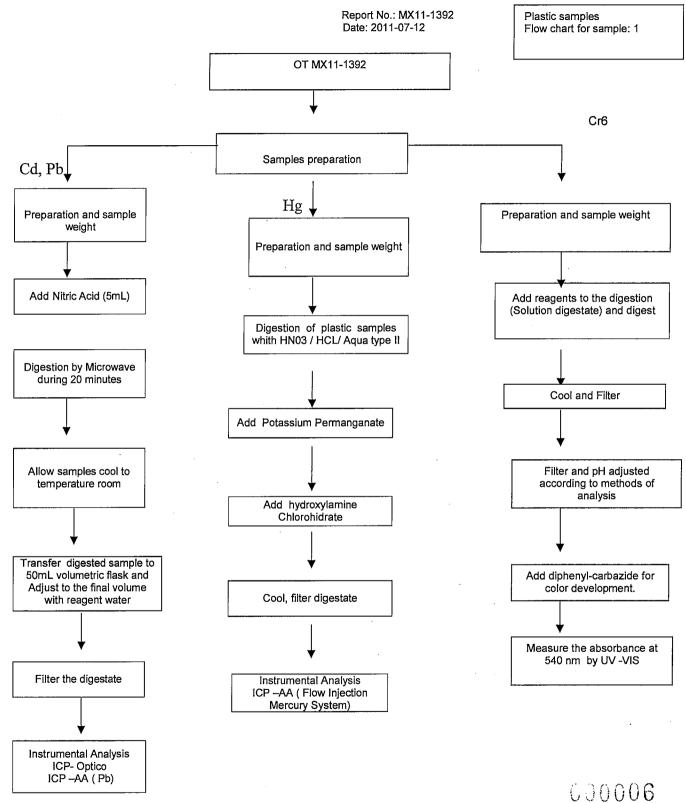
Sample Number	Testing item	Ω Testing method	Quality control Batch:	Analysis Date:	Analyzed By:	Reporting limit ppm
1	Cadmium (Cd) content	With reference to USEPA 3052, by EPA 6010	MET2011-12p23	2011-06-29	MARY	2,0

Sample Number	Testing item	Ω Testing method	Quality control Batch:	Analysis Date:	Analyzed By:	Reporting limit ppm
1	Mercury (Hg) conteпt	With reference to USEPA 7471 by USEPA 7471	MET2011-12p25	2011-07-01	RNC	0,25

600005







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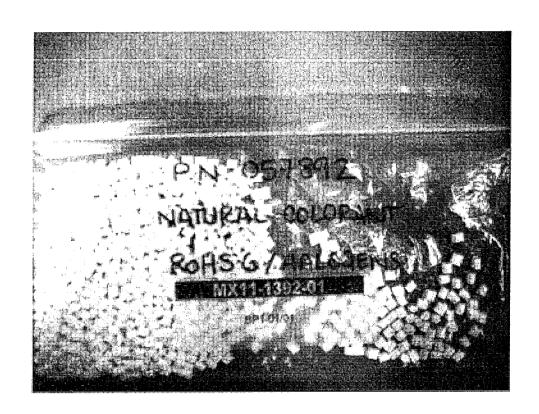
The results that appear in this report belong solely to (s) shows (s) analyzed (s).

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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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000007





## **TEST REPORT**

# **APPLICANT**

Item No.

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 495/895/995

1) N/P 057784 Colorant Blue

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

Sample Number	Testing item	Conclusion	Failed component	Failed result
1	N/P 057784 Colorant Blue	Pass See Result summary		

# **TEST CONDUCTED**

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

ILTA/003/GENS-F8



# Samples:

# 1) N/P 057784 Colorant Blue

# **TEST RESULT SUMMARY FOR RoHS DIRECTIVE:**

TESTING ITEM	Ω RESULT (ppm)	Limit
1201110112111	(1)	<u> </u>
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	



TECTING ITEM	▲ RESULT (ppm)
TESTING ITEM	(1)
Fluor (F) content	ND
Chlorine (CI) content	ND
Bromine (Br) content	ND
lodine (I) content	ND

|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  $\Omega$ .

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 MX11-1036-01 WERE TESTED TOGETHER.

# Test method:

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

ILTA/003/GENS-F8



Sample Number	Testing item	Ω Testing method	Quality control Batch:	Analysis Date:	Analyzed By:	Reporting limit ppm
1		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 <u>Date:</u>	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	MET2010-40p144	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	MET2010-40p144	2011-05-26	MARY	2,0

Samp Numb		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	MET2010-40p139	2010-05-23	RNC	0,25

Sample Number	Testing item	▲ <u>Testing method</u>	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	2011-000307-PCL	2011-06-09	▲ CONT	30
1	Chlorine	With reference to EN 14582:2007 by calorimetric bomb method with oxygen and determined by ion chromatography	2011-000307-PCL	2011-06-09	▲ CONT	30
1	Bromine	With reference to EN 14582:2007 by calorimetric bomb method with oxygen and determined by ion chromatography	2011-000307-PCL	2011-06-09	▲ CONT	30
1	lodine	With reference to EN 14582:2007 by calorimetric bomb method with oxygen and determined by ion chromatography	2011-000307-PCL	2011-06-09	▲ CONT	30