



# TEST REPORT

LAB NO. : (9310)218-0481  
DATE : Aug 19, 2010  
PAGE : 1 OF 6

**APPLICANT** : FLASHBAY ELECTRONICS (SHENZHEN) CO., LTD  
3-5/F, BLDG B, XIFENGCHENG INDUSTRIAL PARK,  
NO.2 FUYUAN RD, 2<sup>ND</sup> HIGH-TECH AREA, HEPING,  
FUYONG, BAOAN, SHENZHEN 518103, GUANGDONG  
PROVINCE, P.R.CHINA

**CONTACT PERSON** : Henry Guo

**DATE OF SUBMISSION** : Aug 06, 2010

**TEST PERIOD** : Aug 06, 2010 to Aug 19, 2010

**NO. OF WORKING DAY(S)** : 10

**SAMPLE DESCRIPTION** : Bamboo Series USB Flash Drive  
Type Reference: BS  
Sample: 3

## SUMMARY OF TEST RESULTS

TEST REQUESTED	PASS	FAIL	REMARK
Restriction of Hazardous Substances Directive (RoHS), 2002/95/EC	X		

RW

**Bureau Veritas Consumer Products Services  
(Guangzhou) Co.,Ltd**  
No. 183, Shinan Road, Meilin Plaza Block B, Dongchong,  
Panyu, Guangzhou, Guangdong Province, China 511453  
Tel: (86) 20 2290 2088 Fax:(86) 20 3490 9303  
Email: BVCPS\_pyinfo@cn.bureauveritas.com  
Website:cps.bureauveritas.com

This report is governed by, and incorporates by reference, the Conditions of Testing as posted at the date of issuance of this report at <http://www.mtl-acts.com> and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.

The content of this PDF file is in accordance with the original issued reports for reference only.  
This Test Report cannot be reproduced, except in full, without prior written permission of the company.




LAB NO. : (9310)218-0481  
DATE : Aug 19, 2010  
PAGE : 2 OF 6

**BUREAU VERITAS CONSUMER PRODUCTS SERVICES (GUANGZHOU) CO., LTD**

PREPARED BY : Aaron Zhu

APPROVED BY: 

**SANDROS FENG**  
**ANALYTICAL LAB MANAGER**

  
**JOEIE TSANG**  
**REGIONAL LABORATORY DIRECTOR**

**REMARK**

If there are questions or concerns on this report, please contact the following persons:

- a) Technical enquiry (86) 20 22902088 - 392 (386)  
analytical-TS.PY@cn.bureauveritas.com
- b) General enquiry (86) 20 22902088 - 364 (215)  
analytical-enquiry.PY@cn.bureauveritas.com

Bureau Veritas Consumer Products Services (Guangzhou) Co.,Ltd  
Address: No.183, Shi Nan Road, Mei Lin Plaza Block B, Dong Chong, 511453  
Pan Yu, Guangzhou, Guang Dong, China  
Tel : (86)20-22902088 Fax : (86)20-22902098  
Email: BVCPS\_pyinfo@cn.bureauveritas.com  
Website: www.bureauveritas.com/cps



LAB NO. : (9310)218-0481  
DATE : Aug 19, 2010  
PAGE : 3 OF 6

### Photo of the Submitted Sample



Report Number  
(9310)218-0481



LAB NO. : (9310)218-0481  
DATE : Aug 19, 2010  
PAGE : 4 OF 6

### TEST RESULT

#### Restriction of Hazardous Substances Directive (RoHS), 2002/95/EC

Test Item	Description	Test Results				
		Pb	Hg	Cd	Cr VI	PBBs & PBDEs
1	Golden metal (pin)	ND	ND	ND	ND	NA
2	Black plastic (pin holder)	ND	ND	ND	ND	ND
3	Silvery solder (PCB)	ND	ND	ND	ND	NA
4	Black/ white body (SMD resistor, PCB)	>1500 <sup>#</sup>	ND	ND	ND*	ND
5	Brown body (SMD capacitor, PCB)	ND	ND	ND	ND	ND
6	Black body (small IC, PCB)	ND	ND	ND	ND	ND
7	Silvery metal (pin, small IC, PCB)	ND	ND	ND	ND	NA
8	Black body (large IC, PCB)	ND	ND	ND	ND	ND
9	Silvery metal (pin, large IC, PCB)	ND	ND	ND	ND	NA
10	White printed green coated green plastic with coppery metal (PCB)	ND	ND	ND	ND	ND*
11	Beige wood (long outer case)	ND	ND	ND	ND	ND
12	Beige wood (short outer case)	ND	ND	ND	ND	ND
13	Transparent glue (outer case)	ND	ND	ND	ND	ND
14	Transparent plastic (outer case)	ND	ND	ND	ND	ND
15	Silvery metal (ring)	ND	ND	ND	ND	NA
16	Silvery plated golden metal (axle)	33400 <sup>#</sup>	ND	ND	ND	NA
17	Silvery magnet (short outer case)	ND	ND	ND	ND	NA
18	Silvery metal (inner case)	ND	ND	ND	Negative <sup>2)*</sup>	NA
19	Black printed white body (crystal, PCB)	ND	ND	ND	ND	ND
20	Red/ white body (LED, PCB)	ND	ND	ND	ND	ND

For item 4:

<sup>#</sup>According to the directive 2005/717/EC, 2005/747/EC and 2006/310/EC, the annex of 2002/95/EC was amended and Clause 7 is reiterated here "Lead in electronic ceramic parts (e.g. piezoelectronic devices)." The sample as received was provided by the client to be electronic ceramic parts, therefore, this material containing the found heavy metals level should be exempted.

For item 16:

<sup>#</sup>According to 2002/95/EC, Annex, exemptions were granted to a few materials and Clause 6 is reiterated here "Lead as an alloying element in copper alloy containing up to 4 % lead by weight." The sample as received was provided by the client to be copper alloy, therefore, this material containing the found heavy metals level should be exempted.

**TEST RESULT**

**Restriction of Hazardous Substances Directive (RoHS), 2002/95/EC**

**Photograph(s) of tested components with the failed items highlighted**





**LAB NO.** : (9310)218-0481  
**DATE** : Aug 19, 2010  
**PAGE** : 6 OF 6

**Note/**

Detection limits of XRF and wet chemistry methods for regulated substances in various matrices and limit of RoHS (in ppm)

Regulated Substances	Detection Limit (ppm) /			Wet Chemistry	RoHS' Limit (ppm) RoHS' (ppm)
	XRF				
	Plastics	Metals	Electronics		
Pb	100	200	200	10	1000
Hg	100	200	200	10	1000
Cd	50	50	50	10	100
Cr	100	200	200	NA	NA
Cr VI	NA	NA	NA	10	1000
Br	200	NA	200	NA	NA
PBBs <i>Bromobiphenyls</i> <i>Dibromobiphenyls</i> <i>Tribromobiphenyls</i> <i>Tetrabromobiphenyls</i> <i>Pentabromobiphenyls</i> <i>Hexabromobiphenyls</i> <i>Heptabromobiphenyls</i> <i>Octabromobiphenyls</i> <i>Nonabromobiphenyls</i> <i>Decabromobiphenyl</i>	NA	NA	NA	50 (each)	1000 (sum)
PBDEs 醚 <i>Bromodiphenyl ethers</i> <i>Dibromodiphenyl ethers</i> <i>Tribromodiphenyl ethers</i> <i>Tetrabromodiphenyl ethers</i> <i>Pentabromodiphenyl ethers</i> <i>Hexabromodiphenyl ethers</i> <i>Heptabromodiphenyl ethers</i> <i>Octabromodiphenyl ethers</i> <i>Nonabromodiphenyl ethers</i> <i>Decabromodiphenyl ether</i>	NA	NA	NA	50 (each)	1000 (sum)

ppm = mg/kg

< = less than

ND = not detected

NA = not applicable

L = low risk materials, no conflict with RoHS directive accordance to the UK Department of Trade and Industry RoHS compliance procedure

Pb = Lead

Hg = Mercury

Cd = Cadmium

Cr = Chromium

Br = Bromine

PBBs = Polybrominated Biphenyls

PBDEs = Polybrominated Diphenyl Ethers

**Test Method:**

- XRF Screening - IEC 62321:2008, "Electrotechnical Products- Determination of Levels of Six Regulated Substances" (Chapter 6) or;
- Wet Chemistry Tests – Reference to IEC 62321:2008, "Electrotechnical Products- Determination of Levels of Six Regulated Substances":
  - Lead (Pb) and Cadmium (Cd): The sample is comminuted and digested with acid mixtures. Pb/ Cd contents are determined with ICP-AES technique. (Chapter 8, 9 & 10)
  - Mercury (Hg): The sample is comminuted and digested with acid mixtures. Hg content is determined with ICP-AES, ICP-MS or AAS-VGA technique. (Chapter 7)
  - Chromium (VI) (Cr VI):
    - Metal: Qualitative method for the presence of hexavalent chromium on metal surface on "Test for the presence of Hexavalent Chromium (Cr (VI)) in colourless and coloured corrosion-protection coatings on metals". The presence of hexavalent chromium is indicated by the formation of a red to violet color. The method is applied in turn to 1) untreated surface; 2) surface got by gently rubbing to scratch possibly reduced chromate surface but without completely removing the whole coating layer; 3) surface got by forcibly scratching into the deeper layers, even reaching the substrate. The sample is further verified by boiling water extraction method if the result of spot test shows ahead is negative or uncertain. (Annex B)
    - Plastics & Electronics : The sample is comminuted and digested with alkaline mixtures. Chromium VI content is determined with UV-VIS spectroscopic technique. (Annex C)
  - PBBs and PBDEs: The sample extracted by appropriate solvent is used for extraction and quantified GC-MS. (Annex A)
- The testing approach reference to:
  - "RoHS Enforcement Guidance Document version 1" by EU RoHS Enforcement Authorities Informal Network (May 2006),
  - "RoHS Regulations – Government Guidance Notes" by Department of Trade and Industry, UK (Jan 2007), and
  - "RoHS substances (Hg, Pb, Cr(VI), Cd, PBB and PBDE) in electrical and electronic equipment in Belgium" by Belgium Federal Public Service, Health, Food Chain Safety and Environment, Belgium (Nov 2005)

**Remark:**

- Test results marked with \* are determined by wet chemistry. Others are screened by XRF.
- Positive means the presence of hexavalent chromium on the tested areas. It is regarded as in conflict with RoHS requirements. According to the IEC 62321, the principle of this method was evaluated and supported by two studies organized by IEC TC111 WG3. The studies were focused on detecting the presence of Cr(VI) in metallic samples.
- For XRF screening, the reported Chromium VI result is determined as total chromium, and Polybrominated Biphenyls (PBBs) and Polybrominated Diphenyl Ethers (PBDEs) results are determined as total bromine.
- Only selected example(s) is/ are indicated on the above photograph.
- The above results of item 1-10 are transferred from (9310)215-0379 dated on Aug 19, 2010.

END