



CONSUMER PRODUCTS SERVICES DIVISION

## FLASHBAY ELECTRONICS

**Technical Report:** (8518)118-0116  
Date Received: May 02, 2018

June 01, 2018  
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LEVIN  
FLASHBAY ELECTRONICS  
BLGD B & C XI FENG CHENG IND ZONE, NO.2  
FUYUAN ROAD HE PING, VILLAGE, FUYONG TOWN,  
SHENZHEN

Sample Description:	POWER BANKS	Sample Size:	2
Vendor:	N/A	Style No(s):	VOLT
Manufacturer:	N/A	SKN/SKU No.:	N/A
Buyer:	N/A	PO No.:	N/A
Labeled Age Grade:	N/A	Ref #:	N/A
Appropriate Age Grade:	N/A	Country of Origin:	N/A
Client Specified Age:	N/A	Assortment No.:	N/A
Grade:			
Tested Age Grade:	ADULT		
UPC Code:	N/A		

### EXECUTIVE SUMMARY:

The sample(s) MEET the following requirement(s):

- European Parliament and Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)
- Phthalates Test – Directive 2015/863/EU Amendment of European Parliament and Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)

Note: The amendment will be effective on 22 July 2019. For medical devices and control instruments, effective date will be 22 July 2021.

BUREAU VERITAS SHENZHEN CO.,LTD

Choy Hon Kwong, Adams  
Senior Manager  
Analytical Department

AC/lj



**RESULTS:**

**Compliance Test - European Parliament and Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)**

**Test Method** : See Appendix.

Test Item(s)	Item / Component Description(s)	Location(s)	Style(s)
1	Bright silvery metal	Case, power bank	
2	Black plastic / adhesive	Cover, power bank	
3	Black printed clear plastic	Adhesive tape	
4	Clear yellow plastic	Adhesive tape	
5	Dull blue paper sticker	Adhesive tape	
6	Red plated coppery metal	Wire	
7	Bright white plastic	Case, USB plug	
8	Silvery metal	Case, USB plug	
9	Pale black plastic	Slot, USB plug	
10	Silvery metal	Lock washer, USB plug	
11	Silvery metal	Plate, USB plug	
12	Silver plated golden metal	Pin, USB plug	
13	Black / white body	SMD resistor, PCB, USB plug	
14	Red coated brown plastic / coppery metal	PCB, USB plug	
15	Silvery solder	PCB, USB plug	
16	Black soft plastic	Frame & sleeve	
17	Dull white soft plastic	Frame	
18	Bright white soft plastic	Wire jacket	
19	Black soft plastic	Wire jacket	
20	Red soft plastic	Wire jacket	
21	Grey printed bright red soft plastic	Thick wire jacket	
22	Grey printed black soft plastic	Thick wire jacket	
23	Silver plated coppery metal	Wire	
24	Silvery solder	Wire	
25	Silvery metal	Connector	
26	Silvery metal	Case, USB plug	
27	Matt white plastic	Base, USB plug	
28	Silver plated golden metal	Pin, USB plug	
29	Silvery solder	Pin, USB plug	
30	Silvery metal	Case, mini USB	
31	Pale black plastic	Base, mini USB	
32	Silvery metal	Plate, mini USB	
33	Silver Plated golden metal	Pin, mini USB	
34	Silvery solder	Pin, mini USB	



**RESULTS:**

**Compliance Test - European Parliament and Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)**

**Test Method** : See Appendix.

<b>Test Item(s)</b>	<b>Item / Component Description(s)</b>	<b>Location(s)</b>	<b>Style(s)</b>
35	White plastic	Adhesive tape, PCB	
36	Silvery metal	Case, USB Plug, PCB	
37	Pale black plastic	Slot, USB plug, PCB	
38	Golden metal	Pin, USB plug, PCB	
39	Brown body	SMD capacitor, PCB	
40	Black / white body	SMD resistor, PCB	
41	White body	SMD LED, PCB	
42	Black body	IC, PCB	
43	Grey body	IRO, PCB	
44	Dull black boy	IC, PCB	
45	White printed green coated translucent plastic / coppery metal	PCB	
46	Silvery solder	PCB	



**RESULTS:**

**Compliance Test - European Parliament and Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)**

See Analytes and their corresponding Maximum Allowable Limit in Appendix

Parameter	Result						Conclusion
	Lead (Pb)	Cadmium (Cd)	Mercury (Hg)	Chromium VI (Cr VI)	PBBs	PBDEs	
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-
Test Item(s)	-	-	-	-	-	-	-
1	ND	ND	ND	ND	NA	NA	PASS
2	ND	ND	ND	ND	ND	ND	PASS
3	ND	ND	ND	ND	ND	ND	PASS
4	ND	ND	ND	ND	ND	ND	PASS
5	ND	ND	ND	ND	ND	ND	PASS
6	ND	ND	ND	ND	NA	NA	PASS
7	ND	ND	ND	ND	ND	ND	PASS
8	ND	ND	ND	Negative <sup>#</sup>	NA	NA	PASS
9	ND	ND	ND	ND	ND	ND	PASS
10	ND	ND	ND	Negative <sup>#</sup>	NA	NA	PASS
11	ND	ND	ND	Negative <sup>#</sup>	NA	NA	PASS
12	ND	ND	ND	ND	NA	NA	PASS
13	ND	ND	ND	ND	ND	ND	PASS
14	ND	ND	ND	ND	ND	ND	PASS
15	ND	ND	ND	ND	NA	NA	PASS
16	ND	ND	ND	ND	ND	ND	PASS
17	ND	ND	ND	ND	ND	ND	PASS
18	ND	ND	ND	ND	ND	ND	PASS
19	ND	ND	ND	ND	ND	ND	PASS
20	ND	ND	ND	ND	ND	ND	PASS
21	ND	ND	ND	ND	ND	ND	PASS
22	ND	ND	ND	ND	ND	ND	PASS
23	ND	ND	ND	ND	NA	NA	PASS
24	ND	ND	ND	ND	NA	NA	PASS
25	ND	ND	ND	ND	NA	NA	PASS
26	ND	ND	ND	Negative <sup>#</sup>	NA	NA	PASS
27	ND	ND	ND	ND	ND	ND	PASS
28	ND	ND	ND	ND	NA	NA	PASS
29	ND	ND	ND	ND	NA	NA	PASS
30	ND	ND	ND	Negative <sup>#</sup>	NA	NA	PASS
31	ND	ND	ND	ND	ND	ND	PASS
32	ND	ND	ND	Negative <sup>#</sup>	NA	NA	PASS
33	ND	ND	ND	ND	NA	NA	PASS



**RESULTS:**

**Compliance Test - European Parliament and Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)**

See Analytes and their corresponding Maximum Allowable Limit in Appendix

-	Result						
Parameter	Lead (Pb)	Cadmium (Cd)	Mercury (Hg)	Chromium VI (Cr VI)	PBBs	PBDEs	Conclusion
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-
Test Item(s)	-	-	-	-	-	-	-
34	ND	ND	ND	ND	NA	NA	PASS
35	ND	ND	ND	ND	ND	ND	PASS
36	ND	ND	ND	Negative <sup>#</sup>	NA	NA	PASS
37	ND	ND	ND	ND	ND	ND	PASS
38	ND	ND	ND	ND	NA	NA	PASS
39	1500	ND	ND	ND	ND	ND	EXEMPTED
40	1600	ND	ND	ND	ND	ND	EXEMPTED
41	ND	ND	ND	ND	ND	ND	PASS
42	ND	ND	ND	ND	ND	ND	PASS
43	ND	ND	ND	ND	ND	ND	PASS
44	ND	ND	ND	ND	ND	ND	PASS
45	ND	ND	ND	ND	ND	ND	PASS
46	ND	ND	ND	ND	NA	NA	PASS

Note / Key :

ND = Not detected  
 NR = Not requested  
 % = percent  
 Detection Limit : See Appendix.

">" = Greater than  
 mg/kg = milligram(s) per kilogram = ppm = part(s) per million  
 10 000 mg/kg = 1 %

Remark :

- The testing approach is listed in table of Appendix.
- <sup>#</sup> denotes as reported result(s) was (were) performed by wet chemistry method. Others were screened by XRF. For XRF screening, the result(s) of Cr VI was (were) reported as total chromium and the result(s) of PBBs and PBDEs was (were) reported as total bromine. Also, the XRF result(s) may be different to the actual content based on various factors including, but not limit to, sample size, thickness, area, non-uniformity composition, surface flatness.
- Only selected example(s) is (are) indicated on the photograph(s) in Comment.
- According to European Parliament and Council Directive 2011/65/EU, Article 5 "Adaptation of the Annexes to scientific and technical progress", exemption(s) should be granted to the materials and components of Test Item(s) in the lists in Annexes III and IV of this directive.
- According to Annex III of European Parliament and Council Directive 2011/65/EU, exemptions were granted a few materials and Clause 7(c)-I is reiterated here "Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound.". Test Item(s) < 39 > < 40 > was (were) claimed as is by client (received as is). Therefore, this (these) Test Item(s) containing the found lead level should be exempted

**RESULTS:**

Comment :

<b>Photograph(s) [ Compliance Test for European Parliament and Council Directive 2011/65/EU ] :</b>	
<b>Photograph of Test Item(s)</b>	
	
	

END



**RESULTS:**

**TEST RESULT**

**Phthalates Test – Directive 2015/863/EU Amendment of European Parliament and Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)**

**Test Method** : With reference to draft International Standard IEC 62321-8.

<b>Maximum Allowable Limit:</b>	<b>DEHP, BBP, DBP &amp; DIBP: 0.1% (Each)</b>
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Tested Item(s)	Result			Conclusion
	Detected Analyte(s)	Conc.	Unit	
2+3+4	ND	ND	%	PASS
5+7+9	ND	ND	%	PASS
14+45	ND	ND	%	PASS
16+17+18	ND	ND	%	PASS
19+20	ND	ND	%	PASS
21+22	ND	ND	%	PASS
27+31+35	ND	ND	%	PASS
37+41	ND	ND	%	PASS

Note / Key :

ND = Not detected

NR = Not requested

% = percent

Detection Limit (%) : 0.005

">" = Greater than

mg/kg = milligram(s) per kilogram = ppm = part(s) per million

10 000 mg/kg = 1 %

Remark : The list of phthalates is summarized in table of Appendix.

END

**RESULTS:**

**APPENDIX**

<b>List of Analytes and their Corresponding Test Methods, Detection Limit and Maximum Allowable Limit [ Compliance Test for European Parliament and Council Directive 2011/65/EU ] :</b>							
No.	Name of Analytes	Detection Limit (mg/kg)				Wet Chemistry	Maximum Allowable Limit (mg/kg)
		X-ray fluorescence (XRF) <sup>[a]</sup>					
		Plastic	Metallic / glass / ceramic	Others			
1	Lead (Pb)	100	200	200	10 <sup>[b]</sup>	1 000	
2	Cadmium (Cd)	50	50	50	10 <sup>[b]</sup>	100	
3	Mercury (Hg)	100	200	200	10 <sup>[c]</sup>	1 000	
4	Chromium (Cr)	100	200	200	NA	NA	
5	Chromium VI (Cr VI)	NA	NA	NA	3 <sup>[g, h]</sup> / 10 <sup>[d]</sup> / See <sup>[e, i]</sup>	1 000 / Negative <sup>[j]</sup>	
6	Bromine (Br)	200	NA	200	NA	NA	
7	Polybromobiphenyls (PBBs) - Bromobiphenyl (MonoBB) - Dibromobiphenyl (DiBB) - Tribromobiphenyl (TriBB) - Tetrabromobiphenyl (TetraBB) - Pentabromobiphenyl (PentaBB) - Hexabromobiphenyl (HexaBB) - Heptabromobiphenyl (HeptaBB) - Octabromobiphenyl (OctaBB) - Nonabromobiphenyl (NonaBB) - Decabromobiphenyl (DecaBB)	NA	NA	NA	Each 50 <sup>[f]</sup>	Sum 1 000	
8	Polybromodiphenyl ethers (PBDEs) - Bromodiphenyl ether (MonoBDE) - Dibromodiphenyl ether (DiBDE) - Tribromodiphenyl ether (TriBDE) - Tetrabromodiphenyl ether (TetraBDE) - Pentabromodiphenyl ether (PentaBDE) - Hexabromodiphenyl ether (HexaBDE) - Heptabromodiphenyl ether (HeptaBDE) - Octabromodiphenyl ether (OctaBDE) - Nonabromodiphenyl ether (NonaBDE) - Decabromodiphenyl ether (DecaBDE)	NA	NA	NA	Each 50 <sup>[f]</sup>	Sum 1 000	





**RESULTS:**

	NA = Not applicable
[a]	Test method with reference to International Standard IEC 62321-3-1: 2013.
[b]	Test method with reference to International Standard IEC 62321-5: 2013.
[c]	Test method with reference to International Standard IEC 62321-4: 2017.
[d]	Polymers and Electronics - Test method with reference to European Standard EN 62321-7-2: 2017.
[e]	Metal - Test method with reference to International Standard IEC 62321-7-1: 2015 <sup>[1]</sup> .
[f]	Test method with reference to International Standard IEC 62321-6: 2015.
[g]	Leather - Test method International Standard ISO 17075: 2007.
[h]	Other Than Metal, Leather, Polymers and Electronics - Test method with reference to International Standard ISO 17075: 2007.
[i]	The principle of this method was evaluated and supported by two studies organized by IEC TC 111 WG3. These studies were focused on detecting the presence of Cr VI in the corrosion protection coatings on metallic samples. Result(s) of Cr VI for metallic material(s) was (were) expressed in term of positive and negative. Negative means the absence of Cr VI on the tested areas and the result(s) was (were) regarded as in compliance with European Parliament and Council Directive 2011/65/EU, Article 4(1). While, positive means the presence of Cr VI on tested areas and the result(s) was (were) regarded as in conflict with European Parliament and Council Directive 2011/65/EU, Article 4(1).
[j]	

<b>Testing Approach [ Compliance Test for European Parliament and Council Directive 2011/65/EU ] :</b>	
The testing approach was with reference to the following document(s).	
1	International Standards IEC 62321-1: 2013 and IEC 62321-2: 2013
2	“RoHS Enforcement Guidance Document Version 1” by EU RoHS Enforcement Authorities Informal Network. (May 2006)
3	“RoHS Regulations - Government Guidance Notes” by United Kingdom Department for Business Innovation & Skills. (February 2011)
4	“Final Report to 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. (November 2005)

<b>List of Phthalates:</b>					
No.	Name of Analytes	CAS-No.	No.	Name of Analytes	CAS-No.
1	Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	3	Dibutyl phthalate (DBP)	84-74-2
2	Butyl benzyl phthalate (BBP)	85-68-7	4	Diisobutyl phthalate (DIBP)	84-69-5

**RESULTS:**

