

# **ICP Test Report Certification Packet**

Littelfuse, Inc.
In Line Holder
150xxx series
March 24, 2011
by Littelfuse, Inc. that there is neither RoHS (EU Directive substance nor such use, for materials to be used for unit parts, for rials, and for additives and the like in the manufacturing processes. Exported to you that the parts and sub-materials, the materials to be used /packaging materials, and the additives and the like in the manufacturing used of the following components.
Issued by: KRISTEEN BACILA
<global ehs="" engineer=""></global>
vers the In Line Holder RoHS-Compliant series products manufactured
Jsed ble 1
measurable substances propriate pages as identifed in Table 1



Table 1: List of Raw Materials covered by this report

Total Parts	Raw Material Part Number	Raw Material Description	Page(s)		
1	155004-1	Body-Housing (RoHS 4)	3-15		
2	155004-4	Knob	3-15		
3	912-065	Spring	3-15		
4	904-216-001	Rivet	3-15		
5	912-067	Spring	3-15		
6	878-112	Wire-Plastic Insulated	16-26		
7	155004-1	Body-Housing (inlcudes PBB & PBDE)	27-31		
8	155004-4	Knob (includes PBB & PBDE)	32-37		
9	155004-3	Knob Insert	38-42		



Date: 2010-05-07

# **RESULTS REPORT**

# INTERTEK TESTING SERVICES DE MEXICO SA DE CV

## LABORATORIO CD. DE MEXICO

**DELIVER TO:** 

Littelfuse, S.A. de C.V.

Blvd. Fausto Z Mtz. 1800, Col. Magisterio Secc. 38, Piedras

Negras, Coahuila, C.P. 26070

ATTENTION:

Ing. Mario Alberto Falcón

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

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



Date: 2010-05-07

#### **TEST REPORT**

## **APPLICANT**

Littelfuse, S.A. de C.V.

Blvd. Fausto Z Mtz. 1800, Col. Magisterio Secc. 38, Piedras Negras, Coahuila, C.P. 26070

Ing. Mario Alberto Falcón

#### SAMPLE DESCRIPTION

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

Sample Description

30) Serie 150 Body 155004-1

31) Serie 150 Knob 155004-4

32) Serie 150 Body 868-062-000

35) Serie 150 Spring 912-065

Item No.

36) Serie 150 Rivet 904-216-001

37) Serie 150 Insert 155 004-3

38) Serie 150 Spring 912-060

39) Serie 150 Spring 912-067

Country of Origin

NP

Buyer's Name

NP

Supplier's Name

NP

Date sample received 2010-03-25

Testing period

2010-03-29 to 2010-04-23

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Date: 2010-05-07

#### **TEST CONDUCTED**

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

#### CONCLUSION

Testing item	Conclusion	Failed component	Failed result
Serie 150 Body 155004-1	Pass		
Serie 130 Body 133004-1	See Result summary		
Serie 150 Knob 155004-4	Pass		
Selle 130 Kilob 133004-4	See Result summary		111
Serie 150 Body 868-062-000	Pass		
Selle 130 Body 808-002-000	See Result summary		<b></b>
Serie 150 Spring 912-065	Pass		
Serie 150 Spring 912-005	See Result summary		4-7
Serie 150 Rivet 904-216-001	Pass		
Selle 130 Nivet 904-210-001	See Result summary		
Serie 150 Insert 155 004-3	Pass		
Selle 130 lilselt 133 004-3	See Result summary		
Serie 150 Spring 912-060	Pass		: :
Selle 150 Spillig #12-000	See Result summary		<del></del> ′.,;
Serie 150 Spring 912-067	Pass		
Selle 150 Spillig 912-007	See Result summary		

#### **TEST CONDUCTED**

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

- 30) Serie 150 Body 155004-1
- 31) Serie 150 Knob 155004-4
- 32) Serie 150 Body 868-062-000
- 35) Serie 150 Spring 912-065
- 36) Serie 150 Rivet 904-216-001
- 37) Serie 150 Insert 155 004-3
- 38) Serie 150 Spring 912-060
- 39) Serie 150 Spring 912-067

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

ILTA/003/GENS-F8



Date: 2010-05-07

#### TEST RESULT SUMMARY FOR RoHS DIRECTIVE:

TESTING ITEM		<u>Limit</u>			
LOTHING     LINI	(30) (31)		(32)	(35)	<u> </u>
Cadmium (Cd) content	ND	ND	ND	50,22	0,01% (100 ppm)
Mercury (Hg) content	ND	ND	ND	ND	0,1% (1000 ppm)
Lead (Pb) content	13,50	ND	ND	14,62	0,1% (1000 ppm)
Chromium (VI) (Cr <sup>6+</sup> )	ND	ND	ND	ND	0,1% (1000 ppm)

TESTING ITEM		<u>Limit</u>			
TEGTING TIEM	(36)	(37)	(38)	(39)	<u> </u>
Cadmium (Cd) content	ND	53,69	51,61	54,06	0,01% (100 ppm)
Mercury (Hg) content	ND	ND	ND	ND . 🥨	0,1% (1000 ppm)
Lead (Pb) content	39,31	7,851	13,86	11,77	0,1% (1000 ppm)
Chromium (VI) (Cr <sup>6+</sup> )	ND	ND	ND	ND	0,1% (1000 ppm)

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

 $\mu$ g/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

i interter

ra

Laboratory Manager

Lingertell

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

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ILTA/003/GENS-F8

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: 2010-05-07

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 <u>MX10-0726-30</u> WERE TESTED TOGETHER

REMARK: AS REQUESTED BY THE APPLICANT, COATING WITH BASE MATERIAL OF TESTED COMPONENTS OF THE SAMPLE <u>MX10-0726-31</u> WERE TESTED TOGETHER.

REMARK: AS REQUESTED BY THE APPLICANT, COATING WITH BASE MATERIAL OF TESTED COMPONENTS OF THE SAMPLE <u>MX10-0726-32</u> WERE TESTED TOGETHER.

REMARK: AS REQUESTED BY THE APPLICANT, COATING WITH BASE MATERIAL OF TESTED COMPONENTS OF THE SAMPLE <u>MX10-0726-35</u> WERE TESTED TOGETHER.

REMARK: AS REQUESTED BY THE APPLICANT, COATING WITH BASE MATERIAL OF TESTED COMPONENTS OF THE SAMPLE MX10-0726-36 WERE TESTED TOGETHER.

REMARK: AS REQUESTED BY THE APPLICANT, COATING WITH BASE MATERIAL OF TESTED COMPONENTS OF THE SAMPLE <u>MX10-0726-37</u> WERE TESTED TOGETHER.

REMARK: AS REQUESTED BY THE APPLICANT, COATING WITH BASE MATERIAL OF TESTED COMPONENTS OF THE SAMPLE \_\_MX10-0726-38 WERE TESTED TOGETHER.

REMARK: AS REQUESTED BY THE APPLICANT, COATING WITH BASE MATERIAL OF TESTED COMPONENTS OF THE SAMPLE MX10-0726-39 WERE TESTED TOGETHER.

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ILTA/003/GENS-F8



Date: 2010-05-07

#### Test method:

Testing item	Ω Testing method	Quality control Batch:	<u>Analysis</u> <u>Date:</u>	Analyzed By:	Reporting limit ppm
	With reference to USEPA 3060, by EPA 7196	QHU2009-3p63	2010-04-06	MELA,JLHS, MTCM	2,0

No. de Muestra	Testing item	Ω Testing method	Quality control Batch:	Analysis Date:	Analyzed By:	Reporting limit ppm
30	Lead (Pb) content	With reference to USEPA 3050MOD, by EPA 7420	MET2010-4p33	2010-04-23	VLM	6,76
31	Lead (Pb) content	With reference to USEPA 3050MOD, by EPA 7420	MET2010-4p33	2010-04-23	VLM	10,20
32	Lead (Pb) content	With reference to USEPA 3050MOD, by EPA 7420	MET2010-4p33	2010-04-23	VLM	7,69
35	Lead (Pb) content	With reference to USEPA 3050MOD, by EPA 7420	MET2010-4p32	2010-04-23	VLM	4,27
36	Lead (Pb) content	With reference to USEPA 3050MOD, by EPA 7420	MET2010-4p32	2010-04-23	,VLM	6,85
. 37	Lead (Pb) content	With reference to USEPA 3050MOD, by EPA 7420	MET2010-4p32	2010-04-23	VLM	2,16
38	Lead (Pb) content	With reference to USEPA 3050MOD, by EPA 7420	MET2010-4p32	2010-04-23	VLM	7,81
39	Lead (Pb) content	With reference to USEPA 3050MOD, by EPA 7420	MET2010-4p32	2010-04-23	VLM: 1	13,16

No. de Muestra	Testing item	Ω Testing method	Quality control Batch:	Analysis Date:	Analyzed By:	Reporting limit ppm					
30	Cadmium (Cd) content	With reference to USEPA 3050MOD, by EPA 6010	MET2010-4p33	2010-04-05	DCL,JMR	1,351					
31	Cadmium (Cd) content	With reference to USEPA 3050MOD, by EPA 6010	MET2010-4p33	2010-04-05	DCL,JMR	2,041					
32	Cadmium (Cd) content	With reference to USEPA 3050MOD, by EPA 6010	MET2010-4p33	2010-04-05	DCL,JMR	1,538					
35	Cadmium (Cd) content	With reference to USEPA 3050MOD, by EPA 6010	MET2010-4p32	2010-04-05	DCL,JMR	0,855					
36	Cadmium (Cd) content	With reference to USEPA 3050MOD, by EPA 6010	MET2010-4p32	2010-04-05	DCL,JMR	1,369					
37	Cadmium (Cd) content	With reference to USEPA 3050MOD, by EPA 6010	MET2010-4p32	2010-04-05	DCL,JMR	0,432					
38	Cadmium (Cd) content	With reference to USEPA 3050MOD, by EPA 6010	MET2010-4p32	2010-04-05	DCL,JMR	1,562					
39	Cadmium (Cd) content	With reference to USEPA 3050MOD, by EPA 6010	MET2010-4p32	. 2010-04-05	DCL,JMR	2,631					
	********	*************	***********								

No. de Muestra	Testing item	Ω Testing method	Quality control Batch:	Analysis Date:	Analyzed By:	Reporting limit ppm
30	Mercury (Hg) content	With reference to USEPA 7471 by USEPA 7471	MET2010-4p37	2010-04-01	UBM	0,0746
31	Mercury (Hg) content	With reference to USEPA 7471 by USEPA 7471	MET2010-4p37	2010-04-01	UBM	0,0806
32	Mercury (Hg) content	With reference to USEPA 7471 by USEPA 7471	MET2010-4p37	2010-04-01	UBM	0,0131
35	Mercury (Hg) content	With reference to USEPA 7471 by USEPA 7471	MET2010-4p36	2010-04-01	UBM	0,0833
36	Mercury (Hg) content	With reference to USEPA 7471 by USEPA 7471	MET2010-4p36	2010-04-01	UBM	0,0833
37	Mercury (Hg) content	With reference to USEPA 7471 by USEPA 7471	MET2010-4p36	2010-04-01	UBM	0,0220
38	Mercury (Hg) content	With reference to USEPA 7471 by USEPA 7471	MET2010-4p36	2010-04-01	UBM	0,0820
39	Mercury (Hg) content	With reference to USEPA 7471 by USEPA 7471	MET2010-4p36	2010-04-01	UBM	0,0758

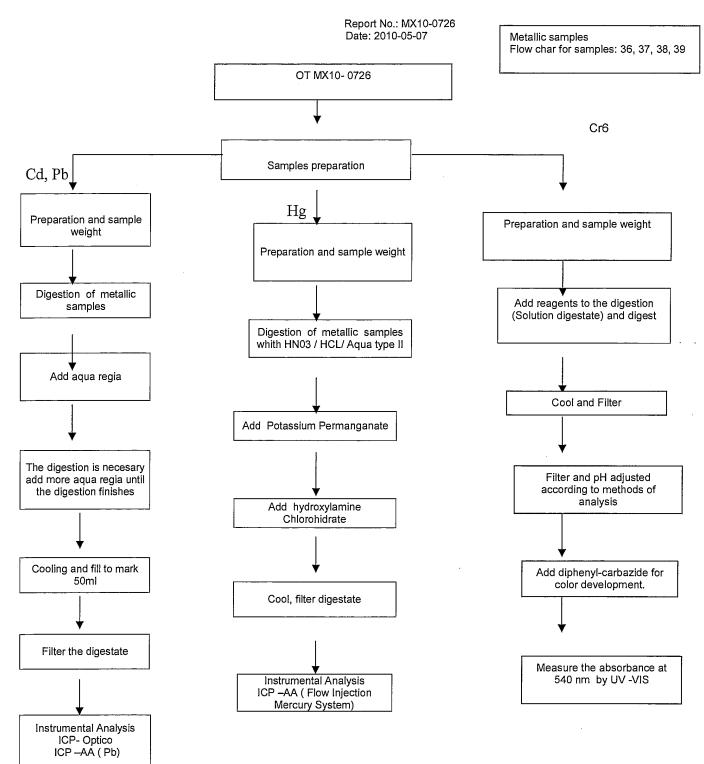
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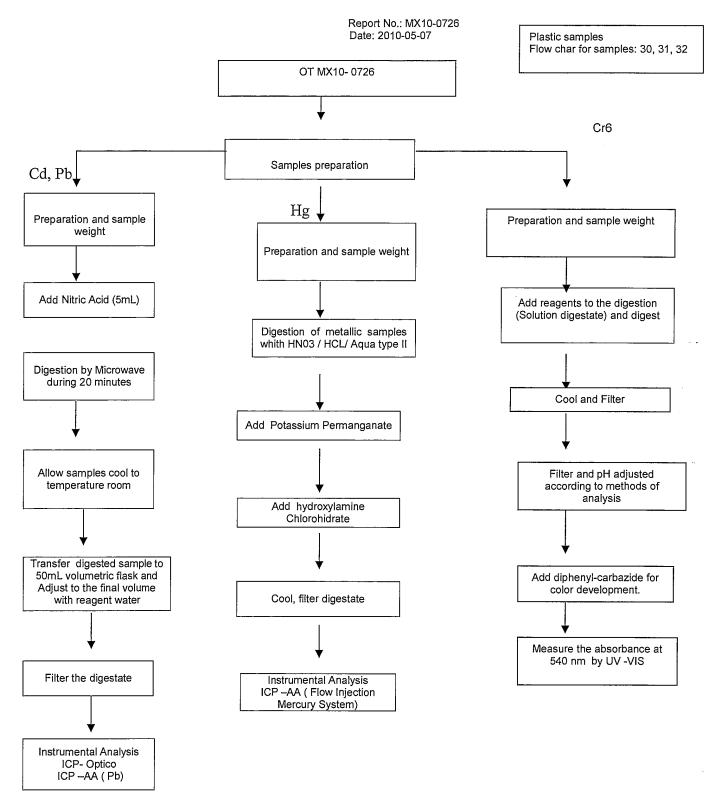


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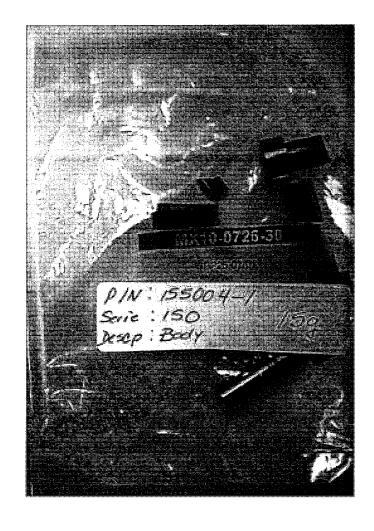
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Intertek Testing Services de México, S.A. de C.V.

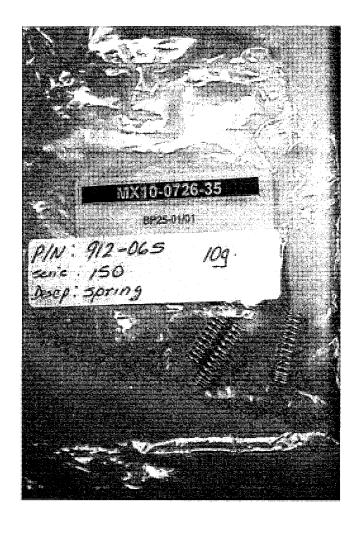




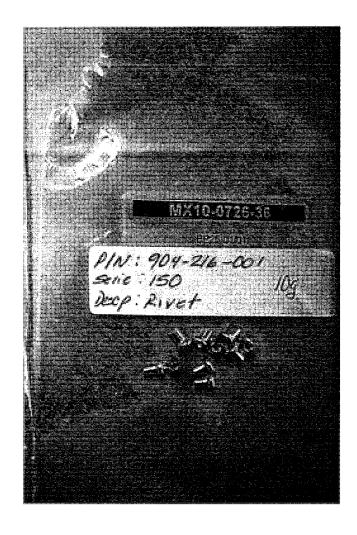




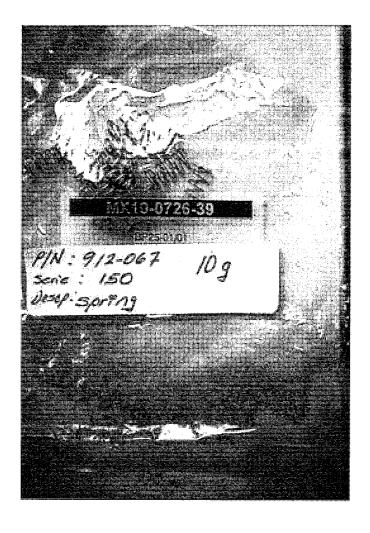














Date: 2010-05-31

# RESULTS REPORT INTERTEK TESTING SERVICES DE MEXICO SA DE CV LABORATORIO CD. DE MEXICO

**DELIVER TO:** 

Littelfuse, S.A. de C.V.

Blvd. Fausto Z. Mtz. 1800, Col. Magisterio Sección 38, Piedras

Negras, Coahuila, 26070

ATTENTION:

Ing. Mario Falcón



Date: 2010-05-31

#### **TEST REPORT**

#### **APPLICANT**

Littelfuse, S.A. de C.V.

Blvd. Fausto Z. Mtz. 1800, Col. Magisterio Sección 38, Piedras Negras, Coahuila, 26070 Ing. Mario Falcón

#### SAMPLE DESCRIPTION

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

Sample Description

NP

1) No. Parte 084215 Serie 155

2) No. Parte 878-112 Serie 150

No. Parte 878-114 Serie 150

4) No. Parte 084113 Serie 155

Item No.

6) No. Parte 878-113 Serie 155

No. Parte 155004-4 Serie 155XXXX2XA

16) No. Parte 155004-3 Serie 155 XXXX2XA

18) No. Parte 079055 Serie BLN

Country of Origin

NΡ

Buyer's Name

NP

Supplier's Name

NP Date sample received 2010-04-13

Testing period

2010-04-19 to 2009-05-22

### **TEST CONDUCTED**

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

#### CONCLUSION

	Testing item	<u>Conclusion</u>	Failed component	Failed result	
1	No. Parte 084215 Serie 155	Pass			
	10. Faite 084219 Selle 199	See Result summary			
2	No. Parte 878-112 Serie 150	Pass			
	No. Faite 6/6-112 Selle 150	See Result summary		<del></del>	
3	No. Parte 878-114 Serie 150	Pass			
3	No. Parte 676-114 Serie 150	See Result summary			
4	No. Parte 084113 Serie 155	Pass			
4	No. Faite 004113 Selle 133	See Result summary			
6	No. Parte 878-113 Serie 155	Pass			
0	No. Faite 676-113 Selle 133	See Result summary			
8	No. Parte 155004-4 Serie	Pass			
6	155XXXX2XA	See Result summary			
16	No. Parte 155004-3 Serie 155	Pass			
10	XXXX2XA	See Result summary			
18	No. Parte 079055 Serie BLN	Pass			
	No. Faite 07 9000 Selle BLIN	See Result summary			

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Date: 2010-05-31

#### **TEST CONDUCTED**

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

- 1) No. Parte 084215 Serie 155
- 2) No. Parte 878-112 Serie 150
- 3) No. Parte 878-114 Serie 150

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

TESTING ITEM	Ω RESULT (ppm)						<u>Limit</u>
	(1a)	(1b)	(2a)	(2b)	(3a)	(3b)	
	Insulator	metal	Insulator	metal	Insulator	metal	
Cadmium (Cd) content	ND	ND	ND	ND	ND	ND	0,01% (100 ppm)
Lead (Pb) content	ND	8,402	ND	9,026	ND	9,094	0,1% (1000 ppm)
Mercury (Hg) content	ND	ND	ND	ND	ND	0,2594	0,1% (1000 ppm)
Chromium (VI) (Cr <sup>6+</sup> )	ND	ND	2,080	2,080	2,356	2,208	0,1% (1000 ppm)
POLYBROMINATED BIPHENYLS (PBBs)	ND		ND,	-	ND		0,1% (1000 ppm)
Monobromobiphenyl (MonoBB)	ND		ND		ND		
Dibromobiphenyl (DiBB)	ND		ND		ND		40-04-07
Tribromobiphenyl (TriBB)	ND		ND		ND		
Tetrabromobiphenyl (TetraBB)	ND		ND		ND		
Pentabromobiphenyl (PentaBB)	ND		ND		ND		
Hexabromobiphenyl (HexaBB)	ND		. ND		ND		u=10
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 Z	1	ND	1	ND		0,1% (1000 ppm)
Monobromodiphenyl (MonoBDE)	ND		ND		ND		
Dibromodiphenyl (DiBDE)	ND		ND		ND		
Tribromodiphenyl (TriBDE)	ND		ND		ND		
Tetrabromodiphenyl (TetraBDE)	ND		ND	PI AND DO	ND		
Pentabromodiphenyl (PentaBDE)	ND		ND		ND	and 600 MM	
Hexabromodiphenyl (HexaBDE)	ND		ND		ND		
Heptabromodiphenyl (HeptaBDE)	ND		ND		ND		
Octabromodiphenyl (OctaBDE)	ND		ND		ND		
Nonabromodiphenyl (NonaBDE)	ND		ND		ND		
Decabromodiphenyl (DecaBDE)	ND		ND		ND		

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Date: 2010-05-31

# **TEST CONDUCTED**

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

4) No. Parte 084113 Serie 155

6) No. Parte 878-113 Serie 155

#### TEST RESULT SUMMARY FOR RoHS DIRECTIVE:

(4a) (4b) (6a) (6b)	TESTING ITEM	Ω RESULT (ppm)					
Cadmium (Cd) content	TESTING ITEM	(4a)	(4b)	(6a)	(6b)	<u>Limit</u>	
Decabromodiphenyl (Decable)   ND   9,571   ND   9,199   0.1% (1000 ppm)		Insulator	metal	Insulator	metal		
No.   (1000 ppm)	Cadmium (Cd) content	ND	ND	ND	ND	0,01% (100 ppm)	
Chromium (VI) (Cr <sup>2n*</sup> )	Lead (Pb) content	ND	9,571	ND	9,199	0,1% (1000 ppm)	
POLYBROMINATED BIPHENYLS   ND	Mercury (Hg) content	ND	ND	ND	ND	0,1% (1000 ppm)	
Monobromobiphenyl (MonoBB)   ND     ND     ND		2,182	ND	ND	ND	0,1% (1000 ppm)	
Dibromobiphenyl (DiBB)		ND		ND ND	* 17 (24 (24)	0,1% (1000 ppm)	
Tribromobiphenyl (TriBB)   ND     ND     ND	Monobromobiphenyl (MonoBB)	· ND		ND			
Pentabromobiphenyl (PentaBB)   ND     ND     ND         Pentabromobiphenyl (PentaBB)   ND     ND         Hexabromobiphenyl (HexaBB)   ND     ND         Heptabromobiphenyl (HexaBB)   ND     ND         Octabromobiphenyl (OctaBB)   ND     ND         ND           Nonabromobiphenyl (NonaBB)   ND     ND         Potyprominated Diphenyl (DecaBB)   ND     ND         Potyprominated Diphenyl (MonoBDE)   ND     ND         Dibromodiphenyl (MonoBDE)   ND     ND         Tribromodiphenyl (TriBDE)   ND     ND         Tribromodiphenyl (TriBDE)   ND     ND         Pentabromodiphenyl (TetraBDE)   ND     ND         Hexabromodiphenyl (HexaBDE)   ND     ND         Hexabromodiphenyl (HexaBDE)   ND     ND         Heptabromodiphenyl (HexaBDE)   ND     ND         Heptabromodiphenyl (NonaBDE)   ND     ND         Heptabromodiphenyl (NonaBDE)   ND     ND         ND     ND           Honabromodiphenyl (NonaBDE)   ND     ND           ND     ND           ND     ND           ND     ND           Heptabromodiphenyl (NonaBDE)   ND     ND           ND     ND             ND     ND             Heptabromodiphenyl (NonaBDE)   ND     ND             ND               ND     ND             ND     ND             ND     ND             ND     ND             ND     ND             ND     ND             ND	Dibromobiphenyl (DiBB)	ND		ND			
Pentabromobiphenyl (PentaBB)   ND     ND           Hexabromobiphenyl (HexaBB)   ND     ND           Heptabromobiphenyl (HeptaBB)   ND     ND           Octabromobiphenyl (OctaBB)   ND     ND           Nonabromobiphenyl (NonaBB)   ND     ND           Decabromobiphenyl (DecaBB)   ND     ND           POLYBROMINATED DIPHENYL   ND     ND           POLYBROMINATED DIPHENYL   ND     ND           Dibromodiphenyl (MonoBDE)   ND     ND           Dibromodiphenyl (DiBDE)   ND     ND           Tribromodiphenyl (TriBDE)   ND     ND           Tetrabromodiphenyl (TetraBDE)   ND     ND           Hexabromodiphenyl (PentaBDE)   ND     ND           Heyabromodiphenyl (HexaBDE)   ND     ND           Heptabromodiphenyl (NonaBDE)   ND     ND           Heptabromodiphenyl (OctaBDE)   ND     ND           Octabromodiphenyl (NonaBDE)   ND     ND           Nnabromodiphenyl (NonaBDE)   ND     ND           Nnabromodiphenyl (NonaBDE)   ND     ND           Nnabromodiphenyl (NonaBDE)   ND     ND           Nnabromodiphenyl (NonaBDE)   ND     ND           ND   -	Tribromobiphenyl (TriBB)	ND		ND			
Hexabromobiphenyl (HexaBB)   ND	Tetrabromobiphenyl (TetraBB)	ND		ND			
Heptabromobiphenyl (HeptaBB)   ND     ND           Cctabromobiphenyl (OctaBB)   ND     ND         ND           ND           ND           ND           ND           ND           ND           ND           Hotzabromobiphenyl (DecaBB)   ND     ND         ND           ND           ND           ND           ND           ND           ND           Hexabromodiphenyl (TetraBDE)   ND     ND         Hexabromodiphenyl (HexaBDE)   ND     ND         Heptabromodiphenyl (HexaBDE)   ND     ND         Heptabromodiphenyl (HexaBDE)   ND     ND         Cctabromodiphenyl (OctaBDE)   ND     ND         ND           Nonabromodiphenyl (NonaBDE)   ND     ND         ND           Nonabromodiphenyl (NonaBDE)   ND     ND           Nonabromodiphenyl (NonaBDE)   ND     ND           Nonabromodiphenyl (NonaBDE)   ND     ND           Nonabromodiphenyl (NonaBDE)   ND     ND           Nonabromodiphenyl (NonaBDE)   ND     ND           ND	Pentabromobiphenyl (PentaBB)	ND		ND			
Octabromobiphenyl (OctaBB)         ND          ND             Nonabromobiphenyl (NonaBB)         ND          ND             Decabromobiphenyl (DecaBB)         ND          ND             POLYBROMINATED DIPHENYL ETHERS (PBDEs)         ND          ND             Monobromodiphenyl (MonoBDE)         ND          ND             Dibromodiphenyl (DiBDE)         ND          ND             Tribromodiphenyl (TriBDE)         ND          ND             Tetrabromodiphenyl (TetraBDE)         ND          ND             Pentabromodiphenyl (PentaBDE)         ND          ND             Heyabromodiphenyl (HexaBDE)         ND          ND             Heptabromodiphenyl (HexaBDE)         ND          ND             Octabromodiphenyl (OctaBDE)         ND          ND             Nonabromodip	Hexabromobiphenyl (HexaBB)	ND		ND			
Nonabromobiphenyl (NonaBB)   ND	Heptabromobiphenyl (HeptaBB)	ND		ND	68 Dri 60		
Decabromobiphenyl (DecaBB)   ND     ND     ND     ND   ND	Octabromobiphenyl (OctaBB)	ND		ND .			
ND	Nonabromobiphenyl (NonaBB)	ND	·	ND ·		· <u></u>	
### Partial Promodiphenyl (MonoBDE)   ND     ND     ND     ND   ND	Decabromobiphenyl (DecaBB)	ND		ND .			
Dibromodiphenyl (DiBDE)         ND          ND             Tribromodiphenyl (TriBDE)         ND          ND             Tetrabromodiphenyl (TetraBDE)         ND          ND             Pentabromodiphenyl (PentaBDE)         ND          ND             Hexabromodiphenyl (HexaBDE)         ND          ND             Heptabromodiphenyl (HeptaBDE)         ND          ND             Octabromodiphenyl (OctaBDE)         ND          ND             Nonabromodiphenyl (NonaBDE)         ND          ND		ND I		· ND	1 (F) <del></del> 1	0,1% (1000 ppm)	
Tribromodiphenyl (TriBDE)         ND          ND             Tetrabromodiphenyl (TetraBDE)         ND          ND             Pentabromodiphenyl (PentaBDE)         ND          ND             Hexabromodiphenyl (HexaBDE)         ND          ND             Heptabromodiphenyl (HexaBDE)         ND          ND             Octabromodiphenyl (OctaBDE)         ND          ND             Nonabromodiphenyl (NonaBDE)         ND          ND	Monobromodiphenyl (MonoBDE)	ND		ND .			
Tetrabromodiphenyl (TriBDE)   ND     ND         Tetrabromodiphenyl (TetraBDE)   ND     ND       Pentabromodiphenyl (PentaBDE)   ND     ND       Hexabromodiphenyl (HexaBDE)   ND     ND       Heptabromodiphenyl (HexaBDE)   ND     ND       Cotabromodiphenyl (OctaBDE)   ND     ND       Nonabromodiphenyl (NonaBDE)   ND     ND       Nonabromodiphenyl (NonaBDE)   ND     ND         ND         ND           ND           ND           ND	Dibromodiphenyl (DiBDE)	ND		ND			
Pentabromodiphenyl (PentaBDE)         ND          ND             Hexabromodiphenyl (HexaBDE)         ND          ND             Heptabromodiphenyl (HeytaBDE)         ND          ND             Octabromodiphenyl (OctaBDE)         ND          ND             Nonabromodiphenyl (NonaBDE)         ND          ND	Tribromodiphenyl (TriBDE)	ND		ND			
Hexabromodiphenyl (HexaBDE)         ND          ND             Heptabromodiphenyl (HeptaBDE)         ND          ND             Octabromodiphenyl (OctaBDE)         ND          ND             Nonabromodiphenyl (NonaBDE)         ND          ND	Tetrabromodiphenyl (TetraBDE)	ND		ND			
Heptabromodiphenyl	Pentabromodiphenyl (PentaBDE)	. ND		ND			
(HeptaBDE)         ND          ND             Octabromodiphenyl (OctaBDE)         ND          ND             Nonabromodiphenyl (NonaBDE)         ND          ND	Hexabromodiphenyl (HexaBDE)	ND		ND			
Octabromodiphenyl (OctaBDE)         ND          ND             Nonabromodiphenyl (NonaBDE)         ND          ND		ND -		ND			
		ND		ND	<i>;</i> `		
Decabromodiphenyl (DecaBDE) ND ND	Nonabromodiphenyl (NonaBDE)	ND		ND			
	Decabromodiphenyl (DecaBDE)	ND		ND			



Date: 2010-05-31

#### **TEST CONDUCTED**

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

- 8) No. Parte 155004-4 Serie 155XXXX2XA
- 16) No. Parte 155004-3 Serie 155 XXXX2XA
- 18) No. Parte 079055 Serie BLN

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

TESTING ITEM		Ω RESULT (ppm)		<u>Limit</u>
TEOTINO ITEM	(8)	(16)	(18)	
Cadmium (Cd) content	ND	49,54	ND	0,01% (100 ppm)
Lead (Pb) content	ND	9,47	31,62	0,1% (1000 ppm)
Mercury (Hg) content	ND	ND .	ND	0,1% (1000 ppm)
Chromium (VI) (Cr <sup>6+</sup> )	ND	2,912	ND	0,1% (1000 ppm)
POLYBROMINATED BIPHENYLS (PBBs)	ND			0,1% (1000 ppm)
Monobromobiphenyl (MonoBB)	ND			
Dibromobiphenyl (DiBB)	ND			
Tribromobiphenyl (TriBB)	ND	Mu		
Tetrabromobiphenyl (TetraBB)	ND			
Pentabromobiphenyl (PentaBB)	ND			
Hexabromobiphenyl (HexaBB)	ND		o-co	
Heptabromobiphenyl (HeptaBB)	ND			
Octabromobiphenyl (OctaBB)	ND			
Nonabromobiphenyl (NonaBB)	ND			
Decabromobiphenyl (DecaBB)	ND			
POLYBROMINATED DIPHENYL ETHERS (PBDEs)	ND ND			0,1% (1000 ppm)
Monobromodiphenyl (MonoBDE)	ND			
Dibromodiphenyl (DiBDE)	ND			
Tribromodiphenyl (TriBDE)	ND			tive seri ser
Tetrabromodiphenyl (TetraBDE)	ND			
Pentabromodiphenyl (PentaBDE)	ND			
Hexabromodiphenyl (HexaBDE)	ND			
Heptabromodiphenyl (HeptaBDE)	ND			
Octabromodiphenyl (OctaBDE)	ND			
Nonabromodiphenyl (NonaBDE)	ND			
Decabromodiphenyl (DecaBDE)	ND			



Date: 2010-05-31

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 <u>MX10-0867-1</u> WERE TESTED SEPARATELY.

REMARK: AS REQUESTED BY THE APPLICANT, COATING WITH BASE MATERIAL OF TESTED COMPONENTS OF THE SAMPLE MX10-0867-2 WERE TESTED SEPARATELY.

REMARK: AS REQUESTED BY THE APPLICANT, COATING WITH BASE MATERIAL OF TESTED COMPONENTS OF THE SAMPLE <u>MX10-0867-3</u> WERE TESTED SEPARATELY.

REMARK: AS REQUESTED BY THE APPLICANT, COATING WITH BASE MATERIAL OF TESTED COMPONENTS OF THE SAMPLE <u>MX10-0867-4</u> WERE TESTED SEPARATELY.

REMARK: AS REQUESTED BY THE APPLICANT, COATING WITH BASE MATERIAL OF TESTED COMPONENTS OF THE SAMPLE <u>MX10-0867-6</u> WERE TESTED SEPARATELY.

REMARK: AS REQUESTED BY THE APPLICANT, COATING WITH BASE MATERIAL OF TESTED COMPONENTS OF THE SAMPLE MX10-0867-8 WERE TESTED TOGETHER.

REMARK: AS REQUESTED BY THE APPLICANT, COATING WITH BASE MATERIAL OF TESTED COMPONENTS OF THE SAMPLE \_MX10-0867-16 WERE TESTED TOGETHER.

REMARK: AS REQUESTED BY THE APPLICANT, COATING WITH BASE MATERIAL OF TESTED COMPONENTS OF THE SAMPLE <u>MX10-0867-18</u> WERE TESTED TOGETHER.

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Date: 2010-05-31

## Test method:

No. de Muestra	Testing item	Ω Testing method	Quality control Batch:	<u>Analysis</u> <u>Date:</u>	Analyzed By:	Reporting limit ppm
	Chromium V (Cr <sup>6+</sup> ) content	With reference to USEPA 3060, by EPA 7196	BEQ160p5b	2010-04-24	MELA	2,0

<u>No. de</u> <u>Muestra</u>	Testing item	Ω Testing method	Quality control Batch:	<u>Analysis</u> <u>Date:</u>	Analyzed By:	Reporting limit ppm
		With reference to USEPA 3540C, by solvent extraction and determined by GC-MSD	2010-004440-P CL	2010-05-22	CONT	50
	ED DIPHENYL	With reference to USEPA 3540C, by solvent extraction and determined by GC-MSD	2010-004440-P CL	2010-05-22	CONT	50

<u>No. de</u> <u>Muestra</u>	Testing item	Ω Testing method	Quality control Batch:	Analysis Date:	Analyzed By:	Reporting limit ppm
1 (a)	Lead (Pb) content	With reference to USEPA 3052MOD, by EPA 6010	MET2010-4p51	2010-04-22	JMR,DCL	4,807
1 (b)	Lead (Pb) content	With reference to USEPA 3050MOD, by EPA 6010	MET2010-4p47	2010-04-22	JMR,DCL	4,902
2 (a)	Lead (Pb) content	With reference to USEPA 3052MOD, by EPA 6010	MET2010-4p51	2010-04-22	JMR,DCL	5,0
2 (b)	Lead (Pb) content	With reference to USEPA 3050MOD, by EPA 6010	MET2010-4p47	2010-04-22	JMR,DCL	4,808
3 (a)	Lead (Pb) content	With reference to USEPA 3052MOD, by EPA 6010	MET2010-4p51	2010-04-22	JMR,DCL	4,717
3 (b)	Lead (Pb) content	With reference to USEPA 3050MOD, by EPA 6010	MET2010-4p47	2010-04-22	JMR,DCL	4,717
4 (a)	Lead (Pb) content	With reference to USEPA 3052MOD, by EPA 6010	MET2010-4p51	2010-04-22	JMR,DCL	4,717
4 (b)	Lead (Pb) content	With reference to USEPA 3050MOD, by EPA 6010	MET2010-4p47	2010-04-22	JMR,DCL	4,902
6 (a)	Lead (Pb) content	With reference to USEPA 3052MOD, by EPA 6010	MET2010-4p51	2010-04-22	JMR,DCL	4,808
6 (b)	Lead (Pb) content	With reference to USEPA 3050MOD, by EPA 6010	MET2010-4p47	2010-04-22	JMR,DCL	5,0
8	Lead (Pb) content	With reference to USEPA 3052MOD, by EPA 6010	MET2010-4p51	2010-04-22	JMR,DCL	5,102
16	Lead (Pb) content	With reference to USEPA 3050MOD, by EPA 7420	MET2010-4p47,48	2010-04-23	MARY,VLM	6,85
18	Lead (Pb) content	With reference to USEPA 3050MOD, by EPA 6010	MET2010-4p47,48	2010-04-22	JMR,DCL	4,901

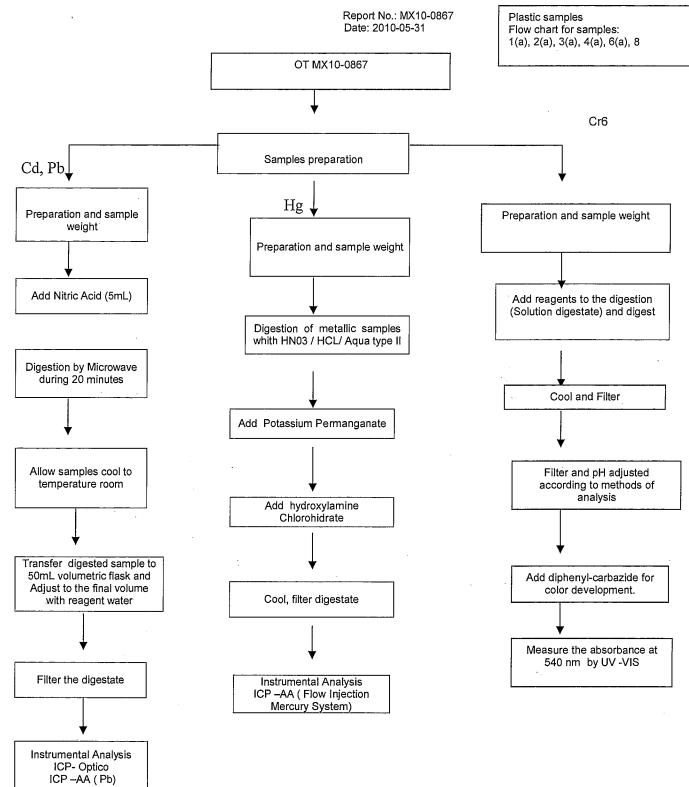


Date: 2010-05-31

<u>No. de</u> <u>Muestra</u> .	Testing item	Ω Testing method	Quality control Batch:	Analysis Date:	Analyzed By:	Reporting limit ppm
1 (a)	Cadmium(Cd) content	With reference to USEPA 3052MOD, by EPA 6010	MET2010-4p51	2010-04-22	JMR,DCL	1,92
1 (b)	Cadmium(Cd) content	With reference to USEPA 3050MOD, by EPA 6010	MET2010-4p47	2010-04-22	JMR,DCL	1,961
2 (a)	Cadmium(Cd) content	With reference to USEPA 3052MOD, by EPA 6010	MET2010-4p51	2010-04-22	JMR,DCL	2,0
2 (b)	Cadmium(Cd) content	With reference to USEPA 3050MOD, by EPA 6010	MET2010-4p47	2010-04-22	JMR DCL	1,92
3 (a)	Cadmium(Cd) content	With reference to USEPA 3052MOD, by EPA 6010	MET2010-4p51	2010-04-22	JMR,DCL	1,89
3 (b)	Cadmium(Cd) content	With reference to USEPA 3050MOD, by EPA 6010	MET2010-4p47	2010-04-22	JMR,DCL	1,887
4 (a)	Cadmium(Cd) content	With reference to USEPA 3052MOD, by EPA 6010	MET2010-4p51	2010-04-22	JMR,DCL	1,89
4 (b)	Cadmium(Cd) content	With reference to USEPA 3050MOD, by EPA 6010	MET2010-4p47	2010-04-22	JMR,DCL	1,961
6 (a)	Cadmium(Cd) content	With reference to USEPA 3052MOD, by EPA 6010	MET2010-4p51	2010-04-22	JMR,DCL	1,923
6 (b)	Cadmium(Cd) content	With reference to USEPA 3050MOD, by EPA 6010	MET2010-4p47	2010-04-22	JMR,DCL	• 2,0
8	Cadmium(Cd) content	With reference to USEPA 3052MOD, by EPA 6010	MET2010-4p51	2010-04-22	JMR,DCL	2,04
16	Cadmium(Cd) content	With reference to USEPA 3050MOD, by EPA 7420	MET2010-4p47,48	2010-04-23	MARY,VLM	1,37
18	Cadmium(Cd) content	With reference to USEPA 3050MOD, by EPA 6010	MET2010-4p47,48	2010-04-22	JMR,DCL	1,96

No. de Muestra	Testing item	Ω Testing method	Quality control Batch:	<u>Analysis</u> <u>Date:</u>	Analyzed By:	Reporting limit ppm
1 (a) ·	Mercury (Hg) content	With reference to USEPA 7471MOD, by EPA 7471	MET2010-4p46	2010-04-20	UBM	0,0806
1 (b)	Mercury (Hg) content	With reference to USEPA 7471MOD, by EPA 7471	MET2010-4p44	2010-04-20	UBM	0,082
2 (a)	Mercury (Hg) content	With reference to USEPA 7471MOD, by EPA 7471	MET2010-4p46	2010-04-20	UBM	0,0833
2 (b)	Mercury (Hg) content	With reference to USEPA 7471MOD, by EPA 7471	MET2010-4p44	2010-04-20	UBM	0,0806
3 (a)	Mercury (Hg) content	With reference to USEPA 7471MOD, by EPA 7471	MET2010-4p46	2010-04-20	UBM	0,0833
3 (b)	Mercury (Hg) content	With reference to USEPA 7471MOD, by EPA 7471	MET2010-4p44	2010-04-20	UBM	0,0769
4 (a)	Mercury (Hg) content	With reference to USEPA 7471MOD, by EPA 7471	MET2010-4p46	2010-04-20	UBM	0,0769
4 (b)	Mercury (Hg) content	With reference to USEPA 7471MOD, by EPA 7471	MET2010-4p44	2010-04-20	UBM	0,0847
6 (a)	Mercury (Hg) content	With reference to USEPA 7471MOD, by EPA 7471	MET2010-4p46	2010-04-20	UBM	0,0806
6 (b)	Mercury (Hg) content	With reference to USEPA 7471MOD, by EPA 7471	MET2010-4p44	2010-04-20	UBM	0,082
8	Mercury (Hg) content	With reference to USEPA 7471MOD, by EPA 7471	MET2010-4p46	2010-04-20	UBM	0,0833
16	Mercury (Hg) content	With reference to USEPA 7471MOD, by EPA 7471	MET2010-4p44	2010-04-20	UBM	0,082
18	Mercury (Hg) content	With reference to USEPA 7471MOD, by EPA 7471	MET2010-4p44	2010-04-20	UBM	0,082

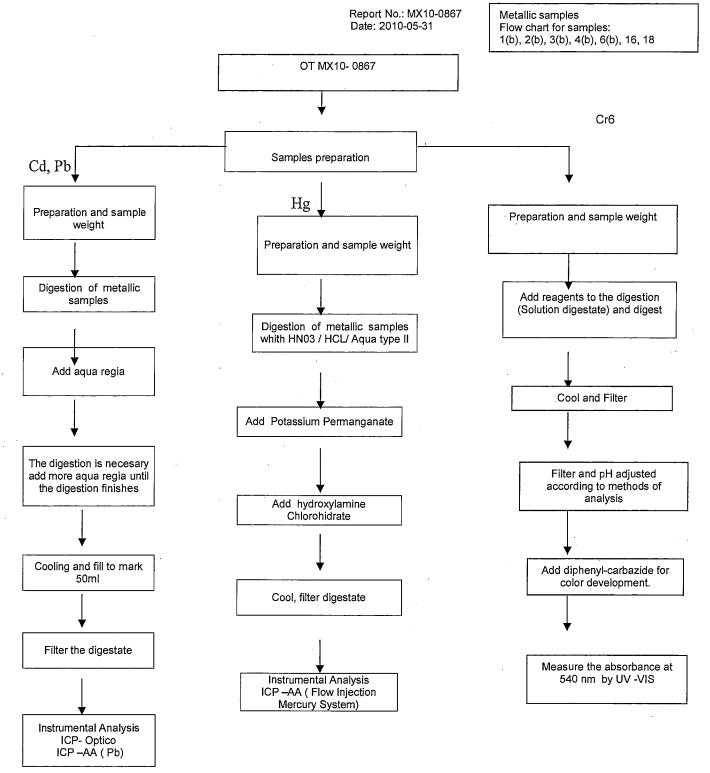




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Blvd. Manuel Ávila Camacho No. 182 Col. Lomas de Chapultepec C.P. 11650, México, D.F. Tel.: 50912150 Fax: 55407863 www.intertek.com 10



# MX10-0867-02





Report No.: MX10-2756 Date: 2010-11-30

# **RESULTS REPORT INTERTEK TESTING SERVICES**

**DE MEXICO SA DE CV** 

LABORATORIO CD. DE MEXICO

**DELIVER TO:** 

Littelfuse, S.A. de C.V.

Blvd. Fausto Z. Martínez 1800, Col. Magisterio Sección 38,

Piedras Negras, Coahuila

ATTENTION:

María Valdez

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1°. Emission Junio 2005, 1° Revision Junio 26, 2009.

ILTA/003/GENS-F8



Report No.: MX10-2756

Date: 2010-11-30

#### **TEST REPORT**

#### **APPLICANT**

Littelfuse, S.A. de C.V.

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

#### SAMPLE DESCRIPTION

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

Sample Description

Item No.

1) N/P 155004-1 Body

Country of Origin

NP

Buyer's Name

NP

Supplier's Name

NP

Date sample received 2010-11-17

Testing period

2010-11-19 to 2010-11-22

## **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 155004-1 Body	Pass See Result summary		



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1°. Emission Junio 2005, 1° Revision Junio 26, 2009.

ILTA/003

ILTA/003/GENS-F8

000001



Report No.: MX10-2756

Date: 2010-11-30

## **TEST CONDUCTED**

Samples:

1) N/P 155004-1 Body

## TEST RESULT SUMMARY FOR RoHS DIRECTIVE:

TESTING ITEM	Ω RESULT (ppm)	Limit
	(1)	<del></del>
POLYBROMINATED BIPHENYLS (PBBs) Total	ND Market and the second secon	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	S. Law
POLYBROMINATED DIPHENYL ETHERS (PBDEs) Total	ND =	0,1% (1000 ppm)
Monobromodiphenyl (MonoBDE)	ND	Serticipal
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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1\* Emission Junio 2005, 1\* Revision Junio 26, 2009.

ILTA/003/GENS-F8



ILTA/003/GENS-F800002



Report No.: MX10-2756 Date: 2010-11-30

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 MX10-2756-01 WERE TESTED TOGETHER.

#### Test method:

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	2010-004892-P CL	2010-11-22	CONT	50,0
1	POLYBROMINATE D DIPHENYL ETHERS (PBDEs)	Determined by GC-MSD	2010-004892-P CL	2010-11-22	CONT	50,0



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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-F8igcup 00003



# MX10-2756



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



Date: 2010-05-31

# RESULTS REPORT INTERTEK TESTING SERVICES DE MEXICO SA DE CV LABORATORIO CD. DE MEXICO

**DELIVER TO:** 

Littelfuse, S.A. de C.V.

Blvd. Fausto Z. Mtz. 1800, Col. Magisterio Sección 38, Piedras

Negras, Coahuila, 26070

ATTENTION:

Ing. Mario Falcón



Date: 2010-05-31

#### **TEST REPORT**

#### **APPLICANT**

Littelfuse, S.A. de C.V.

Blvd. Fausto Z. Mtz. 1800, Col. Magisterio Sección 38, Piedras Negras, Coahuila, 26070 Ing. Mario Falcón

#### SAMPLE DESCRIPTION

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

Sample Description

NP

1) No. Parte 084215 Serie 155

2) No. Parte 878-112 Serie 150

No. Parte 878-114 Serie 150

4) No. Parte 084113 Serie 155

Item No.

6) No. Parte 878-113 Serie 155

No. Parte 155004-4 Serie 155XXXX2XA

16) No. Parte 155004-3 Serie 155 XXXX2XA

18) No. Parte 079055 Serie BLN

Country of Origin

NΡ

Buyer's Name

NP

Supplier's Name

NP Date sample received 2010-04-13

Testing period

2010-04-19 to 2009-05-22

### **TEST CONDUCTED**

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

#### CONCLUSION

	Testing item	<u>Conclusion</u>	Failed component	Failed result	
1	No. Parte 084215 Serie 155	Pass			
	10. Faite 084219 Selle 199	See Result summary			
2	No. Parte 878-112 Serie 150	Pass			
	No. Faite 6/6-112 Selle 150	See Result summary		<del></del>	
3	No. Parte 878-114 Serie 150	Pass			
3	No. Parte 676-114 Serie 150	See Result summary			
4	No. Parte 084113 Serie 155	Pass			
4		See Result summary			
6	No. Parte 878-113 Serie 155	Pass			
0	No. Parte 676-113 Serie 155	See Result summary			
8	No. Parte 155004-4 Serie	Pass			
6	155XXXX2XA	See Result summary			
16	No. Parte 155004-3 Serie 155	Pass			
10	XXXX2XA	See Result summary			
18	No. Parte 079055 Serie BLN	Pass			
	No. Faite 07 9000 Selle BLIN	See Result summary			

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Date: 2010-05-31

#### **TEST CONDUCTED**

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

- 8) No. Parte 155004-4 Serie 155XXXX2XA
- 16) No. Parte 155004-3 Serie 155 XXXX2XA
- 18) No. Parte 079055 Serie BLN

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

TESTING ITEM		Ω RESULT (ppm)		<u>Limit</u>
TEOTINO ITEM	(8)	(16)	(18)	
Cadmium (Cd) content	ND	49,54	ND	0,01% (100 ppm)
Lead (Pb) content	ND	9,47	31,62	0,1% (1000 ppm)
Mercury (Hg) content	ND	ND .	ND	0,1% (1000 ppm)
Chromium (VI) (Cr <sup>6+</sup> )	ND	2,912	ND	0,1% (1000 ppm)
POLYBROMINATED BIPHENYLS (PBBs)	ND			0,1% (1000 ppm)
Monobromobiphenyl (MonoBB)	ND			
Dibromobiphenyl (DiBB)	ND			
Tribromobiphenyl (TriBB)	ND	Mu		
Tetrabromobiphenyl (TetraBB)	ND			
Pentabromobiphenyl (PentaBB)	ND			
Hexabromobiphenyl (HexaBB)	ND		o-u-to	
Heptabromobiphenyl (HeptaBB)	ND			
Octabromobiphenyl (OctaBB)	ND			
Nonabromobiphenyl (NonaBB)	ND			
Decabromobiphenyl (DecaBB)	ND			
POLYBROMINATED DIPHENYL ETHERS (PBDEs)	ND ND			0,1% (1000 ppm)
Monobromodiphenyl (MonoBDE)	ND			
Dibromodiphenyl (DiBDE)	ND			
Tribromodiphenyl (TriBDE)	ND			tive seri ser
Tetrabromodiphenyl (TetraBDE)	ND			
Pentabromodiphenyl (PentaBDE)	ND			
Hexabromodiphenyl (HexaBDE)	ND			
Heptabromodiphenyl (HeptaBDE)	ND			
Octabromodiphenyl (OctaBDE)	ND			
Nonabromodiphenyl (NonaBDE)	ND			
Decabromodiphenyl (DecaBDE)	ND			



Date: 2010-05-31

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 <u>MX10-0867-1</u> WERE TESTED SEPARATELY.

REMARK: AS REQUESTED BY THE APPLICANT, COATING WITH BASE MATERIAL OF TESTED COMPONENTS OF THE SAMPLE MX10-0867-2 WERE TESTED SEPARATELY.

REMARK: AS REQUESTED BY THE APPLICANT, COATING WITH BASE MATERIAL OF TESTED COMPONENTS OF THE SAMPLE <u>MX10-0867-3</u> WERE TESTED SEPARATELY.

REMARK: AS REQUESTED BY THE APPLICANT, COATING WITH BASE MATERIAL OF TESTED COMPONENTS OF THE SAMPLE <u>MX10-0867-4</u> WERE TESTED SEPARATELY.

REMARK: AS REQUESTED BY THE APPLICANT, COATING WITH BASE MATERIAL OF TESTED COMPONENTS OF THE SAMPLE <u>MX10-0867-6</u> WERE TESTED SEPARATELY.

REMARK: AS REQUESTED BY THE APPLICANT, COATING WITH BASE MATERIAL OF TESTED COMPONENTS OF THE SAMPLE MX10-0867-8 WERE TESTED TOGETHER.

REMARK: AS REQUESTED BY THE APPLICANT, COATING WITH BASE MATERIAL OF TESTED COMPONENTS OF THE SAMPLE \_MX10-0867-16 WERE TESTED TOGETHER.

REMARK: AS REQUESTED BY THE APPLICANT, COATING WITH BASE MATERIAL OF TESTED COMPONENTS OF THE SAMPLE <u>MX10-0867-18</u> WERE TESTED TOGETHER.

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Date: 2010-05-31

## Test method:

No. de Muestra	Testing item	Ω Testing method	Quality control Batch:	<u>Analysis</u> <u>Date:</u>	Analyzed By:	Reporting limit ppm
	Chromium V (Cr <sup>6+</sup> ) content	With reference to USEPA 3060, by EPA 7196	BEQ160p5b	2010-04-24	MELA	2,0

<u>No. de</u> <u>Muestra</u>	Testing item	Ω Testing method	Quality control Batch:	<u>Analysis</u> <u>Date:</u>	Analyzed By:	Reporting limit ppm
		With reference to USEPA 3540C, by solvent extraction and determined by GC-MSD	2010-004440-P CL	2010-05-22	CONT	50
	ED DIPHENYL	With reference to USEPA 3540C, by solvent extraction and determined by GC-MSD	2010-004440-P CL	2010-05-22	CONT	50

<u>No. de</u> <u>Muestra</u>	Testing item	Ω Testing method	Quality control Batch:	Analysis Date:	Analyzed By:	Reporting limit ppm
1 (a)	Lead (Pb) content	With reference to USEPA 3052MOD, by EPA 6010	MET2010-4p51	2010-04-22	JMR,DCL	4,807
1 (b)	Lead (Pb) content	With reference to USEPA 3050MOD, by EPA 6010	MET2010-4p47	2010-04-22	JMR,DCL	4,902
2 (a)	Lead (Pb) content	With reference to USEPA 3052MOD, by EPA 6010	MET2010-4p51	2010-04-22	JMR,DCL	5,0
2 (b)	Lead (Pb) content	With reference to USEPA 3050MOD, by EPA 6010	MET2010-4p47	2010-04-22	JMR,DCL	4,808
3 (a)	Lead (Pb) content	With reference to USEPA 3052MOD, by EPA 6010	MET2010-4p51	2010-04-22	JMR,DCL	4,717
3 (b)	Lead (Pb) content	With reference to USEPA 3050MOD, by EPA 6010	MET2010-4p47	2010-04-22	JMR,DCL	4,717
4 (a)	Lead (Pb) content	With reference to USEPA 3052MOD, by EPA 6010	MET2010-4p51	2010-04-22	JMR,DCL	4,717
4 (b)	Lead (Pb) content	With reference to USEPA 3050MOD, by EPA 6010	MET2010-4p47	2010-04-22	JMR,DCL	4,902
6 (a)	Lead (Pb) content	With reference to USEPA 3052MOD, by EPA 6010	MET2010-4p51	2010-04-22	JMR,DCL	4,808
6 (b)	Lead (Pb) content	With reference to USEPA 3050MOD, by EPA 6010	MET2010-4p47	2010-04-22	JMR,DCL	5,0
8	Lead (Pb) content	With reference to USEPA 3052MOD, by EPA 6010	MET2010-4p51	2010-04-22	JMR,DCL	5,102
16	Lead (Pb) content	With reference to USEPA 3050MOD, by EPA 7420	MET2010-4p47,48	2010-04-23	MARY,VLM	6,85
18	Lead (Pb) content	With reference to USEPA 3050MOD, by EPA 6010	MET2010-4p47,48	2010-04-22	JMR,DCL	4,901



Date: 2010-05-31

<u>No. de</u> <u>Muestra</u> .	Testing item	Ω Testing method	Quality control Batch:	Analysis Date:	Analyzed By:	Reporting limit ppm
1 (a)	Cadmium(Cd) content	With reference to USEPA 3052MOD, by EPA 6010	MET2010-4p51	2010-04-22	JMR,DCL	1,92
1 (b)	Cadmium(Cd) content	With reference to USEPA 3050MOD, by EPA 6010	MET2010-4p47	2010-04-22	JMR,DCL	1,961
2 (a)	Cadmium(Cd) content	With reference to USEPA 3052MOD, by EPA 6010	MET2010-4p51	2010-04-22	JMR,DCL	2,0
2 (b)	Cadmium(Cd) content	With reference to USEPA 3050MOD, by EPA 6010	MET2010-4p47	2010-04-22	JMR DCL	1,92
3 (a)	Cadmium(Cd) content	With reference to USEPA 3052MOD, by EPA 6010	MET2010-4p51	2010-04-22	JMR,DCL	1,89
3 (b)	Cadmium(Cd) content	With reference to USEPA 3050MOD, by EPA 6010	MET2010-4p47	2010-04-22	JMR,DCL	1,887
4 (a)	Cadmium(Cd) content	With reference to USEPA 3052MOD, by EPA 6010	MET2010-4p51	2010-04-22	JMR,DCL	1,89
4 (b)	Cadmium(Cd) content	With reference to USEPA 3050MOD, by EPA 6010	MET2010-4p47	2010-04-22	JMR,DCL	1,961
6 (a)	Cadmium(Cd) content	With reference to USEPA 3052MOD, by EPA 6010	MET2010-4p51	2010-04-22	JMR,DCL	1,923
6 (b)	Cadmium(Cd) content	With reference to USEPA 3050MOD, by EPA 6010	MET2010-4p47	2010-04-22	JMR,DCL	• 2,0
8	Cadmium(Cd) content	With reference to USEPA 3052MOD, by EPA 6010	MET2010-4p51	2010-04-22	JMR,DCL	2,04
16	Cadmium(Cd) content	With reference to USEPA 3050MOD, by EPA 7420	MET2010-4p47,48	2010-04-23	MARY,VLM	1,37
18	Cadmium(Cd) content	With reference to USEPA 3050MOD, by EPA 6010	MET2010-4p47,48	2010-04-22	JMR,DCL	1,96

No. de Muestra	Testing item	Ω Testing method	Quality control Batch:	<u>Analysis</u> <u>Date:</u>	Analyzed By:	Reporting limit ppm
1 (a) ·	Mercury (Hg) content	With reference to USEPA 7471MOD, by EPA 7471	MET2010-4p46	2010-04-20	UBM	0,0806
1 (b)	Mercury (Hg) content	With reference to USEPA 7471MOD, by EPA 7471	MET2010-4p44	2010-04-20	UBM	0,082
2 (a)	Mercury (Hg) content	With reference to USEPA 7471MOD, by EPA 7471	MET2010-4p46	2010-04-20	UBM	0,0833
2 (b)	Mercury (Hg) content	With reference to USEPA 7471MOD, by EPA 7471	MET2010-4p44	2010-04-20	UBM	0,0806
3 (a)	Mercury (Hg) content	With reference to USEPA 7471MOD, by EPA 7471	MET2010-4p46	2010-04-20	UBM	0,0833
3 (b)	Mercury (Hg) content	With reference to USEPA 7471MOD, by EPA 7471	MET2010-4p44	2010-04-20	UBM	0,0769
4 (a)	Mercury (Hg) content	With reference to USEPA 7471MOD, by EPA 7471	MET2010-4p46	2010-04-20	UBM	0,0769
4 (b)	Mercury (Hg) content	With reference to USEPA 7471MOD, by EPA 7471	MET2010-4p44	2010-04-20	UBM	0,0847
6 (a)	Mercury (Hg) content	With reference to USEPA 7471MOD, by EPA 7471	MET2010-4p46	2010-04-20	UBM	0,0806
6 (b)	Mercury (Hg) content	With reference to USEPA 7471MOD, by EPA 7471	MET2010-4p44	2010-04-20	UBM	0,082
8	Mercury (Hg) content	With reference to USEPA 7471MOD, by EPA 7471	MET2010-4p46	2010-04-20	UBM	0,0833
16	Mercury (Hg) content	With reference to USEPA 7471MOD, by EPA 7471	MET2010-4p44	2010-04-20	UBM	0,082
18	Mercury (Hg) content	With reference to USEPA 7471MOD, by EPA 7471	MET2010-4p44	2010-04-20	UBM	0,082



Test Report Number : TWNC00195032

Applicant: Littelfuse, Inc.

LIMA Technology Center, Lipa City, Malvar, Batangas

Sample Description:

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

Part Description : Knob Insert
Part Number : 155004-3
Date Sample Received : Mar 15, 2011
Date Test Started : Mar 16, 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 This report shall not be reproduced except in full, without the written approval of the laboratory.

Date : Mar 21, 2011

Page 1 Of 5

#### Intertek Testing Services Taiwan Ltd.

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



Number: TWNC00195032

#### Test Conducted

#### (I) Test Result Summary:

Testing Item		Result (ppm)		
		(2)		
Heavy Metal				
Cadmium (Cd) content	ND	ND		
Lead (Pb) content	ND	ND		
Mercury (Hg) content	ND	ND		
Chromium VI (Cr <sup>6+</sup> ) content (mg/kg with 50cm <sup>2</sup> )		Negative		
Chilomium vi (Ci ) concent (mg/kg with 50cm)	(< 0.02)	(< 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 testing.

#### Tested Components:

(1) Silvery Metal Substrate

(2) Silvery Plating

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

Date Sample Received : Mar 15, 2011

Testing Period : Mar 16, 2011 To Mar 21, 2011

#### ( $\Pi$ ) 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)

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



Number : TWNC00195032

Test Conducted

#### (Ⅲ) Test Method:

Testing Item	Testing 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
With reference to IEC 62321 edition 1.0:2008 in clause 8/9/10, by Lead (Pb) content microwave digestion until the tested samples are totally dissolved and determined by ICP-OES.		2 ppm
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



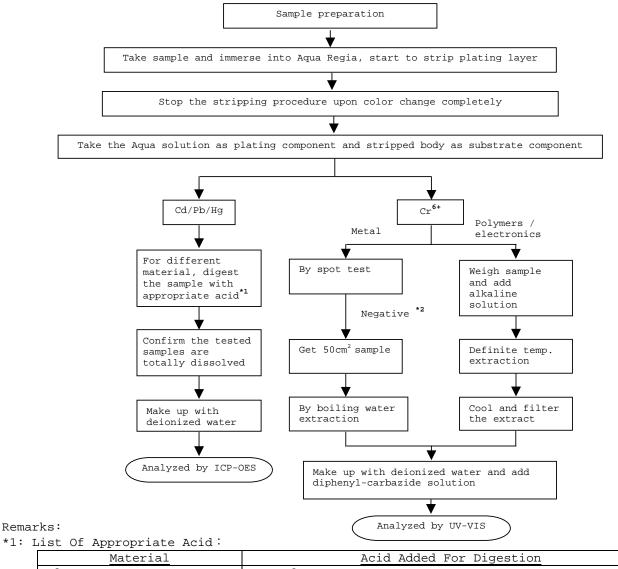
Number: TWNC00195032

#### 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:

ibe of hppropriace hera.				
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

#### Intertek Testing Services Taiwan Ltd.

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Number : TWNC00195032

Test Conducted

## <u>Photo</u>





Page 5 Of 5