



**BUREAU  
VERITAS**

# TEST REPORT

LAB NO. : (9317)313-1126  
DATE : Nov 20, 2017  
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**APPLICANT** : **FLASHBAY ELECTRONICS**  
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ROAD HE PING, VILLAGE, FUYONG TOWN, SHENZHEN

**CONTACT PERSON** : LEVIN

**DATE OF SUBMISSION** : Nov 09, 2017

**TEST PERIOD** : Nov 13, 2017 to Nov 20, 2017

**NO. OF WORKING DAYS** : 6

**SAMPLE DESCRIPTION** : USB Flash Drive

Color: /

Style no. / Model no.: Slide(SE)

P.O. No.: /

Country of Origin: /

Country of Destination: /

**MANUFACTURER** : /

## SUMMARY OF TEST RESULTS

TEST REQUESTED	CONCLUSION	REMARK
European Parliament and Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)	PASS	
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.)	PASS	

LA

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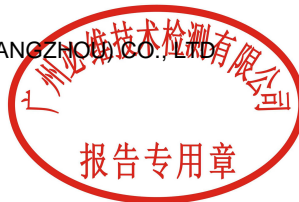
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BUREAU VERITAS CONSUMER PRODUCTS SERVICES (GUANGZHOU) CO., LTD

NINA REN  
SENIOR MANAGER

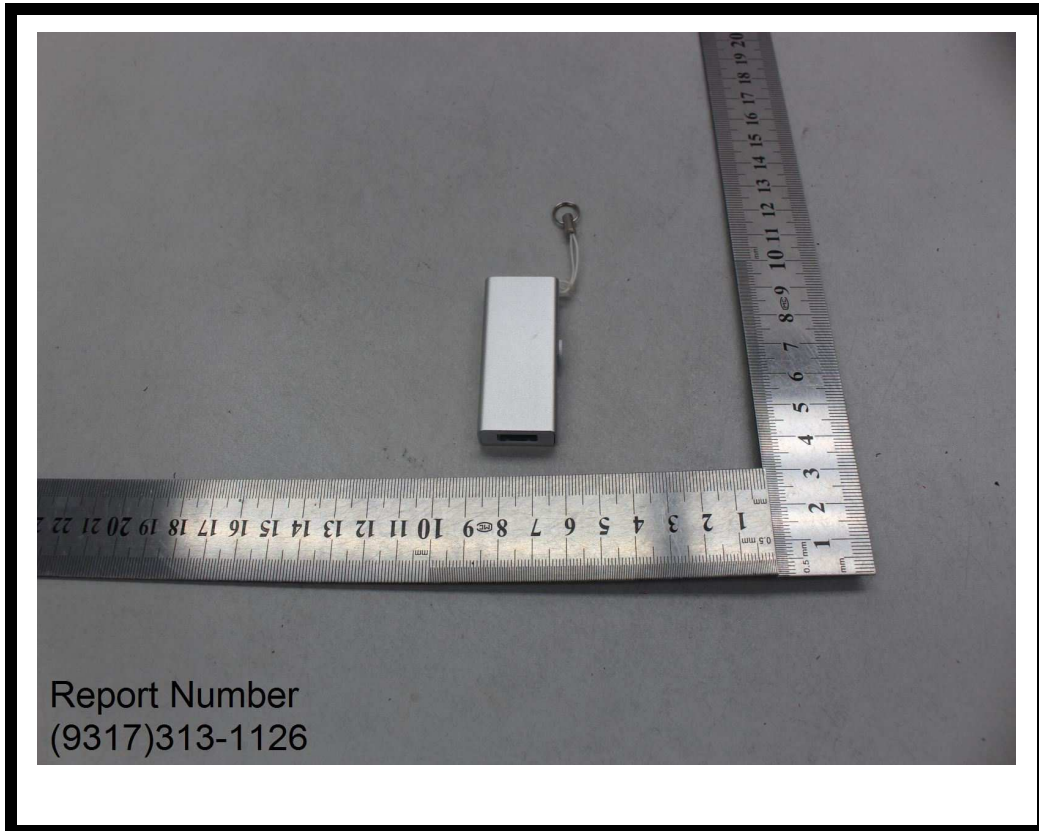


**REMARK**

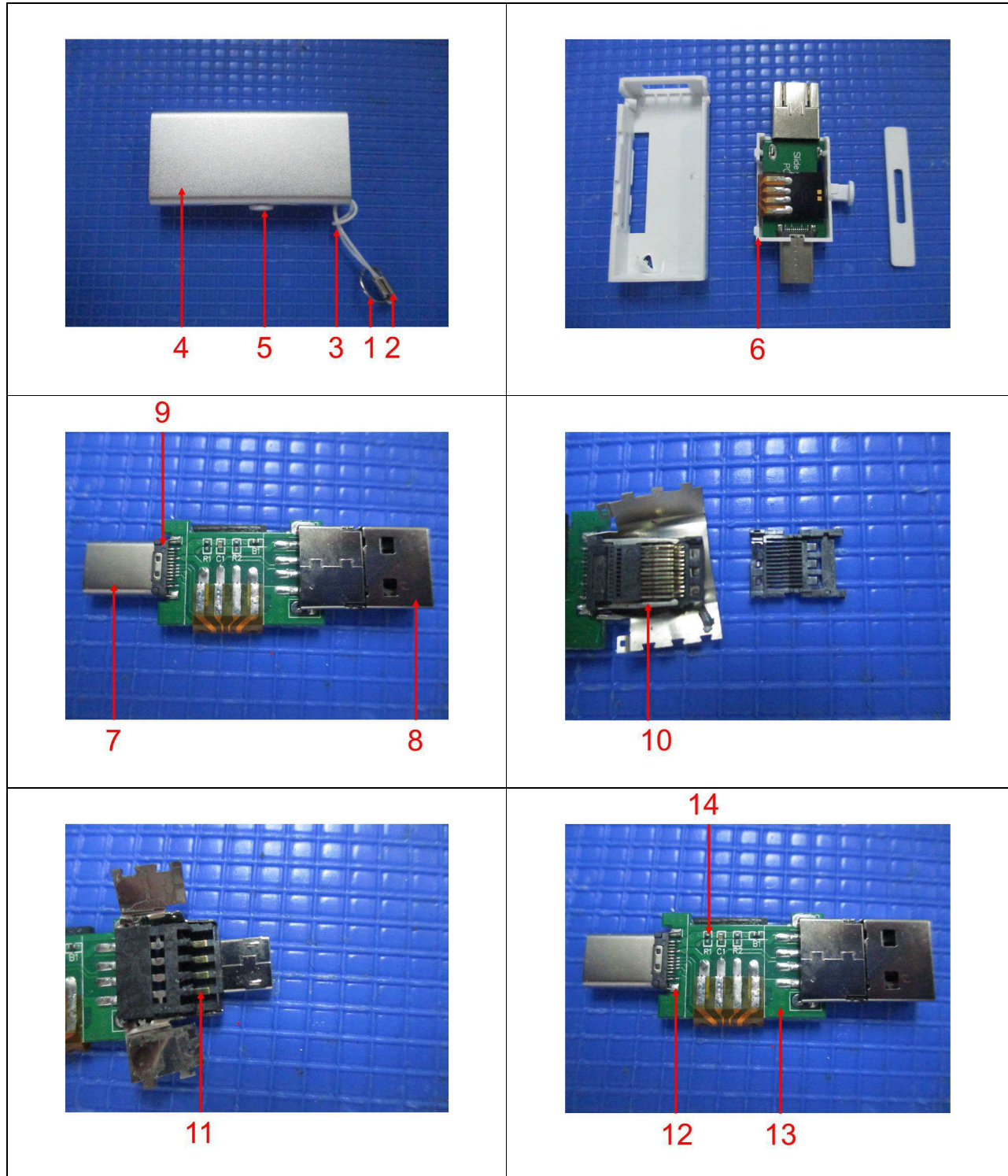
If there are questions or concerns on this report, please contact the following persons:

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**Photo of the Submitted Sample**



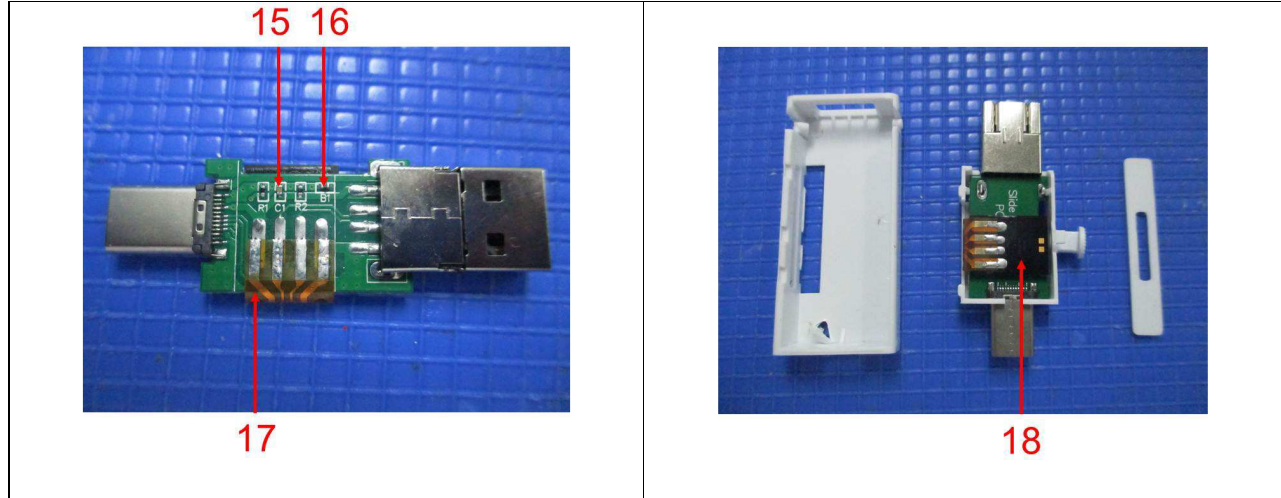
**Photograph of test item(s)**





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**TEST RESULT**

**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	Silvery metal (ring, usb flash drive)	-
2	Silvery metal (connector, usb flash drive)	-
3	White textile (string, usb flash drive)	-
4	Silvery metal (case, usb flash drive)	-
5	White plastic (button, usb flash drive)	-
6	White plastic (case, usb flash drive)	-
7	Silvery metal (sleeve, usb)	-
8	Silvery metal (case, usb)	-
9	Black plastic (insulation, usb)	-
10	Silvery metal (contact plate, usb)	-
11	Golden plated silvery metal (pin, usb)	-
12	Silvery solder (connector, pcb)	-
13	Green pcb (pcb)	-
14	Black body (smd resistor"r1", pcb)	-
15	Brown body (smd capacitor"c1", pcb)	-
16	Black body (smd b1, pcb)	-
17	Brown plastic (foil, pcb)	-
18	Black body (chip, pcb)	-

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	NA	NA	PASS
3	ND	ND	ND	ND	ND	ND	PASS
4	ND	ND	ND	ND	NA	NA	PASS
5	ND	ND	ND	ND	NA	NA	PASS
6	ND	ND	ND	ND	ND	ND	PASS
7	ND	ND	ND	Negative*	NA	NA	PASS
8	ND	ND	ND	ND	NA	NA	PASS
9	ND	ND	ND	ND	ND	ND	PASS
10	ND	ND	ND	Negative*	NA	NA	PASS
11	ND	ND	ND	ND	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	ND	ND	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



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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.
- \* 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.
- 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.



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**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.

Test Item(s)	Item / Component Description(s) + Location(s)	Style(s)
5	White plastic (button, usb flash drive)	-
6	White plastic (case, usb flash drive)	-
9	Black plastic (insulation, usb)	-
13	Green pcb (pcb)	-
17	Brown plastic (foil, pcb)	-
18	Black body (chip, pcb)	-

<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	
5+6+9	ND	ND	%	PASS
13+17+18	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.



**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>						
<b>No.</b>	<b>Name of Analytes</b>	<b>Detection Limit (mg/kg)</b>				<b>Maximum Allowable Limit (mg/kg)</b>
		<b>X-ray fluorescence (XRF)<sup>[a]</sup></b>			<b>Wet Chemistry</b>	
		<b>Plastic</b>	<b>Metallic / glass / ceramic</b>	<b>Others</b>		
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, j]</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
<p>NA = Not applicable</p> <p><sup>[a]</sup> Test method with reference to International Standard IEC 62321-3-1: 2013.</p> <p><sup>[b]</sup> Test method with reference to International Standard IEC 62321-5: 2013.</p> <p><sup>[c]</sup> Test method with reference to International Standard IEC 62321-4: 2017.</p> <p><sup>[d]</sup> Polymers and Electronics - Test method with reference to European Standard EN 62321-7-2: 2017.</p> <p><sup>[e]</sup> Metal - Test method with reference to International Standard IEC 62321-7-1: 2015 <sup>[i]</sup>.</p> <p><sup>[f]</sup> Test method with reference to International Standard IEC 62321-6: 2015.</p> <p><sup>[g]</sup> Leather - Test method International Standard ISO 17075: 2007.</p> <p><sup>[h]</sup> Other Than Metal, Leather, Polymers and Electronics - Test method with reference to International Standard ISO 17075: 2007.</p> <p><sup>[i]</sup> 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</p> <p><sup>[j]</sup></p>						



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areas and the result(s) was (were) regarded as in conflict with European Parliament and Council Directive 2011/65/EU, Article 4(1).

**Testing Approach [ Compliance Test for European Parliament and Council Directive 2011/65/EU ] :**

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)

**List of Phthalates:**

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

END